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TO STUDY THE INVESTOR MINDSET AND THEIR APPROACH TOWARDS INDIAN STOCK MARKET BASED ON STATISTICAL METHODS

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ABSTRACT

Stock market has become an attractive investment avenue for most of the investors, and stock market has enormously grown over the years. But lot of investors fear to invest in stock market due to the volatility often seen in share market. The risk often undertaken by the investors in share market huge and there exist fear among the investors of losing their hard-earned income. Even though the return, the investors receive in stock market is high, the investors need to bear an equal amount of risk as well as moreover the investors must sure of which investment avenue, they are selecting in order to ensure high returns. Considering any trading day, loss or gain is absolutely inconsistent. The demand to predict stock prices are extremely high, hence is the need for stock market analysis..This study was undertaken to understand the different personal factors affecting their investment decision and the different factors influencing various categories of investment..Questionnaire was conducted to understand the view point, behavior and attitude of the investors as well as their level of awareness. Most of the people are attracted towards stock market high returns and speculations among the observation people prefer to invest in IT, Pharma, Banking and Automobile sectors mostly. A lot of peoples came in contact with share market because of friends, neighbors and relatives. People having higher income prefer to take risk. People having less income don't take risk. Analysis and Emotions plays key role in profit and loss of peoples. Experience persons in data say that future of Indian stock market is growing and inexperienced persons are opposite to it.

Keywords*: Parametric Test, Nonparametric Test, Graphical Representation, Level of Significance,*

1. INTRODUCTION

In this world people know various options to earn money. But genrally people interested in earn money in short time and their this wish is fulfilled in Share Market where we can earn money withought so much efforts but proper knowledge. Nowadays banks intrest rates has reduced so people prefer to invest their in stock market. A lot of employees , buisnesssmen and people from various occupation invest their some part of money in Share Market. This covid-19 Pandemic has massive effect over stock market. A lot people lost their jobs and they had no more option to earn money. Stock Market turned out to be boon for this people to generate money. Benjamin Graham, best known for his book The Intelligent Investor, is lauded as a top guru of finance and investment. Known as the father of value investing, The Intelligent Investor: The Definitive Book on Value Investing is considered one of the most important books on the topic. By evaluating companies with surgical precision, Graham excelled at making money in the stock market without taking big risks. Thus, according to Graham, investors should always aim to profit from the whims of the stock market, rather than participate in it. His principles of investing safely and successfully continue to influence investors today. Burton Malkiel in his book A Random Walk Down Wall Street is a A classic guide that blends history, economics, market theory, and behavioral finance to offer practical and actionable advice for investing and achieving financial freedom. Malkiel's central message is abundantly clear – begin a consistent savings plan as early as possible and invest the core of your portfolio in low-cost, broad-based index funds.

AnjuBala (2013) evaluated that stock market is one of the most vibrant sectors in the financial system, marketing an important contribution to economic development. Stock market is a place where buyers and sellers of securities can enter into transaction to purchase and sell shares, bonds, debentures etc. In other words, stock market is a platform for trading various securities and derivatives. Further, it performs an important role of enabling corporate, entrepreneurs to raise resource for their companies and business venture through public issues. Today long-term investors are interested to invest in the stock market rather than invest anywhere.Investors mainly chosen by the short-term investment in capital market, who are forced to join by the guidance of the investors. He conducted a study with a main intention to determine the behavior and attitude of the investors belonging to north eastern region to the Investment Portfolio about mutual fund (Rajagopalan, P., &Gurusamy, S. 2015; Arathy, B 2015; Trang, P. T. M., &Tho, N. H. 2017; Muthumeenakshi, M. 2017; Manimozhy, N., & Borah, N. 2018). The study is published an output that the salaried persons and businessmen created the demand for mutual fund because of tax allowances. Derivative trading introduced in India 200 years ago. Various study states self-conscious is the most dominating trait in among the demographic variables. The study justified the regulatory authorities to increase disclosure of financial information and to take action with the aim of increasing investors and their financial literacy to mitigate the psychological bias. In case of mutual fund, in India it has

found not favourable alternatives as situation prevails in developed countries (Kaur, I., &Kaushik, K. P. 2016; Boda, J. R., &Sunitha, G. 2018; Saravanan, S., &Satish, R. 2018). In India the expiration of financial market has provided opportunities for the people to invest. In counties like Singapore the investment pattern has increased, and stock market has been sharply expanded (Lim, K. L et al. 2016; Rao, P. S. 2018; Sharma, S et al. 2018; Rehan, R. etal. 2018).

