CHAPTER - I

INTRODUCTION AND REVIEW OF LITERATURE

1.1 Introduction:

It is widely believed in financial world that the most significant milestone in financial innovation is achieved with the issuance and trading of derivatives. Financial derivatives have earned a well-deserved and extremely significant place among all the financial instruments, due to innovation and revolutionized the landscape. Derivatives provide an opportunity to transfer risk from one to another. Increased financial risk causes fewer returns to investors. This underlines the importance of risk management to hedge against uncertainty. The growth of derivatives in the recent years has surpassed the growth of its counterpart globally. The two major economic functions of a derivatives market are price risk management and price discovery. Among these, the price risk management is by far the most important, and is the backbone of a futures market. The need for price risk management, through what is commonly called "hedging", arises from price risks in most equities. The larger, the more frequent and the more unforeseen is the price variability in equity, the greater is the price risk in it. The equity derivatives market is playing a major role in shaping price discovery. Volatility in financial asset price, integration of financial market internationally, sophisticated risk management tools, innovations in financial engineering and choices at risk management strategies have been driving the growth of financial derivatives worldwide in India. India is one of the most successful developing country in terms of a vibrate market for exchange-traded derivatives. The Indian government’s efforts directed towards the establishment of a free, fair, transparent and fully informed market with help of the Futures market, so that futures prices truly determined by the forces of demand and supply. In the long term, the continuing rapid growth of economy in India creates a huge potential for Futures market. Launch of equity derivatives in Indian market has been extremely encouraging and successful. The Indian derivatives market has shown tremendous growth since its inception as a risk management tool to averse the risk. The Indian exchanges have prevalent and pioneer in the world exchanges and attain top-notch position. National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) includes futures, currencies, interest, options etc launch many of the products under
the derivatives segment. Each of the products has stipules and the turnover reached to record increment. 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 of NSE Nifty has grown from ₹2365 Cr. in 2000-2001 to ₹38211408.05 Cr. in 2013-14. While mainly retail investors are spearheading the growth, private sector institutions and large corporations, smaller companies and state-owned institutions are gradually getting into the act.

1.2 Derivative Instruments gained popularity due to the following:

- Unlike traditional investments, a derivatives contract need margin amount as prescribed by the derivative exchanges and if the investor lost the contract i.e. he/she will lost margin amount only not the full amount of contract;
- The risk factor is minimal in derivatives which compared to traditional investments;
- It helps in reducing the risk associated with exposures in underlying market by taking counter-positions in the futures market.
- The contracts with specific standardisation and limited size offered under fully controlled environment by well organised exchanges;
- Trade and market liberalization that has resulted in increased linkages between world economy and domestic economy;
- Improvements in technology (communications, software/hardware systems, etc.) and know-how; and
- A growth in the demand for derivatives instruments from institutional investors.
1.3 Need of the Study:

Derivatives as an investment tool attract so many investors to invest their money on contracts for the sake of getting returns. It gained more popularity as a risk management tool i.e. to minimise the risk on investments as compared with other types of investments such as shares, bonds, debentures etc. Stock markets are the best parameters to understand the economic performance of any country. It consists of all the sectors of the economy and represents the growth pattern of the stocks and their influences, effects on the economy. It is believed that the futures market generates adequate returns to the investors. The need of the study is to know the country’s top-notch stocks which give better understanding of their trend movements in the international markets and their influences on the exchanges. The need for the study is to identify the top-notch sectors and the investor’s behaviour regarding the sectors to enter in to the contracts and their encouragement to obstinate the stocks in the derivative exchanges. It is observed that there are seventy sectors played a pertinent role in the development of futures market in terms of contracts and turnover under NSE Nifty. It is identified that that 1130 percent increase in contracts of futures stocks segment and in terms of turnover 850 percent increase at the end of year 2014 compared with the year 2006 under NSE Nifty. Another need of the study is to observe the future markets is the better choice to the investors to get satisfactory returns. To study the stocks and their influences on the NSE Nifty for a specific period is helpful to estimate or forecast the future investment opportunities. There is a need to study the market because it is complex to understand the movements of the stocks and indexes on exchanges will give assiduous information on investments. The NSE and BSE created distinctive products based on capitalisation (individual stocks or companies operated in the nation) and importance of sectors (grouping the companies in same sector and form indexes) to facilitate the investors to invest on the best returns on stock. The researcher takes the NSE Nifty futures market for the study especially stock/equity futures segment and their reflections on the derivatives market. To study these variations the researcher chose eight years period from the year 2006 to 2014. The study based on the quarter-wise and the sector-wise performance on the NSE Nifty stock futures segment that gives extensive information regarding the contracts and turnover. Consequently, the level played by the futures markets on derivatives is inevitable and inexorable.
1.4 Objectives of the Study:
1. To study the growth pattern of Indian derivative market by comparing NSE Nifty stock futures segment contracts and turnover for eight years from 2006 to 2014.
2. To analyse the growth pattern of contracts and turnover of identified stocks on NSE Nifty Stock futures segment on quarterly basis from the year 2006 to 2014.
3. To forecast the movement of contracts for the year 2014-15.
4. To identify and analyse quarter-wise frequency of contracts and turnover on NSE Nifty stock futures segment from 2006 to 2014.
5. To know the number of sectors which take part for the development of derivative market on NSE Nifty stock futures segment and their associated contracts and turnover for eight years from 2006 to 2014.
6. To examine the correlation between contracts and turnover of identified stocks of various sectors on NSE Nifty stock futures segment sector-wise for eight years from 2006 to 2014.
7. To study the growth pattern of various stocks under various sectors identified on NSE Nifty stock futures segment and their impact on economy for the period of eight years from 2006 to 2014.
8. To give evocative measures on NSE Nifty stock futures segment with respect to identified sectors and their related stocks for eight years from 2006 to 2014.

1.5 Scope of the Study:
1. Study of equity/stock futures that are listed on NSE Nifty futures segment of India.
2. Study of traded contracts and their turnover of equity futures segment.
3. Study the role of Securities and Exchange Board of India (SEBI) in controlling the derivative markets.
4. Study the role of NSE in strengthening and expansion of derivatives markets.
1.6 Methodology:

In any research, methodology plays a crucial role to identify the findings based on the objectives set by the researcher. In the present research “A study on role of stock futures in Indian derivative market and an analysis of economic sectors of India and their influence on futures market with special reference to NSE Nifty” the researcher feels free to use various research tools and they are mentioned under the following:

1.6.1. Co-efficient of Determination (R-squared or R^2):

To understand the relation and strength of variables the researcher calculated two coefficients such as correlation coefficient and the coefficient of determination by using the following procedure. To test the linear relations of variables by determine the regression equation slope of the variables i.e.

\[ \hat{y} = \beta_0 + \beta_1 x \]

Where \( \hat{y} \) is the response variable, \( \beta_0 \) & \( \beta_1 \) are the unknown coefficients, whose values are estimated by least squares and ‘x’ is the independent variable.

