

## Analyzing the Impact of Trading Experience on Overconfidence, Self-Attribution and loss-aversion influencing the Investment Decision Making of Individual Investors in Lucknow, Uttar Pradesh

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### Abstract

**Purpose:-**The objective of this study is to examine and analyze the effects of the trading history of individual investors on three distinct behavioral biases: Self-attribution, Overconfidence, and Loss aversion, which play crucial roles in shaping their investment choices.

**Design/methodology/approach:-**Primary data is drawn from a sample of 100 male and female investors who are employed and in the age bracket of 24-60 years—the chosen sample area is in Lucknow, Uttar Pradesh. For hypotheses testing one way, ANOVA is applied on identified variables. Regression analysis is run to identify the impact of behavioral biases on investment decision. For the data reckoning and processing SPSS25 package program is used.

**Findings:-** The results indicate a significant relationship between investors' experience and overconfidence. Traders with more than ten years of experience are more overconfident in trading. In contrast, self-attribution and “loss-aversion” do not reflect any significant relationship with the trading experience. Male as well as female investors both were not formidable to losses.

**Originality:-**The current investigation would aid individual investors to gauge various behavioral biases, affecting their investment decisions and taking corrective actions to minimize the impact and analyze the use of experience in the trading field.

**Keywords:** Investment Decision Making, Trading experience, Individual Investor, Overconfidence, Self-Attribution, “loss-aversion”

### Introduction

If you work hard for your money, it should work hard for you as well. You can control your financial stability by investing. Investments are crucial since they increase your wealth and give you another source of income. You can invest your money in a variety of things, like stocks, real estate, and bonds, to increase your income. Different people interpret investments differently. For some, it simply means putting your

money to make more money, whereas for others, it can mean investing time or effort in some skills or health as a future benefit.

Investment decision is a crucial move on behalf of investors to obtain the optimum return and avoid losses as it incorporates those course of action which produces highest expected benefit for investors (Puspitaningtyas, 2013; Shahzad et.al.2013; Naeem et al. 2020).

Stock market decisions often hinge on various personal factors, with trading experience and financial literacy being paramount contributors to more informed and prudent investment choices. As Benjamin M. Duggar aptly remarked, "It takes a lot of time to gain experience, and once acquired, it should be continuously applied." Experience significantly aids investors in enhancing their knowledge and decision-making capabilities, playing a pivotal role in stock investment decisions and expertise. Experienced investors typically construct efficient portfolios, whereas novice traders are susceptible to poor advice. Investors meticulously chart their financial roadmap, making crucial decisions with careful consideration. Seasoned investors epitomize the pinnacle of financial knowledge, education, investor engagement, and attitude towards investment decisions.

Decision making is a rigorous activity that involves in depth analysis of do's and don'ts among various alternatives available to an individual investor. As per the traditional theories of behavioral finance, investors are rational and cautious but modern researchers suggested that even after having sensible minds they get prone to various behavioral defaults or biases (Abiola and Adetiloye, 2012). Biases represent cognitive or emotional predispositions of investors towards making errors. This paper explores the significance of overconfidence, self-attribution, and loss aversion biases in influencing investors' decision-making processes. According to psychological research, the existence of biases among individuals contributes to further insights and expands the understanding of irrational behavior among investors. (Chira, Adams and Thornton, 2008).

There is an English proverb that says "you reap what you sow," which simply means that before reaping benefits in

the future, you must first sow which clearly defines that out returns or loss are the result of our investment decisions only.

The aim of this study is to elucidate the influence of trading experience on the extent of behavioral biases exhibited by investors, which significantly affect their decision-making processes in the realm of investing.

## Literature Review

### Behavioral Biases and Investment Decision Making

Behavioural finance is a new area of study, particularly in the Indian context, that requires more investigation. The current investigation is focused on providing researchers with a scale that has been empirically tested to measure behavioral biases and evaluate their impact on the decision making process of investors.

In the realm of finance and economics, the concept of behavioral biases pertains to the inclination towards decision making that culminates in irrational financial choices, stemming from flawed cognitive and emotional justification. Prior studies have concluded that behavioral biases exert a substantial impact on the individual decision making process. It has been observed that, on many occasions, investors tend to allocate funds towards a range of financial prospects haphazardly, without sound reasoning. There is a conspicuous lack of effort on the part of investors to deliberate and scrutinize the outcomes of their investment choices. In this regard, cognitive psychology plays a critical role in the decision making process. (Wiley, 2007).

