

**DERIVATIVE TRADING IN INDIAN STOCK MARKET:
INVESTOR'S PERCEPTION WITH REFERENCE TO
UDAIPUR**

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Abstract

Derivative products like futures and options on Indian stock markets have become important instruments of price discovery, portfolio diversification and risk hedging in recent times. The objective of the study is to analyze the perception of investors regarding the derivatives market in India. The study was conducted on a sample of investors who are active participants in the cash and derivative segment of the NSE and BSE. The primary data for this research was collected from a sample of 140 people who are currently trading in the city of Udaipur, India. The research findings could be utilized by broking firms, investors and scholars for further analysis on investor's perception and to understand this issue critically. This paper explores the perception of investors on cash market and derivative market using data of stock and index futures and options. The result shows that the majority of investors invest in cash market.

Key words : Derivatives , hedge , investment , speculate ,

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Introduction

Financial derivatives have emerged as one of the biggest markets of the world during the past two decades. A rapid change in technology has increased the processing power of computers and has made them a key vehicle for information processing in financial markets. Globalization of financial markets has forced several countries to change laws and introduce innovative financial contracts which have made it easier for the participants to undertake derivatives transactions. The most significant event in finance during the past decade has been the astonishing development and expansion of financial derivatives.

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 way back in 1875. In 1952, the Government of India banned cash settlement and options trading. Derivatives trading shifted to informal forwards markets. In recent years, government policy has shifted in favour of an increased role of market-based pricing and less suspicious derivatives trading. The first step towards 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 2001 on the recommendation of L. C. Gupta committee. Securities and Exchange Board of India (SEBI) permitted the derivative segments of two stock exchanges, NSE and BSE, and their clearing house/corporation to commence trading and settlement in approved derivatives contracts.

Initially, SEBI approved trading in index futures contracts based on various stock market indices

The National Stock Exchange (NSE), located in Bombay is the first screen based automated stock exchange. It was set up in 1993 to encourage stock exchange reform through system modernization and competition. It opened for trading in mid- 1994 and today accounts for 99% market shares of derivatives trading in India.

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.

The study understands and analyzes various strategies used by investors in capital market and also analyzes the various aspects of derivatives. It also gives you idea about the investor's awareness for the derivative market. It also characterizes the rationale why investors are not investing more in F&O market. The study does not cover the perceptions of the brokers and was limited to 140 investors of Udaipur city. In derivative market, only two derivative products futures and options are used for the study.

The survey is important because in this volatile market, it prudent to be familiar with the strategies followed by them and the lessons they have learnt by burning their hands in this stock fire.

Review of literature

In the last decade, many emerging and transition economies have started introducing derivative. The introduction of equity index futures markets enables traders to transact large volumes at much lower transaction costs relative to the cash market. The consequence of this increase in order flow to futures markets is unresolved on both a theoretical and an empirical front contract. Impact of derivatives trading on the volatility of the cash market in India has been studied by **Thenmozhi (2002)**, **Shenbagaraman (2003)**, **Gupta and Kumar (2002)** **Gupta and Kumar (2002)** found that the overall volatility of underlying market declined after introduction of derivatives contracts on indices.

Thenmozhi (2002) reported lower level volatility in cash market after introduction of derivative contracts. **Shenbagaraman (2003)** reported that there was no significant fall in cash market

volatility due to introduction of derivatives contracts in Indian market. **Raju and Karande (2003)** reported a decline in volatility of the cash market after derivatives introduction in Indian market. All these studies have been done using the market index and not individual stocks. One school of thought argues that the introduction of futures trading increases the spot market volatility and thereby, destabilises the market (**Cox 1976; Figlewski 1981; Stein, 1987**). Others argue that the introduction of futures actually reduces the spot market volatility and thereby, stabilises the market. (**Powers, 1970; Schwarz and Laatsch, 1991 etc.**). The advocates of the first school perceive derivatives market as a market for speculators. Traders with very little or no cash or shares can participate in the derivatives market, which is characterised by high risk. Thus, it is argued that the participation of speculative traders in systems, which allow high degrees of leverage, lowers the quality of information in the market. These uninformed traders could play a destabilising role in cash markets (**Chatrath, Ramchander and Song, 1995**). However, according to another viewpoint, speculation could also be viewed as a process, which evens out price fluctuations. **Stein (1987)** develops a model in which prices are determined by the interaction between hedgers and informed speculators. In this model, opening a futures market has two effects; (1). The futures market improves risk sharing and therefore reduces price volatility, and (2) if the speculators observe a noisy but informative signal, the hedgers react to the noise in the speculative trades, producing an increase in volatility. In contrast, models developed by **Danthine (1978)** argue that the futures markets improve market depth and reduce volatility because the cost to informed traders of responding to mispricing is reduced. **Froot and Perold(1991)** extend **Kyle's(1985)** model to show that market depth is increased by more rapid dissemination of market-wide information and the presence of market makers in the futures market in addition to the cash market. **Ross (1989)** assumes that there exists an economy that is devoid of arbitrage and proceeds to provide a condition under which the noarbitrage situation will be sustained. It implies that the variance of the price change will be equal to the rate of information flow. The implication of this is that the volatility of the asset price will increase as the rate of information flow increases. Thus, if futures increase the flow of information, than in the absence of arbitrage opportunity, the volatility of the spot price must change. Overall, the theoretical work on futures listing effects offer no consensus on the size and the direction of the change in volatility. We therefore need to turn to the empirical literature on evidence relating to the volatility effects of listing index futures and options. **Fischer and Jordan (1995)** highlighted

