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NEED/IMPORTANCE OF THE STUDY

STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESIS (ES)

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RESULTS & DISCUSSION

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CONCLUSIONS

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HISTORICAL DEVELOPMENT OF FINANCIAL DERIVATIVES AND ITS CURRENT POSITION IN INDIAN DERIVATIVE MARKET

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ABSTRACT

The innovative practices always catch-up the eyes of concerned people where ideas and innovation become the hallmark of progress. During the past decade, India has witnessed the multiple growths in the volume of international trade and business due to the wave of globalization and liberalization all over the world. As a result, the demand for the international money and financial instruments increased significantly at the global level. In this respect, change in exchange rates, interest rates and stock prices of different financial markets have increased the financial risk to the corporate world. Adverse changes in the macroeconomic factors have even threatened the very survival of business world. It is, therefore, to manage such risk, the new financial instruments have been developed in the financial markets, which are also popularly known as financial derivatives,. And even capital market is no far away from this, whereas financial derivatives have given drastic change in the growth of the financial market. Indian markets have recently thrown open a new avenue for retail investors and traders to participate derivatives. The key role and purpose behind introducing derivatives is to minimize or eliminate price risk through hedging. In India, the emergence and growth of derivatives market is relatively a recent phenomenon. Since its inception in June 2000, derivatives market has exhibited exponential growth both in terms of volume and number of contract traded. The market turnover has grown from Rs.2,365 Cr. in 2000-2001 to Rs. 5,56,06,453.39 Cr. in 2014-15. Rs.1,70,82,696.64 Cr. up to July (2015-16). Within a short span of fifteen years, derivatives trading in India has surpassed cash segment in terms of turnover and number of traded contracts. This paper tries to encompass the historical development on the financial derivatives market in India and categories of derivatives, the status of Indian derivative market and derivative product traded at BSE and NSE.

KEYWORDS

derivatives, national stock exchange, exchange rate, financial crisis, forward, futures, index options, notional value underlying asset, options, leverage, risk management, swaps.

INTRODUCTION

New ideas and innovations have always been the hallmark of progress made by mankind. At every stage of development, there have been two core factors that drive man to ideas and innovation. These are increasing return and reducing risk, in all facets of life. The financial markets are no different. It is widely believed in financial world that the most significant milestone in financial innovation is achieved with the issuance and trading of derivatives. The endeavour has always been to maximize returns and minimize risk. A lot of innovation goes into developing financial products centered on these two factors. It has spawned a whole new area called financial engineering. Derivatives are used for variety of purposes, but, perhaps, the most important is hedging. Hedging involves transfer of market risk-the possibility of sustaining losses due to unforeseen unfavorable price changes. With the world embracing the derivatives trading on a large scale, the Indian market obviously cannot remain aloof, especially after liberalisation derivatives are among the forefront innovations in the financial markets and aim to increase return and reduce risk.

Every investor wants to multiply his investments is willing to assume different measures of risk to achieve his target. Secure trading positions and increased profits are often the driving forces behind all trading strategies. Coupled with sounds information on market movements, futures and options can provide a custom made solution for ever investor. Future and Option (F&O's) can be used for maximizing returns as well as minimizing losses. However, it must be remembered that incorrect information on the market can bring in unlimited losses for the investor. F&O's are effective instruments for hedging risks, speculating and price discovery. In India, derivative market making is primarily the province of Indian private and foreign banks, with public sector banks lagging in this area. Similarly, credit derivatives, the fastest growing segment of the market globally, are absent in India and require regulatory action if they are to develop. As Indian derivatives markets grow more sophisticated, greater investor awareness will become essential. In addition, institutions will need to devote more resources to develop the business processes and technology necessary for derivatives trading. India's experience with launch of equity derivatives market has been extremely positive, by world standards. NSE is now one of the prominent exchanges amongst all emerging markets, in terms of equity derivatives turnover. There is an increasing sense that the derivatives market is playing a major role in shaping growth of capital market.

The present study attempts to discuss the genesis of derivatives trading by tracing its historical development along with their economic benefits, types, regulation and policy developments, trend & growth, future prospects and challenges of derivative market in India.

OBJECTIVES OF THE STUDY

- To study the historical development of derivative market in India
- To analyze the categories of derivatives
- To study the scope or uses of financial derivatives
- To find out the current scenario of derivatives in India
- To know the regulation of derivatives trading in India
- To find out the derivative product traded at BSE and NSE
- To study the status of Indian derivative market

RESEARCH METHODOLOGY

The present study is largely based on the available secondary data. The statistical data regarding growth of the derivative markets was available from various websites, books and journals. The study is organized into five sections. Section - I deals with the concept, features, definition, and objectives. Section- II discuss the types and classification and distinction of derivatives in Indian market with diagrams. Section - III has been devoted to a discussion of evolution and growth of derivatives market, and regulation and policy development. Section - IV discusses the statistical information (data) and the last Section - V includes summary and concluding remarks.

SECTION-I

CONCEPT OF FINANCIAL DERIVATIVES

The derivatives originate in mathematics and refer to a variable which has been derived from another variable. A derivative is a financial product which has been derived from another financial product or commodity. The derivatives do not have independent existence without underlying product and market. Derivatives are contracts which are written between two parties for a easily marketable assets. Derivatives are also known as deferred delivery or deferred payment instruments. Since financial derivatives can be created by means of a mutual agreement, the types of derivative products are limited only by imagination and so there is no definitive list of derivative products.

DERIVATIVES

The term 'derivatives, refers to a broad class of financial instruments which mainly include *options* and *futures*. They do not have worth of their own and derive their value from the claim they give to their owners to own some other financial assets or security. A simple example of derivative is butter, which is derivative of milk. The price of butter depends upon price of milk, which in turn depends upon the demand and supply of milk. *The general definition of derivatives means to derive something from something else.* Some other meanings of word derivatives are:

a) derived function: the result of mathematical differentiation; the instantaneous change of one quantity relative to another; $\frac{df(x)}{dx}$

b) derivative instrument: A derivative is an instrument which derives its value from another security,

(linguistics) a word that is derived from another word; "electricity" is a derivative of 'electric'. It has no independent value of its own but derives its value from the value of an underlying asset. This underlying asset could be a stock, index, interest rate, commodity price etc. When a person buys derivative, he buys only a contract and not assets. If it is a commodity it is called commodity derivative, if it is a security it is called financial derivative.

DEFINITION OF FINANCIAL DERIVATIVES

A derivative is a financial product which has been derived from another financial product or commodity.

D.G. Gardener defined the derivatives as "A derivative is a financial product which has been derived from market for another product".

The Securities Contract Regulation Act (SCRA) 1956 defines "derivative" as under section 2(ac). As per this "Derivative" includes;

a) "a security derived from a debt instrument, share loan, whether secured or unsecured, risk instrument or contract for differences or any other form of security".

b) " a contract which derives its value from the prices or index of prices of underlying securities".

UNDERLYING ASSET IN A DERIVATIVES CONTRACT

As defined above, its value is entirely derived from the value of the underlying asset. The underlying asset may assume many forms:

(i) Commodities including grain, coffee beans, orange juice;
(ii) Precious metals like gold & silver;
(iii) Foreign exchange rates or currencies;
(iv) Bonds of different types, including medium to long term negotiable debt, securities issued by governments, companies etc;
(v) Shares and share warrants of companies traded on recognized stock exchanges and stock index;
(vi) Short term securities such as T-bills;
(vii) Over the counter (OTC) money market products such as loans or deposits.