Emotions are the key factor in every individual's life, affecting overall being and behavior. They often cause overconfidence and risk averseness among the people. Humans are often susceptible to succumbing to their emotional states. Emotions can yield favorable or unfavorable outcomes, leading to inflated self-assurance or excessive cautiousness in an individual. Thus, the innate nature of humans causes a difference in their decision making (Shefrin, 2014). Biases act as susceptibility towards mistakes. It is discrimination-based decision making under the influence of established belief. Psychologists have a long list of various cognitive biases. Being deprived of

rational and wealth maximizing attitude, investors are now easily prone to mental biases (Forbes, no date)

The irrational behavior among investors covered beneath the shadow of mental shortcuts and cognitive biases. The unpredictable behavior of 'noise traders'<sup>1</sup> in the financial market creates additional risk for rational shareholders who make gains from incorrect pricing from random trading (Tversky and Kahneman, no date).

Earlier, being on the safer side, individual investors tend to sell their well-doing stocks, whereas they hold their losing players<sup>2</sup> for the long run to avoid losses. The contradiction between traditional theory of finance and behavioral finance. The conventional approach supports rationality, lack of interest, and confidence among investors, whereas modern finance encourages normality among investors as an individual (Odean, 1998).

According to the author, The paper investigates into the intersection of psychology and finance, focusing on behavioral finance. It offers essential insights into financial decision-making solutions and suggests pathways for businesses to adopt customer-centric policies. Through a thoughtful approach, it seeks to comprehensively understand and address emerging challenges in the field. (Statman, 1999). The information scrutinizes the capacity bound towards the difference in investors' confidence and risk-taking restraint (Oppenheimer, 1984).

Economists have studied the impact of gender orientation and marital status on wealth accumulation in US households and explored that excessive knowledge of financial investors shapes overconfidence among them. The literature explains three phases of Overconfidence: overestimation, over placement, and calibration of subjective probabilities (or realism of confidence) (Schmidt and Sevak, no date).

One additional sample demonstrates the potential for an investor to operate outside the bounds of rationality, yet not necessarily in a completely irrational manner. The decision to act with rationality is one that must be consciously made, and the pursuit of complete rationality may come at a high cognitive cost. However, there are advantages to be gained through a rational approach in terms of cost-effectiveness.

While there is but a single path to rationality, there exists a multitude of irrational avenues.

In the realm of investment, overconfidence represents a cognitive bias frequently observed wherein individuals tend to overestimate their understanding of financial markets and specific investment opportunities. This tendency often results in the neglect of relevant market data and professional information. Consequently, individuals may embark on poorly conceived endeavors to navigate the market, sometimes concentrating their investments in high-risk assets. To mitigate the detrimental effects of overconfidence bias, advisors can advocate for clients to remain open to alternative perspectives and advice, thereby fostering a more balanced approach to investment decision-making.

Self-attribution bias is a psychological phenomenon observed in investors, wherein they attribute their investment successes to inherent qualities like skill, attentiveness, and ability. Conversely, they tend to blame external factors such as bad luck or others for investment losses. This bias can lead investors to unknowingly assume excessive financial risk and engage in overly aggressive trading, amplifying market volatility. It often results in investors beliefs and selectively interpreting information to align with their desired outcomes from the investment.

The phenomenon known as "loss-aversion", which is observed in the field of behavioral finance, refers to the tendency of investors to prioritize the avoidance of losses over the pursuit of gains. An individual's susceptibility to this phenomenon is seen to increase in proportion to the number of losses they experience. This behavioral tendency often results in investors holding onto stocks or funds that are not performing well for longer durations. They display a reluctance to sell such assets at a loss, and persist in holding onto them even when superior investment options are available.

The goal of the study was to look into the main variables influencing investment behavior and how they affect risk appetite and decision-making in different age groups of investors. The findings showed that the primary determinants of an investor's risk tolerance are age and gender.

(Kabra, Mishra and Dash, 2010).

## Trading Experience and Behavioural biases of Investors

Before investing in anything, learn everything you can about investments, such as why they are important. Knowledge was required for investment. Experience is also important when it comes to investing. As we all know, not everyone has a basic understanding of investments, which is why they lose. Remember that gaining knowledge and experience can alter the course of your life.

The second way to look at investors' learning tendency is to look at the relationship between trading experience and investment performance. Experience may be able to reduce cognitive biases such as the endowment effect and disposition effect, according to recent research, which could enhance decision-making in investment situations. Bergstrom and associates, 2003. Similarly, we anticipate that trading experience will help individuals get a better grasp of how accurate their private signals are, which will help them make better signal-driven transactions. This is probably modifying their trading style—be it more aggressive or less aggressive—according to how accurate they believe their private signals to be. (Paper, Dhar, and Icf, 2002).

