CHAPTER 1

INTRODUCTION
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Derivatives are considered to be the most significant financial innovation in the world of finance and it has attained wide popularity since the last century. Many financial and commercial firms, the government as well as individual investors use derivatives to hedge or manage their risks. For the financial system as a whole, derivatives can improve market efficiencies by providing price discovery and by transferring risks to those more willing and able to bear them. However, momentous scandals and large-scale losses involving certain types of derivatives have occurred during the past two decades, and particularly during the financial crisis. These have drawn attention to the risks involved in the use of derivatives both to individuals and to the institutional investors.

Financial derivatives are financial instruments that “derive” value from an underlying item such as an asset or index. The use of derivatives provides exposure to the linked underlying item without necessitating the trade or exchange of the item itself. This allows specific risks, such as commodity or equity price fluctuations, to be traded in financial markets. The emergence of the market for derivatives products, most notable forwards, futures, options and swaps can be traced back to the willingness of risk-averse economic agents to guard themselves against uncertainties arising out of fluctuations in asset prices. By their very nature, the financial markets can be subject to a very high degree of volatility. Through the use of derivative products, it is possible to partially or fully transfer price risks by locking-in asset prices. As instruments of risk management, derivatives products generally do not influence the fluctuations in the underlying asset prices. However, by locking-in asset prices, derivatives products minimize the impact of fluctuations in asset prices on the profitability and cash flow situation of risk-averse investors.

Derivatives may be traded for a variety of reasons. A derivative contract enables a trader to hedge some pre-existing risk by taking positions in derivatives markets that offset potential losses in the underlying or spot market. In India, most derivatives users describe themselves as hedgers and Indian laws generally require that derivatives be

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used for hedging purposes only. Another motive for derivatives trading is speculation (i.e. creating profit from anticipated price movements). In practice, it may be difficult to distinguish whether a particular trade was for hedging or speculation, and active markets require the participation of both hedgers and speculators.

This unit is intended to give an extended outlook on the research problem as well as existing scenario of derivative trading practices in India. The initial pages of this chapter will introduce the statement of research problem, objectives, significance methodology and the major limitations faced during the study. The subsequent level will explain about derivatives and different types of derivative contracts, the trading and operational mechanism of derivatives, derivatives in India, the regulatory framework and the recent issues.

1.1. Statement of the problem

In south Kerala generally retail investors perceive derivative investments are too risky, because many of them are lacking sound knowledge in the modus of operandi of financial derivatives. Their investment decisions in derivatives are backfired by lack of technical support and knowledge. Owing to these even financially sound investors hesitated to operate in derivative market. While considering the statistics one can say that derivative investments are booming in terms of volume and number of contract traded. It doesn’t mean that these instruments successfully serving the retail investment community to hedge their positions. In India derivatives are designed for hedging purpose only and several efforts are taken by exchanges and other intermediaries to protect the interest of retail investors. But when we are looking at reality; the cream of derivative market is being enjoyed by large institutions and High Net-worth Individuals (HNI). It doesn’t means that Low Net-worth Individuals (LNI’s) are not encouraged to participate in derivative market; they are also encouraged but in majority of cases their derivative contracts are ended up with losses.

A close examination on the role of intermediaries and other stakeholders on the derivative trading scenario enable to understand the level of support extended for retail investors. The retail investors are encouraged to trade with derivatives; because intermediaries like broking firms are very much concerned about their revenue accumulation. They will encourage their clients to trade with derivatives even if the
client is lacking adequate knowledge on its operational mechanism. This results in a situation where funds are allocated to F&O segment even without proper analysis. Organised investors like Institutions and HNI’s have their own research wing to evaluate the pros and cons of different contracts and their portfolios are managed by experts. But retail investors lack knowledge and skill in designing and using most suitable hedging tools for their investment. Even experienced investors are suffering with their investment position owing to want of information.

Various other stakeholders like exchanges, regulators etc.; are developing several imitativeness to protect the interest of retail investors. Regulatory mechanism is allowing use derivatives only for hedging purpose and several other regulations were put forth to protect the interest of public. Further at implementation level there is no method is available to check whether these laws serve the purpose. And these laws were not good enough to prevent the flow of fund from unorganised sector (retail investment) to organised sector (institutional investment). Exchanges and other intermediaries are organising several investors’ education programs and awareness campaigns especially aiming at retail investors. The effectiveness of these programs has to be further validated in terms of its breadth and depth.

In this context; some investors are really interested to participate in derivative contract and their investment decisions are motivated by several technical as well as behavioural factors. The broking firms and other intermediaries also play a vital role behind their investment decisions. A detailed opinion poll among investors and experts working at firm level would enable to understand the situation prevalent in the present scenario. Based on the study synergies existing and lacking between investors and firms can be identified. This study also intended to develop suitable measures for successful derivative trading; especially for retail investors.
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1.2. Objectives

- To analyse the trading volume and the trend of financial derivatives in India.
- To study various demographic and behavioural factor influencing customer’s preference towards financial derivatives in South Kerala.
- To study the effectiveness of existing level of support extended by broking firms and other intermediaries for derivative education and trading.
- To develop a business model for attracting more customers towards derivative segment.

1.3. Hypotheses

1) There is no significant association between area of residence and source of information about financial derivatives.

2) There is no significant association existed between the area of residence of the investors and their fund allocation preference.

3) There does not existing any significant difference between the attitude towards financial derivatives and investors area of residence.

4) There is no significant difference on opinion of investors about supporting service rendered by broking firms.

5) There is no significant difference on the rank preference of investors on the financial objective of F&O trading.

6) There is no significant difference on the post investment behaviour of investors based on the outcome of F&O trading.

7) There is no significant variation in the evaluation of experts based on their position about support extended by various stake holders for F&O trading.

8) There is no significant association exist between the experts’ position and their contract selection mechanism.

9) There is no significant difference between the rank preferences of experts on fund accumulation strategies.

10) There is no significant difference existed on the customer retention strategies suggested by experts based on investors experience in F&O trading.
1.4. Methodology

The present study is exploratory in nature; and envisioned to identify the key factors influencing customer preference towards financial derivatives. This study will analyse LNI’s attitude towards derivatives, motivating and demotivating factors towards derivatives, preferred investment combinations and their post investment behaviour. Besides; this research will describe the expert’s opinion on present scenario for derivative trading in South Kerala and also provides a glimpse on different measure suggested by experts for efficacious derivative trading.

1.4.1. Population

The population consists of regular stock market customers spread over Thiruvananthapuram, Kollam, Alappuzha and Pathanamthitta districts (Southern part of Kerala). Here the stock market customers refers those who have a DEMAT account to operate with stock market. The study also covers opinion of experts working in stock market especially in South Kerala districts. The experts’ population consists of Associate Vice Presidents, Stock Analysts, Regional/ Territory Managers, Branch Managers, Relationship executives, Stock Dealers etc.

1.4.2. Data source: The research data was collected from primary and secondary sources.

a) Primary data: The primary data was collected with the help of two set of questionnaires. Before finalizing the questionnaires a pilot study was conducted among 50 investors and 20 experts. Based on the results obtained from pilot study, necessary modifications were made in the questionnaire before going for the final survey. The final data was collected from 1020 investors and 200 experts those who are actively associated with stock market.

b) Secondary data: Statistical data related to F&O trading was collected from web portal of NSE. For conducting an extensive survey on literature published sources like printed books, periodicals, and journals related to the topic of study, newspapers, research thesis and dissertations, statistical data sources like statistical hand books etc were used.
1.4.3. Survey Period

The Pilot study was conducted for a period of two months from June 2011 to July 2011. After checking the reliability of the questionnaire a widespread survey has been conducted from August 2011- February 2012. This survey extensively covers 109 independent share trading firms operating in four major districts. Two set of questionnaires were used to gather the data from 1020 investors as well as 200 experts. Moreover the Secondary data related to volume traded in NSE F&amp;O segment from June 2000 to December 2012 has been used.

