

A Study on Derivatives Trading in Haryana with Special Reference to Gurugram and Rewari

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ABSTRACT

“To invest successfully over a lifetime one does not require a stratospheric IQ, unusual business insights or seaside information. What’s needed is a sound intellectual framework for making a decisions and the ability to keep emotions from corroding that frame work” – Warren Buffet Derivatives are unique verity of securities apart from money market and capital market. They give a different kind of flavor to investor and traders. The value of derivatives instruments depends on the value underlying assets. These Underlying assets may be a commodity, currency, securities (share and debenture), Index, Oil price, Precious metals etc. Indian derivative market plays a very important task in the economic development of the nation, so it is essential to mobilization of derivatives instrument towards maximum population of nation. The financial derivatives area is a very wide area; of course, it comes as a part of financial markets. Based on the objective of the topic researcher has covered and confined only to retail investors’ participation and awareness about the derivatives.

Keywords: Derivatives, Options, Futures, F&O, Warrants, GDP.

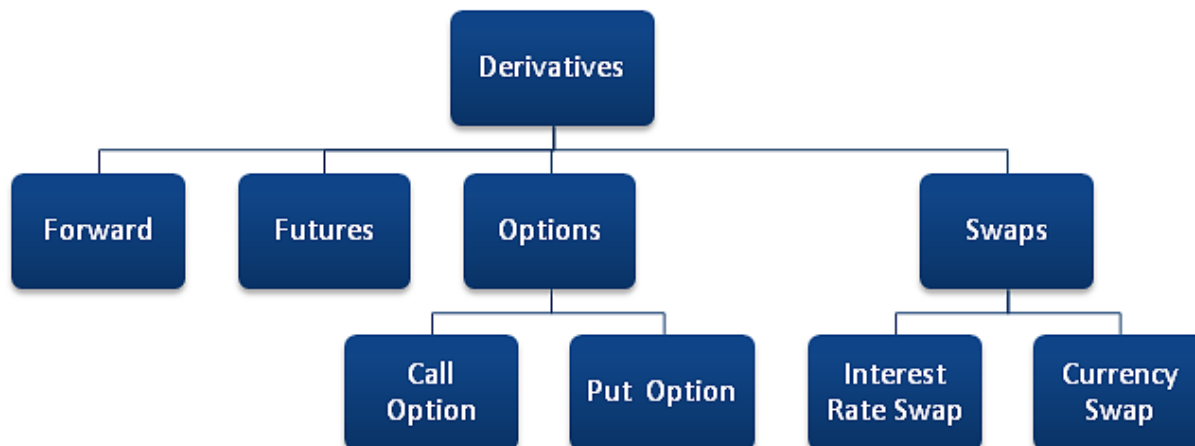
INTRODUCTION

Derivatives are unique verity of securities apart from money market and capital market. They give a different kind of flavor to investor and traders. The value of derivatives instruments depends on the value underlying assets. These Underlying assets may be a commodity, currency, securities (share and debenture), Index, Oil price, Precious metals etc. Thus, a derivative instrument derives its value from the underlying variable. A derivative is a [security](#) with a price that is dependent upon or derived from one or more underlying [assets](#). The derivative itself is a contract between two or more parties based upon the value of assets. Its value is determined by fluctuations in the underlying asset. Derivatives either be traded [over-the-counter \(OTC\)](#) or on an [exchange](#). OTC derivatives constitute the greater proportion of derivatives in existence and are unregulated, whereas derivatives traded on exchanges are standardized. OTC derivatives generally have greater [risk](#) for the [counterparty](#) than do standardized derivatives.

Types of Derivatives:

Derivatives are classified into two category based on nature of contract such as futures and options or a combination of these two:

Types of Derivatives



Options: It is most common derivative instrument in which investors invest their money; it gives right to its owner for sell or buys an underlying assets in given future date at predetermined price. They are a derivative because the price of an option is intrinsically linked to the price of something else. Specifically, options are *contracts* that grant the right, but not the obligation to buy or sell an underlying asset at a set price on or before a certain date. (*investopedia.com*)

Options are of two types namely, call options and put options. *Call options* give the buyer the right to purchase but not the obligation to purchase a given quantity of the underlying assets at a given price. On other hand, *Put options* gives right to sell, but no obligation to sell at a given quantity of the underlying assets at a given price.

Futures: It is the agreement between two parties that fix the term of exchange of underlying assets. The exchange will take place in future but the price of assets is locked in present. All parameters of the assets are decided on the date of transaction with the understanding to settle the transaction on some predetermined future date. In the case on exchange traded futures transactions parameters like lot size, time duration, value date and underlying assets are decided by the exchange. In the Indian stock market, only about 100 to 125 securities have been specified for future transactions. Both buyer and seller are required to deposit margin with stock exchange in the transactions; the rule about margin is decided by the stock exchange, which are changing time to time.

Credit Derivatives: A derivatives that transfer risk from one party to another party is known as credit derivatives. Under this, a bank (moneylender) purchase a derivative product from an insurer or a guarantor. The mechanism of these is that as soon as credit risk or default risk even take place, the money lender is compensated by the insurer according to the terms of credit derivatives. In credit derivatives default/ market, risk of loan transferred to the seller of credit derivatives.

