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## “A study on impact of Investors Behavioral Biases on the returns of the investor’s during volatility, with reference to Indian Capital Markets”.

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### Abstract:

Capital market plays a significant role in mobilizing the savings of investors and helps them in productive investments for the development of the economy. They act as a link between lenders and borrowers i.e. savers are lenders of funds and investors are barrowers of funds. Funds which flow into capital market from both individuals and financial intermediaries are utilized by industries and government and facilitate nationwide growth measurable in terms of GDP. Rationality plays an important role in channelizing one’s investment into productive arenas. Behavioral finance studies the influencing factors such as psychology and emotions of investors and their reaction during volatile situation. *The main objective of the study is to assess the risk and return tradeoff of the investor’s decision during volatility. This paper throws light on the factors which affect investment decisions and also the biases which have an impact on the investors’ decision making during volatility. Exploratory research design is used in the study with the sample size of 50. Chi-square and correlation tools are used to test the reliability of the data.*

**Key terms:** Behavioral Finance, Volatility, Investor’s biases, Risk return tradeoff.

## Introduction:

A capital market refers to the market place for trading with stocks and securities. It is a place for business firms, government organizations to raise the long term capital. In capital market the individuals with resources can efficiently transfer the resources that have proficient need for them. It provides a way for savings for investors to invest in various investment avenues. There is high degree of correlation between a country's GDP and the stock market performance.

The Modern Trader report says that there are 9.6 million traders worldwide. Currently India ranks 8<sup>th</sup> place with a Market Capitalization of \$2.5 trillion.

## Title of the study:

“A study on impact of Investors Behavioral Biases on the returns of the investor's during volatility, with reference to Indian Capital Markets”.

## Review of Literature:

**Ruchi Priya Khilar, Dr. Shikta Singh (2020):** in their research paper have addressed the role of different emotional biases in investors' investment decision making in the Indian context. This paper has tried to explain some of the emotional biases such as overconfidence, loss-aversion, home bias and endowment effect which work as a guideline that can be considered by the decision makers while making invested related decisions.

**Geetika Madaan & Sanjeet Singh (2019):** in their study have made an effort to assess the impact of behavioral biases in investment decision-making in National Stock Exchange. The responses for the study were gathered from 243 investors. The results show that overconfidence and herding bias have significant positive impact on investment decision. Overall results conclude that individual investors have limited knowledge and more prone towards making psychological errors.

**Rupinder Kaur Gill & Rubeena Bajwa (2018):** in their study have reviewed the studies pertaining to various biases to have a clear understanding of the behavioral finance and its significance in the financial decision making of investors. **Coşkun.et.al (2017):** analyzed the capital investor profile of the investors and the factors affecting investment decisions. As a result of the research, it was determined that investors were not rational and did not have enough knowledge about the capital market.

**Arindam Banerjee (2017):** examined the existence of select behavioral biases among Indian investors. The basic objective of this study is to understand the existence and extent of behavioral biases among Indian investors.

**Goutam Tanty (2016):** Examined the relationship between the return and volatility in National Stock Exchange for the period of 16 years. The main focus was to study the nature of volatility in the Indian stock market.

**Satish Kumar (2014):** Examined the Investors Behavioral bias in decision making. The intention of this paper was to systematically analyze the behavioral biases in investor's decision-making. He concluded that much of the existing literature on behavioral biases indicates the limited research in emerging economies in this area,

lack of empirical research on individuals who exhibit herd behavioral while investing in capital market. **Dr.Taqqadus Bashir.et.al (2013):** have critically examined the influence of behavioral biases on investment decisions made by employees. They used chi-square and correlation to examine the relationship of various biases and they concluded that there is no significant difference between the responses of male and female decision making on overconfidence bias **Agalarova.et.al (2013):** In this study, they found that psychological and demographic determinants that affect the investor's investment decision while investing in capital market. This study was conducted 384 investors by conducting survey. As a result of the study, the level of earnings and education, marital status, age and gender had an impact of investment decisions. **Mrs. Vidya R and Mrs. Shailaja M.L. (2012):** conducted a study on Rationale behind Risk and Return Trade-off; A behavioral observation in a volatile capital market. The objective of the study is to observe the behavior of investors in volatile capital market, and they concluded that decisions have become difficult and it involves higher levels of uncertainty; decisions are more influenced by emotions and feelings. **Jahanzeb, et.al (.2012):** explored, that the decision making is a tough cognitive process as the investor has to choose one alternative for investment. Investors must give importance to their risk tolerance, rate of return, market conditions and other constraints for maintaining his or her portfolio. **Kabra.et.al (2010):** studied the determinants affecting the investor's behavior while investing in the stock market. He used systematic method to study the behavior of investors. Kabra concluded that the investor's age and gender are the main determinants which decide the risk taking ability of investors.