1.4.4. Pilot Study

A pilot study was conducted among 50 investors and 20 experts using a preliminary questionnaire. The study was steered from June 2011 to July 2011. The responses obtained from pilot study were scrutinized thoroughly and some suggestions were incorporated with the instrument. The classical Cronbach Alpha model has been used to check the reliability of statements based on the responses obtained from pilot study. The procedure started with all the statements considered and by sequentially eliminating those statements, whose elimination must improve the Alpha value. The final Alpha value obtained for each variable, against the number of statements under study, is presented in the following table.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Variable</th>
<th>No. Statements</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Attitude towards derivatives</td>
<td>4</td>
<td>0.84</td>
</tr>
<tr>
<td>2</td>
<td>Motives of investment in derivatives</td>
<td>8</td>
<td>0.92</td>
</tr>
<tr>
<td>3</td>
<td>Factors demotivating investment in financial</td>
<td>7</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>derivatives</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Continued in Page No: 7...
| 4. | Investors preference towards investment options | 6 | 0.81 |
| 5. | Investors Evaluation on Depository Participant | 13 | 0.91 |
| 6. | Discouraging factors for derivative trading at firm level. | 8 | 0.82 |
| 7. | Investor’s expectation from broking firm. | 6 | 0.86 |
| 8. | Objective of trading with derivatives. | 6 | 0.94 |
| 9. | Essential prerequisites for successful derivative trading | 6 | 0.81 |
| 10. | Post investment behaviour | 6 | 0.92 |

**B. Cronbach Alpha of variables used for survey among Experts**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Variable</th>
<th>No. Statements</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Existing Scenario for derivative trading at exchange level</td>
<td>3</td>
<td>0.87</td>
</tr>
<tr>
<td>2.</td>
<td>Existing Scenario for derivative trading at firm level</td>
<td>5</td>
<td>0.93</td>
</tr>
<tr>
<td>3.</td>
<td>Existing Scenario for derivative trading at staff level</td>
<td>4</td>
<td>0.88</td>
</tr>
<tr>
<td>4.</td>
<td>Existing Scenario for derivative trading at partner level</td>
<td>3</td>
<td>0.82</td>
</tr>
<tr>
<td>5.</td>
<td>Existing Scenario for derivative trading at customer level</td>
<td>5</td>
<td>0.91</td>
</tr>
<tr>
<td>6.</td>
<td>Preferred analytical measure for contract selection</td>
<td>5</td>
<td>0.83</td>
</tr>
</tbody>
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*Continued in Page No. 8...*
<table>
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<th></th>
<th>Preferred information sources</th>
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<tbody>
<tr>
<td>7.</td>
<td>Expert’s preference toward derivatives and its</td>
<td>10</td>
<td>0.94</td>
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<tr>
<td></td>
<td>combinations.</td>
<td></td>
<td></td>
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<tr>
<td>9.</td>
<td>Strategies for attracting more funds towards</td>
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<td></td>
<td>F&amp;O segment</td>
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<td></td>
</tr>
<tr>
<td>10.</td>
<td>Strategies to manage the customer base</td>
<td>10</td>
<td>0.89</td>
</tr>
</tbody>
</table>

*Source: Primary data analysis*

### 1.4.5. Sampling

Simple random sampling techniques were used for determining the sample size. Prior to the fixation of sample size a pilot study was conducted among 50 investors and 20 experts; and the reliability of the collected data was analysed by using Cronbach Alpha. It can be stated that the sample size was proportional to the level of variation and the assumed level of error of the estimate of the population parameter of the study variable. After checking reliability of the data; 70 valid statements at investor’s level and 57 valid statements at expert’s level were retained for the final survey. At 95% confidence level estimates of the means of these responses using the information on variances from the pilot study, the sample size was obtained based on each response. The sample size was determined by using the formula $n \geq \left( \frac{1.96 \times sd}{se} \right)^2$. When ‘n’ is the sample size, ‘sd’ is the estimate of standard deviation, ‘se’ is the standard error of the estimate of the population parameter, and the value 1.96 is the critical value from normal test at 5 per cent level of significance. A calculated sample size of 1008 was the maximum among all the sample size obtained based on the responses of different statements; finally 1020 is fixed as the sample size for investor’s population. The same procedure has been used to fix the sample size among experts population and a maximum size of 188 was obtained from different statements and lastly 200 was fixed as the sample size. After fixation of the sample size a comprehensive survey has been organized; and the data was collected from 109 independent stock trading organizations operating in South Kerala.
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For analysing the volume traded in Indian stock market judgmental sampling techniques were used and total volume traded from 2000-2012 in NSE segment was analysed as NSE is monitoring more than 99% financial derivative trading in India.

1.4.6. Data Analysis

The data so collected was analysed using various statistical tools viz Cronbach Alpha Model (for testing the reliability), Karl Pearson's correlation techniques, Chi-Square test, ANOVA, MANOVA, Multi-Dimensional Scaling Alscal Model, Paired Sample T-test, Friedman Test, Trend analysis using least-square model etc.

1.5. Significance of the Study

Derivatives are considered to be a viable tool for managing risk associated with stock market investment. The customer's preference to financial derivatives is a relatively new area of research. This research will not only confine to the retail investors' attitude and behaviour towards financial derivatives but also extensively covers the level of support extended by various stakeholders for derivative education and trading in the current scenario. This study is also intended to suggest suitable measures for attracting more retail investors towards derivatives segment. Derivatives can not only be introduced as an investment option but also it will offer an excellent tool for retail investors to manage their financial risk. I hope that this study will provide a deep insight to various stake holders viz. stock broking firms, retail investors in capital market, institutional investors, future academic researchers, various statutory organisations etc.

1.6. Limitations of the Study

The present study proposed to find the customer preference towards financial derivative in South Kerala and the survey has been conducted in four major districts viz Thiruvananthapuram, Kollam, Pathanamthitta and Alappuzha.

- The inference of this study reveals only the situation prevailing in a small area while considering the overall population and geographic erection of India.
- The scope of the study is confined only with the investor's preference towards exchange traded equity derivatives. In spite of the fact that other premier
segments like currency derivatives, interest rate derivatives etc. have gained wide popularity now a days ; the study couldn’t give much attention on the above areas due to the fact that these instruments were not that much popular while designing this research.

A large portion of this study was conducted by using primary data; collected by using questionnaires. There is a possibility that the responses can be biased. Besides this study was focused on the opinion and preference of individual investors, another premier segment like institutional investors was totally neglected from this research.

1.7. Conceptual framework and theoretical background of financial derivatives

1.7.1. Meaning and Definition

While referring the dictionary meaning of derivatives it refers originating from, based on or influenced by (as adjective). As a noun derivative refers something which is based on another source. Derivatives are instruments in respect of which trading is carried out as a right on an underlying asset. In normal trading as an asset is acquired or sold. When we deals with derivatives, the asset its self is not traded. Thus a derivative instrument does not directly result in a trade but gives a right to a person which may ultimately result in trade.

According to John. C. Hull; “A derivative can be defined as a financial instrument whose value depends on (or derives from) the values of other, more basic underlying variables.”

In the words of Robert L. McDonald;” “A derivative is simply a financial instrument (or even more simply an agreement between two people) which has a value determined by the price of something else.”

Section 2 (aa) of the Securities Contracts (Regulation) Act [SC(R)A], 1956 defines derivatives as “derivative” includes – (A) a security derived from a debt instrument, share, loan, whether secured or unsecured, risk instrument or contract for

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differences or any other form of security; (B) a contract which derives its value from
the prices, or index of prices, of underlying securities.

Section 133 of Foreign Accounting Standards and Section 33 of Indian
Accounting Standard defines financial derivatives in a generic way based on their
nature rather than the name. Financial Derivatives are;

• Whose value changes in response to the change in a variable (called underlying
  ) such as interest rate, price of a security, price of a commodity, foreign exchange rate,
index of certain prices credit rating etc. and

• Which require very little initial net investment relative to other types of
contracts that have a similar response to change in market conditions and

• Which are settled at a future date.

1.7.2. OTC Derivatives Vs. Exchange traded Derivatives

Derivatives are basically classified into Over the Counter derivatives and
Exchange traded derivatives. The OTC derivatives are between two private parties and
are designed to suit the requirements of the parties concerned. The Exchange traded
ones are standardized ones where the exchange sets the standards for trading by
providing the contract specifications and the clearing corporation provides the trade
guarantee and the settlement activities. As the word suggests, derivatives that trade on
an exchange are called exchange traded derivatives, whereas privately negotiated
derivative contracts are called OTC contracts.

