

## DERIVATIVES IN INDIAN STOCK MARKET

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### ABSTRACT

*The past decade has witnessed multiple growths in the volume of international trade and business due to a wave of globalization and liberalization all over the world. As a result, the demand for the international money and financial instruments increased extensively at the global level. In this respect, changes in the interest rates and stock market prices at the different financial markets have increased the financial risks of the corporate world. Adverse changes have threatened the very survival business. It is therefore, to manage such risks, the new financial instruments have been developed in financial markets, which are popularly known as financial derivatives.*

*Derivatives are insurance for traders. It provides investors and insurers with a wider array of tools managing risk and raising capital. Derivatives have significantly improved the allocation of credit and sharing of the risk in global economy.*

*Key word-Derivative, Option, Future, Forward, Underlying asset, Put option, Call option*

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### INTRODUCTION

The term derivatives word has emerged from derive. Derive means some things have to be derived or arisen out of the underlying variables. For example a financial derivative is instrument indeed derived from the financial market.

The limit of the ratio of the change is a function of the corresponding change in its independent variable. It means that the value of financial derivatives will be change as per the change in the value of the underlying financial Instrument. It is just like chemical substance related structurally to another substance and theoretically derivable from it. The term 'Derivative' indicates that it has no independent value, i.e., its value is entirely derived from the value of underlying asset.

Derivatives are specialized contracts which are engaged for a lot of purposes including attractive the yield on assets, decrease of funding costs by borrowers, modifying the payment structure of assets to correspond to investor's market view etc. Transferring market risks is the most important use of derivatives. It is called hedging, which is a protection against the losses resulting from unexpected price or volatility changes.

Thus, derivatives are an important tool of risk management. As awareness about the usefulness of derivatives as risk management tools has increased, the markets for derivatives too have grown rapidly.

#### **FEATURES OF DERIVATIVES**

1. A derivative instrument relates to the future contract between two parties. It means there must be a contract binding on the underlying parties and same to be fulfilled in the future.
2. Normally, the derivative instruments have the value, which derived from the values of other underlying assets. Value of the derivatives depends upon the value of underlying instrument, which changes as per the changes in the underlying assets.
3. In general the counter parties have specific obligation under the derivative contract. Obviously, the nature of the obligation would be different as per type of instrument of a derivative. For example, the obligation of the counter parties, under the different derivatives, such as future contract and option contract would be different.
4. The derivatives contracts can undertake directly between the two parties or through the particular exchange like financial future contracts. The exchange-traded derivatives are quite liquid and have low transaction cost in the comparison to tailor-made contracts.
5. Usually, in derivative trading, the taking or making of delivery of underlying assets is not involved, rather underlying transactions are mostly settled by taking offsetting position in the derivative themselves.
6. Derivatives are also known as deferred delivery of deferred payment instrument. It means that it is easier to take short or long position in derivatives in comparison to other assets or securities.
7. Derivatives are mostly secondary market instruments and have lot usefulness in mobilizing fresh capital by the corporate world.
8. Although in the market, the standardized, general and exchange-traded derivatives are being increasingly evolved, however, still there are so many privately negotiated customized, over the counter (OTC) traded derivative are in existence. They expose the trading parties to operational risks, counter-party risk and legal risk. Further, there may also be uncertainty about the regulatory status of such derivatives.

The main instruments clubbed under the general term derivatives are:

1. Forward Contract
2. Futures contract
3. Options contract
4. Swaps contract

## 5. Forward Rate Agreement (FRA')

### **FORWARD CONTRACT**

A deal for purchase or sale of commodity, security or other asset can be in the spot or forward markets. A spot or cash market is most commonly used for trading. A majority of our day-to-day transactions are in the cash market where we pay cash and get delivery of the goods.

In addition to cash purchase, another way to acquire or sell assets is by entering into a forward contract. In a forward contract, the buyer agreed to pay cash at a later date when the seller delivers the goods. As a similarity of a forward contract, suppose a patient calls a doctor for an appointment and sees him after two days an appointed hour. The patient pays the doctor after his examination. Similarly, if a person booked a car with a dealer and the delivery 'matures' the car is delivered after its price has been paid.

Usually no advance money is paid in forward contracts when one party entered into the contract but sometimes one or both the parties of a contract may like to ask for some initial amount for good faith. The deposit ensures that the other party honors the contract.