To find how well the Line of Best Fit actually fits the data, we can find a number called R-Squared by using the following formula:

\[ R^2 = 1 - \frac{SSE}{SSY} \]

Where SSE means Sum of squared distances between the actual and predicted Y values and SSY means Sum of squared distances between the actual Y values and their mean.

By using the \( R^2 \), one may find the following and it is useful to evaluate the correlation between the variables and their responsiveness, the possibilities are

- The value of correlation coefficient R is such that \(-1 < r < +1\). The + and – signs are used for positive linear correlations and negative linear correlations, respectively.
- Positive correlation: If x and y have a strong positive linear correlation, correlation coefficient R is close to +1. An R-value of exactly +1 indicates a perfect positive fit. Positive values indicate a relationship between x and y variables such that as values for x increase, values for y increase.
- Negative correlation: If x and y have a strong negative linear correlation, correlation coefficient R is close to -1. An R-value of exactly -1 indicates a
perfect negative fit. Negative values indicate a relationship between x and y such that as values for x increase, values for y decrease.

✓ No correlation: If there is no linear, correlation or a weak linear correlation, correlation coefficient R is close to zero. A value near zero means that there is a random, nonlinear relationship between the two variables.

✓ A perfect correlation of ± 1 occurs only when the data points all lie exactly on a straight line. If correlation coefficient R = +1, the slope of this line is positive. If correlation coefficient R = -1, the slope of this line is negative.

✓ A correlation is greater than 0.8 generally described as strong, whereas a correlation less than 0.5 generally described as weak.

✓ The coefficient of determination, $R^2$, is useful because it gives the proportion of the variance (fluctuation) of one variable that is predictable from the other variable. It is a measure that allows us to determine how certain one can be in making predictions from a certain model/graph.

✓ The coefficient of determination is the ratio of the explained variation to the total variation.

✓ The coefficient of determination is such that $0 < R^2 < 1$, and denotes the strength of the linear association between x and y.

✓ The coefficient of determination represents the percent of the data that is the closest to the line of best fit.

✓ The coefficient of determination is a measure of how well the regression line represents the data. If the regression line passes exactly through every point on the scatter plot, it would be able to explain all of the variation.

1.6.2. Skewness Distribution:

Skewness refers to lack of symmetry, i.e. when a distribution is not symmetrical. Any measure indicates the difference between the manners in which items distributed are in a particular distribution compared with a symmetrical (or normal) distribution. Skewness is the result of the concerned variables mean, median and mode. The interpretation of the skewness is the result of the relationship of the variables mean, median and mode. Skewness interpreted can be on its tail length and the role of extreme values in pulling the mean up or down. The tails that gives more information about the given variables based on:
Table-1.1
Tails at given variables

<table>
<thead>
<tr>
<th>Skewness</th>
<th>Tail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean=Median=Mode</td>
<td>Symmetric Normal</td>
</tr>
<tr>
<td>Mean&lt;Median&lt;Mode</td>
<td>Skewed Left</td>
</tr>
<tr>
<td>Mean&gt;Median&gt;Mode</td>
<td>Skewed Right</td>
</tr>
</tbody>
</table>

Compilied by the Researcher

Skewness interpretation of Values based on the following:

- If skewness is less than minus one or greater than plus one, the distribution is highly skewed.
- If skewness is between minus one and \(-\frac{1}{2}\) or between \(+\frac{1}{2}\) and plus one, the distribution is moderately skewed.
- If skewness is between \(-\frac{1}{2}\) and \(+\frac{1}{2}\) the distribution is approximately symmetric.

1.6.3. Kurtosis Distribution:

Kurtosis refers to the degree of flatness or peakedness or flatness in the region about the mode of a frequency curve. The degree of kurtosis of a distribution measured is relative to the peakedness of normal curve. In other words, measures of kurtosis tell us the extent to which a distribution is more peaked or flat-topped than the normal curve.

The general forms of kurtosis are:

- If a curve is more peaked than the normal curve is called leptokurtic. In this case, the kurtosis is more than three.
- If a curve is more flat-topped than the normal curve, it is called platykurtic. In this case, the kurtosis is less than three.
- The normal curve itself called as mesokurtic. In this case, the kurtosis is equal to three.

1.6.4. Time Series Analysis (Method of Moving Averages):

The analysis of time series is of great importance in the research studies and it is quite useful to the researcher to analyse the data for better understanding past behaviour, planning future operations, evaluate current accomplishments and facilitates comparison. The main aim of the moving averages is to determine trend,
the average value for a number of years (or quarters or months or weeks) secured, and this average taken as the normal or trend value for the unit of the averages. The effect of averaging is to give a smoother curve, lessening the influence of the fluctuations that pull the annual away from the general trend. For this research, the researcher took twenty-eight quarters of contracts and predicted the future trend of the forthcoming quarters by taking quarterly moving averages.

1.6.5 **Box-Whisker Plot Method:**

Statistics assumes that data points are clustered around some central value. A box and whisker plot is a diagram showing statistical distribution of a data set. This plot makes it easy to see how the data is distributed along a number line. The "box" in the box-and-whisker plot contains, and thereby highlights, the middle half of these data points. It is a graph that presents information from a five-number summary. It does not show a distribution in as much detail as a stem and leaf plot or histogram does, but is especially useful for indicating whether a distribution is skewed and whether there are potential unusual observations (outliers) in the data set. A five-number summary is especially useful in descriptive analyses or during the preliminary investigation of a large data set. A summary consists of five values: the most extreme values in the data set (the maximum and minimum values), the lower and upper quartiles, and the median. These values are presented together and ordered from lowest to highest: minimum value, lower quartile (QL), median value (QM), upper quartile (QU), maximum value. These values have been selected to give a summary of a data set because each value describes a specific part of a data set: the median identifies the centre of a data set; the upper and lower quartiles span the middle half of a data set; and the highest and lowest observations provide additional information about the actual dispersion of the data. This makes the five-number summary a useful measure of spread.