The OTC derivatives markets have witnessed rather sharp growth over the last
few years, which have accompanied the modernization of commercial and investment
banking and globalisation of financial activities. The recent developments in
information technology have contributed to a great extent to these developments. While
both exchange-traded and OTC derivative contracts offer many benefits, the former
have rigid structures compared to the latter. It has been widely discussed that the highly
leveraged institutions and their OTC derivative positions were the main cause of
turbulence in financial markets in 1998. These episodes of turbulence revealed the risks
posed to market stability originating in features of OTC derivative instruments and
markets. The OTC derivatives markets have the following features compared to exchange traded derivatives:

i. The management of counter-party (credit) risk is decentralized and located within individual institutions.

ii. There are no formal centralized limits on individual positions, leverage, or margining.

iii. There are no formal rules for risk and burden-sharing.

iv. There are no formal rules or mechanisms for ensuring market stability and integrity, and for safeguarding the collective interests of market participants, and

v. The OTC contracts are generally not regulated by a regulatory authority and the exchange's self-regulatory organization, although they are affected indirectly by national legal systems, banking supervision and market surveillance.

OTC derivatives markets continue to pose a threat to international financial stability. The problem is more acute as heavy reliance on OTC derivatives creates the possibility of systemic financial events, which fall outside the more formal clearing house structures. Moreover, those who provide OTC derivative products, hedge their risks through the use of exchange traded derivatives. In view of the inherent risks associated with OTC derivatives, and their dependence on exchange traded derivatives, Indian law considers them illegal.

1.7.3 Types of Derivatives

There are many types of derivatives in the market. We can classify Forward contracts and Swaps in the OTC derivative market and Options and Futures in the exchange traded market.

1.7.3(A). Forward Contract

A forward contract or simply a forward is a contract between two parties to buy or sell an asset at a certain future date for a certain price that is pre-decided on the date of the contract. The future date is referred to as expiry date and the pre-decided price is referred to as Forward Price. It may be noted that Forwards are private contracts and their terms are determined by the parties involved. A forward is thus an agreement

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between two parties in which one party, the buyer, enters into an agreement with the other party, the seller that he would buy from the seller an underlying asset on the expiry date at the forward price. Therefore, it is a commitment by both the parties to engage in a transaction at a later date with the price set in advance. This is different from a spot market contract, which involves immediate payment and immediate transfer of asset. The party that agrees to buy the asset on a future date is referred to as a long investor and is said to have a long position. Similarly the party that agrees to sell the asset in a future date is referred to as a short investor and is said to have a short position. The price agreed upon is called the delivery price or the Forward Price. Forward contracts are traded only in Over the Counter (OTC) market and not in stock exchanges. OTC market is a private market where individuals/institutions can trade through negotiations on a one to one basis.

The salient features of forward contracts are:

i. They are bilateral contracts and hence exposed to counter-party risk.

ii. Each contract is custom designed, and hence is unique in terms of contract size, expiration date and the asset type and quality.

iii. The contract price is generally not available in public domain.

iv. On the expiration date, the contract has to be settled by delivery of the asset.

v. If the party wishes to reverse the contract, it has to compulsorily go to the same counter-party, which often results in high prices being charged.

When a forward contract expires, there are two alternate arrangements possible to settle the obligation of the parties: physical settlement and cash settlement. Both types of settlements happen on the expiry date and are given below. A forward contract can be settled by the physical delivery of the underlying asset by a short investor (i.e. the seller) to the long investor (i.e. the buyer) and the payment of the agreed forward price by the buyer to the seller on the agreed settlement date. Cash settlement does not involve actual delivery or receipt of the security. Each party either pays (receives) cash equal to the net loss (profit) arising out of their respective position in the contract. The profit and loss position in case of physical settlement and cash settlement is the same except for the transaction costs which is involved in the physical settlement.
A drawback of forward contracts is that they are subject to default risk. Regardless of whether the contract is for physical or cash settlement, there exists a potential for one party to default, i.e. not honour the contract. It could be either the buyer or the seller. This results in the other party suffering a loss. This risk of making losses due to any of the two parties defaulting is known as counter party risk. The main reason behind such risk is the absence of any mediator between the parties, who could have undertaken the task of ensuring that both the parties fulfil their obligations arising out of the contract. Default risk is also referred to as counter party risk or credit risk.

1.7.3(B). Swaps

Swaps are private agreement between two parties to exchange cash flows in the future according to the pre arrangement formulae. The swaps can be either currency swaps or interest rate swaps. In the case of a currency swap there will be an agreement to exchange one currency for another for a definite purpose. Interest rate swaps are agreement to exchange of the interest payment in one form (fixed or floating) for the payment in another form (fixed or floating).

1.7.3(C). Futures

Futures markets were designed to solve the problems that exist in forward markets. A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. But unlike forward contracts, the futures contracts are standardized and exchange traded. To facilitate liquidity in the futures contracts, the exchange specifies certain standard features of the contract. It is a standardized contract with standard underlying instrument, a standard quantity and quality of the underlying instrument that can be delivered, (or which can be used for reference purposes in settlement) and a standard timing of such settlement. A futures contract may be offset prior to maturity by entering into an equal and opposite transaction. The major characteristics of a future contract are standardised contract size, organized exchange, margin money, clearing house etc.
1.7.3(C1). Futures terminology

a) Spot price: The price at which an asset trades in the spot market.

b) Futures price: The price at which the futures contract trades in the futures market.

c) Contract cycle: The period over which a contract trades. The index futures contracts on the NSE have one-month, two-month and three months expiry cycles which expire on the last Thursday of the month. Expiry date: It is the date specified in the futures contract. This is the last day on which the contract will be traded, at the end of which it will cease to exist.

d) Contract size: The amount of asset that has to be delivered on one contract. The standardised contract size is Rs. 200000 under Indian condition.

e) Basis: In the context of financial futures, basis can be defined as the futures price minus the spot price. There will be a different basis for each delivery month for each contract. In a normal market, basis will be positive. This reflects that futures prices normally exceed spot prices.

f) Initial margin: The amount that must be deposited in the margin account at the time a futures contract is first entered into is known as initial margin.

g) Marking-to-market: In the futures market, at the end of each trading day, the margin account is adjusted to reflect the investor's gain or loss depending upon the futures closing price. This is called marking-to-market.

h) Maintenance margin: This is somewhat lower than the initial margin. This is set to ensure that the balance in the margin account never becomes negative. If the balance in the margin account falls below the maintenance margin, the investor receives a margin call and is expected to top up the margin account to the initial margin level before trading commences on the next day.

i) Underlying Assets: the underlying assets for a future contract can be equity, commodity, currency, indices, interest bearing securities etc.
1.7.3(D). Options

Options are fundamentally different from forward and futures contracts. An option gives the holder a right to do something without any obligation. In contrast, in a forward or futures contract, the two parties have committed themselves to doing something. In an option contract there are two parties namely option holder and writer of an option. Purchase of an option requires an up-front payment called option premium.

1.7.3(D1). Option Terminology

a) Buyer of an option: The buyer of an option is the one who by paying the option premium buys the right but not the obligation to exercise his option on the seller/writer.

b) Writer of an option: The writer of a call/put option is the one who receives the option premium and is thereby obliged to sell/buy the asset if the buyer exercises on him.

c) Call option: A call option gives the holder a right without an obligation to buy an asset on a specified date at an agreed price.

d) Put option: A put option gives the holder a right without an obligation to sell an asset on a specified date at an agreed price.

e) Option price/premium: Option price is the price which the option holder pays to the option seller. It is also referred to as the option premium.

f) Strike price: The price specified in the options contract is known as the strike price or the exercise price.

g) Expiration date: The date specified in the options contract is known as the expiration date, the exercise date, the strike date or the maturity.

h) Underlying asset: it is the asset on which the option is executed. The underlying asset can be index, currency, commodity, equity etc.

i) American options: American options are options that can be exercised at any time up to the expiration date. Most exchange-traded options are American.
j) European options: European options are options that can be exercised only on the expiration date itself. European options are easier to analyse than American options, and properties of an American option are frequently deduced from those of its European counterpart.

k) Index options: These options have an index as the underlying asset. Some options are European while others are American. Like index futures contracts, index options contracts are also cash settled.