the deep study of Futures and Options, their types, models, pricing and valuation. **Rohini Singh (2009)** discussed the advantages/disadvantages of using derivatives. Further Evaluate the pay offs from options and their combinations. As far as investment analysis is concerned, appreciate the role of Futures in Portfolio management. **N. Ramanjaneyalu and Dr. A. P. Hosmani (2010)** highlighted the need for awareness among retail investors. **Dr. L. C. Gupta (1996)** committee report submitted which suggested that 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. As pointed out by **Hodges (1992)**, **Mayhew (1999)** and others, many of these theories predict that volatility can increase or decrease with the introduction of futures, depending on the underlying assumptions, or depending on the parameter values used in the models. One interpretation of our result is that futures influence the underlying market through multiple, offsetting channels, with the relative importance of the effects depending on the extent of the development of the market. In particular, it appears that futures markets may play an important role in stabilizing less-developed markets. **Subrahmanyam (1991)** proposed that an uninformed trader will avoid trading with insiders in particular stock by trading in well-diversified index-based derivative instruments which is intact from inside information. If this is the case, the proportion of informed trader in stock market will increase. In order to offset losses from trading with insiders, market maker will increase bid-ask spread and increase stock volatility consequently. **Chan and Wei (2001)** and **Chen and Wu (2001)** examined the impacts on both price and trading volume of underlying securities, arising from the introduction of derivative equity warrants in Hong Kong. Both studies demonstrated the existence of a positive price effect, and that price changes were positively associated with trading volume. **Kumar, Sarin and Shastri (1998)** found evidence in support of the liquidity improvement effect. Their results based on the derivative warrant market do not seem to find supportive evidence of any improvement in liquidity. **Géczy, Minton, and Schrand (1997)**; **Koski and Pontiff (1999)**; **Lee and Hoyt (1997)**; **Mian (1996)**; **Nance, Smith, and Smithson (1993)**; and **Tufano (1996)**, among others conducted research on the determinants of derivative use. These studies have assumed, often unrealistically, that enterprises' motivations for using derivatives as a hedging tool are homogenous. However, firms from different regions or of different organizational structures may face dissimilar economic constraints and conditions that can lead to different derivative choices. Similarly, managers from different segments of an industry may possess dissimilar objectives and

motivations that also can result in different derivative decisions. Consequently, we might expect the factors that influence a firm's financial instrument choice to vary across segments of an industry, and that common factors may influence firms differently. Clearly, this heterogeneity impacts the efforts of financial institutions in developing appropriate derivatives, particularly for customized products.

Objectives of the study

1. To analyze the perception of investors regarding the derivatives market
2. To study the association between various demographic determinants and the knowledge about the financial market and awareness about various strategies like butterfly, straddle, strips & straps.

Hypothesis framed for the study

H₀₁ : There is no significant association between demographic factors and the knowledge about the financial markets .

H₀₂ : There is no significant association between demographic factors and the awareness towards various option trading strategies .

Research methodology

Methodology is a way to systematically solve the research problem. In other words it is the science of studying how research is done scientifically.

Universe : individual investors investing in different avenues

Sampling unit : individual investors in Udaipur city

Sample : residents of the Udaipur city

Sample size : 140 respondents

Sampling method : simple random and judgment sampling

Instrument : there were two questionnaire were executed for survey, 1 for cash market and other for cash and future market both

Data collection : primary data is collected by communicating with the respondents with the help of a structured questionnaire

Statistical tool : chi square test

Market activity of investors and their perception

140 investors are divided into two categories:

1. Investors in cash market segment (109)
2. Investors in cash and future market both (31)

Cash market (109)

For cash market out of 109 respondents 98 were males, 11 were females, 6 were single and 103 were married, 11 were under the age group of 25 years, 49 were under the age group of 25-35-years, 35 were under the age group of 35-45 years, 12 were under the age group of 45-55 years, 2 were above the age group of 55 years. Qualification wise – 11 were below the 12th, 50 were graduates, 34 were post graduates, and 14 were professionals. Occupation wise – 34 were in business, 53 were in service, 9 were in professional and 13 were in others. Annual income wise – 13 were earning below 150000 Rs, 55 were earning between 150000 - 300000 Rs, 27 were earning between 300000 – 500000 Rs, 13 were earning between 500000 – 700000 Rs, and 1 was earning above 700000 Rs. 2 were having good knowledge, 83 were having average knowledge, and 24 were having no knowledge about financial market.

Table 1

| Knowledge about financial market | | | | | |
|----------------------------------|-------------|----------|-----------|--------------|------------|
| Gender | | Good | Average | No knowledge | Total |
| | Male | | 2 | 74 | 22 |
| Female | | 0 | 9 | 2 | 11 |
| Total | | 2 | 83 | 24 | 109 |
| Marital status | Single | 1 | 3 | 2 | 6 |
| | Married | 1 | 80 | 22 | 103 |
| Total | | 2 | 83 | 24 | 109 |
| Age Group | < 25 years | 0 | 5 | 6 | 11 |
| | 25-35years | 1 | 36 | 12 | 49 |
| | 35-45 years | 1 | 30 | 4 | 35 |
| | 45-55 years | 0 | 10 | 2 | 12 |
| | > 55 years | 0 | 2 | 0 | 2 |
| Total | | 2 | 83 | 24 | 109 |

| | | | | | |
|---------------|------------------|----------|-----------|-----------|------------|
| Qualification | < 12th | 0 | 5 | 6 | 11 |
| | Graduate | 1 | 35 | 14 | 50 |
| | Post graduate | 1 | 30 | 3 | 34 |
| | Professional | 0 | 13 | 1 | 14 |
| Total | | 2 | 83 | 24 | 109 |
| Occupation | Business | 0 | 23 | 11 | 34 |
| | Service | 2 | 43 | 8 | 53 |
| | Professional | 0 | 9 | 0 | 9 |
| | Others | 0 | 8 | 5 | 13 |
| Total | | 2 | 83 | 24 | 109 |
| Annual income | < Rs 150000 | 0 | 7 | 6 | 13 |
| | Rs150000-300000 | 1 | 39 | 15 | 55 |
| | Rs 300000-500000 | 1 | 23 | 3 | 27 |
| | Rs 500000-700000 | 0 | 13 | 0 | 13 |
| | > Rs 700000 | 0 | 1 | 0 | 1 |
| Total | | 2 | 83 | 24 | 109 |

Of the 109 respondents 2 were having good, 83 were having average and 24 were having no knowledge about financial market.