The researcher used Ms-Excel and SPSS as a tool to evaluate the data for research purpose. The result based on the software and the researcher interprets the results on accuracy of the SPSS and Excel.
1.7 **Presentation of the Study:**

The present study “A Sector-wise, Stock-wise, Year-wise and Quarter-wise Analysis of Nifty Stock Futures in National Stock Exchange of India for the Period of Eight Years from 2006 to 2014”, has been prepared and presented under the sequential arrangement chapters with the following details.

**Chapter - I: Introduction and Review of Literature**
This chapter covers introduction to the derivatives, need of the study, objectives of the study, scope of the study, research methodology and literature review.

**Chapter - II: An overview of Indian Derivatives Market**
This chapter gives an overview of Indian Derivatves Market covering chronological events of development of derivatives market in India, SEBI & NSE, derivative instruments in India, credit rating agencies in India, organisation of derivative market in India, new technological advancements in dealing derivatives, challenges in derivatives market, sample contracts of all types of derivative instruments in India.

**Chapter - III: Economic Sectors of India and their growth pattern**
This chapter includes various economic sectors of India and their profiles that are listed on NSE Nifty Futures segment for the period of eight years.

**Chapter - IV: Data Analysis and Interpretation**
This chapter is completely based on the secondary information that is available on NSE and SEBI annual reports. This chapter contains the analysis of future contracts and turnover and sectoral growth for seven years.

**Chapter - V: Findings and suggestions**
This chapter presents the major findings of the study based on the NSE NIFTY stock futures and the sectoral analysis responses on the Indian Derivative Market. The researcher tries to give suggestions on the related issues of stock futures.
1.8 Data Collection:
The collection of data for this study is purely collected from secondary source through the SEBI Bulletin, NSE historical data etc. The researcher collected the data as follows for this study:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period of Study (2006 to 2014)</td>
<td>8 Years</td>
</tr>
<tr>
<td>Total no. of quarters (times)</td>
<td>32</td>
</tr>
<tr>
<td>Total no. of Sectors appeared on NSE Nifty</td>
<td>28</td>
</tr>
<tr>
<td>Total no. of Stocks related to various sectors</td>
<td>77</td>
</tr>
<tr>
<td>Total no. of Contracts</td>
<td>808564722</td>
</tr>
<tr>
<td>Total value of Contracts (Turnover in ₹)</td>
<td>2300055791.77</td>
</tr>
<tr>
<td>Number of stocks appeared thirty-two times on NSE Nifty for eight years from 2006 to 2014</td>
<td>30</td>
</tr>
</tbody>
</table>

1.9 Literature Review:

Merton Miller (1991), by volatility public seems to mean days when large market movements, particularly down moves, occur. These precipitous market wide price drops traced cannot always be to a specific news event. Nor should this lack of smoking gun be seen as in any way anomalous in market for assets like common stock whose value depends on subjective judgment about cash flow and resale prices in highly uncertain future. The public takes a more deterministic view of stock prices; if the market crashes, there must be a specific reason.¹

Elements include the regulatory oversight, the order flow and trade execution, market making mechanisms, settlements and clearing procedures and exchange monitoring and enforcements. Derivatives exchanges provide services to economic agents regardless of their location. Derivatives markets facilitate the transfer of risk among economic agents by offering mechanisms for liquidity and price discovery. The most frequently cited market-making system based on an open outcry, daily mark-to-market with a gross margining.²

¹ “Financial Innovation and Market Volatility”, Nobel Prize winner in Economics 1990
Greenspan (1997) “By far the most significant event in finance during the past decades has been the extraordinary development and expansion of financial derivatives…”

Sahoo (1997) opines “Derivatives products initially emerged, as hedging devices against fluctuation in commodity prices and the commodity-linked derivatives remained the sole form of such products for many years.

R. Vaidyanathan, Professor of Finance, Indian Institute of Management, Bangalore (1998), the stock index futures market provides a less expensive and more speedy transaction market for investors to alter their exposes to economic information. A proper regulation pertaining to trading as well as margin requirements and arbitrage needed is so that the market is efficient and can overcome fears that under-related trading will increase stock market volatility. Since futures contracts are marked to the market at the time of each trading day they are subject to interim cash flows because additional margins may be requires in the case of adverse price movements or in the case of favourable price movements cash may be withdrawn.

Mitchell A. Petersen and S. Ramu (2000), risk measurement examines a setting in which the derivative strategies of two firms are known, but completing different. One firm aggressively hedges its risk using derivatives, to manage its risk. Differences in opportunities explain rest of the difference in the two companies risk management strategies. Careful measurement and comparison of a firm’s risk exposure, the opportunities available to the firm, and the objectives of the firm is the first step in explaining its risk management behaviour.

Jamal Mecklai (Domestic Consultant) and David Chin (International Consultant) (2000), the global futures industry is undergoing a period of immense change. This change has an even greater impact than the late 70s dramatic expansion in the industry when financial futures were introduced. This time the industry – both

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5 “Derivatives in the Indian Context- Need for Caution”, Article from Chartered Secretary journal, A 229, page 1001, October 1998
exchanges and brokers – is facing severe contraction in the number of players, though not necessarily of the total volume of business. The exchanges should be set up from the start as for-profit companies with the board of directors selected by the shareholders of each. Particularly given the historic credibility problems, the new guards of exchange developers need to carefully consider the selection of the original directors, ensuring a reasonable balance of trading and non-trading interest.7

Avadhani (2000) stated that a derivative, an innovative financial instrument, emerged to protect against the risks generated in the past, as the history of financial markets is replete with crises). Events like the collapse of the fixed exchange rate system in 1971, the Black Monday of October 1987, the steep fall in the Nikkei in 1989, the US bond debacle of 1994, occurred because of very high degree of volatility of financial markets and their unpredictability. Such disasters have become more frequent with increased global integration of markets.8

Marlowe (2000) argues that the emergence of the derivative market products most notably forwards, futures and options can be traced back to the willingness of risk-averse economic agents to guard themselves against uncertainties arising out of fluctuations in asset prices.9

C. K. G. Nair (2001), ironically, this need was first recognized by the policy-makers, followed by the exchanges and other stakeholders. From forward trading, there is now talking of not only futures but also other forms of derivatives such as options and swaps. Now, considering the global trends in the derivatives market, should the focus in India be on strengthening the regulatory mechanism? The exchanges themselves are undergoing change in terms of managerial structure, technological adaptations, and so on all steps towards becoming self-regulatory organizations. More developments are in the pipeline in the face of corporate interest in setting up modern exchanges for derivatives transactions. Thus, the 1990s has been a decade of renaissance for commodity derivatives trading in India. The stakeholders

have realized the enormous potential of the sector and the need for adapting to the fast-paced changes sweeping across the world.\textsuperscript{10}