l) Stock options: Stock options are options on individual stocks. Here the underlying assets are equity shares.

m) Currency Options: these options will consider currency as underlying variable.

n) Interest rate options: the underlying assets are interest bearing instruments like T-bills, Bonds, Debentures etc.

o) In-the-money option: An in-the-money (ITM) option is an option that would lead to a positive cash flow to the holder if it were exercised immediately. A call option on the index is said to be in-the-money when the current index stands at a level higher than the strike price (i.e. spot price > strike price). If the index is much higher than the strike price, the call is said to be deep ITM. In the case of a put, the put is ITM if the index is below the strike price.

p) At-the-money option: An at-the-money (ATM) option is an option that would lead to zero cash flow if it were exercised immediately. An option on the index is at-the money when the current index equals the strike price (i.e. spot price = strike price).

q) Out-of-the-money option: An out-of-the-money (OTM) option is an option that would lead to a negative cash flow if it were exercised immediately. A call option on the index is out-of-the-money when the current index stands at a level which is less than the strike price (i.e. spot price < strike price). If the index is much lower than the strike price, the call is said to be deep OTM. In the case of a put, the put is OTM if the Index is above the strike price.

r) Intrinsic value of an option: The option premium can be broken down into two components - intrinsic value and time value. The intrinsic value of a call is the amount the option is ITM, if it is ITM. If the call is OTM, its intrinsic value is zero. Putting it
another way, the intrinsic value of a call is $\text{Max} [0, (S_t - K)]$ which means the intrinsic value of a call is the greater of 0 or $(S_t - K)$. Similarly, the intrinsic value of a put is $\text{Max} [0, K - S_t]$, i.e. the greater of 0 or $(K - S_t)$. $K$ is the strike price and $S_t$ is the spot price.

s) **Time value of an option**: The time value of an option is the difference between its premium and its intrinsic value. Both calls and puts have time value. An option that is OTM or ATM has only time value. Usually, the maximum time value exists when the option is ATM. The longer the time to expiration, the greater is an option's time value, all else equal. At expiration, an option should have no time value.

1.7.3(D2). Trading strategies using Options

Investors can form portfolio of options with any instrument; and options can be used as an effective tool for hedging the investment position. The major attraction of option contracts are they could be used for creating a very wide range of payoff functions. Some of the commonly used trading strategies using option contracts are discussed below.

a) **Long Call**: Here the investors are conservative and they will purchase a call option on the expectation that the stock price will rise in future. In the case of long call the investors profit is unlimited and the loss is limited to the extent of premium paid.

b) **Short Call**: Here the investor is very aggressive and believes that the stock price will fall in future. Here the investor will sell a call option. In the case of short call the investors profit is limited to the extent of premium and loss is unlimited.

c) **Long Put**: The investor will purchase a put option on the expectation that the stock price will fall in future.

d) **Short Put**: The investors believe that stock price will increase in future and they will take an aggressive decision sell a put option.

e) **Synthetic Long Call**: Under this strategy the investor will purchase a share on the expectation of raising the share price and subsequently he will purchase a put option to insure against price falls.
f) Synthetic Long Put: The investor will sell a share on the anticipation of purchasing back it in future at a lower price. In order to insure the above he will simultaneously purchase a call option.

g) Covered Call: Investor own shares in a company; on which he feel the price may rise but not much in the near future. The covered call is a strategy in which an investor sells a call option on a stock he owns.

h) Covered Put: Covered Put writing involves a short in a stock along with a writing a put option. Here the investor owns a stock and he thinks that it will move down in future.

i) Long Straddle: A Straddle is a volatility strategy and is used when the stock price is expected to show large movements. This strategy involves buying a call as well as put on the same stock for the same maturity and strike price.

j) Short Straddle: Short straddle is just opposite of long straddle. It is a strategy to be adopted when the investor feels the market will not show much movement. The investor will sells a call and a put on the same stock for the same maturity and strike price.

k) Long Strangle: This strategy involves buying a call as well as put on the same stock for the same maturity but different strike price. Here reward is unlimited and the risk is limited to the extent of premium.

l) Short Strangle: This strategy involves selling a call as well as put on the same stock for the same maturity but different strike price. Here the reward is limited to the extent of premium and the risk is unlimited.

m) Price Spread (Vertical spread): Buying and selling options of the same share with different exercising price.

n) Calendar Spread (horizontal Spread): Buying and selling options of the same share with different expiry dates.

o) Butterfly Spread (Long): Buying an option with a low exercising price and buying another option with high exercising price and selling two options with an exercising price between the two.
p) Butterfly Spread (Short): Selling an option with a low exercising price and selling another option with high exercising price and buying two options with an exercising price between the two.

1.7.4. Participants in the Derivatives Market

As equity markets developed, different categories of investors started participating in the market. In India, equity market participants currently include retail investors, corporate investors, mutual funds, banks, foreign institutional investors etc. Each of these investor categories uses the derivatives market to as a part of risk management, investment strategy or speculation. Based on the applications that derivatives are put to, these investors can be broadly classified into three groups:

❖ Hedgers.
❖ Speculators
❖ Scalpers, and
❖ Arbitrageurs

We shall now look at each of these categories in detail.

1.7.4(1). Hedgers

These investors have a position (i.e., have bought stocks) in the underlying market but are worried about a potential loss arising out of a change in the asset price in the future. Hedgers participate in the derivatives market to lock the prices at which they will be able to transact in the future. Thus, they try to avoid price risk through holding a position in the derivatives market. Different hedgers take different positions in the derivatives market based on their exposure in the underlying market. A hedger normally takes an opposite position in the derivatives market to what he has in the underlying market. Hedging in futures market can be done through two positions, viz. short hedge and long hedge.

a) Short Hedge: A short hedge involves taking a short position in the futures market. Short hedge position is taken by someone who already owns the underlying asset or is expecting a future receipt of the underlying asset.
b) Long Hedge: A long hedge involves holding a long position in the futures market. A long position holder agrees to buy the underlying asset at the expiry date by paying the agreed futures/forward price. This strategy is used by those who will need to acquire the underlying asset in the future.

1.7.4(2). Speculators

A Speculator is one who bets on the derivatives market based on his views on the potential movement of the underlying stock price. Speculators take large, calculated risks as they trade based on anticipated future price movements. They hope to make quick, large gains; but may not always be successful. They normally have shorter holding time for their positions as compared to hedgers. If the price of the underlying moves as per their expectation they can make large profits. However, if the price moves in the opposite direction of their assessment, the losses can also be enormous.

1.7.4(3). Scalpers

Scalpers represent another type of traders who plays a crucial role in the economic functioning of futures markets. They are individuals who engage in continuous buying and selling of contract on their behalf. They work on low margin but their continuous trading enable them to make good profit on their operations. When market shows greater volatility, they can make handsome profit. The presence of scalper ensures future prices to be both continuous and accurate, thus imparting liquidity to the markets in a good measure.

1.7.4(4). Arbitrageurs

Arbitrageurs attempt to profit from pricing inefficiencies in the market by making simultaneous trades that offset each other and capture a risk-free profit. An arbitrageur may also seek to make profit in case there is price discrepancy between the stock price in the cash and the derivatives markets.
1.7.5. Applications of Financial Derivatives

Some of the applications of financial derivatives can be enumerated as follows:

i) Management of risk: Risk management is not about the elimination of risk rather it is about the management of risk. Financial derivatives provide a powerful tool for limiting risks that individuals and organizations face in the ordinary conduct of their businesses. It requires a thorough understanding of the basic principles that regulate the pricing of financial derivatives. Effective use of derivatives can save cost, and it can increase returns for the organisations.

ii) 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 the 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 instrument in cash market.

iii) Speculation: This is not the only use, and probably not the most important use, of financial derivatives. Financial derivatives are considered to be risky. If not used properly, these can lead to financial destruction in an organisation like what happened in Barings Plc. However, these instruments act as a powerful instrument for knowledgeable traders to expose themselves to calculated and well understood risks in search of a reward, that is, profit.

iv) Price discovery: Another important application of derivatives is the price discovery which means revealing information about future cash market prices through the futures market. Derivatives 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.

v) Price stabilization function: Derivative market helps to keep a stabilising influence on spot prices by reducing the short-term fluctuations. In other words, derivative
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reduces both peak and depths and leads to price stabilisation effect in the cash market for underlying asset.