H₀ (Null Hypothesis) : There is no significant association between demographic factors and the Knowledge about the financial markets

Table 2

| | Gender | Marital status | Age | Qualification | Occupation | Annual income |
|---------------------------------|----------|----------------|----------|---------------|------------|---------------|
| Calculated value (chi square) | .358 | 8.552 | 10.529 | 13.661 | 10.027 | 12.063 |
| df | 2 | 2 | 8 | 6 | 6 | 8 |
| Tabulated value | 5.991 | 5.991 | 15.507 | 12.592 | 12.592 | 15.507 |
| Accepted/rejected | accepted | rejected | accepted | rejected | accepted | accepted |

The study reported that gender, age, occupation and annual income of the respondents are not having any significant relationship with the Knowledge about the financial markets. The table shows that the calculated values of chi- square of gender, age, occupation and annual income are less than the tabulated value at 5% level of significance, the null hypothesis is accepted i.e., the knowledge about the financial markets is not dependent upon the gender , occupation and income . And marital

status and qualification of the respondents are having significant relationship with the Knowledge about the financial markets. The table shows that the calculated values of chi- square of marital status and qualification are higher than the tabulated value at 5% level of significance, the null hypothesis is rejected.

Table 3

| Type of trading into stock market | | | | |
|-----------------------------------|------------------|------------|------------|------------|
| | | speculator | investor | Total |
| Gender | Male | 60 | 92 | 98 |
| | Female | 4 | 11 | 11 |
| Total | | 64 | 103 | 109 |
| Marital status | Single | 1 | 5 | 6 |
| | married | 63 | 98 | 103 |
| Total | | 64 | 103 | 109 |
| Age group | < 25 years | 6 | 8 | 11 |
| | 25-35years | 33 | 46 | 49 |
| | 35-45 years | 20 | 35 | 35 |
| | 45-55 years | 5 | 12 | 12 |
| | > 55 years | 0 | 2 | 2 |
| Total | | 64 | 103 | 109 |
| Qualification | < 12th | 3 | 10 | 11 |
| | Graduate | 34 | 47 | 50 |
| | Post graduate | 21 | 32 | 34 |
| | Professional | 6 | 14 | 14 |
| Total | | 64 | 103 | 109 |
| Occupation | Business | 18 | 32 | 34 |
| | Service | 35 | 50 | 53 |
| | Professional | 3 | 9 | 9 |
| | Others | 8 | 12 | 13 |
| Total | | 64 | 103 | 109 |
| Annual income | < Rs 150000 | 8 | 9 | 13 |
| | Rs150000-300000 | 38 | 54 | 55 |
| | Rs300000- 500000 | 12 | 26 | 27 |
| | Rs 500000-700000 | 5 | 13 | 13 |
| | > Rs 700000 | 1 | 1 | 1 |
| Total | | 64 | 103 | 109 |
| Knowledge about financial market | Good | 0 | 2 | 2 |
| | Average | 53 | 80 | 83 |
| | No Knowledge | 11 | 21 | 24 |
| Total | | 64 | 103 | 109 |

Majority of the respondents are using cash market for investing (103) and speculation purpose (64).out of which the investor between the age group of 25 – 35 years are investing more Because the young investors intend to take more risk .

Table 4

| Factors considered while making an investment | | | | | | | |
|---|------------------|-------------|-----------|-----------|-----------------|-----------|------------|
| | | Fundamental | Technical | Tips | Friend's advice | Broker | Total |
| Gender | Male | 73 | 50 | 28 | 14 | 52 | 98 |
| | Female | 9 | 4 | 5 | 3 | 4 | 11 |
| Total | | 82 | 54 | 33 | 17 | 56 | 109 |
| Marital status | Single | 5 | 2 | 0 | 1 | 2 | 6 |
| | married | 77 | 52 | 33 | 16 | 54 | 103 |
| Total | | 82 | 54 | 33 | 17 | 56 | 109 |
| Age group | < 25 years | 6 | 3 | 3 | 4 | 4 | 11 |
| | 25-35years | 36 | 26 | 11 | 9 | 31 | 49 |
| | 35-45 years | 31 | 20 | 11 | 3 | 15 | 35 |
| | 45-55 years | 8 | 4 | 6 | 1 | 6 | 12 |
| | > 55 years | 1 | 1 | 2 | 0 | 0 | 2 |
| Total | | 82 | 54 | 33 | 17 | 56 | 109 |
| Qualification | < 12th | 5 | 1 | 7 | 2 | 7 | 11 |
| | Graduate | 35 | 22 | 13 | 12 | 25 | 50 |
| | Post graduate | 30 | 21 | 9 | 1 | 19 | 34 |
| | Professional | 12 | 10 | 4 | 2 | 5 | 14 |
| Total | | 82 | 54 | 33 | 17 | 56 | 109 |
| Occupation | Business | 25 | 15 | 7 | 5 | 24 | 34 |
| | Service | 42 | 30 | 18 | 8 | 25 | 53 |
| | Professional | 7 | 6 | 3 | 1 | 2 | 9 |
| | Others | 8 | 3 | 5 | 3 | 5 | 13 |
| Total | | 82 | 54 | 33 | 17 | 56 | 109 |
| Annual income | < Rs 150000 | 5 | 3 | 6 | 4 | 5 | 13 |
| | Rs150000-300000 | 42 | 28 | 15 | 10 | 30 | 55 |
| | Rs 300000-500000 | 23 | 15 | 10 | 2 | 12 | 27 |
| | Rs 500000-700000 | 11 | 7 | 2 | 1 | 9 | 13 |
| | > Rs 700000 | 1 | 1 | 0 | 0 | 0 | 1 |
| Total | | 82 | 54 | 33 | 17 | 56 | 109 |
| Knowledge about financial market | Good | 2 | 1 | 0 | 0 | 0 | 2 |
| | Average | 72 | 51 | 21 | 8 | 39 | 83 |
| | No Knowledge | 8 | 2 | 12 | 9 | 17 | 24 |
| Total | | 82 | 54 | 33 | 17 | 56 | 109 |

