



NISM Series VIII

CHAPTER 1: BASICS OF DERIVATIVES

A derivative is a contract or a product whose value is derived from the value of some other asset known as the underlying.

Derivatives Market – History & Evolution

▼ 12th Century:

In European trade fairs, sellers signed contracts promising future delivery of the items they sold.

▼ 13th Century:

There are many examples of contracts entered into by English Cistercian Monasteries, who frequently sold their wool up to 20 years in advance, to foreign merchants.

▼ 16th Century:

Between 1634-1637, Tulip Mania in Holland: Fortunes were lost after a speculative boom in tulip futures burst.

▼ Late 17th Century:

In Japan at Dojima, near Osaka, a futures market in rice was developed to protect rice producers from bad weather or warfare.

▼ 18th Century:

In 1848, The Chicago Board of Trade (CBOT) facilitated trading of forward contracts on various commodities.

In 1865, the CBOT went a step further and listed the first "exchange traded" derivative contract in the US. These contracts were called "futures contracts".

▼ 19th Century:

In 1919, Chicago Butter and Egg Board, a spin-off of CBOT, was reorganised to allow futures trading. Later its name was changed to Chicago Mercantile Exchange (CME).

In 1972, Chicago Mercantile Exchange introduced International Monetary Market (IMM), which allowed trading in currency futures.

In 1973, Chicago Board Options Exchange (CBOE) became the first marketplace for trading listed options.

In 1975, CBOT introduced Treasury bill futures contract. It was the first successful pure interest rate futures.

In 1977, CBOT introduced T-bond futures contract.

In 1982, CME introduced Eurodollar futures contract.

In 1982, Kansas City Board of Trade launched the first stock index futures.

In 1983, Chicago Board Options Exchange (CBOE) introduced option on stock indices with the S&P 100® (OEX) and S&P 500® (SPXSM) Indices.

Factors influencing the growth of derivative market globally

1. Increased fluctuations in underlying asset prices in financial markets.
 2. Integration of financial markets globally.
 3. Use of latest technology in communications has helped in reduction of transaction costs.
 4. Enhanced understanding of market participants on sophisticated risk management tools to manage risk.
 5. Frequent innovations in derivatives market and newer applications of products.
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Indian Derivatives Market

As the initial step towards introduction of derivatives trading in India, SEBI set up a 24 member committee under the Chairmanship of Dr. L. C. Gupta on November 18, 1996.

SEBI set up a group in June 1998 under the Chairmanship of Prof. J. R. Varma, to recommend measures for risk containment in derivatives market in India.

In 1999, The Securities Contract Regulation Act (SCRA) was amended to include "derivatives" within the domain of 'securities' and a regulatory framework was developed for governing derivatives trading.

The exchange traded derivatives started in India in June 2000 with SEBI permitting BSE and NSE to introduce the equity derivatives segment. To begin with, SEBI approved trading in index futures contracts based on Nifty and Sensex, which commenced trading in June 2000. Later, trading in Index options commenced in June 2001 and trading in options on individual stocks commenced in July 2001. Futures contracts on individual stocks started in November 2001. Metropolitan Stock Exchange of India Limited (MSEI) started trading in derivative products in February 2013.

Products in the Derivatives Market

Forwards:

It is a contractual agreement between two parties to buy/sell an underlying asset at a certain future date for a particular price that is pre-decided on the date of contract. Both the contracting parties are committed and are obliged to honour the transaction irrespective of the price of the underlying asset at the time of delivery. Since forwards are negotiated between two parties, the terms and conditions of contracts are customised. These are Over-the-counter (OTC) contracts.

Futures:

A futures contract is similar to a forward, except that the deal is made through an organised and regulated exchange rather than being negotiated directly between two parties. Futures are also standardised contracts (in terms of their lot size, maturity date, etc.) so that they can be traded on the exchange. Indeed, we may say futures are exchange traded forward contracts.

Options:

An Option is a contract that gives the right, but not an obligation, to buy or sell the underlying on or before a stated date and at a stated price. While the buyer of an option pays the premium and buys the right, the writer/seller of an option receives the premium with the obligation to sell/ buy the underlying asset, if the buyer exercises his right.

Swaps:

A swap is an agreement made between two parties to exchange cash flows in the future according to a prearranged formula. Swaps are, broadly speaking, a series of forward contracts. Swaps help market participants manage risks associated with volatile interest rates, currency exchange rates and commodity prices.

Market Participants

Hedgers:

They face risk associated with the prices of underlying assets and use derivatives to reduce their risk. Corporations, investing institutions and banks all use derivative products to hedge or reduce their exposures to market variables such as interest rates, share prices, bond prices, currency exchange rates and commodity prices.

Speculators/Traders:

They try to predict the future movements in prices of underlying assets and based on the view, take positions in derivative contracts. Derivatives are preferred over underlying asset for trading purpose, as they offer leverage, are less expensive (cost of transaction is generally lower than that of the underlying) and are faster to execute in size (high volumes market).

Arbitrageurs:

Arbitrage is a deal that produces profit by exploiting a price difference in a product in two different markets. Arbitrage originates when a trader purchases an asset cheaply in one location and simultaneously arranges to sell it at a higher price in another location. Such opportunities are unlikely to persist for very long, since arbitrageurs would rush into these transactions, thus closing the price gap at different locations.

Significance of Derivatives

1. It helps in improving price discovery based on actual valuations and expectations.
2. It enables the transfer of various risks from those who are exposed to risk but have a low risk appetite to participants with a high-risk appetite. For example, hedgers want to give away the risk whereas traders are willing to take risk.
3. It enables the shift of speculative trades from the unorganised market to the organised market. Risk management mechanism and surveillance of activities of various participants in the organised space provide stability to the financial system.

A **Model Risk Disclosure Document** is issued by the members of Exchanges and contains important information on trading in Equities and F&O Segments of exchanges. All prospective participants should read this document before trading on Capital Market/Cash Segment or F&O segment of the Exchanges.

<https://chatgpt.com/share/68f335a9-e394-8012-bcce-cbd29af6288a>

CHAPTER 2: UNDERSTANDING THE INDEX

An index is a portfolio of securities that represent a particular market or a portion of a market. Financial indices are created to measure price movement of stocks, bonds, T-bills and other type of financial securities.

Significance:

1. A stock index is an indicator of the performance of the overall market or a particular sector.
2. It serves as a benchmark for portfolio performance - Managed portfolios, belonging either to individuals or mutual funds, use the stock index as a measure for evaluation of their performance.
3. It is used as an underlying for financial application of derivatives – Various products in OTC and exchange traded markets are based on indices as the underlying asset.

Market Capitalisation Weighted Index:

In this method of calculation, each stock is given a weight according to its market capitalisation. So higher the market capitalisation of a constituent, higher is its weight in the index. Market capitalisation is the market value of a company, calculated by multiplying the total number of shares outstanding to its current market price. *Popular indices in India, Sensex and Nifty, were earlier designed on market capitalisation weighted method.*

Free-Float Market Capitalisation Index:

The one available for immediate trading is categorised as free float. And, if we compute the index based on weights of each security based on free float market cap, it is called free float market capitalisation index. A majority of the stock indices globally, over a period of time, have moved to free float basis, including the Indian equity indices - Sensex, Nifty and SX40.