In Stock Market investors act as major key players in Indian stock market. Since they constitute a greater share of investments and income, the behavior of individual investor cannot be ignored by the regulators of the stock market. The above study is undertaken to understand and to be aware of the factors that bears an impact on behavior and attitude of the retail investor. Basic concentration lies on investors‟ quality of decisions and their viewpoints towards investing in stock market. Maximization of income and minimization of expenses proves to be main motive of the investors engaged in investment. The rational behavior of the investors routes them to spare their income between expenditure and savings. Decision-making becomes tough for the investors in the investment process, when probability of profit and loss is taken into consideration. Well- framed and structured questionnaire is a technique adopted to know the perspective of investors in the stock market. The personality traits of investors and their stock preference are a factor that widely affects the investment decisions so utmost care is taken up to study these psychological traits of the investors. In this volatile market, the perception and attitude of the investors towards stock market changes from time to time, taking into consideration of this aspect, this study was undertaken to understand the behaviour of the investors and to know the awareness, taste and preferences of the investors regarding the various investment avenues.The first organised stock exchange in India was started in 1875 at Bombay and it is stated to be the oldest in Asia. In 1894 the Ahmedabad Stock Exchange was started to facilitate dealings in the shares of textile mills there. The Calcutta stock exchange was started in 1908 to provide a market for shares of plantations and jute mills.Then the madras stock exchange was started in 1920. At present there are 24 stock exchanges in the country, 21 of them being regional ones with allotted areas. Two others set up in the reform era, viz., the National Stock Exchange (NSE) and Over the Counter Exchange of India (OICEI), have mandate to have nation-wise trading.They are located at Ahmedabad, Vadodara, Bangalore, Bhubaneswar, Mumbai, Kolkata, Kochi, Coimbatore, Delhi, Guwahati, Hyderabad, Indore, Jaipur’ Kanpur, Ludhiana, Chennai Mangalore, Meerut, Patna, Pune, Rajkot.The Stock Exchanges are being administered by their governing boards and executive chiefs. Policies relating to their regulation and control are laid down by the Ministry of Finance. Government also Constituted Securities and Exchange Board of India (SEBI) in April 1988 for orderly development and regulation of securities industry and stock exchanges.

2. OBJECTIVES

- To study the independence between Age and Gender.
- To study the independence between Gender and Area.
- To study the independence between Age and Investment company.
- To study the independence between Age and How people come to know about Stock Market.
- To study the independence between Age and How much risk people prefer.
- To study the independence between Income and How much risk people prefer.
- To study the independence between Factors influence on profit and Factors influence on losses.
- To study the independence between whether people do any research before dealing and satisfaction level considering their investment.
- To study the independence between Whether people join any paid course and satisfaction level considering their investment.
- To study the independence between Whether people join any paid course and
- Whether people put any stoploss on their investment.
- To study the independence between Since how long people are trading and future of Indian Stock Market.
- To check whether there is difference between The company in which most people invest and Age .
- To check whether there is difference between How much risk people prefer and Age .

3. METHODOLOGY

Due to Covid 19 pandemic it was impossible to reach out those people who are trading hence, We formulated a questionary which contains all information that we want for out project over google form. And we sent this google form on trading WhatsApp groups and trading Telegram groups and some of the data has been collected by direct interaction with persons (i.e. friends, teachers and the persons with whom we are in contact) who are trading. Thus we collected a samples amounting 205 observations.

Statistical Software:

MS – Excel and MS – Word

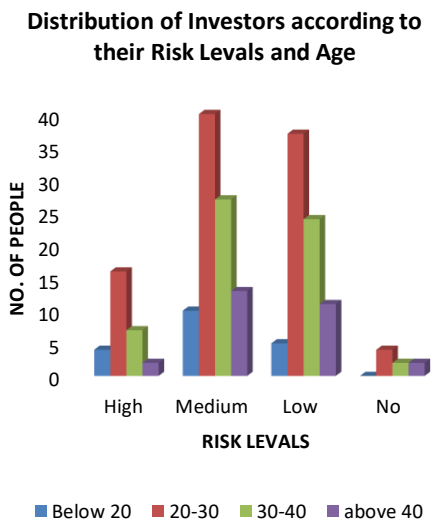
Statistical Tools:

Graphical Tools : Bar diagram, Multiple bar diagram, Pie chart
Test : Chi-square for independence of attributes,
Non - Parametric Test : Kruskal Walli’s test, Mann-Whitney U test

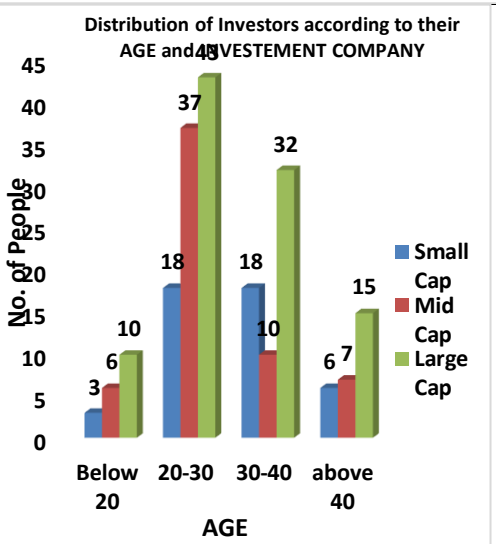
Methods of data collection : For this study, we have collected primary data of 205 observations via google form.