(Over–the-counter security is a security which is not traded on an exchange, usually due to inability to meet listing requirements. For such securities, broker/dealers negotiate directly with one another over computer networks and by phone. In OTC market security transactions are made via telephone and computer rather than on floor of exchange).

PARTICIPANTS OF DERIVATIVE MARKET

The participants of Derivative Market are broadly classified into three Groups:

1. Hedgers:- Hedgers use derivatives markets to reduce or eliminate the risk associated with price of an asset and they want to avoid exposure to adverse movements in the price of an asset. Majority of the participants in derivatives market belongs to this category. The transaction they undergo is known as Hedging.

2. Speculators:- are traders who buy/sell the assets only to sell/buy them back profitably at a later point in time. They use derivatives to bet on the future direction of the price of an asset and take a position in order to make a quick profit. They are risk takers who want to take advantage of future price movement of an asset. They are ready to face what hedgers want to avoid.

3. Arbitrageurs:- are traders, they watch the spot and future markets. They are interested in taking advantage of discrepancy between the prices in two different markets Whenever they see a mismatch in prices of two markets, they enter into a buy transaction in one and a sell transaction in other market so as to enjoy profit arising out of differences in prices.

USES OF FINANCIAL DERIVATIVES

Derivatives are supposed to provide some services and these services are used by investors. Some of the uses and applications of financial derivatives can be enumerated as following:

1. Management of risk: One of the most important services provided by the derivatives is to control, avoid, shift and manage efficiently different types of risk through various strategies like hedging, arbitraging, spreading etc. Derivative assist the holders to shift or modify suitable the risk characteristics of the portfolios. These are specifically useful in highly volatile financial conditions like erratic trading, highly flexible interest rates, volatile exchange rates and monetary chaos.

2. Measurement of Market: Derivatives serve as the barometers of the future trends in price which result in the discovery of new prices both on the spot and future markets. They help in disseminating different information regarding the future markets trading of various commodities and securities to the society which enable to discover or form suitable equilibrium price in the markets. As a result, they assist in appropriate and superior allocation of resources in the society.

3. Efficiency in trading: Financial derivatives allow for free trading of risk components and that leads to improving market efficiency. Traders can use a position in one or more financial derivatives as a substitute for a position in underlying instruments. In many instances, traders find financial derivatives to be a more attractive instrument than the underlying security. This is mainly because of the greater amount of liquidity in the market offered by derivatives as well as the lower transaction costs associated with trading a financial derivative as compared to the costs of trading the underlying instruments in cash market.

4. Speculation and arbitrage: Derivatives can be used to acquire risk, rather than to hedge against risk. Thus, some individuals and institutions will enter into a derivative contract to speculate on the value of the underlying asset, betting that the party seeking insurance will be wrong about the future value of the underlying asset. Speculators look to buy an asset in the future at a low price according to a derivative contract when the future market price is high, or to sell an asset in the future at a high price according to derivative contract when the future market price is low.

5. Price discovery: Another important application of financial derivatives is the price discovery which means revealing information about future cash market prices through the future market. Derivative markets provide a mechanism by which diverse and scattered opinions of future are collected into one readily discernible number which provides a consensus of knowledgeable thinking.

6. Hedging: Hedge or mitigate risk in the underlying, by entering into a derivative contract whose value moves in the opposite direction to their underlying position and cancels a part or all of it out. Hedging also occurs when an individual or institution buys an asset and sells it using a future contract. They have access to the asset for a specified amount of time, and can then sell it in the future at a specified price according to the futures contract of course, this allows them the benefit of holding the asset.

7. Price stabilization function: Derivative market helps to keep a stabilizing influences on spot prices by reducing the short term fluctuations. In other words, derivatives reduces both peak and depths and lends to price stabilization effect in the cash market for underlying asset.

8. Gearing of value: Special care and attention about financial derivatives provide leverage (or gearing), such that a small movement in the underlying value can cause a large difference in the value of the derivative.

9. Develop the complete markets: It is observed that derivative trading develop the market towards "complete markets". The complete market concept refers to that situation where no particular investors are better than others, or patterns of returns of all additional securities are spanned by the already existing securities in it, or there is no further scope of additional security.

10. Encourage competition: The derivatives trading encourage the competitive trading in the market, different risk taking preference at market operators like speculators, hedgers, traders, arbitrageurs etc. resulting in increase in trading volume in the country. They also attract young investors, professionals and other experts who will act as catalysts to the growth of financial market.

11. Liquidity and reduce transaction cost: As we see that in derivatives trading no immediate full amount of the transaction is required since most of them are based on margin trading. As a result, large number of traders, speculators, arbitrageurs operates in such markets. So, derivatives trading enhance liquidity and reduce transaction cost in the markets of underlying assets.

12. Other uses: The other uses of derivatives are observed from the derivatives trading in the market that the derivatives have smoothen out price fluctuations, squeeze the price spread, integrate price structure at different points of time and remove gluts and shortage in the markets. The derivatives also assist the investors, traders and managers of large pools of funds to device such strategies so that they may make proper asset allocation increase their yields and achieve other investment goals.

CRITICISMS OF DERIVATIVES

Options offer the potential for huge gains and huge losses. While the potential for gain is alluring, their complexity makes them appropriate for only sophisticated investors with a high tolerance for risk.

1. When a derivative fails to help investors achieve their objectives, the derivative itself is blamed for the ensuing losses when, in fact, it's often the investor who did not fully understand how it should be used, its inherent risk, etc.
2. Some view derivatives as a form of legalized gambling enabling users to make bets on the market. However, derivatives offer benefits that extend beyond those of gambling by making markets more efficient, helping to manage risk and helping investors to discover asset prices.

Lifespan - Derivatives are "time-wasting" assets. As each day passes and the expiration date approaches, you lose more and more "time" premium and the option's value decreases.

Direction and Market Timing - In order to make money with many derivatives, investors must accurately predict the direction in which the market or index will move (up or down) and the minimum magnitude of the move during a set period of time. A mistake here almost guarantees a substantial investment loss.

SECTION II

TYPES AND CLASSIFICATION OF DERIVATIVES

Derivatives can be categorized many ways, based on the markets where they trade, based on the underlying asset and based on the product feature etc. some ways of classification are following:

(I) On the basis of linear and non-linear: On the basis of this classification the financial derivatives can be classified into two big class namely linear and non-linear derivatives:

(1) Linear derivatives: Those derivatives whose Over-the-counter (OTC) traded derivative: These values depend linearly on the underlying value are called linear derivatives. They are following:

(i) Forwards (ii) Futures (iii) Swaps

(2) Non-linear derivatives: Those derivatives whose value is a non-linear function of the underlying are called non-linear derivatives. They are following:

(i) Options (ii) Convertibles (iii) Equity linked bonds (iv) Reinsurance

(II) On the basis of financial and non-financial: On the basis of this classification the derivatives can be classified into two category namely financial derivatives and non-financial derivatives.

(1) Financial derivatives: Those derivatives which are of financial nature are called financial derivatives. They are following:

(i) Forwards (ii) Futures (iii) Options (iv) Swaps

The above financial derivatives may be credit derivatives, forex, currency fixed-income, interest, insider trading and exchange traded.

(2) Non-financial derivatives: Those derivatives which are not of financial nature are called non-financial derivatives. They are following:

(i) Commodities (ii) Metals (iii) Weather (iv) Others

(III) On the basis of market where they trade: On the basis of this classification, the derivatives can be classified into three categories namely; (1) OTC traded derivatives, (2) exchange-traded derivative and (3) common derivative.