### Research Gap:

In the recent past many researchers and scholars studied the factors affecting investor's decisions and the determinants of the investment decision and on the capital market volatility. In this study, the impact of investors' behavioral biases on the returns of the investors' during volatility is given due importance. In this study the influences of the investors' prejudices and biases on the investors' returns have been assessed.

### Need for the Study:

Capital markets play a major role in channelizing a country's investments in an orderly manner. Its development is indispensable for a country's growth. With varied lot of players in the capital markets, their behavioral biases and sentiments act as a fueling factor in shaping the trends in the behavioral patterns during a volatile market condition. As a situation like volatility in a country's capital market conveys crucial information about an economy's real growth, it is important to assess the behavior of the investor during the volatile situation. The investors must be educated about the investment tactics and strategies to overcome the volatile situation. It is a major challenge for regulators and companies in this context. This study mainly focuses on the biases affecting the investment decision and its impact on the investors' returns in the capital market during a volatile situation.

## Objectives:

1. To understand the various criteria and biases associated with the investment during volatility.
2. To analyze the implications of the decisions made by the investors during volatility
3. To assess the risk and return tradeoff of the investor's decision during volatility.

## Hypotheses:

**H<sub>10</sub>:** There is no significant relationship between the income earned by respondents and investment made in the capital market.

**H<sub>11</sub>:** There is a significant relationship between income earned by respondents and investment made in the capital market.

**H<sub>20</sub>:** The level of risk is independent of the return earned by the investors during volatility.

**H<sub>21</sub>:** The level of risk is dependent of the return earned by the investors during volatility.

**H<sub>30</sub>:** There is no significant relationship between the investment biases and return of the investors in the capital market.

**H<sub>31</sub>:** There is a significant relationship between the investment biases and return of the investors in the capital market.

## Research Design:

**Methodology:** The study conducted is analytical in nature. Exploratory research design is used (i.e. is conducted to understand the existing problem where the problem has not been concluded clearly) in this study. It describes the present situation in the Capital Market, the impact of the investors' pre notions and biases influencing the returns of the investors and strategies to be adopted to overcome a situation during volatility.

**Sources of data collection:** A pilot study was conducted among 10 investors to assess the feasibility of the study. In this research the primary data is collected through structured questionnaire. Secondary data has been gathered from articles, magazines, diaries, books, research papers and sites which helped in further study.

**Sample size and technique:** A sample size of 50 is chosen for this study and convenience sampling technique is been used to choose the respondents. The respondents are the investors who have channelized their investments through Indian capital markets.

**Tools for analysis:** For translating and analyzing the information gathered through organized survey, certain presentation tools aids like bar graphs and charts, and statistical tools like chi-square, and correlation have been

used.

**Limitations of the study:** The data gathered is from a small sample hence it may not be true representation of entire population of the Indian Capital market and the respondents' indisposition to participate in the survey is the major drawback.

