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Cognitive Biases Impact on Investor's Investment Decision of Retail Mutual Fund Investor

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Abstract-
The purpose of this research is to study the effect of Cognitive bias on Investor's investment decision of Retail Mutual Fund Investor.

Methodology Adopted: Structured questionnaire was distributed to 1012 Indian mutual fund investors of four states considered financial hubs of India (Delhi/NCR, Mumbai, Bangalore, and Kolkata). Multiple regressions were used to test the model. Validity of instrument was established through CFA.

Findings: Cognitive Bias (Overconfidence, over-reaction, Herd Effect and Regret Aversion) significant with investor's investment decision making.

Research Implications:Results are significant on Indian investors but with different geographic results might different**.**

Originality/ Value: Academic research is still needed to understand the impact of mutual fund investors' cognitive biases on their investment decisions, Biases studied on Equity investors in south India, due to inconsistency in literature the work found to be original.

Keywords: Behavioral Finance, Cognitive Bias, Herding, Over-reaction, Regret Aversion.

Introduction:

A mutual fund is a shared pool of money into which investors put their money to be invested in accordance with a specified goal. As a result, the fund's ownership is 'mutual', meaning that it belongs to all of the investors. A single investor's ownership of the fund is proportional to the amount of his or her contribution to the total amount of the fund.
Human decision-making is seen as one of their intellectual processes. During the decision-making process, a preferred choice is chosen from a number of options depending on specific criteria (Wang, 2011). The most difficult aspect of making an investment choice is deciding on a particular zone and area to invest in. When investing money, we must evaluate the state of the market, our risk tolerance, and a variety of other factors. The investor must be able to compute correctly and capture all of the facts contained in the market in order to make the best and most logical choices possible. Many investors, however, have different views on how they absorb information and are irrational in their investment decision-making process owing to biases.
With industrial policy changes, public and financial sector reforms, and new economic policies of liberalization, deregulation, and restructuring, the Indian stock market has exploded. With the assistance of financial institutions or intermediaries that encourage savings and channel them to their most effective use, the Indian economy has opened up, and numerous changes have taken place in the Indian capital market and money market. Mutual funds are an example of a financial intermediary that has played a major role in the creation and expansion of capital markets. Millions of small investors have been given new opportunities thanks to mutual funds, which have brought investing to their doorstep. To ramp up performance to satisfy investor criteria, a professional fund manager should monitor investor behavior and comprehend their needs and expectations.
Mutual funds have emerged as a significant investing route for institutional and small investors as a result of financial sector reforms and developments in the Indian financial markets. Small investors investing habits, in fact, have changed dramatically. A growing array of public and private sector companies have joined the industry with creative schemes to fulfill Indian and foreign investors' needs. Mutual funds also offered a better option for all forms of investors, including small investors; to receive the benefits of expertise- based equity investment. The Behavioral finance mutual fund selection process is on describing psychological biases that influence investor behavior. Traditional finance is unable to address what investment mistakes to avoid and what financial market strategies to employ in order to generate above-average returns. In real life, behavior finance can be applied to any situation. People tend to overestimate the risk and reward of any security. An individual's behavior is organized into a logical pattern. Although a person's behavior varies depending on the situation, he behaves consistently in all situations. This perspective emphasizes an investor's entire market rather than focusing on specific actions that he will take in a givensituation.A mutual fund investor obtains a

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diversified portfolio, and academic research (Evans & Archer, 1968) has shown that diversification reduces the risk of loss. Another way in which the fund investor reduces risk is through diversification. When you invest in a pool of funds with other people, any significant loss on one or two securities is shared by all of the other people. Similarly, when purchasing through a mutual fund, investors benefit from economies of scale (Haslem, 2003), as funds pay lower transaction costs due to large volumes and pass the savings on to investors.

A cognitive bias is a faulty way of thinking that causes you to misunderstand information from the environment, affecting the logic and accuracy of your choices and judgements. Biases are unconscious, automatic processes that speed up and improve the efficiency of decision-making. Heuristics, social pressure, and emotions are all examples of factors that may lead to cognitive biases.

