A Study on the Concept of Derivatives

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Derivative is the financial tool, with a value that is reliant upon or derived from an underlying asset or group of assets. It is a contract between two or more parties. Normally, most of the common underlying assets are like – stock, bonds, commodities, currencies, interest rates, and market indexes. Derivatives can traded over the counter on an exchange OTC traded derivatives, generally, have a greater possibility of counter party risk. Traded between to private parties and are unregulated. Derivative can be used to hedge a position, speculate on the directional movement of an underlying asset, or give leverage to holdings. A main objective of the study is to understand the concept of the financial derivatives such as forwards, futures, options and swaps. To find out the profit/loss position of the option holder. This study does not take any Nifty Index features and options and International markets into the consideration. The study was confined to conceptual understanding of derivative market in India. In this study we gathered data from different sources this is News channels, Newspapers, different websites, stock market news, business news, etc. all the above information how the derivative market will work and which parties will include in the derivatives.

Key Words: Speculate, movement, trade, underlying, stock, bonds, currency.

Introduction: Derivative is a financial instrument that allows the investors will to face various types of risk while dealing in the financial markets. Thus, various instruments have been developed in order to mitigating the risk or potential rise arising out of the volatility in the financial world. One of the techniques is called as hedging. It comprises various instruments such as derivatives which are used to minimize the risk of price adversity. The following section describes derivatives in detailed. Derivatives are newly financially engineered instrument that derive their value from underlying assets. The purchaser will approve to purchase the asset on a specified date at a fixed price. Normally, most of the common underlying assets are as follows - Stock, bonds, commodities, currencies, interest rates, and market index. All these assets are commonly traded through brokerages.

Derivative can trade **Over-The-Counter** or on an exchange. OTC derivatives constitute a greater proportion of the derivatives market. OTC traded derivatives, generally have a greater possibility of Counter Party Risk. Counter Party Risk is the danger that one of the parties involved in the transaction might default. These parties traded between two private parties and are unregulated. Derivative can be used to hedge a position, speculate on the directional movement of an underlying asset, or give leverage to holdings. Their values come from the fluctuations of the values of the underlying asset.

Originally derivatives was used to ensure balanced exchange rates of goods traded internationally with the different values of national currencies, international traders needed a system to account for differences. Today, derivatives are based upon a wide variety of transactions and have many more uses. There are even derivatives based on weather data, such as the amount of rain or the number of sunny days in a region.

Objectives of the Study

- To understand the concept of the Financial Derivatives such as Forwards, Futures, Options and Swaps.
- To study various trends in derivatives market.
- To study the role of derivatives in India Financial Market.
- To study in detail the role of futures and options
- To study different ways of buying and selling of options.

Analysis on Derivatives

Features of Derivatives

- → Derivative instruments are used in commodity markets such as gold, oil, gas. Now, derivatives also derive their values from underlying currencies, shares and debentures.
- → The seller of the contract does not need to own the underlying asset. By giving the buyer a sufficient amount to buy the asset at the prevailing price, the seller can fulfill the contract.
- → In this there are two parties or more than two parties involved in a contract and the price is determined by the volatility in the underlying asset.
- → Derivatives can be traded on Over-the-Contract (OTC) or they can be traded on over the established exchange.
- → They do not require heavy investment and are required to be settled on some future date.

Advantages of Derivatives

1. **Hedging Risk Exposure:** Because the worth of the derivatives is related to the price of the underlying asset, derivative asset, derivative agreements are chiefly used to hedge risks arising due to fluctuations.
2. **Determination of price of Underlying Asset:** The spot price of futures assists in determining the approximate price of the commodity.
3. **Easy Access to Unavailable Market:** Many organizations and individuals can gain access to those securities which are not available in the market. E.g Interest rate swaps can help a borrower in borrowing at a favorable rates of interest in comparison to borrowing at direct interest rates.