Of the 109 investors most of the investors believe in fundamental analysis, brokers and technical analysis while some of them rely on tip's and friend's advices. Investors believe that fundamentally strong company will give good returns.

Table 5

| For having position in cash market indicators used | | | | | | | |
|--|------------------|-------------------|--------------------------|---------------|---------------------|-----------|------------|
| | | Global sentiments | Indian market sentiments | Industry news | Stock/ company news | Others | Total |
| Gender | Male | 29 | 77 | 22 | 48 | 15 | 98 |
| | Female | 3 | 8 | 2 | 8 | 1 | 11 |
| Total | | 32 | 85 | 24 | 56 | 16 | 109 |
| Marital status | Single | 2 | 4 | 1 | 4 | 1 | 6 |
| | Married | 30 | 81 | 23 | 52 | 15 | 103 |
| Total | | 32 | 85 | 24 | 56 | 16 | 109 |
| Age group | < 25 years | 1 | 8 | 0 | 5 | 1 | 11 |
| | 25-35 years | 13 | 42 | 12 | 23 | 8 | 49 |
| | 35-45 years | 16 | 27 | 8 | 17 | 4 | 35 |
| | 45-55 years | 2 | 8 | 2 | 9 | 3 | 12 |
| | > 55 years | 0 | 0 | 2 | 2 | 0 | 2 |
| Total | | 32 | 85 | 24 | 56 | 16 | 109 |
| Qualification | < 12th | 1 | 6 | 1 | 5 | 3 | 11 |
| | Graduate | 13 | 40 | 4 | 23 | 4 | 50 |
| | Post graduate | 12 | 28 | 13 | 21 | 6 | 34 |
| | Professional | 6 | 11 | 6 | 7 | 3 | 14 |
| Total | | 32 | 85 | 24 | 56 | 16 | 109 |
| Occupation | Business | 11 | 28 | 6 | 16 | 7 | 34 |
| | Service | 15 | 40 | 14 | 28 | 7 | 53 |
| | Professional | 3 | 7 | 3 | 5 | 1 | 9 |
| | Others | 3 | 10 | 1 | 7 | 1 | 13 |
| Total | | 32 | 85 | 24 | 56 | 16 | 109 |
| Annual income | < Rs 150000 | 0 | 8 | 1 | 6 | 2 | 13 |
| | Rs 150000-300000 | 16 | 48 | 7 | 25 | 7 | 55 |
| | Rs 300000-500000 | 8 | 19 | 10 | 17 | 5 | 27 |
| | Rs 500000-700000 | 7 | 9 | 5 | 7 | 1 | 13 |
| | > Rs 700000 | 1 | 1 | 1 | 1 | 1 | 1 |
| Total | | 32 | 85 | 24 | 56 | 16 | 109 |
| Knowledge about financial market | Good | 1 | 1 | 2 | 1 | 0 | 2 |
| | Average | 29 | 62 | 22 | 47 | 11 | 83 |
| | No Knowledge | 2 | 22 | 0 | 8 | 5 | 24 |
| Total | | 32 | 85 | 24 | 56 | 16 | 109 |

Highest ranking is given to the Indian market sentiments followed by stock / company news.