1.8. Derivatives trading in the Indian context

Derivatives 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 futures trading in 1875 and, by the early 1900s India had one of the world’s largest futures industries. In 1952 the government banned cash settlement and options trading and derivatives trading shifted to informal forwards markets. In recent years, government policy has changed, allowing for an increased role for market-based pricing and less suspicion of derivatives trading.

The present form of derivatives trading in India has taken in 1995 by introduction of financial derivatives trading in India was the promulgation of the Securities Laws (Amendment) Ordinance, 1995. It provided for withdrawal of prohibition on options in securities. The last decade, beginning the year 2000, saw lifting of ban on 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 2000 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 trading in BSE Sensex options commenced on June 4, 2001 and the trading in options on individual securities commenced in July 2001. Futures contracts on individual stocks were launched in November 2001. The derivatives trading on NSE commenced with S&P CNX Nifty Index futures on June 12, 2000. The trading in index options commenced on June 4, 2001 and trading in options on individual securities commenced on July 2, 2001. Single stock futures were launched on November 9, 2001. The index futures and options contract on NSE are based on S&P CNX. In June 2003, NSE introduced Interest Rate Futures which were subsequently banned due to pricing issue. Later it was
re-introduced in August 30\textsuperscript{th} 2009. Trading with currency futures started with NSE from August 29, 2008 and with BSE from October 2, 2008. Currency Options was introduced with NSE on October 29, 2010.

1.8.1. Legal framework for Derivative Trading in India

The precursor to exchange based derivatives in India was a kind of “forward trading” in securities in the form of call options (teji), put options (mandi) and straddles (fatak) etc. The Securities Contracts Regulation Act, 1956 (SCRA) was enacted, inter-alia, to prevent undesirable speculation in securities. Contracts for “clearing” commonly known as “forward trading”, were banned by the Central Government through a notification issued on June 1969 in exercise of the powers conferred under Section 16 of the SCRA. As the prohibition of forward trading in securities led to a decline of traded volumes on stock markets, the Stock Exchange, Mumbai (BSE), evolved in 1972 an informal system of “forward trading”, which allowed carry forward between two settlement periods, which resulted in substantial increase in the turnover of the exchange. However, this also created several problems and there were payment crises from time to time and frequent closure of the market. During December 1982 - January 1983 the Government reviewed the position and in exercise of its powers under Section 10 of the SCRA amended the bye-laws of stock exchanges to facilitate performance of contracts in “specified securities.” In pursuance of this policy the stock exchanges at Bombay, Calcutta and Ahmedabad introduced a system of trading in “specified shares” with carry forward facility after amending their bye-laws and regulations.

The Joint Parliamentary Committee on Irregularities in Securities and Banking Transactions, 1992 (JPC of 1992) discussed the issue of “carry forward of deals” and observed that this system was not functioning appropriately as there were lot of irregularities in the stock exchanges in the form of non-enforcement of margins, non-reporting of transactions and illegal trading outside the stock exchange. SEBI was of the views that carry forward transactions should be disallowed and transactions conducted strictly on delivery basis and trading in futures and options should be permitted in separate markets. Consequently, SEBI issued a directive in December 1993 prohibiting the carry forward of transactions.
However this was reviewed by SEBI, and pursuant to the recommendations of the G.S. Patel Committee to review the system, carry forward transactions in securities were permitted in 1995 subject to certain safeguards. This was further reviewed by the J.R. Varma Committee report in 1997 and the system was further modified subject to a number of safeguards such as segregation of carry forward transactions at the time of execution of trade, daily margin of 10 percent, 50 percent of which would be collected upfront, overall carry forward limit of Rs.20 crore per broker per settlement and other prudential safeguards.

On the other hand, repo transactions in Government securities and public sector bonds developed during 1980s. Following the discussion of JPC of 1992, which indicated that some banks were found to have entered into transactions in violation of RBI circulars, RBI banned all repos except treasury bills since June 1992. The Special Court declared such transactions null and void in December 1993 as being volative of the provisions of SCRA and Banking Regulation Act, 1949. The Supreme Court, however, decided in March 1997 that the ready forward contracts (Repo) were severable into two parts, viz. ready lag and the forward lag. The ready lag of transactions having been completed the forward lag, which alone was illegal, had to be ignored.

As repo transactions violated the Government notification of June 1969 under SCRA, certain institutions such as banks, co-operative banks and other RBI registered dealers were permitted to undertake ready forward transactions in Government securities through amendment notifications from time to time during second half of 1990s. The objective was to enhance liquidity market for Government securities and to further develop it. There were problems with such kind of facility such as, no standard documentation, “master agreement”, non-use of clearing houses to undertake counter party risk and opacity of the regulatory validity in view of the pronouncements of the Special Court and the Supreme Court. As a result the repo market was neither deep nor liquid.

This was an anomalous situation where there was a notification, which prohibited forward trading, while some form of forward trading (carry forward/ ready forward) was prevalent. In view of the changed circumstances particularly the need to develop

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derivatives market the repeal of 1969 notification was considered desirable not only to remove the existing anomaly, but also as a measure of market reforms. The issue was that the notification was to be repealed only after amendment of the SCRA so that the powers could be appropriately delegated to RBI in addition to SEBI.

There were complex regulatory issues relating to repeal of the said notification and delegation of powers to RBI and SEBI. The issue was what powers in respect of which transactions in which securities should be delegated to RBI, since SEBI was already exercising delegated powers under SCRA, irrespective of type of transactions/securities. The Securities Laws (Amendment) Bill, 1999 was passed (before the legislation sufficient ground work was done by the Parliament permitting a legal framework for derivatives trading in India in December 1999.

Consequently, the Central Government lifted a three decade old prohibition on forward trading in securities on 1st March 2000. Simultaneously, in order to promote an orderly development of the market, the Government issued another notification on 1st March 2000 delineating the area of responsibility between RBI and SEBI. In terms of this notification, the contracts for sale and purchase of Government securities, gold related securities, money market securities and securities derived from these securities and ready forward contracts in debt securities were to be regulated by RBI. Such contracts if executed on stock exchanges would be regulated by SEBI in a manner that this consistent with the guidelines issued by RBI. On the same date, both RBI and SEBI issued notifications specifying the regulatory framework in their respective areas. The RBI’s notification while retaining the general prohibition on forward trading, permitted ready forward contracts by the specified entities subject to certain conditions, such as, maintenance of subsidiary ledger account and a current account and such other conditions, as may be prescribed. SEBI also retained the general prohibition on forward trading but permitted derivatives contracts, as permissible under the securities law. Since both the regulators have been made responsible for regulation of debt markets, of course, with some demarcation, issues of coordination become important to prevent the emergence of regulatory gaps or overlaps.

An important step towards introduction of derivatives trading in India was the promulgation of the Securities Laws (Amendment) Ordinance, 1995, which lifted the
earlier prohibition on “options in securities” (NSEIL, 2001). However, since there was no regulatory framework to govern trading of securities, the derivatives market could not develop.

SEBI set up a committee in November 1996 under the chairmanship of Dr. L.C. Gupta to develop appropriate regulatory framework for derivatives trading. The committee suggested that if derivatives could be declared as “securities” under SCRA, the appropriate regulatory framework of “securities” could also govern trading of derivatives. SEBI also set up a group under the chairmanship of Prof. J.R. Varma in 1998 to recommend risk containment measures for derivatives trading. The Government decided that a legislative amendment in the securities laws was necessary to provide a legal framework for derivatives trading in India. Consequently, the Securities Contracts (Regulation) Amendment Bill 1998 was introduced in the Lok Sabha on July 1998 and was referred to the Parliamentary Standing Committee on Finance for examination and report thereon. The Bill suggested that derivatives may be included in the definition of “securities” in the SCRA whereby trading in derivatives may be possible within the framework of that Act. The said Committee submitted the report on 17th March 1999.