Insurance institutions commonly utilize the quoted statement to underpin the resilience of the diverse investment strategies they employ. Typically, these organizations incorporate mandatory disclaimers in their advertising endeavors to mitigate any perception of social or ethical responsibility. Such disclaimers explicitly convey that investment outcomes are susceptible to a multitude of market risks. It is vital for the investor to meticulously scrutinize the offer document prior to making a final determination. The predicament arises when an investor is unable to comprehend the implicit implications of the disclaimer or, by the time they do fathom the entire procedure, the consequent decision becomes irrevocable. Prior research has indicated that a significant proportion of investors rely on the recommendations of their peer group or seniors when making financial decisions. These recommendations are a result of ongoing diligence in confidence levels towards coherent skills, the psychological traits of investors, behavioral factors, risk

tolerance levels, and geographical segmentation. Additionally, the study suggests that investors' sentiments, which may influence their decisions, can be difficult to accurately assess. It is a well-established fact that individuals often attempt to justify their decisions without taking into account areas of potential improvement. Consultants and advisors may leverage this aspect of human psychology by focusing on identifying flaws within the system, resulting in suboptimal returns for investors. According to existing literature, the trading behavior of young professionals is significantly influenced by their age and income level (Ansari & Moid, 2013).

Experience plays a vital role in investment decisions. People with a bundle of experience make easy choices among various alternatives present for a portfolio. There is a relationship between stock investment experience and investment decisions. Experienced investors struggle out all the ingredients that influence their stock investment experience, whereas new investors try to learn from advisors and prior experiences. Experience act as a basis for the reduction of Overconfidence in investors. Their knowledge level rises as they participate more in the stock market and learn its ups and downs. Their work concluded that novice traders are more overconfident than players in the market. Self-attribution bias makes investors overconfident after success and the conception that they have the innate capability to evaluate past performance. This leads to this bias when investors claim successful predictions to their ability and failed outcomes to external factors (Barber and Odean, 2000). The market for investing is changing rapidly. We are undergoing a generational shift which depict that people who perceive higher education, investment experience, and financial knowledge endeavor to risk investing. As per risk preference and investment duration, experience works as a forecasting tool for decision making (Gerber, Hens and Vogt, 2010). Investors with high investment experience tend to be more risk-tolerant than new players in the market. Investment decision requires excellent patience, adequate knowledge, and little opportunities as per market situation to have sufficient trading experience.

This study explores the connection between behavioral

factors and investment decisions among individual investors in Mumbai. By employing factor analysis on a selection of twenty biases outlined by Michael Pompain in

2012, the research identifies four key factors—experience, incongruity, inducement, and dogmatism—that are associated with the decision-making process in investments.

**Table I: Summary of literature review**

Themes	Summary	References
<b>Behavioral Biases and Investment Decision Making</b>	Every person's emotions serve a crucial role in their lives, impacting their general state of well-being and behavior. They might even make people overconfident and afraid of taking risks. Humans are easily influenced by their emotions. The poll indicates that an investor's age and gender are the primary determinants of their level of risk tolerance.	(Pompian and Longo, 2004) , Olsson 2014),(Statman, 1999) , (Odean, 1998) , (Tversky and Kahneman, no date) , (Shefrin, 2014), (Schmidt and Sevak, no date)
<b>Trading Experience and Behavioural biases of Investors</b>	Experience holds significant importance in investment decision-making. Seasoned investors navigate portfolio choices effortlessly, reflecting the correlation between stock investment experience and decision-making. Knowledge deepens with market participation, learning from its fluctuations. Studies indicate many investors rely on peers or seniors for financial guidance, driven by confidence in their skills, psychological traits, behavior, risk tolerance, and regional factors.	(Barber and Odean, 2000) , (Wiley, 2007),(Miglietta, Battisti and Garcia - Perez, 2018)

Source- Prepared by the Author

**Research Gap**

Behavioural biases play an important part in influencing investment decisions since market attitudes significantly impact financial markets. Although tier 2 towns like Lucknow, and Uttar Pradesh, are rarely researched, prior research has highlighted the importance of expertise and market experience, which might cause biases among investors in urban areas. As such, financial professionals must understand this idea from various angles.

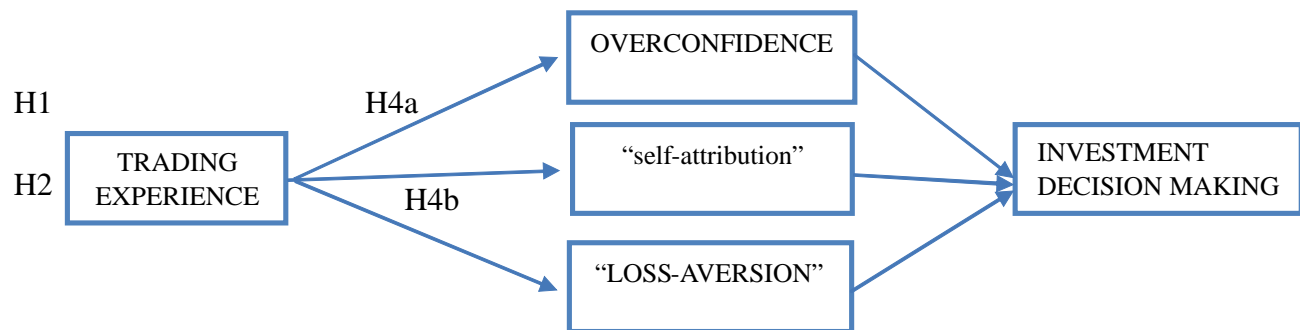
**Statement of Problem**

The present study tries to evaluate the role of trading experience on investors' emotional mindset of tier 2 City of Uttar Pradesh, Lucknow, which is not a metropolitan city

but has good trading volume. It would ultimately provide a concrete solution for the investors belonging to such cities.