Warrants: Warrants are also long-term securities but are generally shorter-term than convertibles. They facilitate investors the right to purchase shares or security in future at a fixed price i.e. exercise price. The exercise price is usually higher than the current price (price at which the shares for the company are currently trading), but if the value of share/ security are increased, then the investor will still be able to purchase at the exercise price. (*tradimo.com*)

Convertibles: Convertibles are long-term securities, which can be changed into another type of security, such as common [stock](#). Convertibles include both equity and debt. Primarily it includes Bond and preference share, but most commonly convertibles are in form of bonds. Convertibles are attractive to investors who are looking for long-term investment with greater growth opportunity compare to traditional bonds. (*tradimo.com*)

Function of Derivatives

Today's sophisticated international markets have helped foster the rapid growth in derivative instruments. In the hands of knowledgeable investors, derivatives can derive profit from followings:

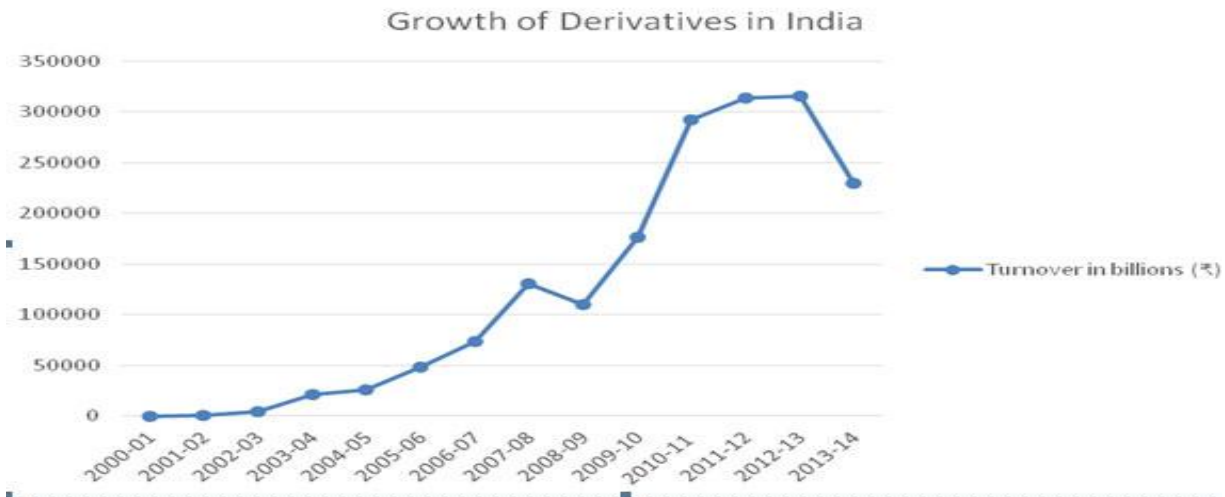
- Changes in interest rates and equity markets around the world
- Currency exchange rate shifts
- Changes in global supply and demand for commodities such as agricultural products, precious and industrial metals, and energy products such as oil and natural gas

Adding some of the wide variety of derivative instruments available to a traditional portfolio of investments can provide global diversification in financial instruments and currencies, help hedge against inflation and deflation, and generate returns that are not correlated with more traditional investments. The two most widely recognized benefits attributed to derivative instruments are price discovery and risk management.

Derivatives Market in India

The Indian financial market has undergone great change during the last two decades. One of the most significant changes is the introduction of derivatives in the year 2000. However, in India, derivatives markets have been functioning since the nineteenth century, with organized trading in cotton through the establishment of the Cotton Trade Association in 1875.

In March 1998, the L.C. Gupta committee (LCGC) submitted its report recommending that, the introduction of derivatives markets. The committee strongly favors the introduction of financial derivatives in order to facility for the hedging in the most cost – efficient way against market risk. Now the NSE (National Stock Exchange) and BSE (Bombay Stock Exchange) are the largest exchanges in India in derivatives trading. The first derivatives contract in India was launched on NSC was the Nifty 50 index future contract. The equity derivatives segment in India is called as Future and Options Segment or F&O Segment. Derivatives trading, which started in June 2000, was a turning point in many ways. After all the changes had fallen into place, NSE and BSE were both amongst the top 10 exchanges in the world by the number of transactions. At present total turnover of derivatives business in India is around 2,00,00,000 Cr. p.a. both in National Stock Exchange and Bombay Stock Exchange. After even 17 years from introduction of derivatives, market participants especially small-retail investors are not familiar with the concept of derivatives. Still they have misconception about derivatives about derivatives. Even they feared derivatives due to lack of knowledge about them and their use. (Shrikrishna & Rakesh) 2015



Source: researchleap.com

LITERATURE REVIEW

Ineichen (2001) studies ambiguous popularity of derivatives in G10 countries. They done reality check of nine myths about derivatives, and the results are derivatives are not new; derivatives are not so complex, high-tech financial products; derivatives are not purely speculative and highly speculative instruments; derivatives trading are not unsafe and highly risky; derivatives link market participant more tightly together, and increase systematic risk; derivatives not increase volatility in the underlying market. They also found that 83% of derivatives are used by large scale sector and 12% by small sector. On other hand according to usage by assets class 84% derivatives use in foreign exchange.