In brief, a forward contract is an agreement between the counter parties to buy or sell at a specified price, with delivery at a specified time (future) and place. These contracts are not standardized; each one is usually being customized to its owner's specification.

### **FUTURES CONTRACT**

A futures contract is a standardized contract between two parties where one of the parties commits to sell, and the other to buy, a stipulated quantity (and quality where applicable) of a commodity, currency, security index or some other specified items at an agreed price on or before a given date in future.

The future contracts represent an improvement over the forward contracts in terms of standardization, performance guarantee and liquidity. Thus whereas forward contracts are not standardized, the future contracts are standardized.

Futures contracts are traded on futures exchanges. People can buy or sell futures like other commodities. When investor buys a futures contract (so that he takes a long position) on an organized future exchange he has the right and the obligation of taking and making the delivery of the underlying on a specified date. Similarly, when an investor sells a contract, to take a short position, one assumes the right and obligation to make delivery of the underlying asset. While there is a risk of non-performance of a forward contract, it is not so in the case of a future contract.

## FEATURES OF FUTURES CONTRACTS

The main features of the futures contracts are as follows-

1. Futures are highly standardized contracts that provide for their performance either through deferred delivery of the asset or final cash settlement.
2. Futures contracts trade on organized futures exchanges with a clearing corporation that acts as a middleman between the two contracting parties.
3. Both parties- i.e., that is the seller and the buyer- of a futures contract pays a margin to the clearing house. This margin is called initial margin (IM), and is used as a performance bond by the contracting parties.
4. Apart from initial margin, the buyer and the seller of the futures contracts may also have to pay a daily mark-to-market (MTM) margin. This margin is equal to the notional net loss of the position of the market participants. This is done on a daily basis. The profiting party is credited with the profit, whereas the losing party is debited by the loss amount.
5. Each futures contract has maturity or the expiry date that represents the date of contract delivery or final settlement. These contracts are defined with their delivery/maturity months. For example the Nifty March 2006 Futures contract has a maturity date of 29th March 2006 on the NSE (National Stock Exchange).
6. Every futures contract represents a specific quantity known as a lot size. The parties to the contract do not negotiate it. One can buy or sell a number of futures contracts to match one's quantity requirements.

There are several differences between forward and futures contracts. The main differences are:

### Difference between forward and futures contracts

		FORWARDS	FUTURES
1.	Size of the contracts	Forward contracts are decided between buyer and seller.	Futures contracts standardized by exchange for every underlying (lot size).
2.	Price of the contract	Price of the forward contracts remains fixed till maturity.	Price of the futures contracts changes every day on the exchange.

3.	Marking-to-market	In forwards contracts marking-to-market is not done.	Future contracts Marked-to-market every day.
4.	Margin	No margins are required in forward contracts.	Margins have to be paid by both buyer and seller in futures contracts.
5.	Counter-party risk	Counter-party risk is present in forward contracts.	No risk is present in futures contracts.
6.	Number of contracts in a year	There can be any number of contracts in case of forward contract.	Number of contracts in case of futures may range between four to twelve in a year.
7.	Hedging	These are tailor-made for specific dates and quantity. Thus, they are perfect hedging tools.	Hedging is done by using the nearest month and fixed quantity contracts (multiply of lot size). Thus, perfect hedging is generally not possible.
8.	Liquidity	There is no liquidity in forward contracts.	Futures contracts are highly liquid.
9.	Nature of market	Forward are traded Over the counter.	Futures are traded on the exchange.
10.	Mode of delivery	They are especially decided. Some of the contacts result in delivery.	Futures contracts are standardized. Most of the contacts do not result in delivery.

All over world future contracts are bought and sold for a variety of reasons. Some individuals buy and sell futures because they wish to speculate, taking advantages of anticipated changes in the price of assets. Business enterprises buy and sell futures to eliminate the risk of the price changes in an underlying asset. Fund manager or

corporate treasure uses futures as a less expensive way of achieving their portfolio goals.'

### **OPTION CONTRACT**

An option is a contract between two parties in which one party has the right but not the obligation to buy or sell a fixed quantity of the underlying asset at a particular date (or period) at a fixed price.

In this type of contract there are two parties - buyer (or the holder, or owner) who takes a long position and the sellers who takes a short position.