4. GRAPHICAL REPRESENTATION

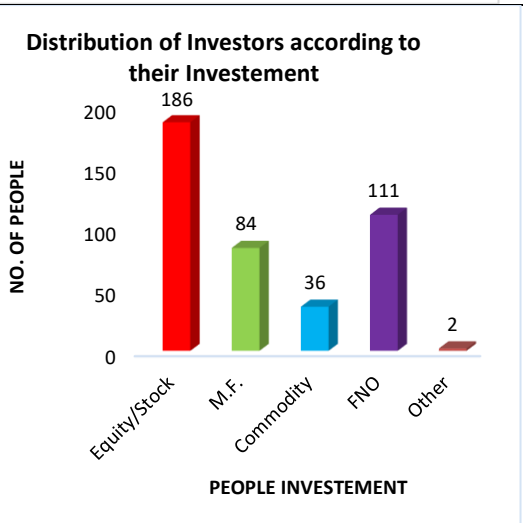
		RISK LEVALS			
		High	Medium	Low	No
AGE	Below 20	4	10	5	0
	20-30	16	40	37	4
	30-40	7	27	24	2
	above 40	2	13	11	2



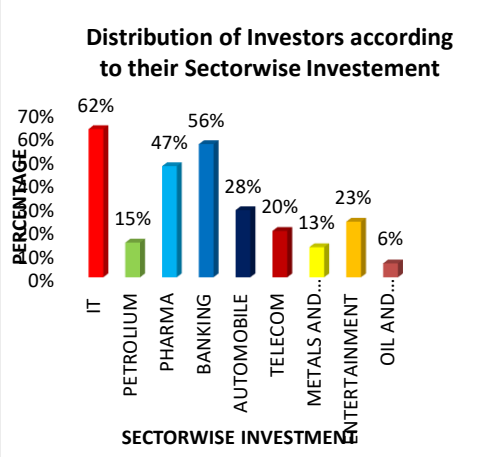
		INESTEMENT COMPANY		
		Small Cap	Mid Cap	Large Cap
AGE	Below 20	3	6	10
	20-30	18	37	43
	30-40	18	10	32
	above 40	6	7	15



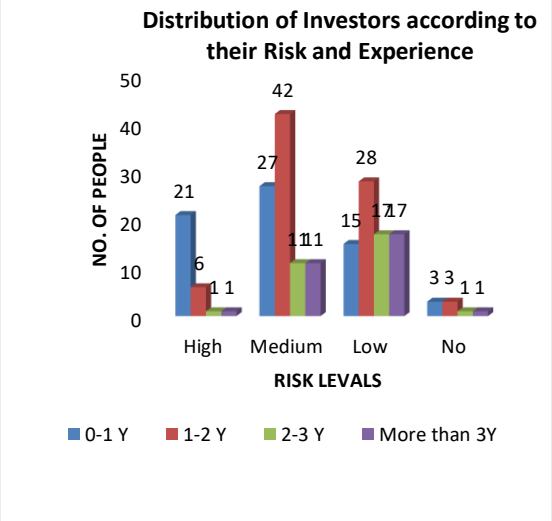
People Investement	No of people
Equity/Stock	186
M.F.	84
Commodity	36
FNO	111
Other	2



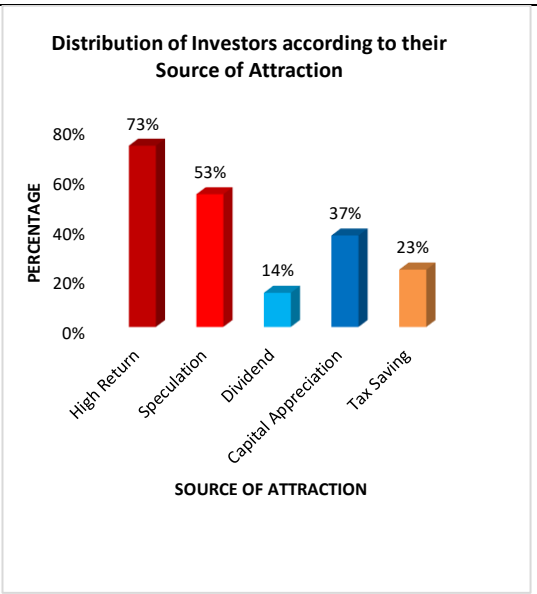
Sector of Investment	Percentage
IT	62%
PETROLIUM	15%
PHARMA	47%
BANKING	56%
AUTOMOBILE	28%
TELECOM	20%
METALS AND MINING	13%
ENTERTAINMENT	23%
OIL AND ENGEENERING	6%



		RISK LEVALS			
		High	**Medium**	**Low**	**No**
EXPERIENCE	**0-1 Y**	**21**	**27**	**15**	**3**
	1-2 Y	**6**	**42**	**28**	**3**
	2-3 Y	**1**	**11**	**17**	**1**
	More than 3Y	**1**	**11**	**17**	**1**



Source of Attraction	Percentage
High Return	73%
Speculation	53%
Dividend	14%
Capital Appreciation	37%
Tax Saving	23%