The Committee was of the opinion that the introduction of derivatives, if implemented, with proper safeguards and risk containment measures, will certainly give a fillip to the sagging market, result in enhanced investment activity and instil greater confidence among investors/participants. The Committee was of the view that since cash settled contracts could be classified as “wagering agreements” which can be null and void under Section 30 of the Indian Contracts Act, 1872, and since index futures are always cash settled, such futures contracts can be entangled in legal controversy. Therefore, the Committee suggested an overriding provision as a matter of abandoned caution – “Notwithstanding anything contained in any other Act, contracts in derivatives as per the SCRA shall be legal and valid.” Further, since Committee was convinced that stock exchanges would be better equipped to undertake trading in derivatives in sophisticated environment it would be prudent to allow trading in derivatives by such stock exchanges only. The Committee, therefore, suggested a clause- “The derivative shall be traded and settled on stock exchanges and clearing
houses of the stock exchanges, respectively in accordance with the rules and bye-laws
of the stock exchange." The Proposed Bill, which incorporated the recommendations of
the said Parliamentary Committee, was finally enacted in December 1999. The
Committee also recommended various operational/legal measures to safeguard the
integrity of the capital market and protect investors. These measures, inter alia, include
the following:

i. The Committee observed that Dr. L.C. Gupta Committee appointed by SEBI
had drawn out detailed guidelines pertaining to the regulatory framework on
derivatives prescribing necessary preconditions which should be adopted before
the introduction of derivatives. The Committee, therefore, recommended that
these should be adhered to fully.

ii. The Committee felt that there was an urgent need to educate the Indian
investors by creating investment awareness among them by conducting
intensive educational programmes, so that they are able to understand their risk
profiles in a better way.

iii. Measures should be taken to strengthen the cash market so that they become
strong and efficient.

iv. The Committee felt that it is imperative that the regulatory authorities ensure a
strong surveillance/vigilance and enforcement machinery.

v. The Committee was of the view that since derivatives trading require a critical
mass of sophisticated investors supported by credit and stock analysts, SEBI
should, in consultation with the stock exchanges, endeavour to conduct
certification programme on derivatives trading with a view to educating the
investors and market intermediaries.

vi. Keeping in view the swift movement of funds and the technical complexities
involved in derivatives transactions, the committee felt that there was a need to
protect particularly the small investors by preventing them from venturing in to
options and futures market, who may be lured by the sheer speculative gains.
The Committee, therefore, recommended that the threshold limit of the
transactions should be pegged not below Rs. 200000 (Rs. two lakhs).
vii. The Committee was of the view that there is an urgent need to prescribe pronounced accounting standards in the case of investors/dealers and also back office standards for intermediaries with a view to reducing the possibility of concealing loss and perpetrating the frauds by companies/intermediaries. The Committee also noted that the need of accounting disclosure had also been recognized by Dr. L.C. Gupta Committee. The committee, therefore, recommended that the Institute of Chartered Accountants of India, in consultation with the stock exchanges, should formulate suitable accounting standards and SEBI should prescribe the same before trading in derivatives is commenced.

viii. The Committee also asked the Government to consider exempting derivatives transactions from the imposition of stamp duty.

It is important to note that the suggestions and recommendations of the said Committee were implemented by the statutory regulators. Thus the enactment of Securities Laws (Amendment) Act 1999 and repeal of 1969 notification provided a legal framework for securities based derivatives trading on stock exchanges in India, which is co-terminus with framework of trading of other “securities” allowed under the SCRA. The trading of stock index futures started in June 2000 and later on, other products, such as, stock index options and stock options and single stock futures were also allowed.

The Act also clarified that, notwithstanding anything contained in any other law for the time being in force, contracts in derivatives shall be legal and valid only if such contacts are traded on a recognized stock exchange and settled on a clearing entity of the recognised stock exchange in accordance with the rules and bye-laws of such stock exchange, thus precluding OTC derivatives. The detailed legal framework for derivatives trading on stock exchanges was suggested by the L.C. Gupta Committee on derivatives, which had submitted its report in March 1998. It not only provided a conceptual basis for various regulatory features, but also suggested byelaws for derivatives exchanges and clearing corporations. These bye-laws were required to be adopted by the stock exchange and clearing entities before derivatives activity can start within their jurisdiction.
1.8.2. The international Regulation on Derivative Market

The International Organisation of Securities Commissions (IOSCO) has been providing international best practices and perspectives on derivatives markets. In 1990, the IOSCO published the Principles for Oversight of Screen Based Trading Systems for Derivatives Products. It was suggested that all the jurisdictions adopt (SEBI, being a member organization, has adopted these principles,) the 10 non-exclusive general principles for the oversight of screen based trading systems for derivatives products which identify areas of common regulatory concern. These principles basically relate to compliance by system sponsor with the regulatory requirements relating to legal standards, regulatory policies, risk management mechanisms and adequate disclosures of attendant risks. These 10 principles were reviewed by IOSCO and 4 additions were proposed in the year 2000 (IOSCO 2000) for derivatives products operating on the cross-border basis.

The principles also anticipated IOSCO Objectives and Principles of Securities Regulations of 1998 relating to protection of investors, fairness and transparency of markets and reduction of systemic risk. The additional regulations suggested include, regulatory coordination and cooperation to avoid potential duplication, inconsistencies and gaps, sharing of relevant information and adequate disclosure and transparency of regulatory requirements in jurisdictions. The IOSCO report on the “International Regulation of Derivative Markets, Products and Financial Intermediaries” released in December 1996 provides a description of various models or approaches to the regulation of derivatives markets based on regulatory summaries prepared on common framework of analysis (IOSCO 1996b). It was observed that while there was no single model for the regulation of derivatives markets, there was substantial similarity in perceived regulatory objectives. The IOSCO framework identifies the three objectives of regulation, which need to be specified by the regulatory framework of the securities markets. These are market efficiency and integrity, customer protection/ fairness and financial integrity.

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1.8.3. Trading by FII's in Derivative Market

RBI vide circular A.P.(DIR Series) Circular No.13, dated September 1, 2003 has specified that Foreign Institutional Investors (FIIs) may trade in all exchange traded derivative contracts approved by SEBI from time to time subject to the limits prescribed by SEBI. The existing FII position limits in equity index derivative contracts were reviewed by the Advisory Committee on Derivatives and Market Risk Management (Advisory Committee). The recommendations of the Advisory Committee were considered and approved by the SEBI Board.

1.8.4. Policy Issues for further Development

While the Indian regulatory framework for derivatives is mostly consistent with the international practices, some elements of financial infrastructure need to be strengthened. It is suggested that the bankruptcy and insolvency laws should clearly prescribe providing due concern to rights of securities holders on winding up or on insolvency of intermediaries and multilateral netting procedures in novation.

The Basel Committee on Banking Supervision and IOSCO Technical Committee have presented recommendations for public disclosure of trading and derivatives activities of banks and securities firms which could also be used by such non-financial companies that make material use of complex financial products. These recommendations emphasize the importance of transparency in promoting financial stability. It is observed that transparency based on meaningful public disclosure plays an important role in reinforcing the efforts of supervisory authorities in encouraging the sound risk management practices and promoting financial market stability (IOSCO 1999). This goes beyond simple accounting treatment of derivatives in the books of the clients or participants. Enhanced transparency would also benefit bank and securities firms themselves by enhancing their ability to evaluate and manage their exposures to counterparties. Institutions should, therefore, provide meaningful information, both qualitative and quantitative, on the scope and nature of trading and derivatives activities and elaborate how these activities contribute to their earning profile.

Accounting and valuation and reporting requirements for forward rate agreements and interest rates swaps have been prescribed in the RBI guidelines (for regulatory
reporting), to all scheduled commercial banks, primary dealers and All India Financial Institutions by RBI in July 1999. However, what is being suggested is that the IOSCO principles would need to be suitably incorporated (through a statutory mandate) in the public disclosure of trading and derivatives activities of banks and securities firms.

The disclosure should be on the major risks associated with their trading and derivatives activities including credit risk, market risk, liquidity risk, operational risk, legal risk and reputational risk. Further, institutions should also disclose about their performance in managing these risks. The qualitative disclosures should also describe the accounting policies and methods of income recognition that are used for trading activities and non-trading derivatives activity. Since the accounting practices for derivatives are not consistent across countries it is important that an institution sufficiently describes the accounting treatment of its derivatives holdings. These qualitative disclosures may include the methods used to account for derivatives, criteria for each accounting method used (for example criteria for recognizing hedges), policies and procedures followed for netting, assets and liabilities of derivatives transactions, methods used to determine the fair value of traded and non-traded derivatives instrument, nature and justification for reserves for valuation adjustments against instruments or portfolios. In order that disclosures are consistent with innovations in risk measurement and management techniques, institutions should also make disclosures produced by their internal risk measurement and management systems on their risk exposures and their actual performance in managing these exposures.