Behavioral Finance

Behavioral finance is a new financial market strategy that developed in reaction to conventional finance's difficulties. Traditional finance is unable to address that what mistakes not to do in investment and what type of strategies should make in financial markets for earning supernormal return. There is no area in real words where behavior finance is not applied. Generally, people overestimate risk and return of any security. The behavior of an individual is organized into a coherent pattern. Although a person's behavior changes with the situation, but he behaves in a consistent manner in various situation. This view emphasizes the totality of an investor's market rather than focusing on specific actions that he will take in a particular instance.

Attitudes are the central issue of investor's behavior. In fact, in the area of investor behavior, attitude has become a popular topic of research. Attitude research is used to design new investment products, reposition current ones, and create marketing campaigns, and forecast brand preferences as well as general investing behavior. Arguments in favor of behavioral finance are realistic, psychological foundation, explanatory power of financial models; solve the puzzles of traditional finance and new approach to traditional finance.

Investors do not invest with understanding theories rather prefer Holistic Decision-Making Model (HDMM) which involves reasoning and intuition in their decision-making process.

Objective:

1. To examine the relationship between Cognitive behavior and investor investment decision among Indian Mutual fund investors.
2. To study the relationship between Cognitive Biases and Investor's Investment Decision.

Literature Review and Hypothesis:

The behavioral decision framework, which has grown in prominence since the pioneering efforts of behavioral researchers, is one of the three theoretical frameworks under which mutual fund investors make fund selection decisions. Modern finance theory promotes the notion of optimum choice in financial decision-making, but its approach to properly defining the actual choice is too restricted and constrained (Debondt and Thaler, 1995). The focus of the behavioral finance mutual fund selection framework is on explaining psychological biases that influence investor behavior.

Herding Effect:

The prevalence in stock market of India, there is a lot of evidence of herd behavior it was investigated by Sunil Poshakwale and Anandadeep Mandal (2014). During the period 1997-2012, data was gathered from the S&P CNX Nifty 50 index of the National Stock Exchange. In the Indian market, investors exhibited substantial herding behavior. In both bear and bull markets, herding exhibited substantial movement, and it intensified under negative market situations.

Jaime. F. Lavin and Nicolas S. Magner (2015) conducted research to distinguish between purposeful and unintentional herd behavior. Amid December 2002 and October 2009, data was collected from 50 equities held by 18 Chilean equity mutual funds, and the amount of herding behavior was assessed using panel regressions, with the elements that influence behavior investigated. Herding was found to be present in 2.8 percent of the time.

Overconfidence:

Priya Kansal and Seem Singh's (2018) study is based on an exploratory investigation of demographic variables and investor traits that lead to overconfidence in people. The main data was collected using a structured questionnaire. Better than average, planning errors, self-assignment, and optimistic illusions all lead to overconfidence. The hypothesis was tested using statistical techniques such as the t-test, ANOVA, and ordinary least square regression. Gender, age, and education have little bearing on overconfidence.

Anila Rafique Khan, Mahwish Azeem and Salman Sarwar (2017) utilised risk perceptions as a moderator to investigate the effects on decision-making behaviour by investors, including excessive confidence and loss aversion.Questionnaires were sent to 160 investors in Islamabad. Overconfidence and loss aversion bias harm investors, according to the findings. Loss aversion and overconfidence have a huge impact.

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Over-reaction:

Aamir Sarwar and Ghadeer Afaf (2016) conducted research to compare the influence of psychological and economic aspects on individual investor decision-making. We employed a suitable sampling strategy to deliver a structured questionnaire to 254 stock investors. The components of psychological and economic variables were discovered using factor analysis. There was a substantial association between psychological and economic issues, according to the findings. A regression study revealed that psychological elements had a greater impact on decision-making behavior than economic considerations. Gender and investing decision-making were investigated using a test, but no significant relationship was discovered.

In their study, NouraMetawa et al. (2019) assessed the relationship by utilizingbehavioural (herd behavior, sentiment, overconfidence, over reactivity) as mediator variables, the students examined demographic data (age, gender, degree of education and experience), and investment decisions in the Egyptian stock market.. 384 individual and institutional investors were polled for information. The influence of demographic characteristics on investment choice was investigated using partial multiple regression with behavioral components as a mediator variable. Investor emotion, overreaction and underreaction, overconfidence, and herd behavior all have a substantial impact on investing decisions, according to the findings. Age, gender, and educational level all have a beneficial impact on investing decisions. The impact of prior experience on investing decisions was minimal.