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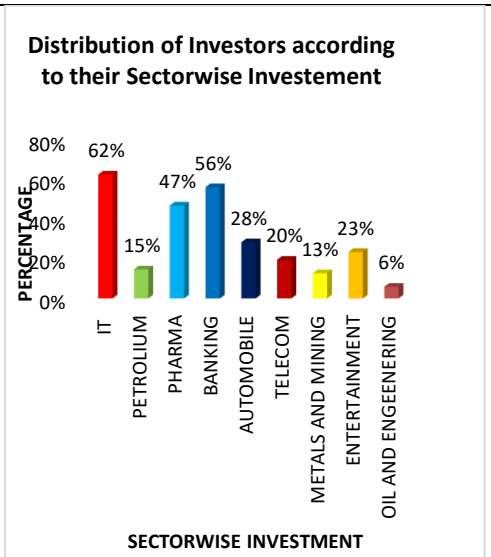
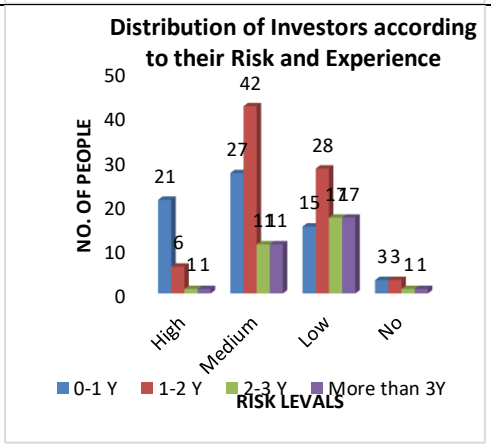


		RISK LEVALS			
		High	Medium	Low	No
EXPERIENCE	0-1 Y	21	27	15	3
	1-2 Y	6	42	28	3
	2-3 Y	1	11	17	1
	More than 3Y	1	11	17	1



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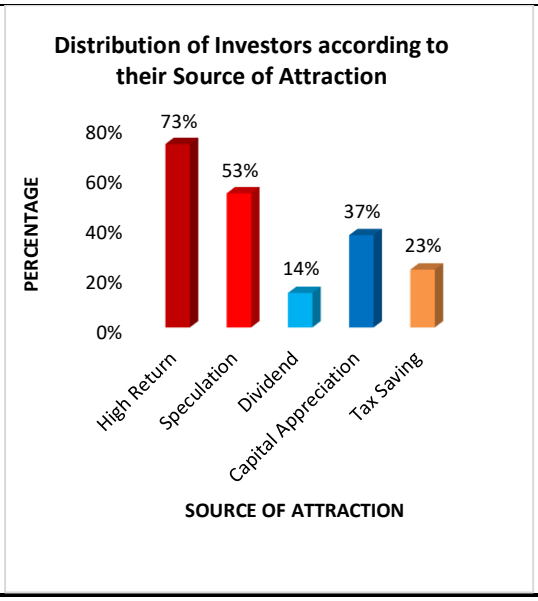

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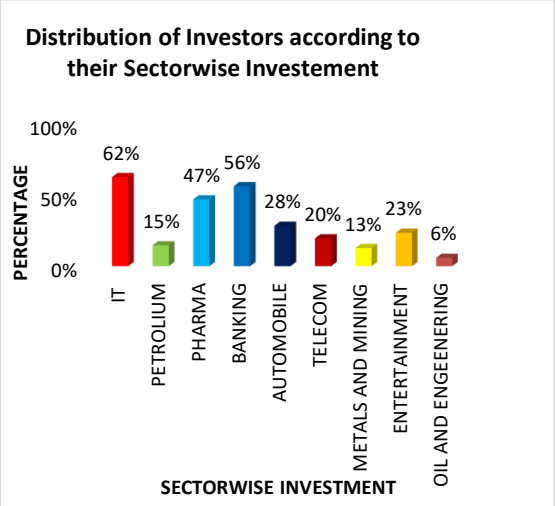

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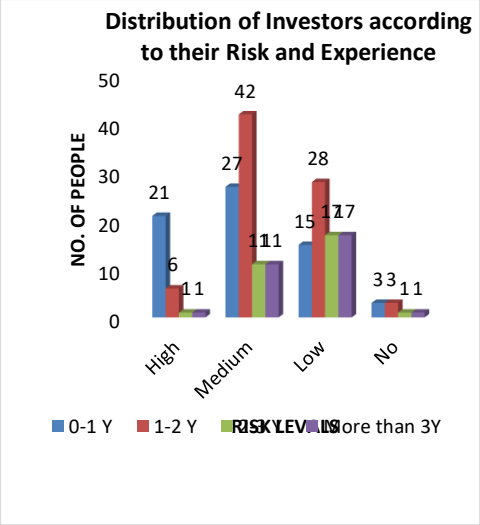