Henry L. Bryant and Michael S. Haigh (2001), in the futures markets, research regarding bid-ask spreads has concentrated primarily on the financial markets. Bid and ask prices reported are usually not in open outcry futures markets and thus various estimators developed have been that estimate bid-ask spreads using commonly available transaction data. The performance of a spread estimator in a financial futures market may not be indicative of that estimator's performance in a commodity futures market.\textsuperscript{11}

Jessica Cross - Chief Executive, Virtual Metals Research & Consulting London, UK (2002), nothing could be further from the truth and regular gold market observers will agree that the great hedging issue has been at the epicentre of some of the most acrimonious and heated debates that this market has ever seen. The hedging phenomenon in gold seems now to have gone full circle. Market circumstances have changed in a number of ways and for a number of reasons. There is consensus now that derivatives have had a major impact on the structure of the gold market and ergo, the behaviour in the price, in a way that has not been seen in other commodities or financial instruments. The market itself is very small relative to currencies, and any structural change imposed on it had an exaggerated effect. However, more importantly, gold remains a contango market, exhibiting a positive carry. Contrast this to base metals and the platinum group metals that may and do lapse into periods of deep and prolonged backwardation; certainly long enough to dramatically influence price risk management decisions.\textsuperscript{12}

The equity derivatives market in India, though young by international standards, is being noticed. Many retail investors, however, shy away from it because they are not very clear about how to go about dealing in these instruments. These instruments give rise to many opportunities as well as challenges because there are

\textsuperscript{10} “Commodity Derivatives Trading- Looking to a Brighter Future”, The Hindu Business line, 29-06-2001
\textsuperscript{11} Bid-Ask Spreads in Commodity Futures Market”, Department of Agricultural and Resource Economics, The University of Maryland, College Park, April 2001
\textsuperscript{12} Paper Prepared for The ABARE Conference, Canberra, March 2002
some important differences between investments in the cash market as opposed to that in derivatives. The decision by SEBI to halve the minimum contract size to Rs 1 lakh has come as a boon to retail investors, who can enter the market with less capital once the lot sizes adjusted downwards by the exchange.\textsuperscript{13}

U R Bhat, Director, J P Morgan India Pvt. Ltd (2003), one of the recent successes in the Indian stock market is the widespread popularity in the exchange traded derivatives segment, specially the individual stock futures contracts. Higher institutional participation is clearly important for the overall development of both the exchange traded derivatives market and the spot market. Robust volumes in the derivatives market will also help the liquidity in the spot market as arbitrageurs arbitrage the spot and futures markets thereby improving the liquidity and price discovery in the spot market. The depth of the derivatives market will rise in the form of rising open interest, as institutions tend to take a relatively longer-term view on the market.\textsuperscript{14}

T. B. Kapali, ING Vysya Bank (2003), the rationale underlying financial derivatives, which seek to mitigate/transfer risk in a portfolio of assets/liabilities, is clear in this background. The key to any kind of derivative contract be it on real assets such as commodities or on financial assets is uncertainty about the price behaviour of the underlying asset. Or to put it more technically, price volatility of the underlying asset both historical and prospective is a critical determinant of the need for and the value of derivative contracts on such assets. Volatility here means two-way price movements in an asset. It is the real possibility of a two-way price movement that which will bring in different kinds of market participants the hedgers, the speculators and the arbitrageurs build volumes and work out efficient risk transfer mechanisms.\textsuperscript{15}


\textsuperscript{15} “Price Volatility is key to Derivatives Growth”, The Hindu Online edition, Business column, 7th July 2003
Narendra Gupta, formerly Deputy General Manager, Global Markets Group, ICICI Bank Ltd, (2003), one of the most significant policy announcements has been the lifting of the ban on futures trading of gold and silver in India. This follows the Central Bank permitting authorized banks to trade in gold futures and options, and banks in India are expected to commence trading in these products in the very near future. The domestic banks’ participation in the bullion market is overseen by the country’s central bank. With a view to integrate the commodity futures market with the rest of the financial market, a task force has been set up to work towards bringing these markets under a single regulator.\footnote{16}{“An Indian Futures Exchange”, The LBMA Precious Metals Conference, Lisbon, In Association with NCDEX, 2003}

John C. Beghin and Ataman Aksoy (2003), all the markets studied present heterogeneous interests, pitting producers and processors in the North against their counterparts in the South and generating different interests within the North and the South as well. Identifying superior policy options is not difficult, but the feasibility of reforms depends on the power of vested interests and the ability of governments to identify trade-offs and possible packages (linkages) that will allow them to continue to pursue multiple goals (such as food security, income transfers, and expansion of domestic value-added production) in a more efficient manner. Perhaps most significant is that the studies reveal the importance of microanalysis in identifying both the key policy instruments that currently distort competition and the likely winners and losers from global reforms. The latter is critical in order to appropriately sequence reforms and put in place complementary policies, including adjustment assistance.\footnote{17}{“Agricultural Trade and the Doha Round: Lessons from Commodity Studies”, Briefing Paper 03-BP 42, July 2003, Centre for Agricultural and Rural Development, Iowa State University}

The Indian market has become more robust with the introduction of derivatives, a sentiment echoed by FIIs. The futures style of trading and settlement induces faith because it reduces the likelihood of manipulation and payments crises. Derivatives have boosted liquidity in the underlying cash market by introducing a hedging mechanism and giving large investors the opportunities for arbitrage. In terms of size, the Indian derivatives market is minuscule less than 0.1 percent of the
worldwide exchange-traded derivatives market volume of about $3000bn per day and less than 0.1 percent of the OTC market volume of $1,400bn per day.\textsuperscript{18}

M. T. Raju, Anirban Ghosh (2004), the returns on portfolio of stocks (index) is more or less normally distributed. Because normal distributions are fully described by their mean and standard deviation, the risk of such portfolios can indeed be measured with one number. Confronted with non-normal distributions, however, it is no longer appropriate to use the standard deviation as the sole measure of risk. In that case investors should also look at the degree of symmetry of the distribution, as measured by its so-called ‘skewness’, and the probability of extreme positive or negative outcomes, as measured by the distributions, ‘kurtosis’. The issues of volatility and risk have become increasingly important in recent times to financial practitioners, market participants, regulators and researchers.\textsuperscript{19}