Regret- Aversion:

The effect of psychological factors on investor decision-making in the Indian stock market is investigated by Yamini Gupta and Shahid Ahmed (2016). A survey of 380 retail investors was used to gather primary data. Anchoring bias, regret aversion and loss aversion were investigated using the Chi-square test and discriminant analysis. Herding bias was seen in both groups after the data was divided into two groups depending on investment experience. Experienced investors have greater levels of anchoring bias, regret aversionand loss aversion than less experienced investors.

Renu Isidore R. and Christie P examined the relationship between income and behavioral prejudice (2018). The researchers examined anchoring, mental accountings, gambler mistakes, availability, loss aversion, regret aversion, representativity and over-confidence to investigate if an annual income and eight behavioral biases were related. In Chennai, India, 436 secondary equity investors were systematically surveyed. This research would benefit financial advisers since the investor's income was a crucial aspect to consider while giving financial advice to customers and advising them on biases. According to the study, investors with higher income levels exhibited stronger overconfidence bias than those with lower income levels. The findings of the correlation study indicated a substantial positive link between yearly income and overconfidence. Annual income has a substantial negative association with representativeness, loss aversion, availability, and mental accounting.

Investor Investment Decision:

Ehsan ul Hassan et al. (2013) investigate the true influence of emotion heuristics such as fear and rage on individual investor assessments and decisions. A survey of 270 investors in the Islamabad Stock Exchange was undertaken. The validity of three factors of individual investor investment decision making was assessed using confirmatory factor analysis. The data was collected using a random sampling methodology.

Investor Behavior

Amos Tversky and Daniel Kahneman (1975) gave crucial insight into clear systemic inequalities that impact judgement. Investors have bounded willpower, according to Thaler (2000), but they assign more weight to present issues than potential concerns, resulting in a number of forms in which their short-term motives are incompatible with long-term interests. Behavioral differences are known to occur in the minds of investors even though investment decisions are made through a logical decision-making mechanism.

Orthodox economics' assumptions view humans as rational beings that seek to maximize their utility at all times. As a result, traditional finance theory and economic models rely strongly on two fundamental assumptions: rationality and market performance. On the other hand, proponents of behavioral finance seek to question this assumption, claiming that a number of variables, from both logical and irrational reasoning, affect investor behavior. They conclude that stock price is not necessarily a true indicator of a company's intrinsic fundamental value, and that investor psychology can cause market prices and fundamental value to diverge greatly (Shefrin, 2000).

Irrational reasoning in investor decision-making has been shown in empirical research and surveys on investor behavior. For investor decision making, cognitive biases are critical research mediators and moderators. Owing to the recurrence of a particular set of conditions, such decision-making preferences impact investor actions and decisions. Self-attribution and overconfidence are two decision-making tendencies that have received a lot of attention in the literature.

Theoretical framework:

Ravindra Jain, Prachi Jain, and Cherry Jain (2015) conducted research to examine behavioural biases that influence individual investors' investing decisions. Articles, books, and project reports were used to gather secondary data. The

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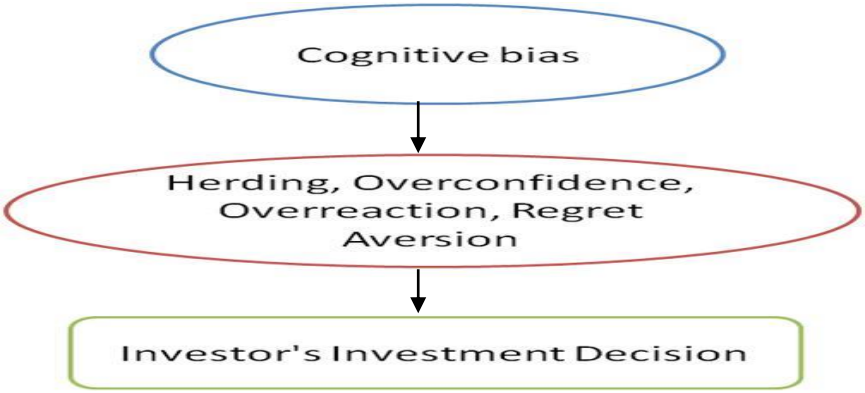
appropriate articles were found using the EBSCO host database. Previously, the study focused on institutional investors and mutual fund performance. The following behavioural biases have an influence on individual investors' investing decisions: Disposition effect, Mental Accounting, Investor Overconfidence, Representativeness, Herding, Hindsight Bias, Familiarity Bias, Aversion, Anchoring, Availability Bias, Regret Aversion, and Gambler fallacy.
The occurrence of behavioral biases (overconfidence, excessive optimism, herd behavior, and the disposition effect) was investigated by Jaya MamtaProsad, Sujata Kapoor, and Jhumur Sengupta (2015). It also looked at how demographics and investor sophistication affected biases. The data was analyzed using SEM. According to the report, overconfidence was the most frequent bias in India. Behavioral biases were used to predict investor demographics such as age, occupation, and trading frequency.