**Research model:**

Father of behavioural finance, Daniel Kahneman thought that none of the investors is a robot who cannot make mistakes and will always have uniform reactions, thus generating similar market sentiments. The current research aims to recognize and scrutinize how experience influences three behavioral biases (Overconfidence, self-attribution, and "loss-aversion") governing investment decision-making within the framework of trading experience, considering these errors as crucial components for establishing a robust future groundwork.

**Figure I: The conceptual framework**

Source: The authors

**Research Questions:**

- a)) How does the trading experience of individual investors relate to the biases they exhibit, consequently affecting their investment decision-making?
- b) What affects an investor's experience level regarding emotional behavioural biases like overconfidence, self-attribution, and "loss aversion," and how do these biases affect the choices made by seasoned investors when making investments?
- c) What impact do acknowledged behavioral biases have on investors' investment decision-making processes?

**Research Objectives:**

The aim of this investigation is to detect and evaluate the impact of experience on emotional behavioral biases, including overconfidence, self-attribution, and "loss-aversion," that affect investors' investing decision-making. The study's main objectives are to:

- a) The study seeks to establish the correlation between the trading experience of individual investors and the recognized biases that impact their decision-making in investments.
- b) The study aims to examine how the trading experience of individual investors influences the identified biases they exhibit.

- c) The objective is to assess how recognized behavioral biases affect investors' decision-making processes in investments.
- d) To suggest strategies for minimizing the impact of biases (if any) on the investment decision making of individual investors.

**Research Hypotheses:**

H1) There is no statistically significant correlation observed between the level of Overconfidence among investors and their Trading Experience.

H2) There isn't a significant correlation between the Trading Experience and the extent of self-attribution among investors.

H3) There is no statistically significant relationship found between Trading Experience and the degree of "loss-aversion" among investors.

H4) There is no significant impact of Behavioral biases (Overconfidence, "self-attribution", "loss-aversion") on Investment decision making.

H4a) There is no significant impact of Overconfidence on Investment decision making of investors.

H4b) There is no significant impact of "self-attribution" bias on Investment decision making of investors.

H4c) There is no significant impact “loss-aversion” bias on Investment decision making of investors.

## Research Methodology

### Research Design:

A descriptive research design is used here. The framework is developed to find the cause-and-effect relationship among dependent and independent variables. For comprehensive results, hypotheses testing is done. Therefore, a quantitative technique is to be used.

### Sample Size and Sampling:

Data was gathered from people living in the City of Lucknow (Uttar Pradesh). Primary data is drawn from a sample of 100 investors who are employed and in the age group of 24-60 years through judgmental sampling. Participants of the study mainly constituted those individuals who were aware of investment or trading activities.

Respondents were from different strata, i.e., working/professionals, self-employed, salaried class, etc. Unemployed people are excluded during data collection.

### Significance of selected sample frame:

As per the results of India's most recent census survey conducted in 2011, Uttar Pradesh ranks as the fourth largest state in terms of landmass. This state is widely recognized as the heartland due to its geographical location in the influence area of both western and eastern freight corridors. Furthermore, the state boasts a remarkable heterogeneity in population, with a significant influx of citizens migrating from neighboring states towards Uttar Pradesh.

### Data Collection Tool:

A well-structured questionnaire is prepared with three major sub-sections to carry out the present research.

### PART-A (Demographic variables):

The demographic data, encompassing Gender, Age, Employment Status, Marital Status, Education, and Annual Income, has been gathered from participants.

### PART - B (Trading analysis)

This section contained questions regarding their Investment frequency in the market, whether they trade

annually, monthly, weekly, or once in 2 years.

### PART – C (Presence of biases)

A 5-point Likert scale, with 1 representing strongly disagree and 5 representing strongly agree, has been used to collect data on three primary biases. Of the 100 respondents, 52 men and 48 women (aged 24 to 60) completed the survey. The existence, influence, and severity of overconfidence, "loss-aversion," and self-attribution on the male and female investors in the sample region impacting their investment decision making have been measured using the "Strongly Disagree" to "Strongly Agree" scale.