Disadvantages of Derivatives:

1. **High Risk:** The price of the derivatives is determined by the underlying asset which is not constant/fixed prices. That is continuously keeps on changing.
2. **Speculative Features:** Derivative are treated as one of the tool for speculation process. Sometimes this will leads to high risk and unproductive due to unless unreasonable speculation.
3. **Counter-Party Failure:** Some OTC derivatives do not include a standard that lead to due carefulness while performing the contract. The counter party to contarct may fils to fulfill the contract.

Difference between Cash and Derivative market:

- In the point of cash market, the shares will available in single share. But in the derivative market that is futures/options we have to purchase a lot or bulk are fixed.
- In cash market tangible assets are traded, in the derivative contracts tangible and intangible assets are traded.
- Cash markets are used for the purpose of investment process, as a derivative market we will used for hedging, arbitrage and speculation purposes
- In case of cash market the customers will open the trading and demat account and in case of derivative market customers must open the future trading account with a derivative broker
- In the process of cash market the entire amount has to be upfront, but in the case of futures only the margin amount has to be put up.
- When individuals purchase shares in the cash market, they will became the part owners of the company. But it will not applicable in the future market contracts.
- In the contract of cash market, the share holders will entitle to the dividends but in the contract of futures share holders will not entitled to the dividends.

Participants in the Derivative Market:

In derivative market, the participants can be segregated into three classifications

a) **Hedgers:** The producer of the commodity or trade who actively participated in trade in order to protect against unstable prices in commodities and financial instruments. That if you have a buy position, you have to create a sell position and vice-versa. The parties who perform hedging are known as hedgers. In the process of hedging, parties such as individuals or companies owning or planning to own a cash commodity like corn, pepper, wheat, treasury, bonds, notes or bills, etc. are concerned that the cost of the commodity may change before either buying it in the cash market. Hedger is the least risk lovers in the derivative market.

   They want to reduce or limit the impact of such movements, which, if not covered, would incur a loss. In such a situation, the hedger achieves protection against changing prices by purchasing or selling futures contracts of the same type and quantity.

b) **Speculators:** Speculators are basically traders. They enter the futures and options contract, with a view to making the profit from the subsequent price movements. They do not have any risk to hedge. In fact, they operate at a high level of risk in anticipation of profits. Speculation provides liquidity in the market. The speculators also perform a valuable economic function of feeding information. These pieces of information are not readily available elsewhere. They also help others in analyzing the derivatives markets.

c) **Arbitragers:** Some traders participate in the market for obtaining risk-free profits. They do so by simultaneously buying and selling financial instruments like stocks futures in different markets. This process is known as 'arbitrage'. Thus, 'arbitrageurs' are the person who does such kind of trading. For example, one can always sell a stock on the National Stock Exchange and buy simultaneously back on the Bombay Stock Exchange platform. The arbitrageurs continuously monitor various markets. And wherever there is a chance of arbitraging, they buy from one market and sell in the other market. In this way, they make a riskless profit. They keep the prices of derivatives and current underlying assets closely consistent and perform a valuable economic function.

Role of derivative markets

[1] Risk Management

As derivative prices are related to the underlying spot market goods (assets), they can be used to reduce or increase the risk of owing the spot items. For example, buying the spot item and selling a futures contract or call option reduces the investor's risk. If the goods price falls, the price of the futures or options contract will also fall. The investor can then repurchase the contract at the lower price, affecting a gain that can at least partially offset the loss on the spot item. All investors however want/need to keep their investments at an acceptable risk level. Derivative markets enable those wishing to reduce their risk to transfer it to those wishing to increase it, which we call speculators.

[2] Price discovery

Forward and futures markets are an important source of information about prices. Futures markets in particular are considered a primary means for determining the spot price of an asset. Futures and forwards prices also contain information about what people expect future spot prices to be. In most cases the futures price is more active hence, information taken from it is considered more reliable than spot market information.