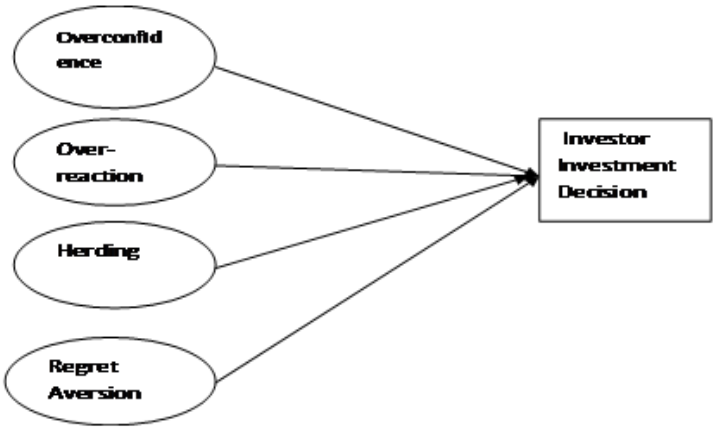
Conceptual framework

Behavioral biases are depend on many factors like personality, perception, feelings, moods and sentiments, emotions, attitudes, based on behavioral finance theory biases has been categorized in two: Heuristic and cognitive, Behavioral approach to Investors Investment decision making is showed in flow diagram. Based on this theory gave by Jhansi Rani Booda, Dr. G Sunitha(2018) Hypothesis was formulated.



Research Problem:

There is inconsistency in Review of Literature, Mostly Behavioral finance covered in North America, European countries. The need of the study is required in North Indian geography. Due to Rise in income Investors invested more in Financial Markets, Higher education regarding financial instruments are also one of the interest for young investors to motivate them to invest in different markets. Survey was conducted in European stock exchange, and others stock exchange of the Countries. This paper covered Mutual fund investors of India which was not studied previously. South India was the part of study but this paper cover the four regions of India .Equity investors are the part of Review of Literature



Empirical Model

Hypothesis:

H1: Overconfidence has a significant relationship with IID
H2: Overreaction has a significant relationship with IID
H3: Herding has a significant relationship with IID

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H4: Regret Aversion has a significant relationship with IID
IID* = Investor's Investment Decision

Research Methodology:

Methodology Adopted:

Data was collected from an adequate and representative sample of 1012 Indian mutual fund investors. A descriptive survey design was used in this research. Non probability sampling technique, Snowball sampling was used to gather the data and hypotheses were tested using responses to a Likert-type (Strongly agree- 1, Agree-2, Neutral-3, strongly disagree- 4) questionnaire distributed to the study's sample. Snowball sampling offers a solution to the problem of data collection among hidden population, the formalization of their sample biases seems to be beyond the reach of current statistics (Rapoport 1979, Frank 1979, Frank 1981). Four major states Delhi/NCR, Mumbai, Bangalore, Kolkata consists four regions of India. These are metropolitan states consists of professional, highly educated and middle, high income group investor. The states have financial institutions and most of the investors working with these firms. The investors have very sound knowledge of mutual funds Data was collected from Sep 2019- Sep 2021.