(1) The OTC derivative market is the largest market for derivatives and largely unregulated with respect to disclosure of information between parties. They are following:

(i) Swaps (ii) Forward rate agreements (iii) Exotic options (iv) Other exotic derivative

(2) Exchange traded derivative: A derivatives exchange is a market where individual trade standardized contracts that have been defined by the exchange. Derivative exchange act as an intermediary to all related transactions and takes initial margin from both sides of the trade to act as a guarantee. They may be followings:

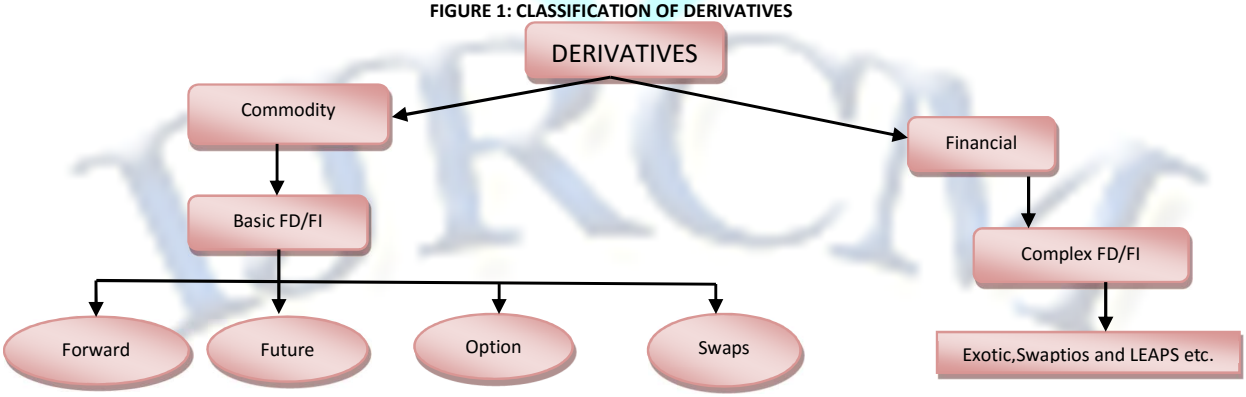
(i) Futures (ii) Options (iii) Interest rate (iv) Index product (v) Convertible (vi) Warrants vii) Others

(3) Common derivative: These derivatives are common in nature/trading and classification. They are following:

(i) Forwards (ii) Futures (iii) Options (iv) Binary options (v) Warrant (vi) Swaps

As aforesaid, this paper restricts itself only to Forward, futures, options and SWAPS in commodities and does not discuss the other kinds of derivatives.

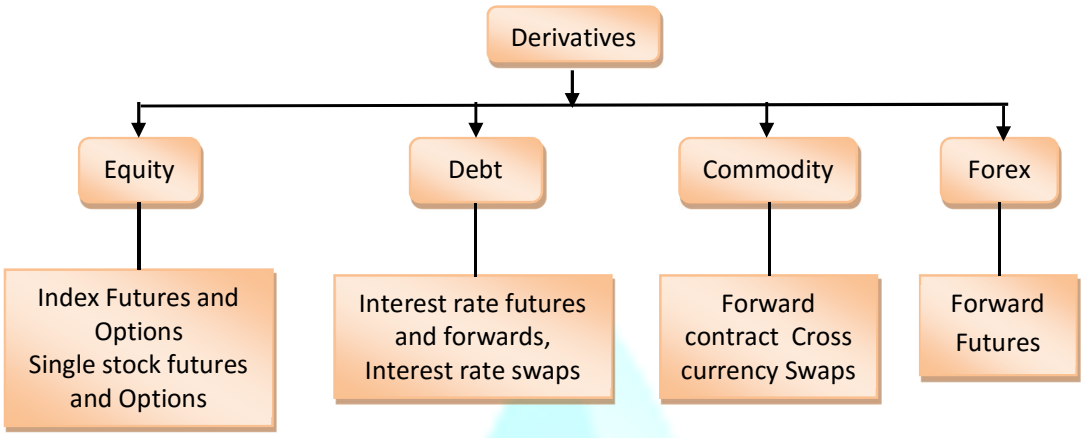
FIGURE 1: CLASSIFICATION OF DERIVATIVES



CLASSIFICATION OF DERIVATIVES CONTRACTS IN INDIA

The Indian financial market woke up to the new generation of financial instrument and the Indian derivatives markets‟ Odyssey in modern times commenced with FOREX derivatives in 1997 has also seen the introduction of many derivatives on different underlying. Currently the following contracts are allowed for trading in Indian markets.

FIGURE 2: DERIVATIVE CONTRACTS TRADED IN INDIA



FORWARD CONTRACTS

It is an agreement between two parties to buy or sell an asset at a certain date in future at a predetermined price. The promised asset may be currency, commodity, instrument like shares / debentures etc. In case of a forward contract the price which is paid/ received by the parties is decided at the time of entering into contract. It is simplest form of derivative contract mostly entered by individual in day to day life.

The holder of a long (short) forward contract has an agreement to buy (sell) an asset at a certain time in the future for a certain price, which is agreed upon today. The buyer (or seller) in a forward contract:

- Acquires a legal obligation to buy (or sell) an asset (known as the underlying asset)
- At some specific future date (the expiration date)
- At a price (the forward price) which is fixed today.

FEATURES OF FORWARD CONTRACT

1. Bilateral Contract :-Forward contract is a bilateral contract between a buyer and a seller hence it is subject to counter-party risk.
2. Over The Counter Trading (OTC) :-Forward contracts are private contracts hence traded over the counter and not in exchanges. The contract can be modified as per the requirements of parties.
3. Custom Designed :- Forward contract is a custom designed contract between two parties. It contains features in terms of size of contract, date of expiry, type and quality of asset etc.
4. Physical Delivery :-There is no physical delivery of assets at the time of entering the contract. Physical delivery takes place only on expiry date.
5. Settlement At Maturity :-Money is exchanged only on the maturity as stated in the contract. The asset must be delivered on maturity date on receipt of payment.
6. Need For Intermediary :-Mostly parties enter into a forward contract with the help of some intermediary. It can be a bank or financial institution or any other party.

LIMITATIONS OF FORWARD CONTRACT

1. Since these contracts are customised, they are non-tradable.
2. There is counter party risk. Default by any one party puts another party in trouble.

There are three authorities, which regulate trading in forward contracts in India.

- Recognised Association
- Forward Market Commission (FMC)
- Central Government

FUTURE CONTRACTS

A future contract is an agreement between two parties to buy or sell an asset at a certain time in future, at a certain price and place. Future contracts are normally traded on an exchange which sets the certain standardized norms for trading in futures contracts. A future contract may be offset prior to maturity by entering into an equal and opposite transaction. Let us take a closer look at the working of an exchange traded futures contract.

WORKING OF FUTURES

The clauses of a futures contract, traded on the exchange, are generally standardized in respect of the following items:

- Quantity of the underlying asset
- Quality of the underlying (not required in financial futures)
- Date and month of delivery
- The units of price quotation (not the price itself) and the minimum change in price (tick-size)
- Location of settlement

FEATURES OF FUTURE CONTRACT

1) Exchange Traded :-Future Contracts are generally traded on an exchange. The exchanges provide a mechanism of guarantee to honor the contract. So there is secondary market for futures.
2) Standardized :-Future contracts are highly standardized and legally enforceable. There is lack of flexibility.
3) Types Of Future :-Future contracts can be classified into two:-
   a) Commodity future in which underlying asset is a commodity
   b) Financial future in which the underlying asset is a security or bond.
4) Transparency :-The contracts enjoy a fair degree of transparency. The terms and conditions are published by exchanges.
5) Down Payment :-In future contracts, the contracting parties have to deposit a certain percentage of contract price called as Margin Money with the exchange. It acts as a collateral to support the contract.
6) Delivery of Asset:-In future contract the parties only exchange the difference between the future price and the spot price prevailing on the date of maturity.
7) Settlement :-A future contract is always settled daily, irrespective of maturity date. It is market to market on a daily basis. The difference between future price and spot price on a day constitutes either profit or loss.
8) The futures prices are expressed in currency units, with a minimum price movement called a tick size.