Amita Batra (2004), Monthly stock returns have been used for analysis as the presence of more noise at higher frequencies makes it difficult to isolate cyclical variations, obscuring thus the analysis of the driving moments of switching behaviour in stock price volatility. Stock market liberalization will attract a new group of investors, the FIIs. An increase in the number of traders in the market may then reduce the stock price variance. Stock market opening may also simultaneously trigger an increase in the variance of information sets available to the FII thereby implying a possibility of an increase in the stock return volatility. The analysis of the stock market cycles shows that in general over the reference period the bull phases are longer, the amplitude of bull phases is higher and the volatility in bull phases is higher. The gains during expansions are larger than the losses during the bear phases of the stock market cycles. The bull phase in comparison with its pre liberalization character is more stable in the post liberalization phase.\textsuperscript{20}


\textsuperscript{19} “Stock Market Volatility – An International Comparison”, Securities and Exchange Board of India, Working paper series, no. 8, April 2004

Michael Gorham, Susan Thomas and Ajay Shah (2005), the government imposed severe restrictions on outbound investment because of a shortage of foreign reserves. India now finds itself in a completely different position with $125 billion in foreign reserves, the fifth largest in the world. Therefore, last year the Reserve Bank of India, the country’s central bank, raised the amount of funds that Indian citizens could invest abroad to $25,000, which is three times the average middle class salary. There are sound clearing and settlement processes, topped off by active markets in a range of modern products like stock futures, stock options, index funds, ETFs, index futures and index options. The spot and derivatives markets have a single regulator, SEBI.\(^{21}\)

B. V. Mehta, Executive Director, the Solvent Extractors’ Association of India, Mumbai (2005), increases integration of the domestic market with the international market leads to increased uncertainty and greater risk. Market Situation has become more competitive as players today are much better off / better equipped than their counterparts until a few years ago, because of futures trading facility. Futures trading provide an excellent tool for managing the most important risk that is price risk.\(^{22}\)

Asani Sarkar (2006), in terms of the growth of derivatives markets, and the variety of derivatives users, the Indian market has equalled or exceeded many other regional markets. While mainly retail investors are spearheading the growth, private sector institutions and large corporations, smaller companies and state-owned institutions are gradually getting into the act. Foreign brokers such as JP Morgan Chase are boosting their presence in India in reaction to the growth in derivatives. The variety of derivatives instruments available for trading is also expanding.\(^{23}\)

Asani Sarkar (2006), Derivatives on stock indexes and individual stocks have grown rapidly since inception. In particular, single stock futures have become hugely popular; accounting for about half of NSE’s traded value in October 2005. In fact, NSE has the highest volume (i.e. number of contracts traded) in the single stock

\(^{21}\) “Futures Markets in Asia: India the Crouching Tiger”, Futures Industry Magazine, May / June 2005

\(^{22}\) “Futures Trading: A Boom to Oil Seed Sector”, Conference on Commodities Futures Market in India, ASSOCHAM, 14th July 2005

futures globally, enabling it to rank 16 among world exchanges in the first half of 2005. Retail investors (including small brokerages trading for themselves) are the major participants in equity derivatives, accounting for about 60% of turnover in October 2005, according to NSE. The success of single stock futures in India is unique, as this instrument has generally failed in most other countries. One reason for this success may be retail investors’ prior familiarity with “badla” trades that shared some features of derivatives trading. Another reason may be the small size of the futures contracts, compared to similar contracts in other countries.²⁴

Suchismitha Bose (2006), adequate regulatory measures are also being put in place to try and ensure that adverse effects from excessive leverage in derivative market do not in any way rupture normal futures market transactions. There is a always a need to know how efficiently the derivative markets is functioning and how far the core benefit of price discovery or fair pricing in asset markets is actually being aided by the flourishing derivative markets. An efficient derivative markets ought to play a lead role in the process of price discovery for the underlying. The relationship between spot and futures markets in price discovery has thus been an important area of research. This broadly amounts to analyzing whether price innovations appear first in the futures market and are then transmitted down into the spot market. In our future research, we propose to inquire into the presence or absence of this feature in major segments of the Indian derivative market.²⁵

Michael Gorham (2006), India has futures or options on only four indexes listed at two exchanges. This is good when compared to other emerging markets, but substantially narrower than the U.S. market, which has six exchanges listing 33 index futures contracts and seven exchanges offering 100 index options contracts. Despite the apparent competition in the U.S., one exchange, the Chicago Mercantile Exchange, still accounts for 92% of all index futures trading. In India, contracts were initially designed so that the exchange attempted to match interested buyers and sellers and cash settled the rest. As a way to bring order to the highly fragmented system of regional commodity exchanges, the national government decided that it

would be wise to create one or more exchanges that would operate on a national level and list a large number of commodities.  

Dheeraj Misra, R. Kannan, and Sangeeta D. Misra, (2006), the focus that have been considered as the determinants of arbitrage profits are the time to maturity. Whether violation is more in rising markets or in declining markets; whether violation is more when theoretical futures price exceeds actual futures price or when actual futures price exceeds theoretical futures price; the number of contracts traded; and the change in open interest.  

Sibani Prasad Sarangi and Uma Shankar Patnaik (2007), increased volatility in asset prices in financial markets, increased integration of national financial markets with international markets and improvement in communication facilities necessitated the introduction of derivatives in India. The futures and options trading has not significantly stabilized or de-stabilized the underlying market volatility. The results regarding the flow of information to the spot market indicate that the surge of recent information or innovating to the stock market has increased while the price sensitivity to the old news has declined in the post-derivatives scenario.  

