IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)
An International Open Access, Peer-reviewed, Refereed Journal

# RISK MANAGEMENT THROUGH DERIVATIVES WITH SPECIAL REFERENCE TO FORWARD AND FUTURES

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Every individual has an eager to earn revenue. Everybody likes to invest their excess of revenue over expenditure (Savings) in various sources for getting additional return. Someone invests their savings in bank accounts with the intension of getting interest in addition to their savings. People invest their savings in gold as an investment avenue in order to capitalise the gold market fluctuations. They expect some immediate return from gold market, when they are invested. Some others invest their savings in real estate and other sources with an intention to acquire immediate return. People also consider share market as an investment avenue and invest their savings in different reputed companies for the purpose of capitalising share market fluctuations. Made investment in shares is a risky activity. There is a possibility to loss the amount invested there too. But the opportunities provided by the share market attract the public towards shares.

If we are planning to invest in share market, we have some options to reduce our financial risk. Derivative instruments like forwards, futures, options, swaps etc. open up opportunities for reducing financial risk of investors. By entering in derivative instruments, it is possible to overcome the unforeseen variations happening in share market.

## FORWARD

Forward contracts is an agreement between two parties to buy/Sell a specified quantity of an asset at a certain future date at a specified price. The person who agrees to buy the specified asset is said to be in the long position. The person who agrees to sell the specified

asset is said to be in the short position. Forward contracts are agreements made in order to hedge financial risk. It will help to overcome the loss that arises due to price fluctuations in the market. It is most commonly used in case of agricultural products.

Some examples are:

(1) Mr. A enter into forward contract with Mr. B and agrees to purchase 1,000 shares of Reliance Ltd. for a pre-determined price of Rs.25 three months later. On the future date, Mr. A will get the 1000 shares and Mr. B will deliver the shares and receive the money of Rs.25,000 irrespective of the market price. It is an obligation of both of the parties to execute the contract at future date. If the market price at the future date is more than or less than the contract price, the contract will be executed.

(2) A wheat trader makes a contract with a farmer prior to the harvesting season and negotiates a price for the crop. The trader agrees to pay the farmer an agreed price on a specified date. It helps to avoid the risk of both of the parties due to price variations. There is a possibility to decline the price when the harvesting season begins. It is a hedge against future price decline for a farmer. There is also a possibility to increase the price during the harvesting season. It is a hedge against future price increase for a trader. The only limitation of this contract is that there is no particular place where such contracts are made. But it will avoid the risk which would arise due to price variations.

**FUTURE**

Future contract, like a forward contract is an agreement between two parties to buy or sell an asset at a certain time in the future for a certain price. Future contracts are normally traded on an agreed or regulated exchange. It is the major difference between forward and future contracts. Future contracts are standardised agreements to exchange a specific type of goods, in specific amount and at a specific future delivery or maturity dates. The future contracts are divided into three:

**a. Commodity Futures**

It is a future contract in commodities like agricultural products, metals, minerals oil etc. In organised commodity markets, futures are standardised with standard quantities and fixed delivery dates.

**b. Financial Futures**

Financial contract refers to future contract in foreign exchange, treasury bills, commercial paper, interest rate, stock market index etc.

**c. Currency Futures**

A currency future is a future contract to exchange one currency for another on a specified future date at a predetermined price. The future contract specifies the price at which a currency can be bought or sold on a future date and the currency paid is exchanged on the delivery date.

In case of future contract, clearing house acts is an intermediary to facilitate the contract. The parties entering in future contract need to deposit certain sum in exchange when they make the contract. The futures contract is revalued daily on the basis of the market price prevailing each day. The change in the value of contract is daily adjusted in the margin accounts of both of the parties. When the market price of the underlying asset declines, the buyer of the contract suffers a loss to the extent of change and the seller of the contract gains. The decline in the value of future contract is debited to the margin account of the buyer and credited to the margin account of the seller. If the price of the underlying asset increases, the buyer gains and the seller has to suffer a loss. The increase in the value of the contract is credited to the buyer's margin account and debited to the seller's margin account. This process is known as 'market to market'. It effectively keeps the margin account in line with the current market conditions.

As the futures contract is 'market to market' on a daily basis, the balance in the margin account of the buyer and seller keeps changing. However, the buyer and seller are expected to maintain a minimum balance which is known as maintenance margin. The margin is fixed as a certain percentage of the initial margin. If the balance in the margin account drops below the maintenance level, a margin call is issued by the exchange to the concerned party to introduce cash into his account. Additional funds have to be deposited into the margin account by the party immediately to bring the balance in the margin account to the level of initial margin. The additional funds to be deposited on the basis of the margin call are known as variation margin. If the additional funds are not deposited within the stipulated time, the exchange cancels the contract and recovers the loss, if any, from the defaulting party. The marginal system ensures that the contracting parties will not default in fulfilling their obligations to the clearing house

as the counter party. At the stipulated future date, the contract can be settled by the exchange of the assets and cash. Cash settlement is effected by entering into a reverse trade on any day before the delivery date. For example, a person who has bought a gold futures contract may hold his long position till the delivery date and take delivery of the gold and make payment for it unless he enters into a reverse trade, that is; to sell a gold futures contract on any day before the delivery date. His open position would be closed and he would receive the difference between the selling price and the buying price when the selling price is higher. If the selling price is lower than his buying price, he would suffer a loss and make the payment to the exchange.