The quality of positive economic theory explains about its ability with precision clarity and simplicity. The main characteristics of futures explained by a good economic theory are as follows:

1. There is a limited number of actively traded products with futures contracts.
2. The trading unit is large and indivisible.
3. It has no more than maturity of 3 months.
4. The success ratio of new contract is about 25% in the world financial markets.
5. Futures are seldom used by farmers.
6. There are both commercial and non-commercial users of futures contract in interest rates and foreign exchange.
7. The main use of the future by the commercial users is to hedge corresponding cash and forward positions.
8. The positions of the non-commercial users almost entirely speculative positions.
9. In foreign exchange futures, the positions of the commercials users are unbalanced.

There are different types of contracts in financial futures which are traded in the various futures market of the world. The followings are the important types of financial futures contract:

1. Stock future or equity futures
2. Stock index futures
3. Currency futures
4. Interest rate futures

SINGLE STOCK FUTURES

Single stock future is a type of futures contracts between two parties to exchange a specified number of stocks in a company for a agreed today (the future price is the strike price) with delivery occurring at a specified future date, the delivery date. The Contracts are traded on futures exchanges. the party agreeing to take delivery of the underlying stock in future is buyer of contract, is said to be long and party agreeing to deliver the stock in future is seller of the contract, is said to be short. The expectations of the parties the buyer hopes or expects that the price is going to increase, while the seller hopes or expects that the price is going to decrease.

ADVANTAGES OF FORWARD AND FUTURE CONTRACT

1) Protection Against Price Fluctuations :-Parties to contract can protect themselves against the risk of heavy fluctuations in price of underlying assets.
2) Flexibility :-Parties to forward contract can modify the agreement as per their convenience.
3) Facilitates Planning:-These contracts facilitates planning to buy / sell assets at the time when they are most required.
4) Bulk Transactions :-The forward / future contracts facilitates bulk purchase or sale of assets at short notice in advance of delivery.
5) Portfolio Management :-Portfolio managers can advice their clients for future contracts to avoid heavy fluctuations in prices.
6) Development Of Financial Market :-Future and forward contracts facilitates the growth and development of financial markets - Capital Markets as well as Money Markets.
7) Cash Management :-In forward contract payment is done at maturity on delivery of asset. In future contract only margin money is to be paid. So these contracts do not require payment of purchase price at the time of contract.

SETTLEMENT

A futures contract that is not liquidated before its expiry may be settled in either of the following ways:

1. **Physical Delivery:** This involves the delivery of the underlying asset by the seller to the buyer in accordance with the rules of the Exchange. However, the exchange generally discourages such physical delivery through the exchange as it makes the exchange vulnerable to arbitration in case of default by either of the parties.
2. **Cash Settlement:** Cash settlement is an important advance and has broadened the reach of derivatives to products like stock indices where physical delivery is not possible. In cash settlement, the underlying asset is not physically delivered on the expiration of the contract. Instead all open positions are settled by payment of cash based on the difference between the final settlement price and the previous day's settlement price.

DISTINCTION BETWEEN FUTURES AND FORWARDS

Forward contracts are often confused with futures contracts. The confusion is primarily because both serve essentially the same economic functions of allocating risk in the presence of future price uncertainty. However futures are a significant improvement over the forward contracts as they eliminate counterparty risk and offer more liquidity.

Futures	Forwards
Trade on an organized exchange	OTC in nature
Standardized contract terms	Customised contract terms
hence more liquid	hence less liquid
Requires margin payments	No margin payment
Follows daily settlement	Settlement happens at end of period

OPTIONS

"An option is a particular type of a contract between two parties where one person gives the other person the right to buy or sell a specific asset at a specified price within a specified time period." It gives the option buyer the right but not the obligation to buy or sell an underlying at a specific price on or before a certain date. Today, options are traded on a variety of instruments like commodities, stock, index, futures, bank times deposits, interest rate, treasury securities, stock, stock indexes, petroleum products, food grains, metals etc.

The person who buys an option is normally called the buyer or holder. Conversely, the seller is known as the seller or writer. The right to buy an option is called a call option, the price which the option holder pays for buying the option is called the option price or the premium and the price at which the option is exercised is called the strike price or the exercise price. Options in India are traded over the exchange as well as OTC. The main characteristics of options are following:

1. Options holders do not receive any dividend or interest.
2. Option yield only capital gains.
3. Options holder can enjoy a tax advantages.
4. Options are traded on OTC and in all recognized stock exchanges.
5. Options holders can control their rights on the underlying assets.
6. Options create the possibility of gaining a windfall profit.
7. Options holder can enjoy a much wider risk-return combinations.
8. Options can reduce the total portfolio transaction costs.
9. Options enable with the investors to gain a better returns with a limited amount of investment.

A call which is the right to buy shares under a negotiable contract and which do not carry any obligation. The buyers have the right to receive the delivery of assets are known as 'call option.'

In this option the owner has the right to sell the underlying asset under the negotiable contract. Put option holder has the right to receive the payment by surrendering the asset.

The writer of an option is a stock broker, member or a security dealer. The buyer of an option pays a price depending on the risk of underlying security and he as an investor or a dealer or trader.

BASIC FEATURES OF OPTIONS

1. The option is exercisable only by the owner namely the buyer of the option.
2. The owner has limited liability.
3. Owners of options have no voting rights and dividend right.
4. Options have high degree of risk to the option writers.
5. Options involving buying counter positions by the option sellers.
6. Flexibility in investors needs.
7. No certificates are issued by the company.
8. Options are popular because they allow the buyer profits from favorable movement in exchange rate.

Options can be *classified into different categories* like:

(i) Call options
(ii) Put options
(iii) Exchange traded options
(iv) OTC traded options
(v) American options
(vi) European options
(vii) Commodity options
(viii) Currency options
(ix) Stock options
(x) Stock Index options

Call option - A call option gives the option holder a right to buy an asset at a certain price within a specified period of time. A call option buyer is said to have a long position.

Put option - A put option gives the option holder a right to sell an asset at a certain price within a specified period of time. A put option holder is said to have a short position.

Stock index option: Stock index option is a type of option. The option may be tied to the price of broad based indexes or narrow based indexes. A stock index option provides the right to trade a specific stock index at a specified price by a specified expiration date. A call option on a stock index gives you right to buy the index, and a put option on a stock index give you the right to sell the index option on stock indexes are similar to exchange traded funds (ETFs), If an index option is exercised before the close of the market, the buyer of the option will in-or out-of-the -money for an additional amount equal to the difference between the closing price and the exercise price. If the market closes above the intra -day exercise price, then the option will accrue an additional loss, and if the market closes below the intra-day exercise price, the option will accrue an additional gain. For this reason, index options are typically closed out after the market has closed.

Leverage - As in futures, one of the biggest advantages of using an option is the leverage it gives to the investor. By making an investment in the form of a small premium, the buyer controls a much larger stake.

Illustration - If the stock of Reliance is trading at Rs.1000, it would take Rs.1,00,000 to buy 100 shares of the stock. Instead of buying the stock, Mr.A purchases a call option with a strike price of 100 with expiration after one month. Lets say the premium he pays is Rs.10 for a share, i.e. Rs.1000 for buying the right to buy 100 shares. Thus, his total investment is Rs.1000.