Anuradha Guru (2007), the growth in this market has been led by the innovations happening in structured finance and other customized derivatives products. These innovations are driven by the investor's demands and the competition among the institutional brokers to cater to these demands. SEBI set up a Derivatives Market Review Committee, in March 2007, to look into the developments in derivatives market in India and suggest future possibilities and course of action. The Committee, in December 2007, recommended introduction of certain new derivative instruments based on global experience and the perceived appetite for new products in the Indian markets. Internationally, the problems of technology solutions and risk management are increasingly being addressed by new developments in the market like introduction of electronic trading and confirmation systems, CCP clearing the

26 “Incredible India: Formidable Futures”, Futures Industry Magazine, September/ October 2006  
trades etc. With these developments happening, analysts have argued that it is actually leading to unification of the organized exchange market and the OTC market. There are other sets of analysts who feel both the exchange and OTC derivatives market will co-exist as they cater to needs of different user.²⁹

Andreas A. Jobst (2007), Equity derivative trading tends to be associated with high trading volumes in deep and wide cash markets, mainly because the development of derivatives necessitates liquid collateral (including pricing benchmarks) to ensure efficient price formation. Low liquidity in some Asian equity markets may reflect issues of transparency and corporate governance, which generate information asymmetries, and accordingly foster high bid-asked spreads and limited trading activity. Price discovery in derivative markets is most efficient if both speculation and institutional hedging motivate trading. Some Asian derivative markets (India) are actively sponsoring more domestic retail participation in order to compensate for the lack of genuine hedging demand of institutional investors.³⁰

Kailash Chandra Pradhan and K. Sham Bhat (2007), the results revealed that futures lead the spot in case of nine individual securities, spot leads futures in case of seven individuals securities and that a feedback relationship exists between the two markets in case of nine individual securities. It could be say that spot and futures may have an important price discovery role, and hence, a temporal causality exists between them.³¹

Hoa Nguyen and Robert Faff (2007), while derivative usage in general can potentially be a source of information asymmetry that explains a hedging discount, market participants may discount the use of swaps more heavily due to the possibly higher default risk associating with swap contracts. Despite the fact that default risk is inherent for all derivative contracts, in the case of exchange traded futures and options, the risk is mitigated through daily marking to market processes by an organized exchanged. In contrast, the swap market, like all other over the counter

derivative markets, does not have such a systematic approach to control default risk but primarily rely on credit enhancement devices to control for default risk. Our results, therefore, suggest that market participants may price default risks associating with swap contracts into the valuation of a firm.\textsuperscript{32}

Afsal E. M. and T. Mallikarjunappa (2007), in India derivatives were launched mainly with the twin objectives of risk transfer and increasing liquidity in order to ensure better market efficiency. The introduction of derivatives has no significant impact on the spot market volatility in a big way. That the derivatives trading have not significantly stabilized or de-stabilized the market. This observes persistence of shocks and long memory process in the post- derivatives period and therefore, concludes that listing of derivatives has not brought in the declined outcome of a decline in the volatility.\textsuperscript{33}

Suchismita Bose (2007), annualised volatility estimates to be higher in the futures market, particularly within a day, it seems much of the adjustment happens in this market and it gives direction to price formation in its underlying spot market. Further the asymmetry in news impact is less pronounced for the futures market; this again shows that the futures market deals with adverse effects, even during market retreats, somewhat faster than the spot market.\textsuperscript{34}

Jason Gilliam (2008), the derivative bubble refers to the enormous quantity of the world's combined open interest (open trades, and mortgages) of all derivative instruments in the marketplace. Some have speculated that if the derivative bubble were to burst it would destroy the values of all the paper currencies; however, based on the lessons of history I believe the opposite is true. Mathematically speaking, if the entire collective derivative portfolio were to unravel, the US dollar could appreciate ten times over. Sounds like a fantasy come true until you review the history of the Great Depression and realize that the sucking power of this derivative black hole will

\textsuperscript{32} “Does the Type of Derivative Instrument used by Companies Impact Firm value?”, School of Accounting, Economics and Finance, School Working Paper- Accounting / Finance Series 2007
\textsuperscript{34} “Understanding the Volatility Characteristics and Transmission Effects in the Indian Stock Index and Index Futures Market”, ICRA Bulletin Money & Finance, September 2007 Issue, Page 159.
take the cash right out of the average person's pocket, de-capitalize businesses small and large, and leave most people jobless as well.\textsuperscript{35}

Ricky McRoskey (2008), Prediction markets, or event futures, are a set of contracts that people can trade like a stock. Prediction markets are about to become federally regulated. The price of each contract would in theory reflect the probability that an event will or will not occur, based on the information that each trader contributes with every "buy" and "sell." The intersection of prediction markets and politics can also be controversial, depending on the nature of the forecasts.\textsuperscript{36}

Namita Jain (2008), the Rules, Byelaws and Regulations of the Derivative Segment of the Exchanges and their Clearing Corporation/House have to be framed in line with the suggestive Byelaws. SEBI has also laid the eligibility conditions for Derivative Exchange/Segment and its Clearing Corporation/House. The eligibility conditions have been framed to ensure that Derivative Exchange/Segment & Clearing Corporation/House provide a transparent trading environment, safety & integrity and provide facilities for redressal of investor grievances.\textsuperscript{37}

Gronvik Gunnvald, special adviser, Norges Bank Financial Stability (2008), Hedging against future price movements can be important both for those producing goods and for those buying them. Commodity derivatives may be employed as a hedge against price risk, and this is one of the reasons behind several initiatives to establish fish derivatives markets in Norway. Central banks focus most heavily on financial derivatives and in particular exchange rate and interest rate derivatives. These are clearly the largest derivatives markets and are the markets that can have the most substantial impact on central bank activities in the areas of monetary policy and financial stability. When a clearinghouse participates in a transaction as central counterparty, it acts as an intermediary between the buyer and seller. Both parties sign contracts with the central counterparty rather than with each other. In this way, all market participants only have counterparty risk in relation to the clearinghouse. Either the clearinghouse performs this service for a small fee but also demands collateral for

\textsuperscript{35} "The Derivative Bubble", Business daily review, 17\textsuperscript{th} October 2008
\textsuperscript{36} "Regulation Looms for Prediction Markets", Business Week> News Analysis, 7\textsuperscript{th} July 2008
\textsuperscript{37} "All about India’s Derivatives markets", Commodity Online, 28-04-2008
its activities in the form of a daily margin payment in accordance with the contract's
daily price movements or a guarantee that covers the maximum loss on the portfolio
of contracts held by the market participant.  

B. Venkatesh (2008), traders extensively use limit-orders to buy a stock at a
discount to the market price. The present market structure does not allow traders to
use Good Till Cancelled (GTC) order to buy or sell a stock at a certain price. Short
puts can be effective when the trader expects the stock to move up marginally or trade
sideways in the near-term. Only a small proportion of traders buy stocks at the
market price. Most place a limit order to buy a stock at a lower price. Using limit-
order has its problems.  

Nishith Srivastava (2008), Turmoil in financial markets, slower growth in
high-income countries, and rising inflation have all adversely affected growth
prospects for developing countries over the near term. Most countries have shown
impressive resilience in this turbulent environment, and growth for developing
countries as a group is expected to moderate from 7.8% in 2007 to a still strong 6.5%
in 2008. However, vulnerable countries that depend on foreign capital flows are likely
to experience a sharper slowdown.  