Gensean, Rengamani and Kiruthiga (2004) they finds that Newspaper and magazines were ranked as the foremost information sources for awareness about derivatives, and speculation is main objective of investors in derivatives market. Fifty-nine per cent of respondents deal only in future, whereas only thirty three percent of them trade in both future and option. They also finds that the degree of variation in future price, as explained by normal market price, is to the extent of seventy percent. They suggest that the investor should be familiarized with the various option concepts through awareness programmers, newsletters and panel discussions. Benson & Oliver (2004) studied management motivation for using financial derivatives in Australia. They mailed 500 questionnaires to the CEO and CFO of top listed company in Australia out of which 76% respondent are use derivatives and 24% do not use derivatives, They use five point Likert scale where 1

means most important and 5 means least important. They find that the most important reason regarding the use of derivatives for hedging is for “changing the volatility of cash flow”. The least most important use of derivatives for hedging regard as “improving management/employee compensation”. They conclude that derivatives are used for a range of different purpose, in a variety of different ways, over a broad range of risk and to cover a broad range of exposures. They also find that managers are focused on the broad reduction of risk and volatility of cash flows and earning in using derivatives.

Santhini (2009) studied the investors’ perception towards derivatives with special reference to future and option in Tanjor district, Tamilnadu. He collect sample from 384 respondents, and finds that gold is mostly preferred investment avenue and future/option are least preferred, high return and high liquidity is major factor that attracted the investors in derivatives market, stock brokers are investors’ major source of advice and newspaper and magazines are least. He also conclude that there is a significant relationship between socio-economic status and level of awareness about derivatives market among retail investors.

Khurana, Agarwal, Meher and Solanki (2009) studied perception of investors’ towards derivative market, they use questionnaire method of sampling to collect the data from 50 respondents who are clients of various broking house of Indore. They found that derivatives are used as risk Hedging tool and the trend of spot market affects the trading of Derivatives. And they further explored that 80% of investors’ invest in derivatives market and rest in cash and most of the amount is for speculation not for hedging.

Trivedi (2010) discuss the characteristics of Indian derivatives market, he finds that market risk consider as most important risk among all the risks and investors mainly invest in stock futures followed by index and they use derivatives mainly for speculation followed by arbitrage and hedging. His survey finds that for short term currency hedging forward cover is dominating tool and there is a significant difference between in cash segment and derivative segment in equity market. He suggest that the regulatory framework applicable to the OCT derivative market and participants would need to evolve further, as majority of derivatives trade go away and it can be summarize that derivative instruments can be used to hedge market risk exposures, as well as to speculates on movements in the value of the underlying asset.

Need of the Study

Derivatives can be use to reduce the risks and ambiguity involved in investments, but they also have risks of their own. There is various type of risk associated with derivatives (such as market risk, credit risk, liquidity risk etc). Derivatives show price sensitivity to change in market situation, such as change in interest rates or a currency exchange rate. Therefore, it is very important to know that, “investors’ awareness about derivatives is and what they think about it”. The people who use derivatives lie in which category. Are retail investors investing their money in derivatives with full of knowledge. The study has done to find the solution to these problems.

Objective of the Study

1. To know the awareness level of retail investors towards various derivatives instruments being traded in Indian securities market.
2. To analyze the relationship between investors’ socio-economic status and their extent of awareness towards derivatives instruments.

Hypothesis

H0: There is no significant association between the socio-economic status and level of awareness about derivatives instruments among retail investors.

RESEARCH METHODOLOGY

Research Design: Descriptive research design is use for the study. It is descriptive because the main goal of this research is to describe the data and characteristics in detail about what is the awareness towards derivatives specifically in Rewari and Gurugram district of Haryana.

Sampling Method For collecting the data, the researcher used Snow-ball sampling technique in the study. For this, the researcher visited various stock broking companies to identify the real respondents, because not all investors are investing in derivatives. For that seventy-six investors from Rewari district were interacted (through directly or via email/whatsapp)

and finally only twenty-seven investors become eligible for the primary survey of the study, out of them only twenty-five is consider for study. Same as four-hundred-eighty-five investors from Gurugram district were interacted (through directly or via email/whatsapp) and finally one-hundred-thirty-three investors become eligible for the primary survey, out of them one hundred respondents is taken into consideration for present study.

Sample Size Finally, 125 respondents were selected through snowball sampling method, out of which 25 investors from Rewari and 100 from Gurugram. Out of which 102 were male and 23 were female. Further in Gurugram 69 respondents are from urban and rest from semi-unrban or rural, and in Rewari 14 from urban and rest from semi-urban and rural. In Gurugram total 83 were married and in Rewari 19 were married. The further demographic profile were describe in Table 1

Data Collection Method: The study is mainly based on primary data and collects through Structured Questionnaire and Schedule method. Various types of questions are asked from investors regarding socio-economic characteristics like their age, education, occupation, area, marital status and income. The researcher used five point Likert Scale for collect the data regarding awareness level where 1 = Highly Aware, 2 = Aware, 3 = Moderate, 4 = Low and 5 = Don't Aware. Same scale is used for investors' perception, different questions are asked from respondents in their level of agreement, where 1 = Strongly Disagree, 2= Disagree, 3= Neither Disagree nor Agree, 4= Agree and 5= Strongly Agree. For collect information about function of derivatives and best source to get advice, data is collected in ranks form.

Study Period: The time spent on the collect data constitutes the study period. The primary data were collects during Jan 2017 to May 2017. Hence, period from Jan 2017 to May 2017 is utilized for primary survey.

Statistical Tool Applied: Descriptive statistics like mean, standard deviation and cross tabulation analysis with Chi-square test and Fisher's Exact test are used for analyzing the data with the help of MS Excel & SPSS. As the data are choice based and non-parametric in nature, Chi-square test is adopted for testing relationship between factors. The basic condition for using Chi-square test is that "less than twenty percent cells have expected count less than five", whenever this condition is not satisfied researcher used Fisher's Exact statistics instead of Chi-square test.