Lets suppose that the stock rises to Rs.1, 100 after a month. If Mr. A had purchased 100 shares, the profit that he would have made is Rs.10, 000 (difference between Rs.1,10,000 (Rs.1,100 x 100) and Rs.1,00,000), i.e. a profit of 10%. However, by virtue of the call option bought by Mr. A, on exercising his option of buying the stock for Rs1,00,000 and selling the same for Rs.1,10,000, the profit that he will be making will be Rs.9,000 (difference between investment of Rs.1000 and the profit from sale), i.e. a profit of 900%.

Option Pricing: Option price is the price which the option holder pays to the option writer for buying a particular option . Theoretically, it is the supply and demand in the secondary market, which drive the option price. Greater the demand for the underlying higher will be the option price and vice versa. To understand option pricing, it becomes necessary to define certain terms.

Intrinsic value of an option is the amount of money that could currently be realised by exercising the option at its strike price. An option is said to have an intrinsic value when the option is in-the-money. When an option is at-the-money, the intrinsic value is zero.

Time value is the amount of money, which the option holder is willing to pay and the option writer is willing to accept, over and above any intrinsic value of the option. Time value of an option declines as the option approaches maturity because the volatility in the price of the underlying reduces.

Reducing option price to a formula it can be said that :

Option price/premium = Intrinsic value + time value.

In addition to the intrinsic value and time value, price of an option depends on the price of the underlying, strike price, volatility in the price of the underlying and risk free rate of interest.

Futures	Options
Exchange traded, with novation	Same as futures.
Exchange defines the product	Same as futures.
Price is zero, strike price moves	Strike price is fixed, price moves.
Price is zero	Price is always positive.
Linear payoff	Nonlinear payoff
Both long and short at risk	Only short at risk.

SWAPS CONTRACT

A swap is an agreement between two or more people or parties to exchange sets of cash flows over a period in future. Swaps are agreements between two parties to exchange assets at predetermined intervals. Swaps are generally customerised transactions. The swaps are innovative financing which reduces borrowing costs, and to increase control over interest rate risk and forex exposure. The swap includes both spot and forward transactions in a single agreement. Swaps are at the centre of the global financial revolution. Swaps are useful in avoiding the problems of unfavorable fluctuation in forex market. The parties that agree to the swap are known as counter parties. The two commonly used swaps are interest rate swaps and currency swaps.

Interest rate swaps- which entail swapping only the interest related cash flows between the parties in the same currency.

Currency swaps- entail swapping both principal and interest between the parties, with the cash flows in one direction being in a different currency than the cash flows in the opposite direction.

SECTION-III

HISTORICAL DEVELOPMENT OF DERIVATIVE MARKET IN INDIA

Derivatives in India are not new. Farmers used to enter into Forward contracts to hedge risk against their crops since long. The emergence and growth of derivative market has been witnessed by increased risk in the financial market. These were simple contracts developed to meet the needs of farmers and were basically a means of reducing risk. It has been traditionally observed that Indians tend to resort to safe ways of making money. For ex: keeping money in bank deposits, PPF, NSC etc. However, that outlook is slowly changing now people have started investing money in Derivatives.

Derivative markets in India have been in existence in one form or the other for a long time. In the area of commodities, the Bombay Cotton Trade Association started future trading way back in 1875. This was the first organized futures market. Then Bombay Cotton Exchange Ltd. in 1893, Gujarat Vyapari Mandall in 1900,

Calcutta Hesstan Exchange Ltd. in 1919 had started future market. After the country attained independence, derivative market came through a full circle from prohibition of all sorts of derivative trades to their recent reintroduction. In 1952, the government of India banned cash settlement and options trading, derivatives trading shifted to informal forwards markets. In recent years government policy has shifted in favor of an increased role at market based pricing and less suspicious derivatives trading. The first step towards introduction of financial derivatives trading in India was the promulgation at the securities laws (Amendment) ordinance 1995. It provided for withdrawal at prohibition on options in securities. The last decade, beginning the year 2000, saw lifting of ban of futures trading in many commodities. Around the same period, national electronic commodity exchanges were also set up. Derivatives trading commenced in India in June 2000 after SEBI granted the final approval to this effect in May 2001 on the recommendation of L. C Gupta committee. Securities and Exchange Board of India (SEBI) permitted the derivative segments of two stock exchanges, NSE and BSE, and their clearing house/corporation to commence trading and settlement in approved derivatives contracts. Initially SEBI approved trading in index futures contracts based on various stock market indices such as, S&P CNX, Nifty and Sensex. Subsequently, index-based trading was permitted in options as well as individual securities. The more detail about evolution of derivatives are shown in table No.1 with the help of the chronology of the events.

TABLE 1: A CHRONOLOGY OF EVENTS: FINANCIAL DERIVATIVES IN INDIA

Sl. No.	Progress Date	Progress of Financial Derivatives
1	1952	Enactment of the forward contracts (Regulation) Act.
2	1953	Setting up of the forward market commission.
3	1956	Enactment of Securities Contract Regulation Act 1956
4	1969	Prohibition of all forms of forward trading under section 16 of SCRA.
5	1972	Informal carry forward trades between two settlement cycles began on BSE.
6	1980	Khuso Committee recommends reintroduction of futures in most commodities.
7	1983	Govt. ammends bye-laws of exchange of Bombay, Calcutta & Ahmedabad and introduced carry forward trading in specified shares.
8	1992	Enactment of the SEBI Act.
9	1993	SEBI Prohibits carry forward transactions.
10	1994	Kabra Committee recommends futures trading in 9 commodities.
11	1995	G.S. Patel Committee recommends revised carry forward system.
12	14th Dec. 1995	NSE asked SEBI for permission to trade index futures
13	1996	Revised system restarted on BSE.
14	18th Nov. 1996	SEBI setup LC Gupta committee to draft frame work for index futures
15	11th May 1998	LC Gupta committee submitted report
16	1st June 1999	Interest rate swaps/forward rate agreements allowed at BSE
17	7th July 1999	RBI gave permission to OTC for interest rate swaps/forward rate agreements
18	24th May 2000	SIMEX chose Nifty for trading futures and options on an Indian index
19	25th May 2000	SEBI gave permission to NSE & BSE to do index futures trading
20	9th June 2000	Equity derivatives introduced at BSE
21	12th June 2000	Commencement of derivatives trading (index futures) at NSE
22	31st Aug. 2000	Commencement of trading futures & options on Nifty at SIMEX
23	1st June 2001	Index option launched at BSE
24	Jun-01	Trading on equity index options at NSE
25	Jul-01	Trading at stock options at NSE
26	9th July 2001	Stock options launched at BSE
27	Jul-01	Commencement of trading in options on individual securities
28	1st Nov. 2001	Stock futures launched at BSE
29	Nov. 2001	Commencement of trading in futures on individual security
30	9th Nov. 2001	Trading of Single stock futures at BSE
31	Jun-03	Trading of Interest rate futures at NSE
32	Aug. 2003	Launch of futures & options in CNX IT index
33	13th Sep. 2004	Weekly options of BSE
34	Jun-05	Launch of futures & options in Bank Nifty index
35	Dec. 2006	'Derivative Exchange of the Year by Asia risk magazine
36	Jun-07	NSE launches derivatives on Nifty Junior & CNX 100
37	Oct. 2007	NSE launches derivatives on Nifty Midcap -50
38	1st Jan. 2008	Trading of Chhota (Mini) Sensex at BSE
39	1st Jan.	Trading of mini index futures & options at NSE
40	3rd March 2009	Long term options contracts on S&P CNX Nifty index
41	NA	Futures & options on sectoral indices (BSE TECK, BSE FMCG, BSE Metal, BSE Bankex & BSE oil & gas)
42	29th Aug. 2008	Trading of currency futures at NSE
43	Aug. 2008	Launch of interest rate futures
44	1st Oct. 2008	Currency derivative introduced at BSE
45	10th Dec. 2008	S&P CNX Defty futures & options at NSE
46	Aug. 2009	Launch of interest rate futures at NSE
47	7th Aug. 2009	BSE-USE form alliance to develop currency & interest rate derivative markets
48	18th Dec. 2009	BSE's new derivatives rate to lower transaction costs for all
49	Feb. 2010	Launch of currency future on additional currency pairs at NSE
50	Apr. 2010	Financial derivatives exchange award of the year by Asian Banker to NSE
51	Jul-10	Commencement trading of S&P CNX Nifty futures on CME at NSE
52	Oct. 2010	Introduction of European style stock option at NSE
53	Oct. 2010	Introduction of Currency options on USD INR by NSE
54	Jul-11	Commencement of 91 day GOI trading Bill futures by NSE
55	Aug. 2011	Launch of derivative on Global Indices at NSE
56	Sep. 2011	Launch of derivative on CNX PSE & CNX infrastructure Indices at NSE
57	30th March 2012	BSE launched trading in BRICSMART indices derivatives
58	29th Nov 2013	BSE launched currency derivative segment