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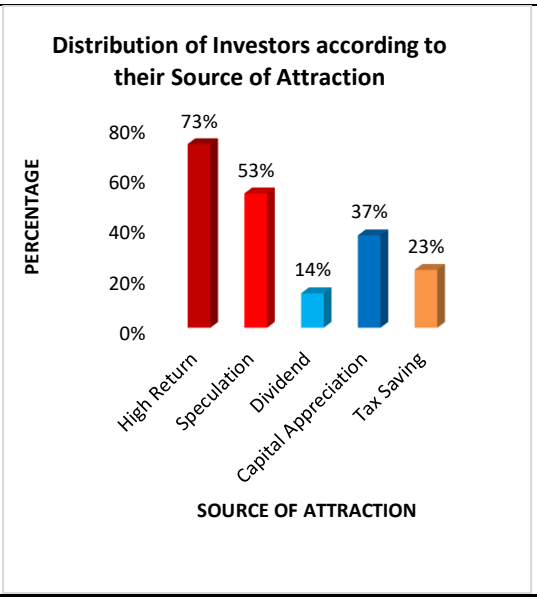

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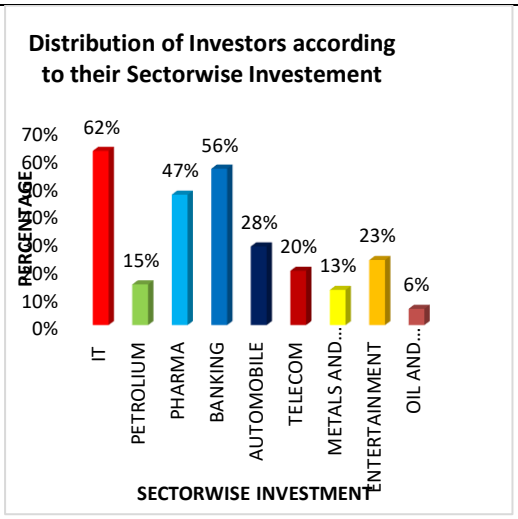

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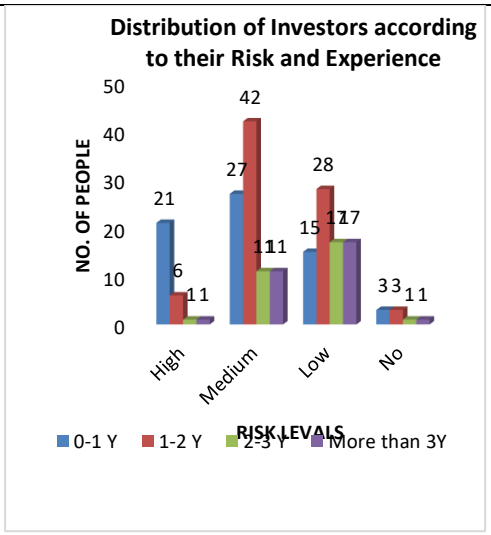

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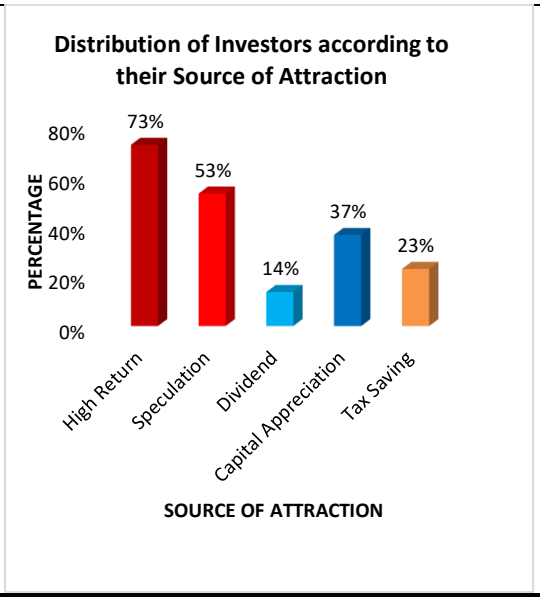
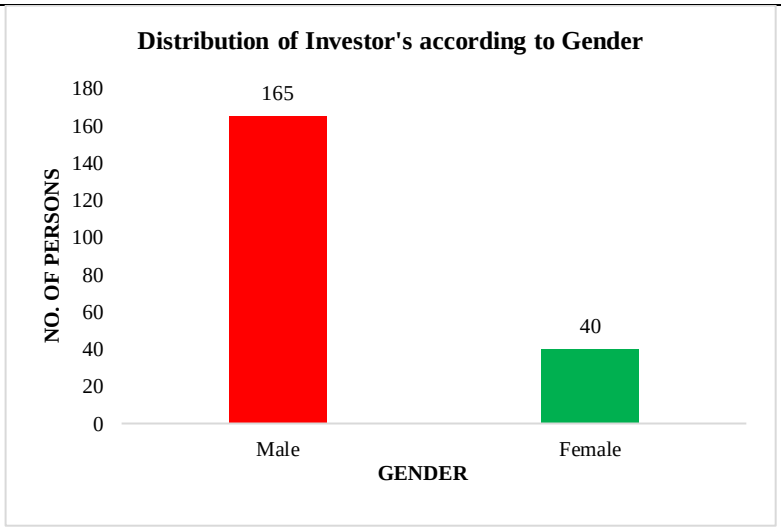
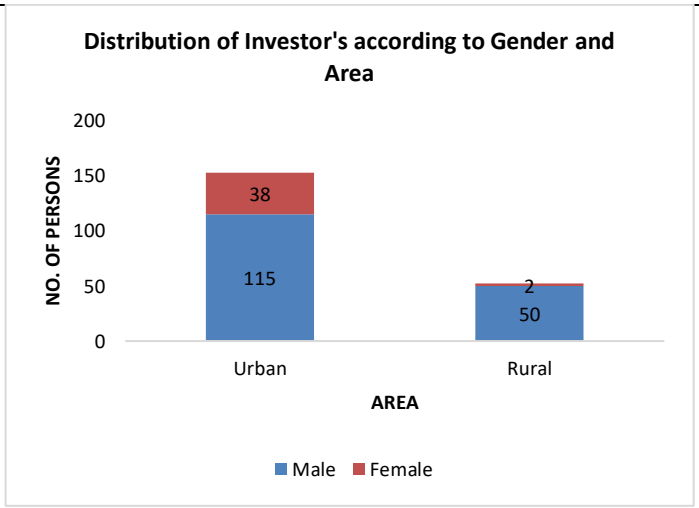