### Data Analysis

One-way ANOVA is carried out on the responses given to the questions based on the 5-point Likert Scale scope. The purpose of using this statistical tool (ANOVA) was to assess the significant difference between investor experience, which is an independent variable with overconfidence bias, self-attribution bias, and “loss-aversion” Bias (dependent variables)

To check the relationship between the change in investment decision Regression Analysis is used (Dependent variable) if any one of the behavioral biases affect the investors (Independent variable). Linear regression is run taking factors of all the biases individually to analyse the impact.

Survey data were analyzed with IBM SPSS 25 package program and then interpreted and evaluated.

## Results and Findings

### Cronbach Alpha Reliability analysis

Consistency is evaluated via the SPSS-performed Cronbach Alpha Reliability analysis. A Cronbach Alpha coefficient of less than 0.60 generally denotes inadequate internal consistency. In this instance, however, the reliability test produced a significant dependability score of 0.7213 for the Cronbach Alpha. As a result, the scale's significant Cronbach alpha value supports its reliability.

**Table II: Reliability Analysis of variables**

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
<b>Rows</b>	290.5825	99	2.935177	3.588616	3.29E-25	1.259499
<b>Columns</b>	61.0425	11	5.549318	6.784727	4.11E-11	1.797428
<b>Error</b>	890.7075	1089	0.817913			
<b>Total</b>	1242.333	1199				

<b>Cronbach Alpha value</b>	<b>No. of Items</b>
<b>0.7213</b>	<b>12</b>

**Primary Objective:**

The objective of this study was to create a research model measuring Behavioural aspects of investors towards Trading Experience. This model reflects the relationship and impact of three specific behavioral biases (cognitive) towards the decision making of individual investors.

**Secondary Objective: Investigation of Behavioural factors**

To attain this objective, a structured questionnaire on 5 point Likert scale was prepared and been distributed

among the individuals of the selected sample area (Lucknow, Kanpur, Gorakhpur and Prayagraj). Feedback from investors suggests the existence of behavioral biases among individuals in Lucknow, which were subsequently categorized into three primary biases.

The data is collected through the questionnaire consisting of investors from different experience levels. Among 100 participants, 51% of investors are new, followed by people with 1-3 years of experience. Only 17% of respondents have more than three years (table-1).

**Table III: Trading experience of Individual Investors**

		<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Valid	Less than one year	51	51.0	51.0	51.0
	One year - 3 years	32	32.0	32.0	83.0
	More than three years	17	17.0	17.0	100.0
	Total	100	100.0	100.0	

We can further classify our respondents based on their profession into salaried class constituting a significant

portion of data with 69%. We have a population of self-employed investors and family businesses who form 27% and 7% of the total population, respectively (table-2).



**Table IV: Occupational type of Individual Investors**

		Frequency	percent	Valid percent	Cumulative percent
Valid	Salaried Class/ Working Professional	69	69.0	69.0	69.0
	Self Employed	24	24.0	24.0	93.0
	Family Business	7	7.0	7.0	100.0
	Total	100	100.0	100.0	

**One way ANOVA Analysis**

## I) Overconfidence and Trading Experience

H1: There is no statistically significant correlation observed between the level of Overconfidence among investors and their Trading Experience.

**Table V: ANOVA analysis of Overconfidence and Trading Experience**

Attributes	Experience	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	F	Sig.
						Lower Bound		
I believe only in my assessment of investment decision	Less than five years	63	3.25	1.015	0.128	3	5.69	0.01
	5 Years - 10 Years	18	4.06	0.639	0.151	3.74		
	More than 10 Years	19	3.58	0.692	0.159	3.25		
	Total	100	3.46	0.947	0.095	3.27		
I can forecast the performance of stocks with complete accuracy on my own capability.	Less than five years	63	2.98	0.924	0.116	2.75	0.98	0.38
	5 Years - 10 Years	18	3.28	0.958	0.226	2.8		
	More than 10 Years	19	3.26	1.195	0.274	2.69		
	Total	100	3.09	0.986	0.099	2.89		
I believe entirely about the market predictions of professional advisors	Less than five years	63	3.56	0.876	0.11	3.33	3.02	0.05
	5 Years - 10 Years	18	4.11	0.832	0.196	3.7		
	More than 10 Years	19	3.68	0.749	0.172	3.32		
	Total	100	3.68	0.863	0.086	3.51		
I follow my own experience and will for trading rather than the advice of any others?	Less than five years	63	3.33	0.95	0.12	3.09	4	0.02
	5 Years - 10 Years	18	4	0.907	0.214	3.55		
	More than 10 Years	19	3.21	1.032	0.237	2.71		
	Total	100	3.43	0.987	0.099	3.23		

The particular mean for the attribute "I only trust my own assessment of investment decision" is 3.25 for the investors with the lower than 5 years experience and 4.06 for the investment time frame between 5 to 10 years and those above 10 years' experience are only 3.58. A p-value results in ANOVA analysis which is measured as 0.01 P(F). Below 0.05 level of significance this effect is concluded to be a statistical significance effect resulting in differing answers on the basis of the investor's level of experience.

