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A Study On Identifying The Behavioural Biases Of Investors

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Abstract:

Behavioural finance is relatively new but quickly growing field that seeks to provide explanation for people's economic decisions by combining behavioural and cognitive psychology theory with conventional economics and finance. An attempt is made to identify the biases which the investors have and study the impact on their investment decision making. Further with the help of mean analysis and coefficient of skewness it can be observed whether an investor is suffering from a particular bias or not. While with the help of one-way ANOVA the researcher has tried to check the similarity in the impact educational qualification towards different biases across the investors. In total data was collected from 150 respondents who are investors and are located in and around Junagadh city.

Keywords: Availability biases, Representative biases, Over confidence bias, skewness.

Introduction:

An underlined assumption of behavioral finance is that the information structure and the characteristics of the market participants thoroughly influence individuals' investment decisions as well as market outcomes. The thinking process does not work like a computer. Instead, the human brain often processes information using shortcuts and emotional filters. These processes influence financial decisions makers such that people often act in a seemingly illogical manner, routinely violate traditional concepts of risk aversion, and make likely errorsin their forecasts.

Behavioral finance is an area of study focused on how psychological influences can affect market outcomes. It can be analyzed to understand different outcomes across a variety of sectors and industries. One of the key aspects of behavioral finance studies is the influence of psychological biases.

- **Heuristic** – referred as rule of thumb, are means of reducing the cognitive resources necessary to find a solution to a problem. They are mental shortcuts that simplify the complex methods ordinarily required to make judgements.
- **Emotions –** People's emotions and associated universal human unconscious needs andfears drive many of their decisions.
- **Self-deception** – is a process of denying or rationalizing away the relevance, significance, or importance of opposing of evidence and logical arguments.
- **Social influence** – that means how the decision-making process of investors is

influences by others.

Behavioral Biases

Behavioral biases potentially affect the behaviors and decisions of financial market participants. Biases may lead to sub-optimal decisions.

- **Status Quo**

It is an emotional bias; a preference for the current state of affairs. The current baselineis taken as a reference point, and any changes from that baseline is perceived as loss. This bias is evident when people prefer things to stay the same by doing nothing or bysticking with a decision made previously.

- **Overconfidence Bias**

It is a tendency to hold a falls and misleading assessment of our skills, intellect, or talent. In short it is egotistical belief that we are then we actually are. It can be dangerousbiased and ia very prolific in behavioral finance and capital markets.

- **Anchoring**

Anchoring bias occurs when people rely too much on preexisting information or first information they find when making decisions. For example, if you first see a t-shirt that costs Rs.1000 – then see a second one that costs Rs.100 – you're prone to see the second shirt as cheap. Whereas, if you/d merelyseen the second t-shirt prices at Rs.100 , you'd probably not view it as cheap. The anchor – the first price that you saw unduly influenced your opinion.

- **Saliency**

The salience bias refers to the fact that individuals are more likely to focus on items or information that are more prominent and ignore those that are less so.

- **Representativeness**

Representativeness heuristic bias occurs when the similarity of objects or events confuses people's thinking regarding the probability of an outcome. People frequentlymake the mistakes of believing that two similar things or events are more closely correlated than they actually are. This representativeness heuristic is a common information processing error in behavioral finance theory.

- **Loss aversion**

It is a tendency in behavioral finance where investors are so fearful of losses that they focus on trying to avoid a loss more so than on making gains. The more one experienceslosses, the more likely they are to become prone to loss aversion.

- **Availability Bias**

It is the human tendency to think that examples of things that come readily to mind are more representative than is actually the case. Naturally, the things that are most memorable can be brought to mind most quickly. However, there are number of factorsthat influence how well we remember things.

- **Mental accounting bias**

This is the tendency of people to designate money for certain purpose. For instance, they divide up money and treat it differently, depending what "account" it's in. So,money in savings jar is treated differently than money meant for debt repayment. People tends to say that money in that savings jar can't be used for another purpose, even if it means paying down debt at 15% interest.

- **Regret avoidance bias**

Regret avoidance is when a person wastes time, energy or money in order to avoid feeling regret over an initial decision. The resoures spent to ensure that the initial investment was not wasted can exceed the value of that investment.
One example is buying a bad car, then spending more money on repairs than the originalcost of the car, rather than admit that a mistake was made and that you should have justbought a different car.

- **Herding bias**

In behavioral finance, herd mentality bias refers to investors' tendency to follow and copy what other investors are doing. They are largely influenced by emotion and instinct, rather than by their own independent analysis.

Literature Review

Jaya Mamta Prasad (July, 2015) This study was undertaken to investigate about presence andimpact of 4 behavioral biases in India. The presence and impact of optimism are investigated with the help of the pricing kernel techniqueand time series regression. The results reveal that herd behavior is not seen in the overall market, although, it persists in a bull phase. Finally, the survey results capture the current stateof behavioral biases of Indian investors. It presents the investor characteristics specific to eachbias. On ranking these biases in their order of prevalence, it is observed that overconfidence isthe most important bias in the Indian equity market followed by optimism and herd behavior. The disposition effect gets the lowest rank. **Ganatra Darshita (Nov, 2017)** The study focuses on the psychology of the investors to understand the way in which they take decisions in financial markets. The study was done through Qualitative and Quantitative research. The sample size of the study was 401. The results of the test shows that respondents are irrational. More significance is given to the information which is available easily while taking decisions in market. As per study, respondents always try to avoid experiencing the feeling of regret as they do not like to think of themselves to be responsible for whatever wrong that happens.