DATA ANALYSIS AND INTERPRETATION

General Profile of Respondents

The demographic information about the 125 investors included in the study is presented in below Table 1

Table 1: Demographic Profile of Investors

		Gurugram(%)	Rewari(%)	Total(%)
Gender	Male	84(82.3)	18(17.6)	102(81.6)
	Female	16(69.5)	7(30.4)	23(18.4)
Age	up to 35 Years	52(81.3)	12(18.7)	64(51.2)
	35 to 50 Years	37(82.3)	8(17.7)	45(36)
	Above 50 Years	11(68.7)	5(31.3)	16(12.8)
Education	Up to Secondary	8(72.7)	3(27.3)	11(8.8)
	Graduation	17(85)	3(15)	20(16)
	Post Graduation	52(88.1)	7(11.9)	59(47.2)
	Above PG	23(65.7)	12(34.3)	35(28)
Occupation	Self Employed	20(76.9)	6(23.1)	26(20.8)
	Govt Employees	24(72.7)	9(27.3)	33(26.4)
	Private Employees	49(84.4)	9(15.6)	58(46.4)
	Other	7(87.5)	1(12.5)	8(6.4)
Area	Rural	8(88.8)	1(11.9)	9(7.2)
	Semi-Urban	23(69.6)	10(30.4)	33(26.4)
	Urban	69(83.1)	14(16.9)	83(66.4)
Marital Status	Married	83(81.4)	19(18.6)	102(81.6)
	Unmarried	17(73.9)	6(26.1)	23(18.4)

Annual Income	Up to Rs. 6,00,000	36(78.2)	10(21.8)	46(36.8)
	Rs. 6,00,001-9,60,000	46(85.1)	8(14.9)	54(43.2)
	Above 9,60,000 Rs.	18(72)	7(28)	25(20)
Total		100(80)	25(20)	125(100)

Source: Primary Data

Figures in brackets are percentage to Row total

In the Sample there are 125 respondent, out of which 100 i.e. 80% from Gurugram and 25 i.e. 20% from Rewari. As Gender-wise distributions we have total 102 males out of which 84 i.e. 82.3% from Gurugram and 18 males (17.6%) are from Rewari. On other hand there are total 23 females out of which 16 i.e. 69.5% are from Gurugram and 7 i.e. 30.4% are from Rewari. As per age wise distribution there are total 64 respondent (51.2%) lie in category 'up to 35 years' out of which 52 (81%) are from Gurugram and 12 (19%) are from Rewari. The total 45 respondent are lie in category '35 to 50 Years' out of which 37 respondents (83%) are from Gurugram and 8 respondents (17.7%) are from Rewari and rest are lie in category 'above 50 years' age group. As per education wise distributions 11 respondents (8.8%) lie in category "up to secondary", out of which 8 respondents (72.7%) are from Gurugram and rest from Rewari. While 20 respondents (16%) are Graduate, out of them 17 respondents (85%) are from Gurugram and rest 15% are from Rewari. Further, 59 respondents (47.2%) are Post Graduate, out of which 49 (84.4%) are from Gurugram and rest 15.6% are from Rewari.

In addition, 35 (27%) respondents are above PG, out of which 23 (65.7%) are from Gurugram and rest 12 (34.3%) are from Rewari. As per occupation wise distributions 26 respondents (20.8%) are self-employed, out of which 76% are from Gurugram and 24% are from Rewari. Further, 33 respondents (26%) are government employees, out of which 24 respondents (72.7%) are from Gurugram and 9 (27.3%) are from Rewari. Further, 58 respondents (46%) are private employees, out of which 84.4% are from Gurugram and rest from Rewari. Finally, 7% of total respondents related to any other profession. As per Area wise distribution, only 9 respondents (7%) are from Rural area, out of which only 1 respondent from Rewari district. Further 33 respondents (27%) are from Semi Urban, out of which 23 respondents (69%) are from Gurugram and rest from Rewari. Most of respondents are from urban area i.e. 83 (66%), out of which 69 (83%) are from Gurugram and remaining are from Rewari. As per marital status of respondents, total 102 respondents (82%) are married and only 23 (18%) are unmarried. As per income wise distribution 46 respondents (37%) have less than Rs. 6,00,000 per annum income, out of which 36 respondents (78.2%) are from Gurugram and 10 (21.8%) are from Rewari. Further, total 54 respondents (43.2%) are lie in income group more than Rs. 6,00,001 but less than Rs. 9,60,000 per annum, out of which 18 respondents (72%) are from Gurugram and 7 respondents (28%) are from Rewari. Finally, 25 respondents (20%) have more than Rs. 9,60,000 per annum income, out of which 18 respondents (72%) are from Gurugram and rest 7 i.e. 28% are from Rewari.

Awareness about Various Derivatives Instruments

There are various types of derivatives instruments in which investors are invest their money, the most common instrument are Stock Future, Index Future, Stock option, Index Option, Forwards and Swaps. The awareness levels about different instruments are interpreted below in table 2:

Table 2: Awareness about various derivatives instruments

Derivatives Instruments	Mean Score	Std. Deviation	Sum
Stock Futures	2.02	0.85	252
Index Futures	2.46	1.34	307
Stock Options	2.30	1.13	288
Index Options	2.32	1.14	290
Forwards	2.74	1.12	342
Swaps	3.03	1.14	379

Source: Primary Data

N=125

The researcher has used five point Likert scale to capture opinion of the investors regarding their awareness level, in which 1 is considered for highly aware and 5 for Don't aware. As result shown in the table 2, investors are highly aware about Stock Futures because it's mean value is lowest i.e. 2.02, after that Stock Option is most common instruments among investors with 2.30 mean value, and then Index option with 2.32 mean value, index future with 2.46 mean value respectively. The least aware instruments among investors is Swaps with highest mean value 3.03 followed by Forwards with 2.74 mean value.