It can be explained with the help of an example. On Monday morning Mr. X enters into a future contract with Mr. Y to buy 200 kg of Rubber at Rs.100 on Friday afternoon. At the close of trading of Monday, the futures prices goes up to Rs.110/- per kg. At the end of Monday, Mr. X will get a cash profit of Rs.2,000 at the rate of Rs.10 per kg. In this scenario, the amount of Rs.2,000 is credited to the account of Mr. X and debited to the account of Mr. Y. On Tuesday, at the time of close of trading, future price is down to Rs.105. At the end of Tuesday, Mr. X will suffer a loss of Rs.1,000 and Mr. Y will get a profit of Rs.1,000. The amount will be debited to the account of Mr. X and credited to the account of Mr. Y. This process will continues still Friday. On Friday, Mr. X can be settled by the purchase of an asset and make payment of cash. Otherwise, he may enter into a reverse contract to sell futures at any date before the delivery date. The price of selling and purchasing determine the profit or loss.

The loss on investment may reduce or avoid with the help of futures. If an investor has an expectation of fall in price, he may enter into a future contract of short position (to sell) a particular commodity on a future date at a stipulated price. It will be helpful to overcome the price decline and at the future date, he will sell the commodity at predetermined price. If the market value of the commodity falls as he expects, he may purchase the same commodity from the market at a lesser amount as compared to selling price. He will get a profit by capitalising the difference between selling price and purchase price and may continue the same activity for earning more profit. The risk which would arise due to the expected decline in the value of commodities can be overcome with the help of futures contract in this way.

If an investor likes to purchase a commodity at an immediate future date, he may not have monetary resources to acquire the commodity at present. At the same time, he may expect

rise in the market price of particular commodity. In such a situation, he may enter into a future contract of long position (buy) to avoid the risk due to price variations. At the stipulated date, he will purchase the same commodity at pre-determined price and will avoid the loss due to price fluctuations.

Some individuals may engage in international transactions. They engage in import and export in order to earn profit or revenue. When they are involved in international transactions, there is a high risk due to the variations in exchange rate in addition to all other risks prevailing in the market. Futures provide an option to overcome the risk which would arise due to the variations in exchange rate. If a person imports goods from foreign countries, he needs to make payment in foreign currency after a stipulated period. If the foreign currency strengthens against the domestic currency during that period, he has to spend more money in order to acquire foreign currency. The uncertainty can be hedged by using currency futures. It is possible by entering a futures contract to buy foreign currency at a specified rate on a future date and avoid the loss due to exchange rate. If an individual makes export to foreign country, there is also a risk due to the variations in exchange rate. If the domestic currency strengthens against the foreign currency during the period, he receive a less amount of money in domestic currency than he expected. He will avoid the risk by entering a future contract to sell the foreign currency at a specified rate on a future date. It can be explained with the help of an example:

Mr. X, an Indian importer has a payment obligation of British pound 5,000 after two months (being payment towards an import note). The current exchange rate is 95. If Pound strengthens against Indian rupee at the time of payment, the importer will lose more money. He will be forced to spend more rupees per pound for acquiring the required British pound. This uncertainty can be hedged by using currency futures. This will help the importer to freeze Pound-INR exchange rate to a predetermined rate as per a future contract.

Assume that the present two months future rate for Pound is 96. Mr. X can enter into a future contract to buy Pound Stirling 5,000 at Rs.96.Whatever may be the prevailing spot market price of Pound after two months, Mr. X can acquire Pound Stirling 5,000 at Rs.96 per Pound Stirling as per the contract. Thus, the liability is only Rs.4,80,000. He is protected against any adverse movements in the exchange rate. An exporter who has to pay for exports in foreign currency can also enter into a futures contract to lock the exchange rate fluctuations. If Pound Stirling weakness against Indian rupee, the exporter will suffer loss.

Future contracts also provide opportunities to earn capital profit in addition to hedging. It is possible to earn quick profits by entering in future contracts. If a person expects that the market price of a commodity, share etc. is going to increase in the near future, he may enter into a future contract to buy and at a specified future date, he will earn capital profit. If the transaction is settled through delivery of commodity, he will purchase the commodity from the market at market price which is less than the future value and sell the commodity at specified price. If he expects that the price is going to decline, he may enter in to a future contract to sell the commodities at a specified future date at a pre-determined price. If the price declines, as he expects, he may sell the future at specified price and purchase the same from the market at a price which is less than specified price.

All investors make their investments in order to get some additional income. But when they make investment in different sources, they would face a lot of difficulties. Shares of companies are one of the attracting investment avenue. But it also offers many risks. When we are investing somewhere, there is a possibility to loss the money invested too. The risks which arise from the prevailing market due to price variations can be overcome with the systematic usage of forward and future contacts. Futures contract opens up an opportunity to earn quick profit by capitalising the price variations and also hedging against risk.