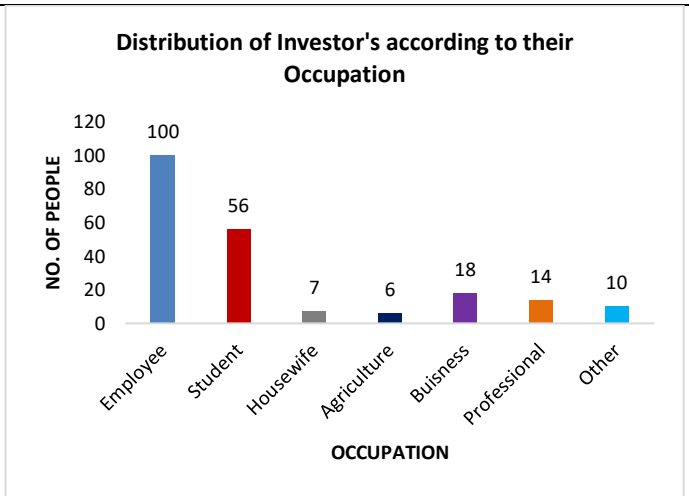
Gender	No of Persons
Male	165
Female	40



GENDER	AREA	
	Urban	Rural
Male	115	50
Female	38	2



Occupation	No. of People
Employee	100
Student	56
Housewife	7
Agriculture	6
Business	18
Professional	14
Other	10



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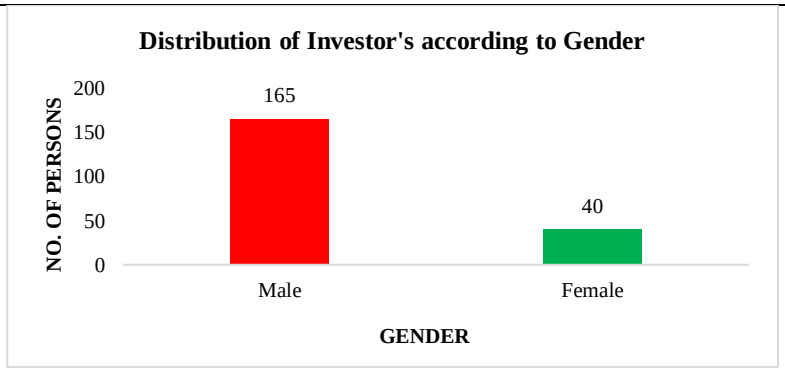

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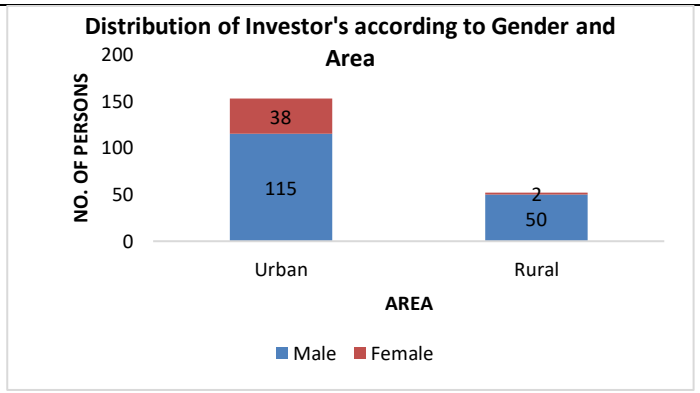