Awareness about various derivatives instruments: District wise analysis

Table 3 presents the result of Pearson's Chi Square test for testing the awareness level as per District.

Table 3: Awareness about various derivatives instruments: District wise analysis with Chi Square test

Derivatives Instruments	Chi Square Test Result		
	Chi Square value**	P value*	Significant/Not Significant
Stock Futures	11.25	0.024	Significant
Index Futures	16.49	0.002	Significant
Stock Options	11.14	0.025	Significant
Index Options	5.28	0.260	Not Significant
Forwards	12.81	0.012	Significant
Swaps	3.72	0.444	Not Significant

Source: Primary Data

Degree of Freedom=4, N=125

*5% level of significance

** Less than 20% cells have expected count less than 5

The cross tabulation tables 4 to 7 show the observed count and expected count with percentage of total for each factor. There is a difference between the expected and observed frequencies. As can be seen in table 3, the p value is significant at 5% level of significance for Stock Future ($X^2 = 11.249$ & p value= 0.024), Index Future ($X^2 = 16.49$ & p value= 0.002), Stock Option ($X^2 = 11.14$ & p value= 0.025) and Forwards ($X^2 = 11.14$ & p value= 0.025). That is why there is a significant difference between the awareness levels of respondents regarding derivatives instruments with respect to their district. As per crosstab tables 4, 5, 6 and 7 the investors of Gurugram are highly aware than the investors of Rewari regarding the derivatives instruments like Stock Futures, Index Futures, Stock Options and Forwards. The p value is not significant at 5% level of significance for Index Option ($X^2 = 5.28$ & p value= 0.260) and Swaps ($X^2 = 5.28$ & p value= 0.260). That is why there is no significant difference between the awareness levels of respondents regarding these derivatives instruments with respect to their district. (Gurugram/Rewari)

Table 4: Crosstab for Stock Futures as per investors' district

Crosstab								
			STOCK FUTURES					Total
			Highly Aware	Aware	Moderate	Low	Don't Aware	
Gurugram or Rewari	Rewari	Count	5	10	7	1	2	25
		Expected Count	6.8	12.6	4.4	.8	.4	25.0
	Gurugram	Count	29	53	15	3	0	100
		Expected Count	27.2	50.4	17.6	3.2	1.6	100.0
Total		Count	34	63	22	4	2	125
		Expected Count	34.0	63.0	22.0	4.0	2.0	125.0

Source: Compiled from Primary Data, N=125

Table 5: Crosstab for Index Futures as per investors' district

Crosstab								
			INDEX FUTURES					Total
			Highly Aware	Aware	Moderate	Low	Don't Aware	
Gurugram or Rewari	Rewari	Count	5	4	3	7	6	25
		Expected Count	6.8	9.0	3.4	2.6	3.2	25.0
	Gurugram	Count	29	41	14	6	10	100
		Expected Count	27.2	36.0	13.6	10.4	12.8	100.0
Total		Count	34	45	17	13	16	125
		Expected Count	34.0	45.0	17.0	13.0	16.0	125.0

Source: Compiled from Primary Data, N=125

Table 6: Crosstab for Stock Options as per investors' district

Crosstab								
			STOCK OPTIONS					Total
			Highly Aware	Aware	Moderate	Low	Don't Aware	
Gurugram or Rewari	Rewari	Count	2	6	11	3	3	25
		Expected Count	7.0	7.8	6.8	2.0	1.4	25.0
	Gurugram	Count	33	33	23	7	4	100
		Expected Count	28.0	31.2	27.2	8.0	5.6	100.0
Total		Count	35	39	34	10	7	125
		Expected Count	35.0	39.0	34.0	10.0	7.0	125.0

Source: Compiled from Primary Data, N=125

Table 7: Crosstab for Forwards as per investors' district

Crosstab								
			FORWARDS					Total
			Highly Aware	Aware	Moderate	Low	Don't Aware	
Gurugram or Rewari	Rewari	Count	6	5	3	7	4	25
		Expected Count	3.6	7.2	8.0	4.6	1.6	25.0
	Gurugram	Count	12	31	37	16	4	100
		Expected Count	14.4	28.8	32.0	18.4	6.4	100.0

Total	Count	18	36	40	23	8	125
	Expected Count	18.0	36.0	40.0	23.0	8.0	125.0

Source: Compiled from Primary Data, N=125

Awareness about various derivatives instruments: Income wise analysis

Table 8 presents the result of Pearson's Chi Square test for testing the awareness level as par income of respondents.