Therefore futures and forward market are said to provide price discovery. Option markets do not directly provide forecasts of future spot prices. They do, however provide valuable information about the volatility and hence the risk of the underlying spot asset.

[3] Operational advantages

Derivative markets offer several operational advantages, such as:

1. They entail lower transaction costs. This means that commission and other trading costs lower for traders in these markets.

2. Derivative markets, particularly the futures and exchanges have greater liquidity than the spot markets.

3. The derivative markets allow investors to sell short more easily. Securities markets impose several restrictions designed to limit or discourage short if not applied to derivative transactions. Consequently many investors sell short in these markets in lieu of selling short the underlying securities.

[4] Market efficiently

Spot markets for securities probably would be efficient even if there were no derivative markets. There are important linkages among spot and derivative prices. The ease and low cost of transacting in these markets facilitate the arbitrage trading and rapid price adjustments that quickly eradicate these opportunities. Society benefits because the prices of the underlying goods more accurately reflect the goods true economic value.

Therefore the derivative markets provide a means of managing risk, discovering prices, reducing costs, improving liquidity, selling short and making the market more efficient.

Types of Derivatives

There are various forms of derivative instruments that have been engineered for hedging the risk. They are a follows.

i. Forward Market

A forward market is an Over-The-Counter (OTC) market that can deals with the value or price of a financial asset or instrument for the purpose of future delivery. They are used for exchange of various instruments; however they are extensively used for the exchange market. Thus, this type of markets will called as Foreign Exchange Markets. Forwards will applicable for various ranges of products such as commodities, interest rates and markets for financial securities.

Features of Forwards

- Forward Contracts are made for the requirements of the counter parties. In this contract the price, date and quantity can be changed according to the contractors.
- It is a contract between two parties either sell or buy particular commodity or currency as per the value or price which is applicable for today, but the contract will be done or fulfill in future.
- Forward contract will provide hedge against any instability of price. The parties involved in the contract may sell/buy or exchange of currencies at the price that was decided at the point of agreement.
- The special feature of forward is that they are not traded on prioritized exchanges, rather they are trades over the counter (or off exchange – trading is done directly between two parties without the supervision of an exchange).

- In the contract of forward contract settlement will be takes place on the basis of delivery or cash.

ii. Currency Forward

It is an agreement between a business and a commercial bank to exchange an amount of a currency at a predetermined exchange rate on a specific future date. When an MNC anticipates requirement for a specific amount of foreign currency in near future (e.g. for paying import bill after 3 months), they enter into a forward contract and define the amount of foreign currency required (say $ 1000), the rate at which the delivery will take place (1$ = 72.85 on june 7th 2021) and the date on which the delivery takes place (after three months). On the date of delivery i.e. after three months or 90 days, the contract will be delivered on the pre-specified rate that is Rs. 72.85/$ even if the exchange rate becomes Rs.74 or Rs.70.

Advantages of Forward Agreement

They are tailor made; hence the investors can trade commodities and currencies according to their requirements

Disadvantages of Forward Agreements

They are not prioritized and hence they are not exchange traded

iii. Future Market

It is a authorized contract for the future purchase or sale of a specific product or asset or a currency at a pre-set- price. They standardized for quantity along with the quantity in order to enable future trade. When a futures contract expires, the buyer of a future contract accepts the duty and responsibility to purchase the underlying asset at the predetermined price. Like Forwards, future contracts or future derive their value from the underlying asset which can be Gold, oil, gas, commodities, wheat, potatoes and even currencies.

Features of Future contracts

- This type of contracts are traded on standardized exchanges and not over-the –counter
- It requires margins to be deposited when the contract is started
- It will eliminates the default risks, which was not detected by forwards
- In India Future markets will governed and regulated by SEBI, forward markets are not regulated.

iv. Currency Futures

These agreements are contracts stating standardized size of a particular currency or asset to be traded on specified date. It is parallel to forward contract in case of responsibility, but differ from forward contract in the area of they are traded. Currency futures are bought by the investor and the speculator. Speculators will believe that the future spot value will decrease, hence they will buy the securities in order to sell at higher prices.