Constructs formulation for survey tool:

Overconfidence	OC 1: Confident of my ability to do better than others in mutual funds	Nadya septiNoor,Lutfilutfi (2018)
	OC 2: My past profitable investments were mainly due to my specific investment skills	
	OC 3: I feel satisfied with my investment decision in the past	
Herding	Herd 1: Other investor's decisions of buying and selling mutual funds have impact my investment decision	H. Kent Baker, Satish Kumar & Nisha Goyal (2018)
	Herd 2: I usually react quickly to the changes of other investor's decisions and follow their reactions to the market	
	Herd 3: I consult others (family, friends or colleagues) before making mutual fund purchase	
	Herd 4: Investor's decisions of their portfolio have impact my investment decision	
Regret Aversion	RA 1: After I have already invested, if I get to know that a better investment option was available in the market, I would feel bad	Shalini Kalra Sahi(2010)
	RA 2: If my Investment portfolio value starts going down, I will sell my investments without any delay	
	RA 3: I feel regretful about holding losing funds	
	RA 4: I always sell winners funds easily and holding losers funds for a long time	
Overreaction	OR 1: I rethink before making an investment decision when there is random information	NouraMetawa,M.KabirHassan,SaadMetawa, M.Faisal Safa (May 2018)
	OR 2: My reaction depends on my analysis of the data	
	OR 3: I rethink before making an investment decision when the information source is unreliable	
Investor Investment Decision	ID 1: When making an investment, I trust my inner feelings and reactions	Mohammad Haroon Rasheed, Amir Rafique(Jan 2017)
	ID 2 : I generally make investments that feel right to me	
	ID 3 : When making investments, I rely upon my instincts	
	ID 4 : When I make an investment, it is more important for me to feel the investment is right than have a rational reason for it	
	ID 5 : When I make investment, I tend to rely on	

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	my intuition	

Source: Secondary data

Reliability and Validity:

	Measure Construct	Number of items	Reliability
1	Overconfidence	4	0.86
2	Herding	4	0.63
3	Regret Aversion	4	0.79
4	Overreaction	3	0.72
5	Investor Investment Decision	5	0.73

Cronbach's Alpha values are calculated in the table above. The value is higher than the "cutoff point of 0.6." It means the data is reliable and has a high level of internal consistency.

Validity:

CR	**AVE**	**MSV**	**MaxR(H)**
InvDec	0.712	0.581	0.13
H_OC	0.931	0.819	0.03
P_RA	0.789	0.685	0.364
P_OR	0.729	0.577	0.123
H_Herd	0.71	0.56	0.05

Convergent validity demonstrates the relationship between two measures that are intended to assess the same concept. Discriminant validity demonstrates that two measurements that aren't intended to be linked aren't. Excellent construct validity requires both types of validity.

Target Group Respondents:

State	**Target Group**	**% of sample**
Delhi/NCR	287	28.3
Mumbai	269	26.5
Bangalore	254	25
Kolkata	202	20

Source: Primary data

Tools and Technique:

To gather answers from the 1012 individuals, Non-probability Sampling is used.To study the identified research, question the decision on population and universe was based on the basis of respondents.

The validity of the data was tested using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA)of the developed scales while the reliability of the scales was assessed using Cronbach Alpha. To a large extent, EFA is carried out by relying on analysis using Principal Component Analysis (PCA) and the criteria of eigen values being greater than 1 (Ruth and Huffcutt, 2013). Though oblique rotations have been known to be superior than orthogonal rotations, still orthogonal rotations have been preferred in carrying out EFA (Ford, MacCallum and Tait, 1986). While EFA can be used to reduce data along with retaining as much of the original variance as possible, EFA can also be used to assess how latent constructs can be measured (Fabrigarand Wagner, 2012).

Through a detailed literature review pertaining to the research questions of interest, variables will be identified and defined precisely. After the identification of variables, hypotheses will be framed to analyze the inter-relationships between variables. Where the variables have not been research upon much, scales will be developed in order tooperationalize them. The scales will be developed as per the procedures outlined by DeVellis (2013). The scale development will first involve the generation of items for each of the variables. The items will be generated after undertaking the literature review and in discussion with potential respondents.

Data Analysis:

Correlation Analysis

		Overconf_M	RegAv_M	Herd_M	Overreac_M	InvDec_M
Overconf_M	Pearson Correlation	1	-.023	.036	-.102*	.117**
	Sig. (2-tailed)		.597	.420	.021	.008
	N	1012	1012	1012	1012	1012
RegAv_M	Pearson Correlation	-.023	1	.316**	.235**	.180**
	Sig. (2-tailed)	.597		.000	.000	.000

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	N	1012	1012	1012	1012	1012
Herd_M	Pearson Correlation	.036	.316**	1	.125**	.176**
	Sig. (2-tailed)	.420	.000		.005	.000
	N	1012	1012	1012	1012	1012
Overreac_M	Pearson Correlation	-.102*	.235**	.125**	1	.149**
	Sig. (2-tailed)	.021	.000	.005		.001
	N	1012	1012	1012	1012	1012
InvDec_M	Pearson Correlation	.117**	.180**	.176**	.149**	1
	Sig. (2-tailed)	.008	.000	.000	.001	
	N	1012	1012	1012	1012	1012

Correlation:

The relation between Cognitive Biases and Investor's Investment Decision is statically significant. Regret Aversion was strongly positively correlated with IID (.180), Herding was (.176) correlated.