Table 8: Awareness about various derivatives instruments: Income wise analysis with Chi Square test

Derivatives Instruments	Chi Square Test Result		
	Chi Square**	P Value*	Significant/Not Significant
Stock Futures	3.91	0.865	Not Significant
Index Futures	13.87	0.085	Not Significant
Stock Options	14.69	0.065	Not Significant
Index Options	10.37	0.240	Not Significant
Forwards	6.85	0.553	Not Significant
Swaps	5.77	0.673	Not Significant

Source: Compiled from Primary Data

Degree of Freedom=4, N=125

*5% level of significance

** Less than 20% cells have expected count less than 5

Table 8 exhibits the p value and chi square value for stock future ($X^2=3.91$ & p value = 0.865), Index Future ($X^2= 13.89$ & p value =0.085), Stock Option ($X^2=14.69$ & p value = 0.065), Index Options ($X^2=10.37$ & p value = 0.240), Forwards ($X^2=6.85$ & p value = 0.553) and Swaps ($X^2=5.772$ & p value = 0.673). These result shows that p values are significant at 5% level of significance for each variables. That is why null hypothesis cannot be rejected, it means there is no significant difference between the awareness levels of respondents regarding derivatives instruments with respect to their income.

Awareness about various derivatives instruments: Gender wise analysis

Table 9 presents the result of Pearson's Chi Square test for testing the awareness level as par gender of respondents.

Table 9: Awareness about various derivatives instruments: Gender wise analysis with Chi Square test

Derivatives Instruments	Chi Square Test Result		
	Chi Square value**	P Value*	Significant/Not Significant
Stock Futures	4.62	0.328	Not Significant
Index Futures	3.83	0.429	Not Significant
Stock Options	2.23	0.692	Not Significant
Index Options	9.92	0.042	Significant
Forwards	3.59	0.463	Not Significant
Swaps	4.81	0.307	Not Significant

Source: Compiled from Primary Data

Degree of Freedom=4, N=125

*5% level of significance

** Less than 20% cells have expected count less than 5

Table 9 exhibits the chi square value and p value for Stock Futures ($X^2=4.621$ & p value = 0.865), Index Futures ($X^2= 13.89$ & p value = 0.085), Stock Options ($X^2=14.69$ & p value = 0.065), Forwards ($X^2=6.85$ & p value = 0.553) and Swaps ($X^2=5.772$ & p value = 0.673). These results show that p values are significant at 5% level of significance for each variable. That is why there is no significant difference between the awareness levels of males and females investors regarding derivatives instruments. The p value is significant at 5% level of significance for the Index Option ($X^2= 9.92$ & p value = 0.42). It means there is a significant difference between the awareness level of males and females investors regarding Index Option. As per crosstab table 10 males investors are more aware than females.

Table 10: Crosstab for Index Options as per gender of investors

Crosstab									
			INDEX OPTIONS						
			Highly Aware	Aware	Moderate	Low	Don't Aware		
Gender of respondent	Male	Count	29	37	22	16	2	106	
		Expected Count	29.7	37.3	20.4	14.4	4.2	106.0	
	Female	Count	6	7	2	1	3	19	
		Expected Count	5.3	6.7	3.6	2.6	.8	19.0	
Total		Count	35	44	24	17	5	125	
		Expected Count	35.0	44.0	24.0	17.0	5.0	125.0	

Source: Compiled from Primary Data, N=125

Awareness about various derivatives instruments: Age wise analysis

Table 11 presents the result of Pearson's Fisher's Exact test for testing the awareness level as per age of respondents.

Table 11: Awareness about various derivatives instruments: Age wise analysis with Chi Square test

Derivatives Instruments	Fisher's Exact Test Result		
	Fisher's Exact Value**	P Value*	Significant/Not Significant
Stock Futures	6.11	0.622	Not Significant
Index Futures	5.66	0.659	Not Significant
Stock Options	8.04	0.400	Not Significant
Index Options	9.19	0.295	Not Significant
Forwards	9.02	0.316	Not Significant
Swaps	6.84	0.545	Not Significant

Source: Compiled from Primary Data

Degree of Freedom=8, N=125

*5% level of significance, **More than 20% cell have expected count less than 5.

Here researcher have applied Fisher's exact test instead of chi square as more than 20% cells have expected frequency less than 5 in the above table. The table 11 exhibits the Fisher's Exact value and p value for Stock Futures (FET= 6.11 & p value = 0.622), Index Futures (FET = 0.659 & p value = 0.659), Stock Options (FET = 8.04 & p value = 0.400), Index Options (FET = 9.19 & p value = 0.295), Forwards (FET = 9.02 & p value = 0.316) and Swaps (FET = 6.84 & p value =

0.545). These result shows that p values are significant at 5% level of significance for each variables. That is why there is no significant difference between the awareness levels of investors regarding derivatives instruments with respect to their age group.

Awareness about various derivatives instruments: Education wise analysis

Table 12 presents the result of Fisher's Exact test for testing the awareness level as par education of respondents.

Table 12: Awareness about various derivatives instruments: Education wise analysis with Fisher's Exact test

Derivatives Instruments	Fisher's Exact Test Result		
	Fisher's Exact Value**	P Value*	Significant/Not Significant
Stock Futures	15.40	0.138	Not Significant
Index Futures	14.43	0.228	Not Significant
Stock Options	20.29	0.052	Not Significant
Index Options	13.03	0.027	Significant
Forwards	13.77	0.266	Not Significant
Swaps	15.83	0.199	Not Significant

Source: Compiled from Primary Data

Degree of Freedom=12, N=125

*5% level of significance

**More than 20% cell have expected count less than 5

Here researcher have applied Fisher's exact test instead of chi square as 30% cells have expected frequency less than 5 in the above table 12. The table exhibits the fisher's exact vale and p value for Stock Futures (FET= 15.40 & p value = 0.138), Index Futures (FET = 14.43 & p value = 0.228), Stock Options (FET = 20.29 & p value = 0.052), Forwards (FET = 13.77 & p value = 0.027) and Swaps (FET = 15.83 & p value = 0.199). These result shows that p values are significant at 5% level of significance for each variables. That is why there is no significant difference between the awareness levels of investors regarding derivatives instruments (Stock Futures, Index, Futures, Stock Options, Forwards and Swaps) with respect to their Education. The p is significant at 5% level of significance for Index Options (FET= 13.77 & p value = 0.027). It means there is a significant difference between the awareness level investors regarding Index Options. The crosstab table 12 shows postgraduates' investors are highly aware about Index Option than others.