There are no specific tax provisions for derivatives transactions under the Income Tax Act, 1961. However, some provisions have indirect relevance for derivatives transactions. Under section 73(1) of the Income Tax Act, 1961 any losses on speculative business are eligible for set off against profits and gains of speculative business only, up to a maximum of eight years. The section 43(5) of the Income Tax Act, 1961 defines a speculative transaction where the contract for purchase or sale of any commodity, including share, is settled otherwise than by actual delivery. There are exceptions given to jobbing/arbitrage transactions and hedging of underlying positions. It follows that a transaction is speculative if it is settled otherwise than by actual delivery. The hedging and arbitrage transactions, even though not settled by actual
delivery, are considered non-speculative. Thus, a speculative transaction is one which is (i) a transaction in commodities/ shares, (ii) settled otherwise than actual delivery, (iii) the participant has no underlying position, and (iv); the transaction is not for jobbing/arbitrage.

In the absence of a specific provision regarding taxability of income from derivatives in the Income Tax Act, 1961, it is apprehended that derivative contracts are treated as “speculative” in nature and therefore, the losses, if any, will not be allowed to be set-off against any other income of the assessee, but only speculative income, up to a maximum of eight years. However, derivative contracts are not undertaken for purchase/sale of any commodity, stock or scrip, but are a special class of securities under the SCRA. Derivatives contracts, particularly, the index futures are always cash settled (because delivery of an index is impossibility). At least one of the parties to a derivatives contract is a hedger or an arbitrageur. Therefore, treating derivatives transaction as speculative would amount to penalizing hedging transactions, which the securities laws seek to promote. Derivative transactions serve economic purpose of price discovery, hedging, portfolio balancing, enhanced liquidity and cost effective way of risk management. Further, these transactions are under a regulatory framework of the stock exchanges recognized by SEBI. Any administrative attempt to ascertain if the transaction is for speculation, hedging or arbitrage, in the absence of objective criteria, may result in arbitrary outcomes and open numerous litigations at the time of assessment.

1.8.5. Trading infrastructure and intermediaries

In India wide verity of derivative contracts are available which are traded through the following recognised stock exchanges.

i) Bombay Stock Exchange (BSE): BSE was established as “The Native Share & Stock Brokers’ Association” in 1875. BSE is the first stock exchange in the country which obtained permanent recognition (in 1956) from the government of India under the Securities Contracts (Regulation) Act 1956. The derivative trading with BSE has started w.e.f June 2000. Currently BSE F&O segment is dealing with Futures and Option contracts of equities, indices and future contract of currencies. BSE have an automated screen based trading system called BOLT (BSE Online Trading).

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ii) National Stock Exchange (NSE): On the basis of the recommendations of high-powered Pherwani Committee, Industrial Development Bank of India, Industrial Credit and Investment Corporation of India, Industrial Finance Corporation of India, all Insurance Corporations, selected commercial banks and others incorporated the National Stock Exchange in 1992. It started its operation from 1994 and derivative segment of NSE started from June 2000. The derivative segment of NSE is dealing with futures and option contracts of equities, indices, currencies and futures of interest bearing securities. More than 72% of the average daily volume traded in NSE is generated by derivative segment. NSE’s automated screen based trading, modern, fully computerised trading system designed to offer investors across the length and breadth of the country a safe and easy way to invest. The NSE trading system called ‘National Exchange for Automated Trading’ (NEAT) is a fully automated screen based trading system, which adopts the principle of an order driven market.

iii) Multi Commodity Exchange (MCX): Headquartered in Mumbai, Multi Commodity Exchange of India Ltd (MCX) is a state-of-the-art electronic commodity futures exchange. The demutualised Exchange has permanent recognition from the Government of India to facilitate online trading, and clearing and settlement operations for commodity futures across the country. Having started operations in November 2003, today, MCX holds a market share of over 85% (as on March 31, 2012 MCX had a market share of 86%) of the Indian commodity futures market. The Exchange has more than 2,170 registered members operating through over 3,46,000 including CTCL trading terminals spread over 1,577 cities and towns across India. MCX was the third largest commodity futures exchange in the world, in terms of the number of contracts traded in CY2011.

iv) National Commodity and Derivative Exchange Ltd. (NCDEX): NCDEX commenced its operation from December 2003 It was promoted by national level financial institutions such as NABARD, LIC, NSE, PNB, CRISIL, Canara Bank etc. It facilitate trading in different commodities includes agricultural commodities, bullion etc. NCDEX is a nation-level, technology driven de-mutualised on-line commodity exchange with an independent Board of Directors and professional management - both not having any vested interest in commodity markets. It is committed to provide a
world-class commodity exchange platform for market participants to trade in a wide spectrum of commodity derivatives driven by best global practices, professionalism and transparency.

v) National Multi-Commodity Exchange India Ltd (NMCE): NMCE is the first national level commodity exchange to be set up in India started its functioning from 26th November 2002.

vi) United Stock Exchange (USE): United Stock Exchange, India’s newest stock exchange marks the beginning of a new chapter in the development of Indian financial markets. USE represents the commitment of ALL 21 Indian public sector banks, respected private banks and corporate houses to build an institution that is on its way to becoming an enduring symbol of India’s modern financial markets. Sophisticated financial products such as currency and interest rate derivatives are exciting introductions to Indian markets and hold immense opportunities for businesses and trading institutions alike. Consequently, USE’s strong bank promoter base allows a build-up of a highly liquid marketplace for these products. It also provides the necessary expertise to reach out to Indian businesses and individuals, educate them on the benefits of these markets and facilitate easy access to them. USE started its functioning from 20th September 2010.

1.8.5. Products

Generally the equity derivatives segment with NSE & BSE offers variety of instruments like Index Futures, Index Options, Stock Futures and Stock Options. The selection of indices and stocks for derivatives are purely based on instructions given by SEBI.

A. List of Products and Eligibility Criteria with NSE

Presently NSE is offering 149 securities and 8 indices for derivative trading. These securities and indices offered on the basis of several regulations and rulings imposed by SEBI from time to time. The below paragraph will mention about various products and eligibility criteria for selection of securities and indices for derivative trading.

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A.I. List products

Currently NSE is offering the following indices for derivative contracts viz. S&P CNX Nifty, Mini Derivatives contracts on S&P CNX Nifty, Bank Nifty, CNX IT, Nifty midcap 50 index, CNX Infrastructure & CNX PSE. With respect to individual securities 149 securities are offered for F&O trading.

A. II. Eligibility Criteria for selection of Securities and Indices for Derivative Trading

a) Eligibility criteria of stock Futures and Options

i. The stock shall be chosen from amongst the top 500 stocks in terms of average daily market capitalisation and average daily traded value in the previous six months on a rolling basis.

ii. The stock's median quarter-sigma order size over the last six months shall be not less than Rs. 10 lakhs. For this purpose, a stock's quarter-sigma order size shall mean the order size (in value terms) required to cause a change in the stock price equal to one-quarter of a standard deviation.

iii. The market wide position limit in the stock shall not be less than Rs. 300 crores. The market wide position limit (number of shares) shall be valued taking the closing prices of stocks in the underlying cash market on the date of expiry of contract in the month. The market wide position limit of open position (in terms of the number of underlying stock) on futures and option contracts on a particular underlying stock shall be 20% of the number of shares held by non-promoters in the relevant underlying security i.e. free-float holding.

iv. For an existing F&O stock, the continued eligibility criteria is that market wide position limit in the stock shall not be less than Rs. 200 crores and stock's median quarter-sigma order size over the last six months shall not be less than Rs. 5 lakhs. Additionally, the stock’s average monthly turnover in derivative segment over last three months shall not be less than Rs. 100 crores. If an existing security fails to meet the eligibility criteria for three months consecutively, then no fresh month contract shall be issued on that security. However, the existing unexpired contracts...
may be permitted to trade till expiry and new strikes may also be introduced in the existing contract months.