Just like in the category endowed with investors with less than five years experience, the mean score of respondents on the statement "I can predict the performance of stocks with absolute precision based on my personal ability" is 2.98 when compared to those having 5-10 years' experience whose mean score is 3.28; those with over ten years of experience scored 3.26. The test statistic is 0.98 and the significance value is 0.38. Consequently, the null hypothesis's rejection would be inappropriate, as the

measured difference is statistically insignificant (significance value is higher than 0.05).

In addition, for attribute "I strictly follow the forecasting that the experienced advisors predict the market", it was observed that the investors with less than 5 years' experience scored the mean of 3.56 while those with 5-10 years' experience scored the mean of 4.11 and those with more than 10 years of experience scored the mean of 4.68. The ANOVA result presents F value at 3.02, while the significance value stands at 0.05. In the case that the statistical significance test gives a p-value of less than 0.05, the mean difference is statistically significant. The result

means a practical deviation among responses of experts and investors taken by an experience factor.

The null hypothesis is rejected, indicating that investors with greater investment experience exhibit a higher degree of overconfidence compared to their less experienced counterparts.

#### ii) Self-attribution and trading experience

H2: There isn't a significant correlation between the Trading Experience and the extent of self-attribution among investors.

**Table VI: ANOVA analysis of Self-attribution and experience**

Attributes	Experience	N	Mean	Std. Deviation	F	Sig.
My previous unsuccessful investments were purely due to bad luck or the external environment	Less than five years	63	3.16	1.066	1.842	0.164
	5 Years - 10 Years	18	2.89	0.963		
	More than 10 Years	19	3.53	0.905		
	Total	100	3.18	1.029		
I try to avoid the situation that requires thinking in-depth about trading decisions?	Less than 5 years	63	3.08	1.112	0.154	0.858
	5 Years - 10 Years	18	3.22	0.878		
	More than 10 Years	19	3.05	0.97		
	Total	100	3.1	1.04		
Following a profitable trade, I promptly reinvested my earnings into another transaction instead of allowing the funds to remain idle until I found another promising investment opportunity.	Less than five years	63	3.65	0.864	1.179	0.312
	5 Years - 10 Years	18	3.5	1.295		
	More than 10 Years	19	3.26	0.991		
	Total	100	3.55	0.978		

The attribute "My previous unsuccessful investments were purely due to bad luck or external environment" has a mean score of 3.16 among investors with less than five years' experience, 2.89 among those with five to ten years' experience, and 3.53 among those with more than ten years' experience. An F value of 1.842 and a significance value of 0.164 are shown in the ANOVA result. The mean difference lacks statistical significance because the significance value is more than 0.05, indicating that the variance in response depending on investor experience is not significant.

Comparably, investors with less than five years' experience scored a mean of 3.08 for the attribute "I try to avoid situations that require in-depth thinking about trading decisions," while investors with five to ten years' experience scored 3.22 and those with more than ten years' experience scored 3.05. An F value of 1.176 and a significance value of 0.312 are displayed in the ANOVA output. It is feasible to conclude that the mean difference lacks statistical significance if the significance value is

greater than 0.05. This suggests that there is no significant difference between years of investment experience and self-attribution, and it also shows that there is no significant variation in response based on investor experience. The null hypothesis is so accepted.

### iii) "loss-aversion" and trading experience

H3: There is no statistically significant relationship found between Trading Experience and the degree of "loss-aversion" among investors.

**Table VII: ANOVA analysis of "loss-aversion" and experience**

Attribute	Experience	N	Mean	Std. Deviation	F	Sig.
I feel more affected when I incur a loss in my trading decisions than happiness that I derive while I earn gains from any investment?	Less than five years	63	3.51	1.014	0.128	0.88
	5 Years - 10 Years	18	3.39	0.916		
	More than 10 Years	19	3.53	0.697		
	Total	100	3.49	0.937		
I sell off my investment if its price falls below its acquisition price?	Less than 5 years	63	3.05	1.023	0.171	0.843
	5 Years - 10 Years	18	3.17	1.425		
	More than 10 Years	19	2.95	1.224		
	Total	100	3.05	1.132		
I persist in retaining an investment that is yielding losses despite being aware of its unfavorable performance.	Less than 5 years	63	2.87	0.959	0.664	0.517
	5 Years - 10 Years	18	2.89	1.023		
	More than 10 Years	19	3.16	0.898		
	Total	100	2.93	0.956		
I am more affected by negative emotions, such as setbacks, than I am by positive emotions, such as progress.	Less than 5 years	63	3.08	0.972	0.602	0.55
	5 Years - 10 Years	18	3.28	0.826		
	More than 10 Years	19	3.32	1.057		
	Total	100	3.16	0.961		
Opting for investments with low guaranteed returns appears more appealing to me compared to investing in high-return opportunities that carry higher risks.	Less than 5 years	63	3.27	1.081	1.111	0.333
	5 Years - 10 Years	18	3.5	1.15		
	More than 10 Years	19	3.68	1.204		
	Total	100	3.39	1.118		