Table 13: Crosstab for Index Options as per Education of investors

Crosstab								
			INDEX OPTIONS					Total
			Highly Aware	Aware	Moderate	Low	Don't Aware	
Educational Qualification of Investors	Up to Secondary	Count	2	2	5	1	1	11
		Expected Count	3.1	3.9	2.1	1.5	.4	11.0
	Graduation	Count	6	11	2	1	0	20
		Expected Count	5.6	7.0	3.8	2.7	.8	20.0
	Post Graduate	Count	17	23	8	11	0	59
		Expected Count	16.5	20.8	11.3	8.0	2.4	59.0

	Above PG	Count	10	8	9	4	4	35
		Expected Count	9.8	12.3	6.7	4.8	1.4	35.0
Total		Count	35	44	24	17	5	125
		Expected Count	35.0	44.0	24.0	17.0	5.0	125.0

Source: Compiled from Primary Data, N=125

Awareness about various derivatives instruments: Occupation wise analysis

Table 14 presents the result of Fisher's Exact test for testing the awareness level as par occupation of respondents.

Table 14: Awareness about various derivatives instruments: Occupation wise analysis with Fisher's Exact test

Derivatives Instruments	Fisher's Exact Test Result		
	Fisher's Exact Value**	P Value*	Significant/Not Significant
Stock Futures	4.28	0.447	Not Significant
Index Futures	9.23	0.668	Not Significant
Stock Options	12.47	0.351	Not Significant
Index Options	11.27	0.458	Not Significant
Forwards	12.23	0.370	Not Significant
Swaps	9.83	0.307	Not Significant

Source: Compiled from Primary Data

Degree of Freedom=4, N=125

*5% level of significance

**More than 20% cell have expected count less than 5

Table 14 exhibits the Fisher's Exact test value and p value for Stock Futures (FET= 4.28 & p value = 0.477), Index Futures (FET= 9.23 & p value = 0.668), Stock Options (FET = 12.47 & p value = 0.351), Index Options (FET = 11.27 & p value = 0.458), Forwards (FET = 12.23 & p value = 0.370) and Swaps (FET = 9.83 & p value = 0.307). These result shows that p values are significant at 5% level of significance for each variables. That is why there is no significant difference between the awareness levels of investors regarding derivatives instruments with respect to their occupation.

CONCLUSION

The development of capital market is leads to economic development of a country. Now days derivatives instruments are the main pillars of the growth and development of capital market. Indian middle class is very large in numbers, that is what individual retail investors play a very big role in the capital market as well as in the derivatives market. Now days NSE and BSE are the leading stock exchange in derivatives especially in future and options (F&O). Investors in Big cities like Delhi and Gurugram are highly interested to invest in derivatives product. However, investors in small cities like Rewari, the awareness level is very low about derivatives instruments, and investors don't want to invest their money in derivatives. The present study conclude that Future and Options in stock are most common stock exchange, and Swaps is least awarded instruments between investors of both district Gurugram and Rewari. Same as the first preference of investors for getting advice is TV and News channels. In addition, investors are mainly used derivatives for risk management and price discovery.

REFERENCES

- [1] Alexander M Ineichen, (2001) "Ambiguous popularity of derivatives" Thunderbird International Business Review, Vol 43(3), pp 397-418.