Table 6

| Reasons for not investing in F&O market | | | | | | | |
|---|------------------|--------------------|----------------------|---------------------|---------------------|-----------|------------|
| | | Market uncertainty | Huge amount of money | Huge amount of risk | No knowledge of F&O | others | Total |
| Gender | Male | 23 | 30 | 37 | 33 | 38 | 98 |
| | Female | 3 | 3 | 5 | 2 | 5 | 11 |
| Total | | 26 | 33 | 42 | 35 | 43 | 109 |
| Marital status | Single | 0 | 2 | 1 | 2 | 1 | 6 |
| | Married | 26 | 31 | 41 | 33 | 42 | 103 |
| Total | | 26 | 33 | 42 | 35 | 43 | 109 |
| Age group | < 25 years | 0 | 6 | 1 | 4 | 2 | 11 |
| | 25-35years | 15 | 18 | 19 | 14 | 25 | 49 |
| | 35-45 years | 10 | 7 | 17 | 8 | 13 | 35 |
| | 45-55 years | 1 | 2 | 5 | 7 | 3 | 12 |
| | > 55 years | 0 | 0 | 0 | 2 | 0 | 2 |
| Total | | 26 | 33 | 42 | 35 | 43 | 109 |
| Qualification | < 12th | 0 | 4 | 3 | 7 | 5 | 11 |
| | Graduate | 8 | 18 | 19 | 19 | 19 | 50 |
| | Post graduate | 13 | 7 | 12 | 6 | 14 | 34 |
| | Professional | 5 | 4 | 8 | 3 | 5 | 14 |
| Total | | 26 | 33 | 42 | 35 | 43 | 109 |
| Occupation | Business | 6 | 9 | 13 | 15 | 15 | 34 |
| | Service | 16 | 18 | 17 | 16 | 22 | 53 |
| | Professional | 2 | 1 | 5 | 2 | 5 | 9 |
| | Others | 2 | 5 | 7 | 2 | 1 | 13 |
| Total | | 26 | 33 | 42 | 35 | 43 | 109 |
| Annual income | <Rs 150000 | 0 | 6 | 4 | 5 | 4 | 13 |
| | Rs 150000-300000 | 15 | 22 | 19 | 18 | 24 | 55 |
| | Rs 300000-500000 | 7 | 4 | 14 | 9 | 9 | 27 |
| | Rs 500000-700000 | 4 | 1 | 4 | 3 | 5 | 13 |
| | >Rs 700000 | 0 | 0 | 1 | 0 | 1 | 1 |
| Total | | 26 | 33 | 42 | 35 | 43 | 109 |
| Knowledge about financial market | Good | 1 | 0 | 0 | 0 | 1 | 2 |
| | Average | 25 | 26 | 38 | 17 | 31 | 83 |
| | No Knowledge | 0 | 7 | 4 | 18 | 11 | 24 |
| Total | | 26 | 33 | 42 | 35 | 43 | 109 |

Investors in the cash market do not like to invest in future and option mainly because of other factors and high risk.

Cash and future market (31)**Table 7**

| | | Frequency | Percent |
|----------------------------------|------------------------|-----------|--------------|
| Gender | Male | 28 | 90.3 |
| | Female | 3 | 9.7 |
| Total | | 31 | 100.0 |
| Marital status | Single | 0 | 0 |
| | Married | 31 | 100 |
| Total | | 31 | 100 |
| Age group | < 25 years | 1 | 3.2 |
| | 25-35 years | 9 | 29.0 |
| | 35-45 years | 16 | 51.6 |
| | 45-55 years | 3 | 9.7 |
| | > 55 years | 2 | 6.5 |
| Total | | 31 | 100.0 |
| Qualification | Below 12 th | 1 | 3.2 |
| | Graduate | 12 | 38.7 |
| | Post graduate | 10 | 32.3 |
| | Professional | 8 | 25.8 |
| Total | | 31 | 100.0 |
| Occupation | Business | 12 | 38.7 |
| | Service | 13 | 41.9 |
| | Professional | 4 | 12.9 |
| | Others | 2 | 6.5 |
| Total | | 31 | 100.0 |
| Annual income | < Rs 150000 | 1 | 3.2 |
| | Rs 150000-300000 | 5 | 16.1 |
| | Rs 300000-500000 | 15 | 48.4 |
| | Rs 500000-700000 | 9 | 29.0 |
| | > Rs 700000 | 1 | 3.2 |
| Total | | 31 | 100.0 |
| Knowledge about financial market | Good | 1 | 3.2 |
| | Average | 30 | 96.8 |
| | No knowledge | 0 | 0 |
| Total | | 31 | 100.0 |

For cash and future market out of 31 respondents 28 were males, 3 were females, all 31 were married, 1 was under the age group of 25 years, 9 were under the age group of 25-35-years, 16 were under the age group of 35-45 years, 3 were under the age group of 45-55 years, 2 were above the age group of 55 years. Qualification wise – 1 was below the 12th, 12 were graduates, 10 were post graduates, 8 were professionals. occupation wise – 12 were in business, 13 were in service, 4 were in professional and 2 were in others. Annual income wise – 1 was earning below 150000 Rs, 5 were earning between 150000 - 300000 Rs, 15 were earning between 300000 –

500000 Rs, 9 were earning between 500000 – 700000 Rs, and 1 was earning above 700000 Rs. 1 was having good knowledge, 30 were having average knowledge about financial markets.

Table 8

| Awareness of strategies like butterfly, straddle, strips & straps | | | | |
|---|-----------------|----------|-----------|-----------|
| | | Yes | No | Total |
| Gender | Male | 5 | 23 | 28 |
| | Female | 0 | 3 | 3 |
| Total | | 5 | 26 | 31 |
| Marital status | Single | 0 | 0 | 0 |
| | Married | 5 | 26 | 31 |
| Total | | 5 | 26 | 31 |
| Age group | < 25 years | 0 | 1 | 1 |
| | 25-35 years | 2 | 7 | 9 |
| | 35-45 years | 3 | 13 | 16 |
| | 45-55 years | 0 | 3 | 3 |
| | > 55 years | 0 | 2 | 2 |
| Total | | 5 | 26 | 31 |
| Qualifications | Below 12th | 0 | 1 | 1 |
| | Graduate | 2 | 10 | 12 |
| | Post graduate | 0 | 10 | 10 |
| | Professional | 3 | 5 | 8 |
| Total | | 5 | 26 | 31 |
| Occupation | Business | 1 | 11 | 12 |
| | Service | 3 | 10 | 13 |
| | Professional | 1 | 3 | 4 |
| | Others | 0 | 2 | 2 |
| Total | | 5 | 26 | 31 |
| Average income | <Rs 150000 | 1 | 0 | 1 |
| | Rs150000-300000 | 1 | 4 | 5 |
| | Rs300000-500000 | 0 | 15 | 15 |
| | Rs500000-700000 | 3 | 6 | 9 |
| | > Rs 700000 | 0 | 1 | 1 |
| Total | | 5 | 26 | 31 |
| Knowledge about financial market | Good | 1 | 0 | 1 |
| | Average | 4 | 26 | 30 |
| | No knowledge | 0 | 0 | 0 |
| Total | | 5 | 26 | 31 |

Majority of the investors are not aware about the strategy like butterfly, straddle, strips & straps they use their own strategies. some investors know about such strategy but they have no knowledge how to use such strategy.