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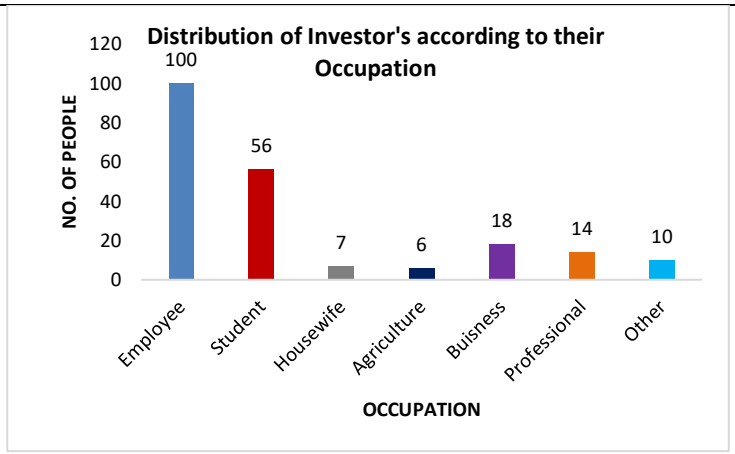
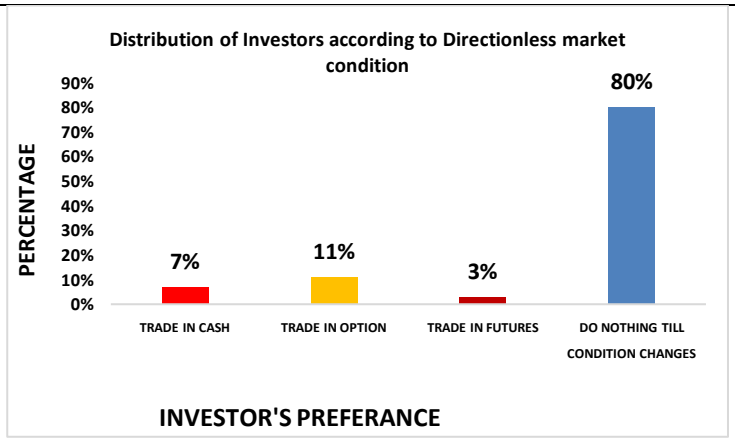


Market Conditions	DIRECTIONLESS
TRADE IN CASH	7%
TRADE IN OPTION	11%
TRADE IN FUTURES	3%
DO NOTHING TILL CONDITION CHANGES	80%



TESTING OF HYPOTHESIS:

a) Chi-square Test for independence of attribute age and gender :

H0: The attribute age and gender are not independent Vs

H1: The attribute age and gender are independent

α=level of Significance = 5%

Observation Table :

		Age				Total
		Below 20	20-30	30-40	Above 40	
Gender	Male	19	77	44	25	165
	Female	0	21	16	3	40
Total		19	98	60	28	205

Under H_0 $\chi^2_{\text{Calculated}} = 3.564728$ and $\chi^2_{\text{tabulated}} = 5.991464547$

$\chi^2_{\text{Calculated}} < \chi^2_{\text{tabulated}}$

b) Chi-square Test for independence of attribute area and gender

H_0: The attribute gender and area are not independent V/s

H_1 : The attribute gender and area are independent.

α=level of Significance = 5%

Observation Table:

		Area		Total
		Urban	Rural	
Gender	Male	115	50	165
	Female	38	2	40
Total		153	52	205

Under H_o $\chi 2 = \frac{N(ad-bc)^2}{(a+c)(b+d)(c+d)(a+b)} = 10.8879995$ and $\chi 2_{\text{tabulated}} = 3.841459$

$\chi 2_{\text{calculated}} > \chi 2_{\text{tabulated,}}$

c) Chi-square Test for independence of attributes age and invested company

H_0: The attribute age and invested company are not independent V/s

H_1: The attributes Age and invested company are independent

α=level of Significance = 5%

Observation Table:

		Age				**Total**
		Below 20	**20-30**	**30-40**	**Above 40**	
Invested	**Small cap**	3	18	18	6	45

Company	**Mid Cap**	6	37	10	7	60
	Large Cap	10	43	32	15	100
Total		19	98	60	28	205

$\chi 2_{calculated} = 9.171444086$ and $\chi 2_{tabulated} = 11.07049775$

$\chi 2_{calculated} < \chi 2_{tabulated,}$

d) Chi-square Test for independence of attribute age and how people come to Know about stock market

H_0: The attribute Age and how people come to know about stock market are

not independent.v/s

H_1 : The attribute Age and how people come to know about stock market are Independent

α=level of Significance = 5%

Observation Table:

		How did you know about Stock Market?			Total
		Internet	Friends, Neighbors, Relatives	Workshop, Advertisment, Newspaper,Agent	
Age	Below 20	3	15	1	19
	20-30	16	73	9	98
	30-40	5	36	19	60
	Above 40	4	11	13	28
Total		28	135	42	205

$\chi 2_{calculated} = 26.99445$ and $\chi 2_{tabulated} = 7.814728$

$\chi 2_{calculated} > \chi 2_{tabulated,}$

e) Chi-square Test for independence of attribute age and how much risk do people prefer:

H_0: The attribute age and how much risk do people prefer are not independent v/s

H_1 : The attribute age and how much risk do people prefer are independent.

α=level of Significance = 5%

Observation Table :

		How much risk do you prefer				total
		high	medium	low	no risk	
age	below 20	4	10	5	0	19
	20-30	16	41	37	4	98
	30-40	7	27	24	2	60
	above 40	2	13	11	2	28
total		29	91	77	8	205

$\chi 2_{calculated} = 2.831007$ and $\chi 2_{tabulated} = 7.814728$

$\chi 2_{calculated} < \chi 2_{tabulated,}$

f) Chi-square Test for Independence of attribute income and how much risk do people prefer

H_0: The attribute income and how much risk do people prefer are not independent.V/s

H_1 : The attribute income and How much risk do people prefer are independent.