Multivariate regression analysis as suggested by Hair et al (2014) will be used for this study. In a regression analysis, a dependent variable is regressed along with independent variable(s) and a regression equation seeks to access the correlation between the dependent variable and independent variable(s). The coefficients of regression indicate the strength of correlation between the independent and dependent variable.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.273[a]	.075	.067	.70179	.075	10.263	4	509	.000	1.880

a. Predictors: (Constant), Overreac_M, Overconf_M, Herd_M, RegAv_M

b. Dependent Variable: InvDec_M

This table displayed the R-value, which represents the correlation between the dependent variables' observed and anticipated values. The R-square score is 0.075, indicating that the model's independent variable may be predicted. Dependent variables account for 75% of the variation.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.218	4	5.055	10.263	.000[b]
	Residual	250.685	509	.493		
	Total	270.903	513			

a. Dependent Variable: InvDec_M

b. Predictors: (Constant), Overreac_M, Overconf_M,

instance, the F value is 10.263 and the P-value is 0.000.
Regression equation is
Y= 1.337+0.109X1*+0.098X2*+.090X3*+0.094X4*+e
Sig@ 5%

Y= Investor's Investment decision
X1= Overconfidence
X2 = Regret Aversion
X3= Herd

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X4= Overreaction
e = Error

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.337	.167		8.018	.000			
	Overconf_M	.109	.037	.127	2.965	.003	.117	.130	.126
	RegAv_M	.098	.038	.117	2.550	.011	.180	.112	.109
	Herd_M	.090	.034	.119	2.649	.008	.176	.117	.113
	Overreac_M	.094	.035	.119	2.699	.007	.149	.119	.115

a. Dependent Variable: InvDec_M

The regression constant and coefficient, as well as their significance, are listed in the table above. The p-values for regression coefficients are now determined by testing hypothesis:
.003 in the case of Overconfidence which is less than .05 thus the hypothesis is relevant and accepted which means Overconfidence has a significant relationship with IID.
.011 in the case of Overreaction which is less than 0.05 thus the hypothesis is relevant and accepted which means Overreaction has a significant relationship with IID.
.008 in the case of Herding which is less than 0.05 thus the hypothesis is relevant and accepted which means Herding has a significant relationship with IID.
And .007 in the case of Regret Aversion which is less than 0.05 thus the hypothesis is relevant and accepted which means Regret Aversion has a significant relationship with IID.

The study of investor's behavior is important for improving the performance of independent investors and professional financial advisor. The present study can be further extended to cover factors affecting investor's attitude towards pension fund. Depositors approach towards mutual fund investment can be researched further, based on wider geographical area. The study can be supplemented for commodity market and insurance also. Classification of retail investors can be done on other basis like availability of time, family environment etc. Similar studies on this line may be conducted in other cities too and for different investment products in India. This study is focused on retail investors can be extended to institutional investors.

Conclusion :

The goal of this study was to investigate the impact of cognitive behavior and cognitive bias on investment decisions. Individual investors of India were studied for the objectives of the study. While the literature review indicated and inferred that all kinds of cognitive biases have a significant effect on the investment decision-making process, it was also provedempiricallyand concluded in this study. The current research indicates that biases occur at every stage of the investment decision-making process, influencing the decision's conclusion and resulting in a departure from the expected outcome. One unit change in mutual fund investor is associated with 0.109 unit increase in Overconfidence, 0.098 unit increases in Regret Aversion, 0.090 unit increases in Herding, 0.094 unit increases in Overreaction. All the cognitive biases are significant with IID. Prospect biases and Heuristic biases are not the part of study; future research will be done on factors like Heuristic biases, prospect biases and their relationship with investor's investment decision. Only Four regionswere covered in sample. Different regions and different time span may alter the results. Since its beginnings in 1964, the Indian mutual fund sector has gone a long way. For the Indian mutual fund industry, the years 2000-2010 were pivotal. While the sector was opened up to private and foreign fund companies in the 1990s, it was only