Source: Compiled from BSE & NSE website

REGULATION OF DERIVATIVES TRADING IN INDIA

The regulatory frame work in India is based on L.C. Gupta Committee report and J.R. Varma Committee report. Derivatives trading commenced in India in June 2000 after SEBI granted the final approval to this effect in May 2001 on the recommendation of L. C Gupta committee. It is mostly consistent with the international organization of securities commission (IUSCO). The L.C. Gupta Committee report provides a perspective on division of regulatory responsibility between the exchange and SEBI. It recommends that SEBI"s role should be restricted to approving rules, bye laws and regulations of a derivatives exchange as also to approving the proposed derivatives contracts before commencement of their trading. It emphasizes the supervisory and advisory role of SEBI. It also suggests establishment of a separate clearing corporation.

DERIVATIVES MARKET IN INDIA

In India, there are two major markets namely National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) along with other Exchanges of India are the market for derivatives. Here we may discuss the performance of derivatives products in Indian market.

DERIVATIVE PRODUCTS TRADED AT BSE

The BSE started derivatives trading on June 9, 2000 when it launched "Equity derivatives (Index futures-sensex) first time. It was followed by launching various products which are shown in table no.2. They are index options, stock options, single stock futures, weekly options, stocks for: Satyam, SBI, Reliance Industries, Tata Steel, Chhota (Mini) Sensex, Currency futures, US dollar-rupee future and BRICSMART indices derivatives. The table No.2 summarily specifies the derivative products and their date of introduction at BSE.

TABLE 2: DERIVATIVE PRODUCTS OF BSE

Sl. No.	Introduction date	Derivative Products
1	9th June 2000	Equity derivatives (Index futures -Sensex)
2	1st June 2001	Index options launched (Index options –sensex)
3	9th July 2001	Stock options launched (Stock option on 109 stocks)
4	9th Nov. 2002	Stock futures launched (Stock futures on 109 Stocks)
5	13th Sep. 2004	Weekly options on 4 Stocks
6	1st Jan. 2008	Chhota (mini) sensex
7	NA	Futures options on sectoral indices (namely BSE TECK, BSE FMCG, BSE metal, BSE Bankex & BSE oil & gas)
8	1st Oct. 2008	Currency derivative introduced (currency futures on US Dollar)
9	30th March 2012	Launched BRICSMART indices derivatives

Source: Compiled from BSE website

DERIVATIVE PRODUCTS TRADED AT NSE

The NSE started derivatives trading on June 12, 2000 when it launched "Index Futures S &P CNX Nifty" first time. It was followed by launching various derivative product which are shown in table no.3. They are index options, stock options, stock future, interest rate, future CNX IT future and options, Bank Nifty futures and options, CNX Nifty Junior futures and options, CNX100 futures and options, Nifty Mid Cap-50 future and options, Mini index futures and options, Long term options. Currency futures on USD-rupee, Defty future and options, interest rate futures, S&P CNX Nifty futures on CME, European style stock options, currency options on USD INR, 91 days GOI T.B. futures, and derivative an global indices and infrastructures indices. The table no.3 presents a description of the types of derivative product traded at NSE and their data of introduction at NSE.

TABLE 3: DERIVATIVE PRODUCTS OF NSE

S. No.	Introduction date	Derivative Products
1	12th June 2000	Index futures –S&P CNX Nifty
2	4th June 2001	Index Options –S&P CNX Nifty
3	2nd July 2001	Stock options –on 233 stocks
4	9th Nov. 2001	Stock futures on 233 stocks
5	23rd June 2003	Interest rate futures –T. Bills & 10 years Bond
6	29th Aug. 2003	CNX IT futures & options
7	13th June 2005	Bank Nifty futures & options
8	1st June 2007	CNX Nifty Junior Futures & Options
9	1st June 2007	CNX 100 futures & options
10	5th Oct. 2007	Nifty midcap –50 futures & options
11	1st Jan. 2008	Mini index futures & options –S&P CNX Nifty Index
12	3rd March 2008	Long term options contracts on –S&P CNX Nifty Index
13	29th Aug. 2008	Currency futures on US Dollar Rupee
14	10th Dec. 2008	S&P CNX Defty Futures & options
15	Aug. 2009	Launch of Interest rate futures
16	Feb. 2009	Launch of currency futures on additional currency pair
17	July 2010	S&P CNX Nifty futures on CME
18	Oct. 2010	Introduction of European style stock options
19	Oct. 2010	Introduction of Currency options on USD INR
20	July 2011 start	91 day GOI Treasury Bill-futures
21	Aug. 2011	Launch of derivatives on global indices
22	Sep. 2011	Launch of derivatives on CNX PSE & CNX Infrastructure indices

Source: Compiled from NSE website.

GROWTH OF INDIAN DERIVATIVES MARKET

The NSE and BSE are two major Indian markets have shown a remarkable growth both in terms of volumes and numbers of traded contracts. Introduction of derivatives trading in 2000, in Indian markets was the starting of equity derivative market which has registered on explosive growth and is expected to continue the same in the years to come. NSE alone accounts 99% of the derivatives trading in Indian markets. Introduction of derivatives has been well received by stock market players. Derivatives trading gained popularity after its introduction in very short time.

If we compare the business growth of NSE and BSE in terms of number of contracts traded and volumes in all product categories with the help of table no.4, table no.5 and table no.12 which shows the NSE traded 730001863 total contracts whose total turnover is Rs.17082696.64 crores in the year 2015-16 in futures and options segment while in currency segment in 15,16,08,602 total contracts have traded whose total turnover is Rs. 9,82,871.84 Crores in same year.

In case of BSE the total numbers of contracts traded are 75,03,405 whose total turnover is Rs.1,94,21,854.8 Crores in the year 2013-14 for all segments. In the above case we can say that the performance of BSE is not encouraging both in terms of volumes and numbers of contracts traded in all product categories. The table no.4, table no.5 and table no.12 summarily specifies the updated figures since 2002-03 to 2015-16 about number of contracts traded and total volumes in all segments.