Advantages of Future Contracts

- The amount of commission charged is small when compared to other investments. Thus, the transaction cost is less.
- There is high liquidity in futures as compared to other countries
- The amount of gain can be untitled

Disadvantages of Future Contracts

- These are standardized instruments and cannot be change according to the parties
- They have fixed amount ad terms which cannot be modified/changed as per the individual requirements
- It will provide the some part of hedge only to the parties. There is a risk of losing still induce in future
- commission charges are less in this type of contract

v. Options

It is not like Future contract; in this the buyer of the option contract has the right to exercise. Options do not have any obligations to perform the contract. Under this type of contract, the buyer and seller of an option agree to trade a commodity at a future price which is prearranged today. It is called striking price.

The date of maturity is also fixed at that time, the buyer of the option will exercise his right to fulfill the contract when it is favorable, if incase of unprofitable contract he will not exercise his contract and ultimately the delivery will not be made. The person who is selling the option to others is called as Option writer and the other party who is willing to buy the option is treated as option holder/ option buyer. The option holder has a right to exercise the option or not. If the exercises the option then the option writer is obliged to fulfill the contract.

Types of Options

There are different types of options are ciurclated in the Domestic and International markets

Call Option: In this type of contract the option holder has the right to buy certain commodity or asste at pre determined date and pre-specified price. Hence the option holder is the buyer of the asset and the option writer is the sell of the asset

Put Option: It gives the opertunity to the option buyer a right to sell the commodity or currency at a predetermined date and price. Here the option holder is the seller and option writer is the buyer.

American Style/ Option: In this contract, before the expiry of the date the buyer has the right to exercis his rights. The expiry date is the date pre-specified for the delivery of commodities. The right can be exercised before this date.

Europian Style/ Option: In this contract, it allows the buyer can exercise his right on the due date mentiond at option, not before that due date. There is a flexibility difference between the American Style and Europian Style.

Future Option: Future options are such options where the asset (Financial Instrument/Commodity) being sold or brought is a foreign currency future contract. Thus, the seller of the option has a right to sell single and standardized future contract for specific rate at a defined date. In this the owner of call option has a right to sell the underlying future contract a specific price and after a predetermined price.

Currency Option: They offer the right to acquire or sell currencies at pre-specified prices. A currency call option grants the right to buy a specific currency at a designated price within a specific time period of time.

Terminologies of Options

1. **Option Holder:** He is the purchaser or buyer of the option contract. Hedgers are against the risk. Option writing is riskier than the option holder because the maximum gain to the option writer is the premium amount. However, there is a loss for the option holder.
2. **Option Writer:** trading involves when the buyer of a contract meets the seller of such contract. An option writer is a person who sells the right to exercise an option to the buyer.
3. **Option premium:** It is the premium/price paid by the buyer of option to the option writer.
4. **Strike price:** It is the price at which the transaction will take place in future. It is predetermined.
5. **Expiry Date:** it is the maturity date on which the option mentioned will be end
6. **Exercise Date:** It is the date which the contract is exercised
7. **Spot Price:** it is the market price prevailing at the time of expiry

Limitations:

- The study does not take any Nifty Index futures and options & International Markets into the consideration
- The study does not provide any predictions or forecast of the selected area/field only.
- Study was confined to conceptual understanding of derivatives markets in India

Conclusion

A derivative product, or simply 'derivative', is to be sharply distinguished from the underlying cash asset. Cash asset is the asset which is bought or sold in the cash market on normal delivery terms. Thus, the term 'derivative' indicates that it has no independent value. It means that its value is entirely 'derived' from the value of the cash asset. The main point is that derivatives are forward or futures contracts, i.e., contracts for delivery and payment on a-specified future date. They are essentially to facilitate hedging of price risk of the cash asset. In the market term, they are called as 'Risk Management Tools'.

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