v. Further, the members may also refer to circular no. NSCC/F&O/C&S/365 dated August 26, 2004, issued by NSCCL regarding Market Wide Position Limit, wherein it is clarified that a stock which has remained subject to a ban on new position for a significant part of the month consistently for three months, shall be phased out from trading in the F&O segment.

vi. Further, once the stock is excluded from the F&O list, it shall not be considered for re-inclusion for a period of one year.

vii. A stock which is excluded from derivatives trading may become eligible once again. In such instances, the stock is required to fulfil the eligibility criteria for three consecutive months to be re-introduced for derivatives trading.

b) Eligibility criteria of Index based Futures and Options

i. Futures & Options contracts on an index can be introduced only if 80% of the index constituents are individually eligible for derivatives trading. However, no single ineligible stock in the index shall have a weightage of more than 5% in the index. The index on which futures and options contracts are permitted shall be required to comply with the eligibility criteria on a continuous basis.

ii. SEBI has subsequently modified the above criteria, vide its clarification issued to the Exchange "The Exchange may consider introducing derivative contracts on an index if the stocks contributing to 80% weightage of the index are individually eligible for derivative trading. However, no single ineligible stocks in the index shall have a weightage of more than 5% in the index.

iii. The above criteria is applied every month, if the index fails to meet the eligibility criteria for three months consecutively, then no fresh month contract shall be issued on that index. However, the existing unexpired contacts shall be permitted to trade till expiry and new strikes may also be introduced in the existing contracts.

Futures & Options contracts may be introduced on new securities which meet the above mentioned eligibility criteria, subject to approval by SEBI. New securities being

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Introduced in the F&O segment are based on the eligibility criteria which take into consideration average daily market capitalization, average daily traded value, the market wide position limit in the security, the quarter sigma values and as approved by SEBI. The average daily market capitalisation and the average daily traded value would be computed on the 15th of each month, on a rolling basis, to arrive at the list of top 500 securities. Similarly, the quarter sigma order size in a stock would also be calculated on the 15th of each month, on a rolling basis, considering the order book snapshots of securities in the previous six months and the market wide position limit (number of shares) shall be valued taking the closing prices of stocks in the underlying cash market on the date of expiry of contract in the month.

The number of eligible securities may vary from month to month depending upon the changes in quarter sigma order sizes, average daily market capitalisation & average daily traded value calculated every month on a rolling basis for the past six months and the market wide position limit in that security.

c) Selection criteria for mini derivative contracts

Mini derivative contracts (Futures and options) shall be made available for trading on such indices/securities as specified by SEBI from time to time.

d) Eligibility criteria for long term option contracts

Vide its circular no. SEBI/DNPD/Cir-34/2008 dated January 11, 2008 SEBI has specifically permitted introduction of option contracts with longer tenure on S&P CNX Nifty index.

B. List of Products and Eligibility criteria with BSE

BSE created history on June 9, 2000 by launching the first Exchange-traded Index Derivative Contract in India i.e. futures on the capital market benchmark index - the BSE Sensex. The inauguration of trading was done by Prof. J.R. Varma, member of SEBI and Chairman of the committee which formulated the risk containment measures for the derivatives market. In sequence of product innovation, BSE commenced trading in Index Options on Sensex on June 1, 2001, Stock Options were introduced on 31 stocks on July 9, 2001 and Single Stock Futures were launched on November 9, 2002.

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The eligibility criteria to determine the eligibility of stocks and indices on which Futures & Options contract could be introduced for trading in Derivatives is based upon the criteria laid down by SEBI vide circulars SMDRP/DC/CIR-13/02 dated December 18, 2002, SEBI/DNPD/Cir-26/2004/07/16 dated July 16, 2004, SEBI/DNPD/Cir-31/2006 dated September 22, 2006 for the selection of stocks eligible for launching Futures and Options contracts in the Derivatives Segment and the Exchange vide Notice No. 20090421 dated April 21, 2009 regarding change in eligibility criteria of stocks on which single stock futures and options can be introduced.

B.I. List of Products

Presently BSE is offering F&O trading on the following indices viz. BSE 30 index, SENSEX Mini, BSE BANKEX, BSE OIL & GAS Index, BSE TECH Index and BSE 100. BSE is also offering future contracts on the foreign indices also. They are HANG SENG Index future, MICEX Index Futures, FTSE/ JSE top 40 Futures, IBOVESPA Futures. A sizable number of (Presently 50) F&O trading is offered on Individual stocks. While considering the overall trading volume of index based/ stock based futures and option contracts in India; BSE merely accounts only 1% of the total turnover.

B.II. Eligibility Criteria for selection of Securities and Indices for Derivative Trading

a) Eligibility criteria for stock Futures and Options

i. The stocks would be chosen from amongst the top 500 stocks in terms of average daily market capitalization and average daily traded value in the previous six-month period on a rolling basis.

ii. For a stock to be eligible, the median quarter-sigma order size over the last six months should not be less than Rs. 5 lakh (Rs 0.5 million). For this purpose, a stock’s quarter sigma order size shall mean the order size (in value terms) required to cause a change in the stock price equal to one-quarter of a standard deviation.

iii. The Market Wide Position Limit in the stock shall not be less than Rs 100 crore (Rs 1000 million). The Market Wide Position Limit is valued taking into consideration 20% of number of shares held by Non-Promoters (i.e. free-float
holdings) in the relevant underlying stock and the closing prices of the stock in the underlying cash market on the date of expiry of contract in the month. Market Wide Position Limit is calculated at the end of every month.

iv. For an existing F&O stock, the continuing eligibility criteria is that market wide position limit in the stock shall not be less than Rs. 60 crores and the stock's median quarter-sigma order size over the last six months shall be not less than Rs. 2 lakhs. The stock shall be excluded if the above criteria are not fulfilled for consecutively three months.

b) Eligibility criteria for index based Futures and Options

i. The Futures Options Contracts on an index can be issued only if 80% of the index constituents are individually eligible for derivatives trading. However, no single ineligible stock in the index should have a weightage of more than 5% in the index. The index on which Futures and Options contracts are introduced shall be required to comply with the eligibility criteria on a monthly basis.

ii. SEBI has subsequently clarified that "The Exchange may consider introducing derivative contracts on an index if the stocks contributing to 80% weightage of the index are individually eligible for derivative trading. However, no single ineligible stock in the index shall have a weightage of more than 5% in the index."

iii. If an index fails to meet the above eligibility criteria for 3 months consecutively, no fresh month contract shall be issued on that Index. However, the existing unexpired contracts shall be permitted to trade till expiry and new strike prices will continue to be introduced in the existing contracts.

iv. The above requirements as prescribed by SEBI need to be necessarily met for introduction of F&O contracts on underlying stocks of the cash market. However, once the criteria are met, it is at the discretion of BSE to apply to SEBI for permission to launch F&O contract on the eligible stocks. Once SEBI approval in respect of those stocks is obtained, BSE shall issue a suitable notice to the market, in advance and then introduce F&O contracts on the respective stocks.
1.9. Scheme of Presentation

Chapter 1: Introduction; This Chapter will give an outlook on the research problem, objectives, the significance and the limitations of the study. Also this chapter will provide necessary conceptual and theoretical background on financial derivatives, various instruments, usage of derivatives, trading infrastructure and various regulatory aspects.

Chapter 2: Literature Review; will extensively review studies related to the broad area of research.

Chapter 3: Growth and Development of Financial Derivatives in India; intended to analyse the volume and future trend of derivative trading in India. This unit will also viewpoints the historical performance Index Futures, Index Options, Stock Futures and Stock Options in India.

Chapter 4: Customer Preference towards Financial Derivatives in South Kerala, analyse various demographic and behavioural factors influencing investors preference towards financial derivatives. This chapter provide a detailed picture on various aspects like attitude of investors towards derivatives, motives behind investment in derivatives, preferred investment combination, post investment behaviour etc.

Chapter 5: Role and Support extended by Intermediaries in Derivative Trading: Situation prevalent to South Kerala; provides a close examination on the opinion of expert population regarding present system and practices of derivative trading in India. A structural business model has developed at the end of this chapter in view of some strategies favoured by experts for promotion, management and customer retention towards F&O segment.

Chapter 6: Summary of Findings, Conclusion and Recommendations.
Chapter 1

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