For investors under five years of experience, the mean score for the attribute "I feel more affected when I incur a loss in my trading decisions compared to the happiness derived from gains" is 3.51; for investors between five and ten years of experience, it is 3.39; and for investors over ten years of experience, it is 3.53. An F value of 0.128 and a significance value of 0.88 are shown in the ANOVA findings. The mean difference does not exhibit statistical significance with a significance score larger than 0.05, suggesting that the response variation depending on investor experience is not statistically significant.

For investors with over ten years of experience, the average score for the attribute "I sell off my investment if its price falls below its acquisition price" is 2.95; for investors with five to ten years of experience, it is 3.17; and for those with fewer than five years of experience, it is 3.05. An ANOVA's F value of 0.171 and significance value of 0.843 are displayed in the results. The response variance dependent on investor experience is not statistically significant because its statistically significant value is greater than 0.05. Therefore, it doesn't appear that self-attribution and investing experience differ all that much. Consequently, the null hypothesis is maintained.

The average score for the trait "I hold on to loss-making investment even after I know that it is giving me a loss" is 2.87 for those who have invested less than five years, 2.89 for those who have invested between five and ten years, and 3.16 for those who have invested more than ten years. A matched significance of  $p = 0.517$  and a F value of 0.664 were identified in the computation's result. Because the p-value is greater than the significance level of 0.05, the observed mean difference does not approach statistically significant. Because of the variability based on the investor's level of skill, we are unable to deduce any statistical significance from the response rate.

The average attribute score for investors with less than five years of experience is 3.08, for those with five to ten years of experience it is 3.28, and for those with more than ten years of experience it is 3.32. "A negative (a setback) impression on me is stronger than any positive (any progress) one." The ANOVA yielded a F value of 0.602 and a Sig value of 0.55, indicating that there was no statistically significant variation between the groups. Observe that the p-value indicates a higher p-value because it is more than 0.05. There is no discernible difference in the means of

response between the two groups of investors—those with and without expertise.

In the same manner, for the point "To me investing for low guarantee returns of 10 years seems more attractive than the unsecured high returns of 10 years," the average score of the investors who have got the experience during less than 5 years is 3.27, it is 3.5 for those investors who has the 5-10 years' experience, and it is 3.68. A t-test result has a value of  $F = 1.111$ . The value of significance in the success chi-square test is greater than threshold of 0.05 so the means difference lacks the statistical significance, showing that there is no significant difference in the response depending on investor experience.

**Regression Analysis**

H4: There is no significant impact of behavioral biases on investment decision making

H4a) There is no significant impact of Overconfidence on Investment decision making.

I) Overconfidence and Investment Decision

**Table VIII: Analyzing the Influence of Overconfidence on Investment Decision-Making.**

<b>SUMMARY OUTPUT</b>	
<i>Regression Statistics</i>	
Multiple R	0.206748944
R Square	0.042745126
Adjusted R Square	0.032977219
Standard Error	0.742496239
Observations	100
<i>Regression Statistics</i>	
Multiple R	0.136533592
R Square	0.018641422
Adjusted R Square	0.008627559
Standard Error	0.75178616
Observations	100

<i>Regression Statistics</i>	
Multiple R	0.062598268
R Square	0.003918543
Adjusted R Square	-0.006245553
Standard Error	0.75740452
Observations	100

According to the analysis presented in tables 8, 9, and 10, the R-squared values for all variables related to overconfidence are notably low (0.042, 0.0186, 0.00391). Despite this, investors exhibit strong belief in their own assessments and future trend forecasting. Consequently, the null hypothesis is rejected, leading to the conclusion that

overconfidence indeed influences investment decision-making.

II) "self-attribution" and Investment Decision

H4b) There is no significant impact of "self-attribution" bias on Investment decision making.

**Table IX: Assessment of the Influence of "Self-Attribution" on Investment Decision-Making.**

<b>SUMMARY OUTPUT</b>	
<i>Regression Statistics</i>	
Multiple R	0.027570498
R Square	0.000760132
Adjusted R Square	-0.009436193
Standard Error	0.758604372
Observations	100

Both external factors and previous losing investments influence investors' decisions about their investments. Investment decisions are not significantly impacted by "self-attribution" bias when this issue is taken into consideration. Not a single other variable shows any discernible association.

III) "loss-aversion" and Investment Decision

H4c) There is no significant impact of "loss-aversion" on Investment decision making.