H₀ (Null hypothesis) : There is no significant relationship between demographic factors and awareness of strategies like butterfly, straddle, strips and straps.

Table 9

| | Gender | Age | Qualification | Occupation | Annual income | Knowledge about financial market |
|-------------------|----------|----------|---------------|------------|---------------|----------------------------------|
| Calculated value | 0.639 | 1.482 | 4.819 | 1.620 | 10.302 | 5.373 |
| df | 1 | 4 | 3 | 3 | 4 | 1 |
| Tabulated value | 3.841 | 9.488 | 7.815 | 7.815 | 9.488 | 3.841 |
| Accepted/rejected | accepted | accepted | accepted | accepted | rejected | rejected |

The study reported that gender, age, qualification and occupation of the respondents are not having any significant relationship with the awareness of strategies like butterfly, straddle, strips and straps. The table shows that the calculated values of chi- square of gender, age, qualification and occupation are less than the tabulated value at 5% level of significance, the null hypothesis is accepted

And annual income and Knowledge about financial market of the respondents are having significant relationship with awareness of strategies like butterfly, straddle, strips and straps. The table shows that the calculated values of chi- square of annual income and Knowledge about financial market are higher than the tabulated value at 5% level of significance, the null hypothesis is rejected

Table 10

| Type of trading into stock market | | | | | |
|-----------------------------------|--------|----------|------------|-----------|-----------|
| | | Hedger | Speculator | Investor | Total |
| Gender | Male | 9 | 17 | 27 | 28 |
| | Female | 0 | 2 | 3 | 3 |
| Total | | 9 | 19 | 30 | 31 |
| Marital status | Single | 0 | 0 | 0 | 0 |

| | | | | | |
|---------------|------------------|----------|-----------|-----------|-----------|
| | Married | 9 | 19 | 30 | 31 |
| Total | | 9 | 19 | 30 | 31 |
| Age group | < 25 years | 0 | 1 | 1 | 1 |
| | 25-35years | 4 | 6 | 8 | 9 |
| | 35-45 years | 2 | 10 | 16 | 16 |
| | 45-55 years | 2 | 2 | 3 | 3 |
| | > 55 years | 1 | 0 | 2 | 2 |
| Total | | 9 | 19 | 30 | 31 |
| Qualification | < 12th | 0 | 1 | 1 | 1 |
| | Graduate | 5 | 6 | 11 | 12 |
| | Post graduate | 4 | 5 | 10 | 10 |
| | Professional | 0 | 7 | 8 | 8 |
| Total | | 9 | 19 | 30 | 31 |
| Occupation | Business | 5 | 8 | 12 | 12 |
| | Service | 4 | 7 | 12 | 13 |
| | Professional | 0 | 2 | 4 | 4 |
| | Others | 0 | 2 | 2 | 2 |
| Total | | 9 | 19 | 30 | 31 |
| Annual income | < Rs 150000 | 1 | 0 | 0 | 1 |
| | Rs 150000-300000 | 0 | 3 | 5 | 5 |
| | Rs 300000-500000 | 3 | 9 | 15 | 15 |
| | Rs 500000-700000 | 4 | 6 | 9 | 9 |
| | > Rs 700000 | 1 | 1 | 1 | 1 |
| Total | | 9 | 19 | 30 | 31 |

Majority of the investors using cash and future market for investing as well as speculating while some of them are using them in the market for hedging purposes.

Table 11

| Factors considered while making an investment | | | | | | | |
|---|-------------|-------------|-----------|----------|-----------------|-----------|-----------|
| | | Fundamental | Technical | Tips | Friend's advise | Broker | Total |
| Gender | Male | 26 | 17 | 2 | 1 | 10 | 28 |
| | Female | 3 | 1 | 0 | 0 | 3 | 3 |
| Total | | 29 | 18 | 2 | 1 | 13 | 31 |
| Marital status | Single | 0 | 0 | 0 | 0 | 0 | 0 |
| | Married | 29 | 18 | 2 | 1 | 13 | 31 |
| Total | | 29 | 18 | 2 | 1 | 13 | 31 |
| Age group | < 25 years | 1 | 0 | 0 | 0 | 0 | 1 |
| | 25-35years | 9 | 4 | 0 | 0 | 4 | 9 |
| | 35-45 years | 15 | 11 | 2 | 1 | 7 | 16 |
| | 45-55 years | 2 | 2 | 0 | 0 | 1 | 3 |
| | > 55 years | 2 | 1 | 0 | 0 | 1 | 2 |
| Total | | 29 | 18 | 2 | 1 | 13 | 31 |