Jitendra Shekhar (2008), 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. With 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. A primary motivation for pre-arranging a

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38 “On Commodity Derivatives and the Norwegian Initiatives to create a Fish Derivatives Market”,
buyer or seller for a stock of commodities in early forward contracts was to lessen the possibility that large swings would inhibit marketing the commodity after a harvest.\textsuperscript{41}  

Neesa Moodley (2009), the derivatives market is not for every investor. There are risks involved, particularly that of being exposed to large losses. You should not trade in futures or options if you are not comfortable with these risks or if you do not understand how derivatives work and what you should look out for. In this instalment of our series on how to manage your money, we tell you about investing in derivatives. Unlike shares and other forms of investment, some derivatives can lose you more than your initial investment amount, resulting in huge debts. Some investors balk at derivatives because of their perceived complexity, and rightly, so, because you should not invest in something you don't understand.\textsuperscript{42}  

Anne Vardell (2009), Trading in stock futures can be risky and complicated. People purchase stock futures to hedge their investments so that on one market blip either way up or way down will cause them to lose all their cash. When buying a stock future, the two parties match upon a fair price, which possibly won’t be too high or too low. Future trading systems allow investors to training futures trading with no committing any money. This way, the investor may sharpen his or her skills by practicing with numerous different market conditions. But future trading systems may also be used to automate futures orders based on definite conditions. It reduces the chances of human error and helps get the emotions out of the transactions. It certainly is not a lack of information that makes futures trading difficult and risky. Future trading systems can be used to sift through the mountains of information in order to make better options trading decisions.\textsuperscript{43}  

Vijay Kumar Singh, Mayank Mishra & Ruchi Mehta (2009), Indian derivative market, like Indian telecom, offers a lesson that radical change is possible. In finance, clear thinking on the part of key people at RBI, SEBI, BSE, NSE and NSDL gave revolutionary rather than incremental change, and laid a sound foundation for the

\textsuperscript{41} “Financial Derivatives Market and its Development in India”, http://jitendrashekhar.sampa.com/Blog, 14\textsuperscript{th} November 2008  
\textsuperscript{43} “Details of Future Trading Systems”, Chang Siu dot com, 24\textsuperscript{th} May 2009
Indian financial system. The initiatives of the Government, RBI, SEBI, etc for growth of derivatives market are admirable; however, there is still much leeway for improvement. This market is embryonic, which is manifest from the low trading volumes compared with that of developed capital economies. We believe that establishment of NMDE will not only solve this problem but also dilute the complex nature, tough norms and high entry barriers, which keeps derivative away from large, section of investor.44

D. S. Kolamkar, Director for the Forward Markets Commission, the objective of catching up with the developed countries can be achieved in the short run by reviving the derivative markets by attracting traditional players. The policy liberalization in the physical and derivative commodity sector would help in reviving their interest. Simultaneously large-scale training programmes need to be launched for market participants who are not conversant with modern trade practices. The transition to the modern systems and practices need to be made by adopting policies which will unleash competitive pressures after the derivative markets are revived by traditional players rather than thrusting new systems and practices on the traditional players. For example, allowing the stockbrokers trading in derivative segment of the security markets to trade in commodity derivative markets would hasten the transition to modern methods of trading, clearing and settlement.45

Kailash R. Gupta, Managing Director, National Multi-commodity Exchange of India Ltd. the development and sustenance of competitiveness critically depends on the ability of the trade and industry to make accurate price forecasts in the days to come and transfer the risks related to movement in prices of its inputs / outputs. An efficient futures market seeks to create an efficient forecast of price, which takes into account all the price-sensitive information about the commodity that is available at a particular point of time. The futures market provides efficient price signals which enables the producers to plan their production strategy and the situations of glut or scarcity can be avoided. The need for accurate price forecast and efficient transfer of

44 “Structuring the Nebulous Derivative Souk in India - A Bid to Ascertain National Multi Derivative Exchange”
45 “Regulation and Policy issues for Commodity Derivatives in India”
risk have forced the producers of commodities and the trade and industry to participate in the commodity futures market.\textsuperscript{46}

Ashutosh Vashishtha, Faculty College of Management, Shri Mata Vaishno Devi University (2010), India is one of the most successful developing countries in terms of a vibrant market for exchange-traded derivatives. This reiterates the strengths of the modern development of India’s securities markets, which are based on nationwide market access, anonymous safe and secure electronic trading, and a predominantly retail market. There is an increasing sense that the equity derivatives market is playing a major role in shaping price discovery. Factors like increased volatility in financial asset prices; growing integration of national financial markets with international markets; development of more sophisticated risk management tools; wider choices of risk management strategies to economic agents and innovations in financial engineering, have been driving the growth of financial derivatives worldwide and have also fuelled the growth of derivatives here, in India.\textsuperscript{47}

N. Tripathy (2010), the expiration week effects on volatility and trading volume and found that the weekly returns and volatilities of NIFTY futures during the expiration week are not significantly different from the returns and volatilities during other comparison. Day of the week effect is not present in almost all of the NIFTY futures indices. While looking for day of the week effect for the fifty stocks constituting the NIFTY, it is found that in the bullish phase thirty-eight stocks exhibit the weekday effect and nine stocks don’t exhibit the weekday effect.\textsuperscript{48}

Dr. Kapil Gupta (2010), the price discovery efficiency of Indian equity futures and cash markets. Study finds strong and stable long-run movement between two markets, which suggests that both markets observe long-run price equilibrium; hence, on maturity date price convergence does take place. However, during short-run, significant violations of equilibrium relationship have been observed, which implies that significant volatility spill over from one market to other takes place. Granger

\textsuperscript{46} “Role of Futures Market”, \url{http://www.nmce.co.in/%5C;%5C/Downloads/pub.aspx}
Causality results further suggest that both markets observe significant feedback relationship, which implies that price discovery, takes place in both markets.\textsuperscript{49}

Rasmeet Kohli (2010), the four types of products available for trading in the futures and options segment of NSE, it has been observed that the Index futures and stock futures are witnessing dwindling volumes in terms of turnover, while index options have seen an increase in the volumes since last three years. Most significant fall has been witnessed by stock future which accounted for a share of around 50\% in derivative markets turnover. On the other hand the index options have gained significantly. This reflects that the Indian securities market are maturing and understanding the usage of options.\textsuperscript{50}