## ANALYSIS:

**1.1** Factor rating as a tool has been used to ascertain the important objectives for investors to invest which are rated from 1 to 4. (1-Very important; 2- important; 3-not important; 4- not very important)

| Objectives    | Points     | Weights | Percentage | Rank       |
|---------------|------------|---------|------------|------------|
| Tax Saving    | 197        | 0.26336 | 26.33      | <b>I</b>   |
| Level of Risk | 184        | 0.24598 | 24.59      | <b>III</b> |
| High Return   | 179        | 1.23930 | 23.95      | <b>IV</b>  |
| Term period   | 188        | 0.25133 | 25.13      | <b>II</b>  |
| Total         | <b>748</b> |         |            |            |

The above table infers the respondents' main objective as per the ranking, Tax saving stands first from the view point under the (section 80c) of investors then the term of the investment and followed by the level of risk and high return

**1.2** Factor rating as a tool has been used to ascertain the major risk faced by investors during volatility which are rated from 1 to 4. (1-Very important; 2- important; 3-not important; 4- not very important)

| Risk during Volatility | Points     | Weight   | Percentage | Rank       |
|------------------------|------------|----------|------------|------------|
| Market risk            | 202        | 0.265092 | 26.5       | <b>I</b>   |
| Liquidity risk         | 185        | 0.242782 | 24.27      | <b>III</b> |
| Reinvestment Risk      | 184        | 0.24147  | 24.1       | <b>IV</b>  |
| Inflation              | 191        | 0.250656 | 25.06      | <b>II</b>  |
| Total                  | <b>762</b> |          |            |            |

## Interpretation:

The above table ranks the risk from higher to lower by their percentage, as per the respondents, the Market risk stands first due to price fluctuations on securities and Reinvestment risk stands second, then followed by Liquidity risk and Inflation.

### 1.3 CORRELATION ( $r_{xy}$ ) test:

$H_0$ : There is no significant relationship between income and investment of investors in the capital market. ( $r_{xy} = 0$ )

$H_1$ : There is a significant relationship between income and investment of investors in the capital market. ( $r_{xy} \neq 0$ )

| Income/Investment | 0-25%     | 25-50%    | 50-75%   | 75-100%  | Total     |
|-------------------|-----------|-----------|----------|----------|-----------|
| <40000            | 27        | 7         | 2        | 0        | 36        |
| 40000-60000       | 5         | 2         | 0        | 1        | 8         |
| 60000-80000       | 3         | 2         | 0        | 0        | 5         |
| 80000-100000      | 1         | 0         | 0        | 0        | 1         |
| <b>Total</b>      | <b>36</b> | <b>11</b> | <b>2</b> | <b>1</b> | <b>50</b> |

As the value of correlation co-efficient ( $r_{xy}=0.1$ ) is greater than zero, the Null hypothesis is rejected and the alternate hypothesis is accepted. It can be concluded that there is a significant relationship between the income earned by investors and the investment made in the capital market. In other words higher the income, higher the investment made by the investors in the capital market.

### 1.4 CORRELATION ( $r_{xy}$ ) test:

$H_0$ : The level of risk is independent of the return earned by the investors during volatility. ( $r_{xy}=0$ )

$H_1$ : The level of risk is dependent of the return earned by the investors during volatility. ( $r_{xy} \neq 0$ )

| Risk/Return  | 0-20%     | 20-40%    | 40-60%   | 60-80%   | 80-100%  | Total     |
|--------------|-----------|-----------|----------|----------|----------|-----------|
| 0-20%        | 24        | 7         | 3        | 0        | 0        | 34        |
| 20-40%       | 3         | 7         | 2        | 0        | 0        | 12        |
| 40-60%       | 0         | 1         | 2        | 0        | 0        | 3         |
| 60-80%       | 0         | 0         | 0        | 0        | 0        | 0         |
| 80-100%      | 0         | 0         | 0        | 1        | 0        | 1         |
| <b>Total</b> | <b>27</b> | <b>15</b> | <b>7</b> | <b>1</b> | <b>0</b> | <b>50</b> |

As the value of correlation co-efficient ( $r_{xy}=0.025$ ) is greater than zero, the Null hypothesis is rejected and alternate hypothesis is accepted. It can be concluded that the level of risk assumed is dependent on the return earned by the investors during volatility. In other words, higher the risk better is the rate of return to the investor trading in the capital market.