α=level of Significance = 5%

Observation Table :

		How much risk do you prefer				Total
		High	Medium	Low	No Risk	
Income	Below 10000	1	6	8	0	15
	10000-20000	8	22	9	2	41
	20000-30000	9	5	6	1	21
	Above 30000	11	58	54	5	128
Total		29	91	77	8	205

$\chi 2_{calculated}$ =8.957402491 and $\chi 2_{tabulated}$ = 5.991464547

$\chi 2_{calculated} > \chi 2_{tabulated,}$

g) Chi-square Test for independence of attribute factor influence on profit and factor influence on losses :

H_0: The attributes factor influence on profit and factor influence on losses are not independent V/s

H_1 : The attributes factor influence on Profit and Factor influence on losses are Independent

α=level of Significance = 5%

Observation Table:

		Factor influence of Losses			Total
		Analysis	Emotion	News	
Factor influence on profit	Analysis	53	88	13	154
	Emotion	0	4	0	4
	News	0	17	30	47
Total		53	109	43	205

$\chi 2_{calculated}$ =65.75194 and $\chi 2_{tabulated}$ = 3.841459149 $\chi 2_{calculated} > \chi 2_{tabulated,}$

h) Kruskal – Walli Test :

The following data is obtain according to different age level is can be classified to How much risk do you prefer.

H_0: There is no defference between the compony in which most people invest and

Age V/s

H_1 : There is defference between the compony in which most people invest and age

α=level of Significance = 5%

Observation Table :

		Small Cap	Mid Cap	Large Cap
Age	Below 20	3	6	10
	20-30	18	37	43
	30-40	18	10	32
	Above 40	6	7	15

Under H_o Test Statistics H = $12/N(N+1)\left(\frac{\Sigma T_i^2}{n}\right) - 3(N+1)$= 1.4

Tabulated $\chi 2 = \chi^2_{(k-1),0.05=5.9914}$ and H < $\chi 2_{\text{tabulated}}$

i) Kruskal – wallis Test :

H_0: There is no difference between How much risk people prefer and age V/s

H_1 : There is difference between How much risk people prefer and age

α=level of Significance = 5%

Observation Table :

The following data is obtain according to different age level can be classified according to How much risk people prefer.

		How much risk do you prefer?			
		High	Medium	Low	No risk
Age	Below 20	4	10	5	0
	20-30	16	41	37	4
	30-40	7	27	24	2
	Above 40	2	13	11	2
Total(Ti)		28.5	50	45	12.5

Under H_o ;

Test Statistics H = $12/N(N+1)\left(\frac{\Sigma T_i^2}{n}\right) - 3(N+1)$ = 9.59007

Tabulated $\chi 2$ is $\chi^2_{(k-1),0.05=}$ 7.815

H > $\chi 2_{\text{tabulated}}$

j) Mann – Whitney U Test :

The following data is obtain according to different education level can be classified according to gender.

H_0 : The two samples comes from same population v/s

H_1 : The tow samples does not comes from same population

α=level of Significance = 5%

Observation Table :

	Male(I)	Female(II)
Upto SSC	13	0
SSS+2	38	3
Diploma	31	6
Graduation	48	12
Post graduation	21	10
Proffesional Course	14	9

$R_1 = Sum\ of\ ranks\ of\ sample\ I = 57$

$R_2 = Sum\ of\ ranks\ of\ sample\ II = 21$

Test Statistics :

$n_1 = 6\ , n_2 = 6\ , R_2 = 6$

$U_1 = n_1 n_2 + \frac{n_1(n_1+1)}{2} - R_1$=$6 * 6 + \frac{6(6+1)}{2} - 57$=0
$U_2 = n_1 n_2 - U_1$ = 36
$U = \min\{U_1, U_2\}$ =0
Critical Value :
$C = \{U \leq U_{\alpha/2}\} = (U \leq U_{6,6,0.025})$ = 5 ;$U_{cal} > U_{tab}$

5. OVER ALL CONCLUSIONS

The data shows that nearly 80% males of the sample are trading whereas female percentage is very low i.e. 20%.The percentage of people who come from urban areas is very high than that of people from rural areas. Among this sample observations most of the peoples are employee and students. Here 53% people are bullish in nature, 25% people are bearish in nature and remaining are stable. It is clear that maximum people comes from age group 20 to 40. Most of the people are attracted towards stock market high returns and speculations among the observation people prefer to invest in IT, Pharma, Banking and Automobile sectors mostly. A lot of peoples came in contact with share market because of friends, neighbors and relatives. People having higher income prefer to take risk. People having less income don't take risk. Analysis and Emotions plays key role in profit and loss of peoples. People who have joined any paid course and people who do research before trading are satisfied and people who haven't joined paid course and who do not do research before dealing are dissatisfied. Experience persons in data say that future of Indian stock market is growing and unexperianced persons are opposite to it. People in the age group below 30 like to take risk

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