R. Kohli and A. Belaisch (2011), the increased intensity of transmission of global financial shocks in times of higher volatility in foreign capital flows may be partly attributable to India’s rising financial integration, as it had relaxed some of its capital account regulation in the mid-2000. However, the list of regulation remains long and complex, and the recent rise in the pass through of foreign shocks points to the unavoidable need to strengthen financial markets infrastructure to improve their resilience to shocks. Adopting a discriminative approach to the liberalization of different segments of the financial markets, and varying the pace of liberalization, can be successful in limiting transmission of foreign shocks, which could otherwise exacerbate these vulnerabilities and threaten financial and macroeconomic stability.\textsuperscript{51}

Pankaj Sinha and Kritika Mathur, Faculty of Management Studies, University of Delhi (2012), financial market volatility has always remained a concern for regulators. In recent years, governments and global organisations are involved in proposing and adopting various regulations to control the level of speculations. One of the popular mechanisms is Securities Transaction Tax (STT). The proponents argue that imposition of STT discourages noise traders from trading, reducing unproductive

\textsuperscript{49} http://www.nseindia.com/content/research/res_paper_final185.pdf
\textsuperscript{50} “Journey of equity derivatives market at NSE –An analysis for the decade (2000-01 to 2009-10)”, NSE News Letter, Article, May 2010

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speculations. Whereas the opponents are of the view that increased tax can lead to lower value of securities, increase volatility, and decrease stock market efficiency.52

Dhananjay Sahu, Banaras Hindu University, India (2012), The Indian capital market has been witnessing major operational and structural changes as a result of ongoing financial sector reforms initiated by the Govt. of India. The major activities of these reforms have been to improve market efficiency, enhancing transparency and bringing the Indian capital market up to international standards. In addition to these developments, India is perhaps one of the real emerging markets in South Asian region that has introduced derivative products in June 2000 to provide tools for risk management to investors and to facilitate an efficient price discovery process with respect to different financial instruments by inculcating informational efficiency into the market. Derivatives markets provide a mechanism for those who buy and sell the actual asset to hedge themselves against unfavourable price movement and spreads risk across a large number of investors, the risk is transferred away from those hedging spot position to professional speculators who are willing and able to bear it. The availability of risk transference afforded by the derivatives market reduces the spot price volatility because it eliminates the need to incorporate risk premium in the spot market transaction to compensate the risk of price fluctuations.53

Prithul Chakraborty (2012), The Indian stock futures market has a good prospect and potential for achieving sustainable growth by leaps and bounds and thereby holding a commanding niche in the global market in near future. The minimum lot size and margin requirement of the futures contracts are still beyond the capacity of small retail investors. Further, the existing system of periodic alignment of the lot size of equity futures causes confusions among the market participants by way of creating a number of lot sizes for different contracts and in many cases, such lot sizes are with odd numbers of underlying shares. Indian stock futures market plays a major role in shaping price discovery, stabilizing volatility in stock prices, effectively managing the price fluctuation risk, providing wider choices of risk management strategies to the banks and financial institutions and improving integration of the

52 “Evolution of security transaction tax in India”, Munich Personal RePEc Archive (MPRA), Paper No. 40165, June 2012
national financial markets with their international counterparts and thereby stimulating the overall economic growth of the country.\textsuperscript{54}

Namita Rajput (2012), the new traders and investors are still facing difficulty to entry in the futures market as this market is tricky. Therefore, spot market leads futures market. The results show clearly that it is important to take into account the long-run relationship between the futures and the spot prices in forecasting future spot prices. In conclusion, the Nifty spot market is more informational efficient than the futures market. The results have practical implications for investors who wish to improve portfolio performance. Investors may use the spot market to discover the new equilibrium price, where the mean of this equilibrium price may be transmitted to the futures market. Greater efficiency of price discovery of spot market may help investors with more efficient strategies for hedging and speculating in futures.\textsuperscript{55}

Niti Saxena (2012), the limit for single stock product is 20\% of the market wide limit or INR. 50 cr., whichever is lower. Another hurdle towards the growth of derivatives is the overall cap on the total gross position in any underlying asset, which is currently set at the lower of 30 times average daily volume in the stock or 10\% of free float. It is very essential that this limit also to be revised. Indian debt markets are used to trading on YTM basis whereas interest rate futures are settled on the basis of zero coupon yield curve. Institutional participation is still very low for a number of reasons, the prime one amongst them is the position limit cap imposed by the regulator on FIIs. Each FIIs gross exposure in an index product is restricted to a max of 15\% of the open interest or INR. 100 cr.\textsuperscript{56}

Dr. P. S. Ravindra (2012), volatility is higher when prices are falling than when prices are rising. It means that the negative returns are more likely to be associated with greater volatility than positive returns. This is called asymmetric volatility effect. The change in the pattern of volatility and the recent irregular

\textsuperscript{54}“Futures Trading In Indian Stock Market: Present Scenario And Future Prospects”, Vidyasagar University Journal of Commerce, Vol. 17, March, 2012/ISSN 0973-5917, Page 38-52
\textsuperscript{56}“Emerging Derivatives Market Structure in India-A Study of Nifty Futures : An overview of Select Multinational Companies in the Indian Market Place”, VIEWPOINT, Volume 3 • No. 2 • July-December 2012
behaviour of the futures market came as a result of the global economic events, particularly the recent sub-prime crisis and news of probable recession. The trading volume growth of nearby-month index futures is the most influential factor for volatility in the futures market in India. Therefore, the investors are advised to predict volatility in the cash market by observing the futures volume growth as well as volatility in the index futures since volatility in the cash market is a measure of market risk.\(^{57}\)

Dr. Agha Nuruzzaman (2013), Futures trading exist primarily for the purpose of hedging. The main aim of trading in futures was to protect risk against some underlying assets like commodities or equity shares etc. The present study found that most of the retail investors’ trade in futures only for speculative purpose, and only a few of them are trading in futures for hedging purpose. It is also found that all the demographic factors except gender have significant variation with the motive of futures trading. Retail investors tend to use purchase price as the reference point and make decisions based on it. They would sell only if the price of the investment is above the price at which they had made the purchase.\(^{58}\)

1.10 Limitations of the Study:

1. The study is restricted only to NSE Nifty stock futures segment for the period of eight years from the year 2006 to 2014 only.

2. The study is limited to the stocks listed on NSE Nifty stock futures segment form the year 2006 to 2014 only.

3. The study is limited to the stocks and sectors of Indian Economy that are identified on NSE Nifty futures segment from the year 2006 to 2014 only.

4. The study is limited to the stocks which appeared thirty-two times on NSE Nifty stock futures segment from the year 2006 to 2014.