| | | | | | | | |
|---------------|------------------|-----------|-----------|----------|----------|-----------|-----------|
| Qualification | < 12th | 1 | 0 | 0 | 0 | 0 | 1 |
| | Graduate | 11 | 6 | 0 | 0 | 4 | 12 |
| | Post graduate | 9 | 7 | 1 | 1 | 5 | 10 |
| | Professional | 8 | 5 | 1 | 0 | 4 | 8 |
| Total | | 29 | 18 | 2 | 1 | 13 | 31 |
| Occupation | Business | 12 | 9 | 1 | 0 | 2 | 12 |
| | Service | 12 | 7 | 1 | 1 | 7 | 13 |
| | Professional | 4 | 2 | 0 | 0 | 2 | 4 |
| | Others | 1 | 0 | 0 | 0 | 2 | 2 |
| Total | | 29 | 18 | 2 | 1 | 13 | 31 |
| Annual income | < Rs 150000 | 1 | 0 | 0 | 0 | 0 | 1 |
| | Rs150000-300000 | 5 | 2 | 0 | 0 | 2 | 5 |
| | Rs 300000-500000 | 13 | 7 | 2 | 1 | 9 | 15 |
| | Rs 500000-700000 | 9 | 8 | 0 | 0 | 2 | 9 |
| | > Rs 700000 | 1 | 1 | 0 | 0 | 0 | 1 |
| Total | | 29 | 18 | 2 | 1 | 13 | 31 |

Out of 31 investors in cash and future market 29 investors believe in fundamental analysis because they think investing in fundamentally strong company will give better return's, 18 believe in technical analysis and 13 believe in broker's while some of them rely on tip's and friend's advices.

Table 12

| For having position in cash and future market indicators used | | | | | | | | |
|---|---------------|-------------------|-----------------|------------|---------------------------|---------------|----------|-----------|
| | | Global sentiments | Index movements | Volatility | Price of underlying asset | Open interest | Others | Total |
| Gender | Male | 11 | 8 | 16 | 19 | 6 | 2 | 28 |
| | female | 1 | 0 | 0 | 3 | 0 | 1 | 3 |
| Total | | 12 | 8 | 16 | 22 | 6 | 3 | 31 |
| Marital status | Single | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Married | 12 | 8 | 16 | 22 | 6 | 3 | 31 |
| Total | | 12 | 8 | 16 | 22 | 6 | 3 | 31 |
| Age group | < 25 years | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | 25-35 years | 4 | 3 | 3 | 8 | 2 | 2 | 9 |
| | 35-45 years | 8 | 3 | 9 | 9 | 4 | 1 | 16 |
| | 45-55 years | 0 | 1 | 2 | 3 | 0 | 0 | 3 |
| | > 55 years | 0 | 1 | 1 | 2 | 0 | 0 | 2 |
| Total | | 12 | 8 | 16 | 22 | 6 | 3 | 31 |
| Qualifications | Below12th | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | Graduate | 4 | 3 | 8 | 8 | 0 | 1 | 12 |
| | Post graduate | 4 | 4 | 4 | 8 | 4 | 1 | 10 |
| | Professional | 4 | 1 | 3 | 6 | 2 | 1 | 8 |

| | | | | | | | | |
|----------------|------------------|-----------|----------|-----------|-----------|----------|----------|-----------|
| Total | | 12 | 8 | 16 | 22 | 6 | 3 | 31 |
| Average income | <Rs 150000 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Rs 150000-300000 | 1 | 1 | 2 | 3 | 0 | 1 | 5 |
| | Rs300000-500000 | 6 | 2 | 5 | 10 | 5 | 2 | 15 |
| | Rs 500000-700000 | 3 | 4 | 8 | 8 | 0 | 0 | 9 |
| | > Rs 700000 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| Total | | 12 | 8 | 16 | 22 | 6 | 3 | 31 |
| Occupation | Business | 4 | 5 | 10 | 9 | 2 | 1 | 12 |
| | Service | 6 | 1 | 4 | 8 | 2 | 1 | 13 |
| | Professional | 2 | 2 | 2 | 3 | 1 | 0 | 4 |
| | Others | 0 | 0 | 0 | 2 | 1 | 1 | 2 |
| Total | | 12 | 8 | 16 | 22 | 6 | 3 | 31 |

Majority of investors explain the price of underlying asset is one most important indicator than followed by the volatility and global sentiments for having position in cash and future market.

Table 13

| Contracts used for future market | | | | |
|---|---------------|--------------|--------------|-----------|
| | | Index future | Stock future | Total |
| Gender | Male | 6 | 22 | 24 |
| | Female | 0 | 3 | 3 |
| Total | | 6 | 25 | 27 |
| Marital status | Single | 0 | 0 | 0 |
| | Married | 6 | 25 | 27 |
| Total | | 6 | 25 | 27 |
| Age group | < 25 years | 0 | 1 | 1 |
| | 25-35years | 4 | 7 | 9 |
| | 35-45 years | 0 | 12 | 12 |
| | 45-55 years | 1 | 3 | 3 |
| | > 55 years | 1 | 2 | 2 |
| Total | | 6 | 25 | 27 |
| Qualification | Below 12th | 0 | 1 | 1 |
| | Graduate | 3 | 10 | 11 |
| | Post graduate | 2 | 9 | 9 |
| | Professional | 1 | 5 | 6 |
| Total | | 6 | 25 | 27 |
| Occupation | Business | 3 | 12 | 12 |
| | Service | 2 | 8 | 10 |
| | Professional | 1 | 3 | 3 |

| | | | | |
|---------------|-----------------|----------|-----------|-----------|
| | Others | 0 | 2 | 2 |
| Total | | 6 | 25 | 27 |
| Annual income | < Rs 150000 | 1 | 0 | 1 |
| | Rs150000-300000 | 2 | 4 | 5 |
| | Rs300000-500000 | 0 | 11 | 11 |
| | Rs500000-700000 | 2 | 9 | 9 |
| | > Rs 700000 | 1 | 1 | 1 |
| Total | | 6 | 25 | 27 |

Mainly the investors are using stock futures as compare to index futures and they are using these contracts for speculation purpose as compare to hedging purpose .