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in the past decade that Mutual Funds became a force to be reckoned with in the financial services arena. Unfortunately, the increase in mutual fund assets has not been matched by a commensurate emphasis on the mutual fund individual investor and his investing decision-making process. Investors are a distinct and diverse group at the retail level. In all of its aspects, the mutual fund business has grown dramatically. Given the mutual fund industry's rapid development and growing significance, policymakers and asset managers must understand investor behaviorin order to effectively address the numerous challenges and possibilities. This research is beneficial to both academics and the mutual fund industry. The research begins by looking at the mutual fund industry's development and the performance of a few equity-oriented mutual fund schemes. More significantly, it examines mutual fund investors' investing habits and fund ownership characteristics. The research distinguishes various investor groups based on the information sources utilized and the selection criteria used by the investors. Individual investor behavior must be understood in order to create effective marketing tactics in the mutual fund business.

Limitations of the Study

1. Due to time constraint the sample is taken from four states of India
2. The study has statistical limitations, as measurement is done only on ordinal and nominal scale
3. With different geographies the results may not hold true
4. Investors who were financial literate, professional, middle and high income group contribute more to the sample.
5. All the behavioral biases are not the part of study.

Recommendation:

Although investors are aware of mutual funds, they lack in-depth understanding of them. They are unfamiliar with the technical terminology used in mutual funds. As a result, their mutual fund investment percentage is extremely low. The risk of investing in a mutual fund is often seen as significant due to the unpredictable performance of stock markets and, as a result, equity-based mutual funds. The following ideas may help to improve the situation:

- Mutual fund firms should raise investor awareness by holding workshops and seminars so that investors can learn more about the significance of mutual funds in fighting inflation.
- Before investing in a mutual fund, investors should look at the fund's historical performance as well as dividends. If they are investing in a mutual fund that is linked to the stock market, they should choose the SIP option. If you are a risk averse investor, you should avoid sectoral mutual funds.
- Mutual fund firms should devise strategies that consider investor behavior.
- Because the majority of investors perceive the danger of underperformance, mutual fund firms may strive to provide the returns that investors anticipate.
- Because mutual fund firms believe the risk in mutual funds is minimal, they may concentrate more on investors with yearly incomes of more than 4 lakhs.
- Because mutual fund investors have less resource, they may focus more on unmarried mobilization as a means of reducing their financial obligations.

Suggestions:

- To attract more inflow into mutual funds from metro cities, the distribution model should be strengthened.
- There are more than four RTAs (Registrars to an Issues and Share Transfer Agents) in India. The look and feel including reporting is not the same across RTAs. The suggestion for AMFI / SEBI is to bring in uniformity and also make regulations on how RTAs will interact with their customers.
- From the one-on-one interviews the researcher had with mutual fund investors, one of the common concerns raised by investors is that there are too many folios to manage, as each distributor, advisor creates new folios. The suggestion is for folios with value less than Rs. 100, to be auto closed and the funds to be credited to the investors. This will bring down the smaller folios and lesser work for RTAs.
- Mutual fund advisory and mutual fund distribution have to be segregated. Fund distributor performing the role of advisory is not adding value to the investor. Mutual fund advisors to be certified by NISM / FPSB / SEBI.
- For the mutual fund business to expand and attract the largest number of investors, new technologies must be introduced.
- While the investment universe remains the same, the cost of delivering the services is very high in the mutual fund industry (Expense ratio is as high as 2.5% of the AUM) as compared to pension fund managers (Expense ratio is as low as 0.5% of the AUM). Parity has to be brought in.