TABLE 4: BUSINESS GROWTH OF NSE IN FO (FUTURE AND OPTION) SEGMENT

Year	*Total No. of Contracts*	*Total Turnover (Rs. Cr.)*	*Average Daily Turnover (Rs. Cr.)*
2015-16	730001863	17082696.64	262810.72
2014-15	1837041131	55606453.39	228833.14
2013-14	1284424321	38211408.05	152236.69
2012-13	1131467418	31533003.96	126638.57
2011-12	1205045464	31349731.74	125902.54
2010-11	1034212062	29248221.09	115150.48
2009-10	679293922	17663664.57	72392.07
2008-09	657390497	11010482.2	45310.63
2007-08	425013200	13090477.75	52153.3
2006-07	216883573	7356242	29543
2005-06	157619271	4824174	19220
2004-05	77017185	2546982	10107
2003-04	56886776	2130610	8388
2002-03	16768909	439862	1752

Source: Compiled from NSE website.

TABLE 5: BUSINESS GROWTH OF NSE IN CD SEGMENT

Year	*Total No. of Contracts*	*Total Turnover (Rs. Cr.)*	Average Daily Turnover (Rs. Cr.)
2015-16	15,16,08,602	9,82,871.84	15357.37
2014-15	48,06,64,694	30,23,907.67	12,705.49
2013-14	66,01,92,530	40,12,513.45	16,444.73
2012-13	95,92,43,448	52,74,464.65	21,705.62
2011-12	973344132	4674989.91	19479.12
2010-11	749602075	3449787.72	13854.57
2009-10	378606983	1782608.04	7427.53
2008-09	32672768	162272.43	1167.43

Source : Compiled from NSE website.

SECTION-IV

STATISTICAL DATA (INFORMATION)

This section contains the statistical data or information about Indian derivatives markets namely: product wise turnover of FO segment at NSE, product wise turnover of CD segment at NSE, Number of contract traded at NSE in FO segment, number of contracts traded at NSE in CD segment, Average daily transaction at NSE in FO segment, average daily transactions at NSE in CD segment, Product wise turnover of futures at BSE, product wise turnover of options at BSE, number of contract traded at BSE in future segment, number of contract, traded at BSE in option segment and average daily transaction at BSE in all segments.

After analyzing the data given in table no.6, 7, 8, 9, 10, 11, 13, 14, 15, 16, and 17, we can say that they are encouraging growth and developing. Industry analyst feels that the derivatives market has not yet, realized its full potential in terms of growth and trading. Analyst points out that the equity derivative market on the NSE and BSE has been limited to only four product Index-futures, index options and individual stock future and options, which in turn are limited to certain select stock only. Although recently NSE and BSE has added some more products in their derivative segment but still it is far less than the depth and variety of product prevailing across many developed capital markets.

TABLE 6 : PRODUCT WISE TURNOVER OF FO (FUTURE AND OPTION) SEGMENT AT NSE

Year	Index Futures Turnover (cr.)	Stock Returns Turnover (cr.)	Index Options Notional Turnover (cr.)	Stock Options Notional Turnover (cr.)	Total Turnover (cr.)	Average Daily Turnover (cr.)
2015-16	1229547.17	2006849.17	13043817.92	802475.29	17082696.64	262810.72
2014-15	4107215.2	8291766.27	39922663.48	3282552.18	55606453.39	228833.14
2013-14	3083103.23	4949281.72	27767341.25	2409488.61	38211408.05	152236.69
2012-13	2527130.76	4223872.02	22781574.14	2000427.29	31533003.96	126638.57
2011-12	3577998.41	4074670.73	22720031.64	977031.13	31349731.74	125902.54
2010-11	4356754.53	5495756.7	18365365.76	1030344.21	29248221.09	115150.48
2009-10	3934388.67	5195246.64	8027964.2	506065.18	17663664.57	72392.07
2008-09	3570111.4	3479642.12	3731501.84	229226.81	11010482.2	45310.63
2007-08	3820667.27	7548563.23	1362110.88	359136.55	13090477.75	52153.3
2006-07	2539574	3830967	791906	193795	7356242	29543
2005-06	1513755	2791697	338469	180253	4824174	19220
2004-05	772147	1484056	121943	168836	2546982	10107
2003-04	554446	1305939	52816	217207	2130610	8388
2002-03	43952	286533	9246	100131	439862	1752

Source : Compiled from NSE website. upto June 2015.

TABLE 7: PRODUCT WISE TURNOVER OF CD SEGMENT AT NSE

Year	Currency Future Turnover (Rs. Cr.)	Currency Option Notional Turnover (Rs. Cr.)	Total Turnover (Rs. Cr.)	Average Daily Turnover (Rs. Cr.)
2015-16	6,65,843.90	3,17,027.94	9,82,871.84	15,357.37
2014-15	22,47,992.34	7,75,915.32	30,23,907.67	12,705.49
2013-14	29,40,885.92	10,71,627.54	40,12,513.45	16,444.73
2012-13	37,65,105.33	15,09,359.32	52,74,464.65	21,705.62
2011-12	33,78,488.92	12,96,500.98	4674989.91	19479.12
2010-11	32,79,002.13	1,70,785.59	3449787.72	13854.57
2009-10	17,82,608.04	-----	1782608.04	7427.53
2008-09	1,62,272.43	-----	162272.43	1167.43

Source : Compiled from NSE website.

TABLE 8: NUMBER OF CONTRACT TRADED AT NSE IN FO SEGMENT

Year	Index Future No.of Contracts	Stock Future	Index Option No.of Contracts	Stock Option No.of Contracts	Total No.of Contracts
2015-16	47668271	72323271	581936607	28073654	730001863
2014-15	129303044	237604741	1378642863	91479209	1837041131
2013-14	105252983	170414186	928565175	80174431	1284424321
2012-13	96100385	147711691	820877149	66778193	1131467418
2011-12	146188740	158344617	864017736	36494371	1205045464
2010-11	165023653	186041459	650638557	32508393	1034212062
2009-10	178306889	145591240	341379523	14016270	679293922
2008-09	210428103	221577980	212088444	13295970	657390497
2007-08	156598579	203587952	55366038	9460631	425013200
2006-07	81487424	104955401	25157438	5283310	216883573
2005-06	58537886	80905493	12935116	5240776	157619271
2004-05	21635449	47043066	3293558	5045112	77017185
2003-04	17191668	32368842	1732414	5583071	56886776
2002-03	2126763	10676843	442241	3523062	16768909

Source : Compiled from NSE website.

TABLE 9 : NUMBER OF CONTRACT TRADED AT NSE IN CD SEGMENT

Year	Currency Futures No.of Contracts	Currency Options No. of Contracts	Total No. of Contracts
2015-2016	10,21,65,723	4,94,42,879	15,16,08,602
2014-2015	35,55,88,963	12,50,75,731	48,06,64,694
2013-2014	47,83,01,579	18,18,90,951	66,01,92,530
2012-2013	68,41,59,263	27,50,84,185	95,92,43,448
2011-2012	70,13,71,974	27,19,72,158	97,33,44,132
2010-2011	71,21,81,928	3,74,20,147	74,96,02,075
2009-2010	37,86,06,983	-	37,86,06,983
2008-2009	3,26,72,768	-	3,26,72,768

Source : Compiled from NSE website.