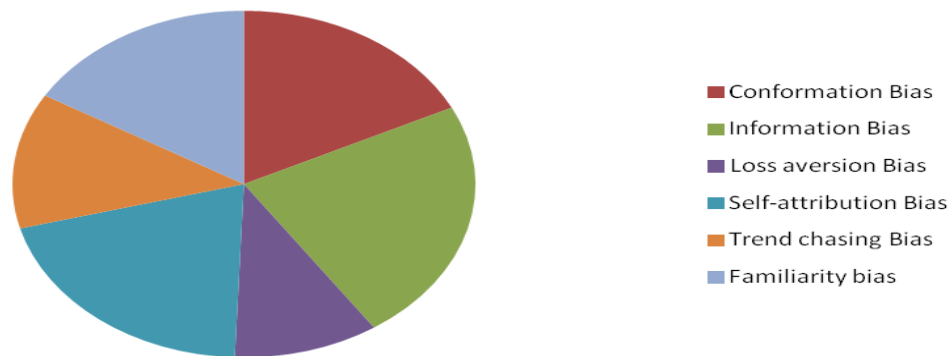
### 1.5 CHI- SQUARE ( $X^2$ ) test:

$H_0$ : There is no significant relationship between the investment bias and return of the investors in the capital market.

$H_1$ : There is a significant relationship between the investment bias and return of the investors in the capital market.

| Investment biases     | Percentage of Return in the capital market |        |        |        |         | Total |
|-----------------------|--|--------|--------|--------|---------|-------|
|                       | 0-20%                                      | 20-40% | 40-60% | 60-80% | 80-100% |       |
| Conformation Bias     | 14   | 30     | 4      | 2      | 0       | 50    |
| Information Bias      | 18   | 21     | 10     | 1      | 0       | 50    |
| Loss aversion Bias    | 8  | 25     | 14     | 3      | 0       | 50    |
| Self-attribution Bias | 16   | 27     | 6      | 1      | 0       | 50    |
| Trend chasing Bias    | 10   | 23     | 15     | 0      | 2       | 50    |
| Familiarity bias      | 13   | 21     | 10     | 6      | 0       | 50    |
| Total                 | 79   | 147    | 56     | 10     | 2       | 300   |

**Level of influence of various biases on the returns earned in the capital market**



Since the chi- square calculated value 57.63 is greater than the chi- square table value 23.685 at five percent level of significance, the null hypothesis is rejected and the alternate hypothesis is accepted. It can be concluded that there is a significant relationship between the investment biases and the return of the investors in the capital market.



## Findings:

1. It was found that majority of the investors do not modify their portfolio during volatile situation and they wait for stability in such situation.
2. Most of the investors have considered confirmation bias and self-attribution bias while making their investment.
3. Majority of the investors adopt technical analysis during volatile situation, where it helps the investors to formulate the buying and selling strategy.
4. The biases of the investors have a high degree of influence on the returns of the investors' during a volatile situation in the capital market. Information bias has a high impact on the returns of the investors. The reason behind this bias is that investors are bombarded with lot of information every moment, from financial commentators, newspapers and stockbrokers, and it is difficult to filter through it to focus on information that is relevant.

## Suggestions:

1. As only few women moved into speculative sources of investment, the Regulatory bodies can take a few measures to promote investment among women as they are conservative. Section 80c of the Income Tax Act must have different tax slabs to men and women so that it encourages the women to invest in the capital market.
2. Investors have divested their portfolios' from Capital Market for short term period, investing in capital markets by adopting formula plans will increase the average profits in the long- run. The investment can be diverted to small cap companies, since they have good prospects for earnings in the future with minimal investment.
3. To be a successful investor over the long term, the investors' have to critically evaluate their decisions, and hopefully overcome, common human cognitive or psychological biases that often lead to poor decisions and investment mistakes.

## Conclusion:

In the present scenario many investors do not make any decision during volatility, they wait for the market to stabilize and invest in the safer investment avenue. The investors seem to be analyzing information with conservatism. Hence every investor must look the capital market as an investment avenue rather than a speculative arena. Many investors, knowingly or unknowingly, may react emotionally while making investment decisions and may possess one or many of the biases. Hence, it is prudent to have a long term investment plan in place and follow a disciplined investment approach to reach the goals of investment.



## Scope for further study:

The research can also be conducted to study the biases affecting the investment decisions in the capital market during the bull and bear phase and also to assess the differences in risk and return ratio. The contrast in the level of influences in both the phases helps the investors to make rational decision about their investment portfolio.

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