- [2] Arvid O.I. Hoffmann, Thomas Post, Joost M.E Pennings (2013) "Individual Investor Perception and Behaviour during Financial Crisis" *Journal of Banking and Finance*, No-37, pp 60-74
- [3] Babaraju K Bhatt, Apurva A Chauhan, (2014) "A study of investors perception towards derivatives in investment avenues" *Kadakkia International Journal of Research in Multidiscipline*, pp 127-137
- [4] Eleonora Broccardo, Maria Mazzuca, Elmas Yaldiz, (2014) "The use and determinants of credit derivatives in Italian Banks" *Emerald, The Journal of Risk Finance*, Vol 15, No-4, pp 417-436
- [5] E.V.P.A.S. Pallavi, T. Kama Raju, (2014) "An Empirical Analysis on Perception of Retail Investors towards derivatives Market with reference to Visakhapatnam District" *Indian Journal of Management Science*, Vol 4, Issue 1, ISSN 2249-0280 pp 54-61.
- [6] Frank H. Bezzina, Simon Grima, (2011) "Exploring factors affecting the proper use of derivatives- An empirical study with active users and controllers of derivatives" *Emerald Managerial Finance Journal*, Vol 38, No 4, pp 414-4358
- [7] G Velmurugan, V Selvam, N Abdul Nazar, (2015) "An Empirical Analysis on Perception on Investors towards various Investment Avenues" *Mediterranean Journal of Social Sciences*, Vol 6, No-4, pp 427-433
- [8] Gunjan Tripathi, (2014) "An Empirical Investigation of investors perception towards derivative es trading" *Global Journal Of Finance and Management*, Vol 6, pp 99-104
- [9] Jain Dhiraj, Khokhawat Nilesh, (2012), "Derivatives Trading in Indian Stock market; Investors' perception with reference to Udaipur", *International Journal of Marketing Technology*, Vol 2, Issue 8, pp 174-196.
- [10] John C. Hull, (2004), "Options, Futures, & Other Derivatives", Pearson Education, India, 5th Edition.
- [11] Karen Benson, Barry Oliver, (2004) "Management Motivation for using Financial derivatives in Australia" *Australian Journal of Management*, Vol 29, No-2, pp 225-242
- [12] K Ravichandran, (2008) "A study on investors preferences towards various investment avenues in capital market with special reference to derivatives" *Journal of Contemporary Research in Management*, pp 101-111
- [13] K. Soina, G Mohanraj, P Karthikeyan (2013) "The study on Financial Derivatives (Future and Option) with special reference to ICICI & SBI" *International Journal of Commerce and Business studies*, Vol 1, Issue 2, pp 11-21
- [14] K S Shrikrishna, H.M. Rakesh, (2014) "A study of retail investors' behavior and level of awareness about equity futures and options", *International Journal in Management and Social Science*, Vol.2 Issue-7, ISSN: 2321-1784, pp 372-376.
- [15] Mohan Midhula, Memalata A.V., (2015), "A Study on awareness about investment in derivativing among Government employees in Calicut District of Kerala" *Abhinav International Journal Research in Management & Techonology*, Vol 5, Issue 2, pp 1-8.
- [16] Pasha Shaik, Abdul Majeed, (2013), "Retail investors' perception on financial derivatives in India", *European Scientific Journal*, edition, Vol.9, No.22, ISSN: 1857 – 7881. pp 366-383.
- [17] P. Ganesan, K T Rengamani and P. Kirthiga, (2003) "Perception of, and influences on, derivatives investment: A study of Indian investors" *Derivative use, trading & regulation journal*, Vol 9, No-4, pp 365-376
- [18] Veena K.P, C Mahadeva Murthy, (2015) "Investors Perception towards trading and equity derivatives Market: A study at Angel Broking Private Limited Mysore City" *Global Journal for Research Analysis*, Vol-4, Issue 2, pp 35-38
- [19] Xuan Shen, Valentina Hartarska (2013) "Derivatives as Risk Management and Performance of agricultural Banks" *Emerald Agricultural Finance Review*, Vol 73, No-2, pp 290-309.
- [20] Afza, T., & Alam, A. (2011). Corporate derivatives and foreign exchange risk management: A case study of non-financial firms of Pakistan. *The Journal of Risk Finance*, 12(05), 409-420.
- [21] Rushinek, AVI., Rushinek, Sara F., Chang, Lucia S., & Most, Kenneth S. (1983). The construction of international investors' perception model for corporatepublished forecasted financial reports for the USA, the UK and New Zealand. *Managerial & Decision Economics*, 4(4), 258-264.

BOOKS

- [1] Bhalla, V.K.. (2007). *Investment Management*. (11th ed.). New Delhi, India: S. Chand.
- [2] Dangi, V. (2016). *Investment Management*. New Delhi, India: VK Global.
- [3] Dhanesh, K. (2010). *Security Analysis and Portfolio Management*. (1st ed.). New Delhi, India: Macmillan.
- [4] Fredrick, A. (2016). *Investment-An Introduction Analysis and Management*. (1st ed.). New Delhi, India: PHI.
- [5] Gupta, S.K. & Gupta, A. (2014). *Financial Management*. Ludhiana, India: Kalyani.
- [6] Khan, M.Y. & Jain, P.K. (2010). *Financial Management*. (5th ed.). New Delhi, India: Tata McGraw Hill.

WEBPAGE

- [1] Axis Direc. (n.d.). Derivatives market participants. Retrieved from https://simplehai.axisdirect.in/3543_courses.
- [2] Biostathandbook. (n.d.). Fisher's exact test of independence. Retrieved from <http://www.Biostathandbook.com/fishers.html>
- [3] BSE, (n.d.). Derivatives Market. Retrieved from <http://www.bseindia.com/markets/Derivatives/DeriReports/introduction.aspx>
- [4] Businessstandard. (n.d.). Extending derivatives market timing would be a great idea. Retrieved from http://www.business-standard.com/article/markets/sebi-mulls-extending-derivatives-market-timing-117080701135_1.html
- [5] Choice. (n.d.). Derivatives Market. Retrieved from <http://www.choiceindia.com/equity-derivative-Market.aspx>
- [6] Economictimes. (n.d.). Sebi to detoxify derivatives market; brokers say data overstated. Retrieved from http://economictimes.indiatimes.com/articleshow/60346891.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- [7] Epicresearch. (n.d.). Derivatives packages. Retrieved from <http://www.epicresearch.co/derivatives>

- [8] GEOJIT. (n.d.). Participants in derivatives market. Retrieved from <http://www.geojit.com/derivatives/participants-in-a-derivative-market>
- [9] IBEF. (n.d.). About Indian economy growth rate & statistics. Retrieved from <https://www.ibef.org/economy/indian-economy-overview>
- [10] IEDRA. (n.d.). Introduction. Retrieved from <http://www.iedra.org/> IIFL. (n.d.). What is a Derivative Market? Retrieved from http://www.indiaonline.com/article/article-latest/what-is-a-derivative-market-117042700195_1.html
- [11] Important India. (May 2 2015). Economic Growth and Development in India. Retrieved from <https://www.importantindia.com/16693/economic-growth-and-development-in-india/>