**Table X: Examining the Effect of "Loss-Aversion" on Investment Decision-Making.**

<b>SUMMARY OUTPUT</b>	
<i>Regression Statistics</i>	
Multiple R	0.003460917
R Square	1.19779E-05
Adjusted R Square	-0.010191981
Standard Error	1.128655081
Observations	100

The p value regarding all the factors detailing "loss-aversion" among the investors influencing the investment decision making are greater than 0.05. Therefore

collectively we can conclude that "loss-aversion" has no significant impact on decision making of investors. Null hypothesis is accepted here.

## Interpretations / Discussion

The findings indicate that overconfidence—the most blatant bias—affects Lucknow investors with more than two years of trading experience. However, no meaningful connection could be found between "loss-aversion," self-attribution bias, and trading experience. Self-attribution is a subset of overconfidence but the respondents do not highlight the tendency of taking credit for successes and attributing blame for failures to others. They exhibit different symptoms of overconfidence like underestimating risks, overestimating expected returns, and indulging in excessive trading due to their irrational belief. The results of regression shows that only Overconfidence and influence of external factors in "self-attribution" have the significance values less than 0.05 indicating major impact of overconfidence and a partial overshadow of "self-attribution" on the Investment Decision making of Investors.

## Conclusion

The proliferation of behavioral finance literature in recent years highlights a growing interest in understanding market anomalies and the intersection of psychology with finance. This field aims to elucidate the reasons behind unexplained market fluctuations that traditional financial theories struggle to explain.

The current study endeavors to establish a correlation between trading experience and specific biases—overconfidence, self-attribution, and loss aversion—to assess their influence on investment decision-making among individual investors in Lucknow.

Findings concluded that – Investors' gender and trading experience in investment impact overconfidence bias. We can confirm that traders falling in the category of more than 5 years are more overconfident than inexperienced investors with less than 5 years of in the financial market.

The difference between respondents and experience is not significant, which implies that null hypotheses are accepted in the case of self-attribution and "loss-aversion". Both the biases are not found in the people of Lucknow.

Through the previous study and current research, we can trace that Overconfidence is the most prevalent bias found

in maximum investors belonging to a different region. We can easily spot Overconfidence in others but not in our self. Therefore, to reduce this bias among the investors, they need to be competent and always in a learning mood, depend on reliable sources of information, and avoid quick calls because hasty decision making leads to ambiguous results. Before making any choices, investors should examine every investment using both technical and fundamental analysis. The detrimental effects of prejudice can also be lessened by talking with financial experts. Overall, the results demonstrate that individual investors learn from their prior stock trading experiences, modify their future stock trading accordingly, and attain better investing success as they develop expertise—despite their many well-documented blunders.

## Managerial Implications

This aims to provide a conceptual foundation on irrational decision-making, facilitating clearer insights and enabling the delivery of more reliable information to clients. It will empower organizations to devise diverse strategies for crafting tailored portfolios. Moreover, this study will aid non-psychology academicians in comprehending various behavioral aspects inherent in individual personalities, potentially shaping these traits if necessary. Additionally, it sheds light on how heuristic-driven biases hinder judgment processes. By familiarizing investors with the intricacies of decision-making, it redirects their focus toward behavioral biases of which they may be unaware. Consequently, they can better manage emotions while trading, avoid anchoring to winners, and adopt a vigilant attitude towards thorough stock analysis, promoting effective and bias-free investment decisions. As Warren Buffett wisely advised, "Embrace greed when others are apprehensive, and exercise caution when others are overly confident."

## Suggestions

1. Every investor consistently advises thorough examination of investment records through technical and fundamental analysis. However, it's cautioned not to rely solely on past data, as circumstances may change.
2. The study reveals how behavioral factors affect trading

knowledge and investing judgments. Consequently, investors are cautioned not to blindly mimic others and to recognize that what works for one individual might not work for another.

3. Prior to heeding others' advice, investors are advised to educate themselves practically, enabling the evaluation of various investment options.

4. Investors lacking confidence may seek guidance from investment advisors and financial professionals to achieve above-average returns. Yet, this may lead to herd behavior, diminishing their independence.

#### **Limitations and Future Scope:**

The study's limitations, including constraints in time, location, financial support, and respondent accessibility, suggest avenues for future research on similar concepts. The research is confined to Lucknow, indicating potential for broader studies with larger samples across the state or country to yield more diverse results. Additionally, the study focuses solely on individual investors, suggesting the inclusion of other investor types such as institutions, mutual fund managers, and consultants in future investigations. Furthermore, the examination of only selected biases by the researcher implies that numerous other factors may influence investors' decision-making, thus enhancing the robustness of the findings.

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**Endnotes:**

<sup>1</sup>An investor who trades without the support of professional advice and fundamental analysis.

<sup>2</sup>Loss incurring market securities.