Table 14

| Selection of future and option month contract | | | | | |
|---|-----------------|------------|------------|-----------|-----------|
| | | Near month | Next month | Far month | Total |
| Gender | Male | 28 | 1 | 0 | 28 |
| | female | 3 | 0 | 0 | 3 |
| Total | | 31 | 1 | 0 | 31 |
| Marital ststus | Single | 0 | 0 | 0 | 0 |
| | Married | 31 | 1 | 0 | 31 |
| Total | | 31 | 1 | 0 | 31 |
| Age group | < 25 years | 1 | 0 | 0 | 1 |
| | 25-35 years | 9 | 0 | 0 | 9 |
| | 35-45 years | 16 | 0 | 0 | 16 |
| | 45-55 years | 3 | 0 | 0 | 3 |
| | > 55 years | 2 | 1 | 0 | 2 |
| Total | | 31 | 1 | 0 | 31 |
| Qualifications | Below12th | 1 | 0 | 0 | 1 |
| | Graduate | 12 | 1 | 0 | 12 |
| | Post graduate | 10 | 0 | 0 | 10 |
| | Professional | 8 | 0 | 0 | 8 |
| Total | | 31 | 1 | 0 | 31 |
| Occupation | Business | 12 | 1 | 0 | 12 |
| | Service | 13 | 0 | 0 | 13 |
| | Professional | 4 | 0 | 0 | 4 |
| | Others | 2 | 0 | 0 | 2 |
| Total | | 31 | 1 | 0 | 31 |
| Average income | <Rs 150000 | 1 | 0 | 0 | 1 |
| | Rs150000-300000 | 5 | 0 | 0 | 5 |
| | Rs300000-500000 | 15 | 0 | 0 | 15 |
| | Rs500000-700000 | 9 | 1 | 0 | 9 |

| | | | | |
|--------------|-----------|----------|----------|-----------|
| > Rs 700000 | 1 | 0 | 0 | 1 |
| Total | 31 | 1 | 0 | 31 |

Majority of the investors selected the near month contract. The reason behind this to forecasting future is very difficult.

Table 15

| Preference of investors for long call desiring long position in underlying asset | | | | |
|--|-----------------|-----------|-----------|-----------|
| | | Long call | Short put | Total |
| Gender | Male | 21 | 2 | 23 |
| | Female | 3 | 0 | 3 |
| Total | | 24 | 2 | 26 |
| Marital status | Single | 0 | 0 | 0 |
| | Married | 24 | 2 | 26 |
| Total | | 24 | 2 | 26 |
| Age group | < 25 years | 1 | 0 | 1 |
| | 25-35 years | 7 | 0 | 7 |
| | 35-45 years | 11 | 2 | 13 |
| | 45-55 years | 3 | 0 | 3 |
| | > 55 years | 2 | 0 | 2 |
| Total | | 24 | 2 | 26 |
| Qualifications | Below 12th | 1 | 0 | 1 |
| | Graduate | 7 | 2 | 9 |
| | Post graduate | 8 | 0 | 8 |
| | Professional | 8 | 0 | 8 |
| Total | | 24 | 2 | 26 |
| Occupation | Business | 7 | 1 | 8 |
| | Service | 11 | 1 | 12 |
| | Professional | 4 | 0 | 4 |
| | Others | 2 | 0 | 2 |
| Total | | 24 | 2 | 26 |
| Average income | <Rs 150000 | 1 | 0 | 1 |
| | Rs150000-300000 | 3 | 1 | 4 |
| | Rs300000-500000 | 12 | 1 | 13 |
| | Rs500000-700000 | 7 | 0 | 7 |
| | > Rs 700000 | 1 | 0 | 1 |
| Total | | 24 | 2 | 26 |

There are two types of options – call and put. Investors can enter into long or short call and long or short put as per their perception and choice. In this study the majority of investors (24) are using long call for desiring long position in underlying asset.

Table 16

| Preference of investor for long put desiring short position in underlying assets | | | | |
|--|------------------|------------|-----------|-----------|
| | | Short call | Long put | Total |
| Gender | Male | 3 | 20 | 23 |
| | Female | 0 | 3 | 3 |
| Total | | 3 | 23 | 26 |
| Marital status | Single | 0 | 0 | 0 |
| | Married | 3 | 23 | 26 |
| Total | | 3 | 23 | 26 |
| Age group | < 25 years | 0 | 1 | 1 |
| | 25-35 years | 2 | 5 | 7 |
| | 35-45 years | 1 | 12 | 13 |
| | 45-55 years | 0 | 3 | 3 |
| | > 55 years | 0 | 2 | 2 |
| Total | | 3 | 23 | 26 |
| Qualifications | Below 12th | 0 | 1 | 1 |
| | Graduate | 1 | 8 | 9 |
| | Post graduate | 2 | 6 | 8 |
| | Professional | 0 | 8 | 8 |
| Total | | 3 | 23 | 26 |
| Occupation | Business | 1 | 7 | 8 |
| | Service | 1 | 11 | 12 |
| | Professional | 1 | 3 | 4 |
| | Others | 0 | 2 | 2 |
| Total | | 3 | 23 | 26 |
| Average income | <Rs 150000 | 0 | 1 | 1 |
| | Rs 150000-300000 | 1 | 3 | 4 |
| | Rs 300000-500000 | 1 | 12 | 13 |
| | Rs 500000-700000 | 0 | 7 | 7 |
| | > Rs 700000 | 1 | 0 | 1 |
| Total | | 3 | 23 | 26 |

In this study the majority of investors are using long put for desiring short position in the underlying asset. Because by taking this position investors have unlimited gain and limited loss of option premium.

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