An option contract gives its owner a right to buy/sell a particular commodity or other asset at a predetermined price by a specified date. It is important to understand that an option contract gives the holder a right, and not the obligation to buy/sell. The option writer undertakes upon himself the obligation to buy/sell the underlying asset if it suits the option holder.

The view of the option can be exemplified as follows. Assume we go for marketing, and in a certain shop we see an item, say a camera that we like. However, we do not have the full amount to pay for it. We ask the manager to keep some money as advance so as to allow you to buy a camera within the next three days, and he agrees to the proposal. Now, we or may not go to the shop to buy the camera within the predetermined time. For example, if we find an identical camera at a lower price in the other shop, we may simply forget about the first one. Here we have an option to buy- you are not obliged to buy.

### **TYPES OF OPTIONS**

Two types of options are available-

- (1) Call Options
- (2) Put Option

### **CALL OPTIONS**

A call option gives the owner the right to buy a specific quantity of the underlying asset at a predetermined price the exercise price, on a specified day- date of maturity. For example suppose it is March now and an investor buys a May call option contract on ONGC shares with an exercise price of 225. With this, the investor obtains the right to buy 200 shares of ONGC at the rate of 225 per share on a particular day in the month of May. The investor is not obliged to buy the shares. Obviously, if on expiry of the option, the price of the share in the market in the March is being quoted at higher than 225, the investor would like to exercise the call. By buying the shares at 225 per share and selling them at prevailing at higher price, the investor can make a profit. If on the other hand, the price of the share is quoted at 225 or lower, the investor would not benefit by buying the share. In any case, the writer of the call option is obliged to sell the shares at Rs.225 per share, if called upon.

## **PUT OPTION**

A put option gives the right to the option holder to sell a specific underlying asset at the specified exercise price on the date of maturity. If an investor buys a March put option on RIL shares with an exercise price of 200 per share, the investor gets the right to sell 150 shares of RIL at the price of 200 per share on a specific day in the month of March. The investor would naturally be tending to exercise the option if the share price in the month of March happens to be the lower than Rs 200. By buying the shares in the market at a lower than Rs 200 per share, and selling them at Rs 200 per share, the investor would stand to gain. In this kind of an option, the writer undertakes to buy the share at the exercise price, in the case the holder of the option puts for that.

Options are also standardized contract like futures contracts and traded on exchanges. The trading in options is regulated by the exchanges that make sure the honoring of such contracts. While buying or selling of futures contracts does not require any price to be paid, the options are bought and sold on the exchange for a price called the premium. The writer of the option receives the premium as a compensation of the risk that he takes upon himself. The premium belongs to the writer and is not adjusted in the price if the holder of the options decides to exercise it.

## **'FORWARD RATE AGREEMENT (FRAS)**

FRA is a forward contract on interest rates- an OTC version of interest rates futures. This is basically an arrangement between two parties, with a bank on one side and a depositor or borrower on the other. A bank guarantees the borrower or depositor a fixed rate of interest for a term. The bank need not necessarily be a lender in the transaction. With this instrument, a borrower or depositor can lock in on future interest rates.'

## **SWAPS**

Swaps have become popular derivative instruments in recent years all over the world. A swap is an agreement between two or more parties to exchange sequences of cash flows over a period in the future.

Under the swap agreement, various terms like the dates when the cash flows are to be paid and the mode of payment are determined and finalized by the parties. Usually the calculation of cash flows involves the futures values of one or more market variables.

There are two most popular forms of swap contracts, i.e. interest rate swaps and currency rate swaps. In interest rate swap one party agrees to pay the other party interest at a fixed rate on a notional principal amount, and in return, it receives interest at floating rate on the same principal notional amount for a specified period. The currencies of the two sets of cash flows are the same. In the case of currency swap, it involves in exchanging of interest flows, in one currency for interest flows in other currency.

## **CONCLUSION**

The past decades has witnessed the multiple growths in the volume of trade due to the wave of globalization and liberalization in the entire world. Different financial markets have increased the financial risks to the corporate world due to the volatility in the prices. Adverse changes have even threatened the survival of the business world. Therefore to manage such risk, the new financial instruments have been developed in the financial market, which are known as financial derivatives.

The basic purpose of these instruments is to provide the protection against unfavorable movements of the price at future date in order to reduce the financial risk. They also provide opportunities to make profit for the participants who are willing to bear risk. In other words, by the use of these instruments we can transfer the risk from those participants who desire to avoid it to the participants who are ready to accept the same.

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