TABLE 10: AVERAGE DAILY TRANSACTION AT NSE IN FO SEGMENT

Year	Total no. of Contracts	Total Turnover (Rs. Cr)	Average Daily turnover (Rs. Cr)
2015-16	730001863	17082696.64	262810.72
2014-15	1837041131	55606453.39	228833.14
2013-14	1284424321	38211408.05	152236.69
2012-13	1131467418	31533003.96	126638.57
2011-12	1205045464	31349731.74	125902.54
2010-11	1034212062	29248221.09	115150.48
2009-10	679293922	17663664.57	72392.07
2008-09	657390497	11010482.2	45310.63
2007-08	425013200	13090477.75	52153.3
2006-07	216883573	7356242	29543
2005-06	157619271	4824174	19220
2004-05	77017185	2546982	10107
2003-04	56886776	2130610	8388
2002-03	16768909	439862	1752

Source: Compiled from NSE website

TABLE 11: AVERAGE DAILY TRANSACTION AT NSE IN CD SEGMENT

Year	Total no. of Contracts	Total Turnover (Rs. Cr)	Average Daily turnover (Rs. Cr)
2015-2016	15,16,08,602	9,82,871.84	15,357.37
2014-2015	48,06,64,694	30,23,907.67	12,705.49
2013-2014	66,01,92,530	40,12,513.45	16,444.73
2012-2013	95,92,43,448	52,74,464.65	21,705.62
2011-2012	97,33,44,132	46,74,989.91	19,479.12
2010-2011	74,96,02,075	34,49,787.72	13,854.57
2009-2010	37,86,06,983	17,82,608.04	7,427.53
2008-2009	3,26,72,768	1,62,272.43	1,167.43

Source: Compiled from NSE website.

TABLE 12: BUSINESS GROWTH AT BSE IN ALL SEGMENTS

Year	Total Contracts	Total Turnover (Rs Cr)	Average Daily Turnover (Rs Cr)	Trading Days
2013-14	7503405	19421854.8	78630.99	247
2012-13	150068157	3884370.96	16117.72	241
2011-12	32222825	808475.99	3246.89	249
2010-11	5623	154.33	0.61	255
2009-10	9028	234.06	1.04	224
2008-09	496502	11774.83	48.46	243
2007-08	7453371	242308.41	965.37	251
2006-07	1781220	59006.62	259.94	227
2005-06	203	8.78	0.14	61
2004-05	531719	16112.32	77.09	209
2003-04	143224	5021.81	81.00	62

Source: Compiled from BSE Website

TABLE 13: PRODUCT WISE TURNOVER OF FUTURES AT BSE

Year	Index Futures Turnover (Rs Cr)	Equity Futures Turnover (Rs. Cr.)	Trading Days
2013-14	215647.78	32560.8	247
2012-13	194188.65	21390.6	241
2011-12	178448.83	10215.7	249
2010-11	154.08	0	255
2009-10	96.00	0.3	224
2008-09	11757.22	8.49	243
2007-08	234660.16	7609.24	251
2006-07	55490.86	3515.5	227
2005-06	5.00	0.49	61
2004-05	13599.66	212.85	209
2003-04	3082.63	1680.34	62

Source: Compiled from BSE Website

TABLE 14: PRODUCT WISE TURNOVER OF OPTION AT BSE

Year	Index option Call Turnover (Rs. Cr.)	Index Option Put Turnover (Rs. Cr.)	Equity Option Call Turnover (Rs. Cr.)	Equity option Put Turnover (Rs. Cr.)	Trading days
2013-14	17680872.23	9063791.85	1487.98	298.54	247
2012-13	1967091.23	1812758.37	1367.87	245.32	241
2011-12	200089.57	418252.79	1277.27	191.82	249
2010-11	0	0.25	0	0	255
2009-10	137.76	0	0	0	224
2008-09	6.11	3.01	0	0	243
2007-08	31	7.66	0.21	0.14	251
2006-07	0.06	0	0.16	0.04	227
2005-06	3.2	0	0.09	0	61
2004-05	1470.61	826.62	2.08	0.5	209
2003-04	0	0	139.07	119.77	62

Source: Compiled from BSE Website

TABLE 15: NUMBER OF CONTRACTS TRADED AT BSE IN FUTURE SEGMENT

Year	Index Futures Contracts	Equity Futures Contracts	Trading Days
2013-14	42440004	1958052	247
2012-13	14146668	652684	241
2011-12	7073334	326342	249
2010-11	5613	0	255
2009-10	3744	8	224
2008-09	495830	299	243
2007-08	7157078	295117	251
2006-07	1638779	142433	227
2005-06	89	12	61
2004-05	44630	6725	209
2003-04	103777	33437	62

Source: Compiled from BSE Website

TABLE 16: NUMBER OF CONTRACTS TRADED AT BSE IN OPTIONS SEGMENT

Year	Index Options Call Contracts	Index Options Put Contracts	Equity Options Call Contracts	Equity Options Put Contracts	Trading Days
2013-14	28387467	278474689	5425	39584	247
2012-13	14413028	143044388	3498	15314	241
2011-12	7206514	17569130	39848	7657	249
2010-11	0	10	0	0	255
2009-10	5276	0	0	0	224
2008-09	251	122	0	0	243
2007-08	951	210	9	6	251
2006-07	2	0	5	1	227
2005-06	100	0	2	0	61
2004-05	48065	27210	72	17	209
2003-04	0	0	3466	2544	62

Source: Compiled from BSE Website

TABLE 17: AVERAGE DAILY TURNOVER AT BSE IN ALL SEGMENT

Year	Total Contracts	Total Turnover (Rs. Cr.)	Average Daily Turnover (Rs. Cr.)	Trading Days
2013-14	698497492	127464748	128344.6	247
2012-13	300067817	6884370.9	60828.43	241
2011-12	32222825	808475.99	3246.89	249
2010-11	5623	154.33	0.61	255
2009-10	9028	234.06	1.04	224
2008-09	496502	11774.83	48.46	243
2007-08	7453371	242308.41	965.37	251
2006-07	1781220	59006.62	259.94	227
2005-06	203	8.78	0.14	61
2004-05	531719	16112.32	77.09	209
2003-04	143224	5021.81	81.00	62

Source: Compiled from BSE Website

SECTION – V

SUMMARY AND CONCLUSION

Derivatives are tools for managing risk. Derivatives provide an opportunity to transfer risk, from the one who wish to avoid it; to one, who wish to accept it. India's experience with the launch of equity derivatives market has been extremely encouraging and successful. Financial derivatives have earned a well deserved and extremely significant place among all the financial instruments (products), due to innovation and has revolutionized the landscape. The growth of derivatives in the recent years has surpassed the growth of its counterpart globally.

The total contracts of derivatives and the total turnover of NSE increased from 16768909 and Rs.439862 in 2002-2003 to 730001863 and Rs.17082696.64 crores in the year 2015-16 in futures and options segment. Meanwhile, in the currency segment, it was 32672768 and Rs.162272.43 in 2008-09 to 15,16,08,602 total contracts and total turnover of Rs. 9,82,871.84 Crores in 2015-16. In the case of BSE, the total number of contracts traded increased from 143224 contracts with a total turnover of 5021.81 in 2003-04 to 75,03,405 contracts with turnover of Rs. 1,94,21,854.8 Crores in the year 2013-14 for all segments. It shows the growth of Indian derivative markets and its development in NSE & BSE. There is an increasing sense that the equity derivatives market is playing a major role in shaping price discovery.

India is one of the most successful developing country in terms of a vibrant market for exchange-traded derivatives. Factors like increased volatility in financial asset price, integration of financial markets on an international basis, sophisticated risk management tools, innovations in financial engineering and choices at risk management strategies have been driving the growth of financial derivatives worldwide, and have also fuelled the growth of derivatives here, in India. Finally, we can say that the derivatives play a very significant role in the financial system.

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