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Figures and tables

Figure 1

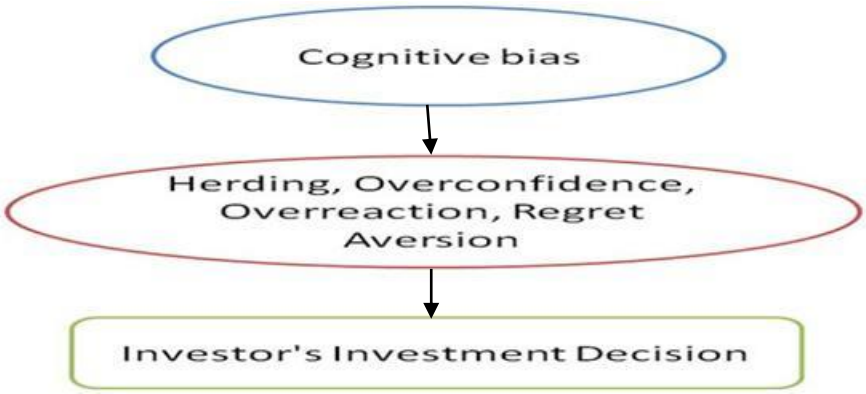

Figure 2

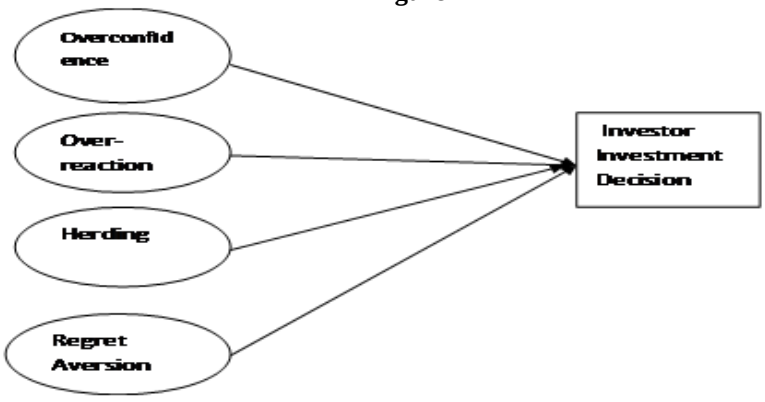

Table 1

	Measure Construct	Number of items	Reliability
1	Overconfidence	4	0.86
2	Herding	4	0.63
3	Regret Aversion	4	0.79
4	Overreaction	3	0.72
5	Investor Investment Decision	5	0.73

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Table 2

CR	AVE	MSV	MaxR(H)
InvDec	0.712	0.581	0.13
H_OC	0.931	0.819	0.03
P_RA	0.789	0.685	0.364
P_OR	0.729	0.577	0.123
H_Herd	0.71	0.56	0.05

Table 3

State	Target Group	% of sample
Delhi/NCR	287	28.3
Mumbai	269	26.5
Bangalore	254	25
Kolkata	202	20

Table 4

		Overconf_M	RegAv_M	Herd_M	Overreac_M	InvDec_M
Overconf_M	Pearson Correlation	1	-.023	.036	-.102*	.117**
	Sig. (2-tailed)		.597	.420	.021	.008
	N	1012	1012	1012	1012	1012
RegAv_M	Pearson Correlation	-.023	1	.316**	.235**	.180**
	Sig. (2-tailed)	.597		.000	.000	.000
	N	1012	1012	1012	1012	1012
Herd_M	Pearson Correlation	.036	.316**	1	.125**	.176**
	Sig. (2-tailed)	.420	.000		.005	.000
	N	1012	1012	1012	1012	1012
Overreac_M	Pearson Correlation	-.102*	.235**	.125**	1	.149**
	Sig. (2-tailed)	.021	.000	.005		.001
	N	1012	1012	1012	1012	1012
InvDec_M	Pearson Correlation	.117**	.180**	.176**	.149**	1
	Sig. (2-tailed)	.008	.000	.000	.001	
	N	1012	1012	1012	1012	1012

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Table 5

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.273[a]	.075	.067	.70179	.075	10.263	4	509	.000	1.880

a. Predictors: (Constant), Overreac_M, Overconf_M, Herd_M, RegAv_M

b. Dependent Variable: InvDec_M

Table 6

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.218	4	5.055	10.263	.000[b]
	Residual	250.685	509	.493		
	Total	270.903	513			

a. Dependent Variable: InvDec_M

b. Predictors: (Constant), Overreac_M, Overconf_M,

Table 7

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.337	.167		8.018	.000			
	Overconf_M	.109	.037	.127	2.965	.003	.117	.130	.126
	RegAv_M	.098	.038	.117	2.550	.011	.180	.112	.109
	Herd_M	.090	.034	.119	2.649	.008	.176	.117	.113
	Overreac_M	.094	.035	.119	2.699	.007	.149	.119	.115

a. Dependent Variable: InvDec_M