Yaseer K.M (June,2019) In this research, the researcher focuses on the herding behavior of the stock market which has a power to influence market seriously and would lead to mispricing of assets and then results into market inefficiency. Through study it was examinedthe existence of herding behavior in BSE by using 10 years daily date of 243 constituent scripsof BSE-500. In order to test existence of herding behavior, researcher applied two methodologies; static measures and time varying measure and test are carried out for differentsub periods using static measures. So, the study found that investors showed a moderate level of herding in the studied market and also it tends to be evident and at peak during crisis period.

Gupta Yamini (May,2018) In this, the researchers tried to examine the impact of seven behavioral biases on the investment decision process of investors. This was done through a sample of 380 investors from Delhi. Sample was analyzed by Multicollinearity and Discriminant analysis and various hypothesis were tested using non-parametric Chi-square testfor independence to know which investor group is more prone to behavioral biases.

Bhatt Kruti Pankajbhai (May,2019) The study was conducted to analyze the impact of behavioral biases on individual investor behavior. The study was done into 2 phases. The firstphase was qualitative in nature and expert opinion was used to discover 8 biases for further study. The sample size was 497. Results indicate that majority of investors make buy/sell decisions of equity shares on past performances of stock. Anchoring and Overconfidence biaswere the most prominent biases found among the investors under study and it was also found that biasness is more prevalent among single respondents and those who have service occupation.

Sachan Abhisekh (March,2018) This study focuses on the relationship between the personality traits and behavioral biases. The responses were collected from the 516 respondents. The responses measured the personality traits, behavioral biases and demographicof investors. The statistical tools like Chi-square, binary logistic regression was used. The relationships of the behavioral biases with personality traits demonstrate that conscientiousness, agreeableness, extraversion and openness to experience are significant traitsof an investor. **Amit B. Mirji (May,2018)** The researchers have done study to analyze 9 biases. Questionnairewas framed and to record the responses. The sample size of the study was 600. From the studyit was prominent that knowledge on behavioral finance is assumed to be at higher side by respondents. Overconfidence bias seems to influence investment behavior of male investors while risk aversion bias seems to influence female investors.

Archana T.S (March,2019) The study focuses to establish existence of fundamental issues driven by various psychological biases in investment decision making process. The sample sizeof the research was 360. Gambler's Fallacy and Anchoring were the biases which were exhibited by experienced and young investors. Results of the study says that there is no statistically significant difference between behavioral patterns of the young and experienced investors for whole set of biases considered together.

Pankajam (2016) Research was conducted to find out the influence of the behavioural factorssuch as emotional intelligence, personality locus of control, risk attitude and also factors such as Heuristic, Herding and Prospect factors one the investment decision making behaviour. Thedata was collected from 795 respondents by distributing questionnaires. The collected data wasanalyzed using percentage analysis, chi-square, multiple regression and canonical correlation.The study concluded that influence of behavioral factors on Investment decision making process of investor were 60 to 70 % fit. **Skala D. (2011) I**n this research, Overconfidence in psychology and finance – An inter- disciplinary literature review. Author has presented the theory with main facts comprising mis-calibration better than average effect, illusion of control and unrealistic optimism. An author has analyzed the primary application of over confidence in contemporary finance from the perspective of financial markets and corporate behavior. It has been observed that experimental studies and formal models and analysis of market data demonstrate that over confidence at least partially solves some financial market puzzles that cannot be accounted forby standard economic theory. The author has observed that over confidence in the corporate context may affect not only company's internal financial structure but also its interactions withother market participants through merger and acquisition activities. **Sairafi,K.,**

Selleby, K., & Stahl, T (2011) In this research, "Behavioral finance- the student investor" have examined the characteristics of investment interested business students and their decision making process. They have analyzed their choice from perspective of behavioral finance. Their study has revealed the herd behavior of respondents in the chosen population was best described as "student behavior" which was somewhat irrational behavior explainedby the learning process.

Kent Daniel (2012) in their research article "investor phychology in capital markets: evidencesand policy implications" have reviewed evidence about how psychological biases affect investor behavior and prices. Systematic mispricing probably causes substantial resource misallocation. The authors have argued that limited attention and overconfidence cause investor credulity about the strategic incentives of informed market participants. The authors viewed that individual as political participants remain subject to the biases and self-interest they exhibit in private settings

Jaya M Prasad, Sujata Kapoor and Thumar (2013) In their research paper ―Impact of overconfidence and the Disposition Effect on Trading Volume; An Empirical Investigation ofIndian Equity Market‖ have provided the results of their investigation of the presence and impact of the two of the prevalent behavioral biases; the disposition effect and overconfidencein Indian equity market. The research study has tried to separate the effect of these two biasesusing time series regression model. The data comprises of sample of Nifty 50 Stocks for a period of five years (2006-2011). The results of this study suggest that biases like the disposition effect and overconfidence prevail in Indian equity market and can lead to an increase in trading volume at market level as well as at individual security level.

Abdulaho Dakane Athur (2014) In their study ―Effect of Behavioral Biases on Investment Decisions of Individual Investors in Kenya‖ have found that individual investor decisions were significantly correlated to representativeness bias, illusion of control bias, cognitive Dissonance bias, Herd instinct bias, and Hindsight bias, However individual investor outcomes were not significantly related to loss aversion bias, Self-attribution bias, regret aversion bias and over-optimism bias.

Maartje Marchand (2012) has observed that investors do not always act in a ratio and mannerdue to the cognitive and psychological errors they have to deal with. They are influenced by behavioral factors that are important in financial markets because they influence the investorswho make the financial decisions. They have endorsed the view of, that if the environment is uncertain and complex, biases and heuristics can be an effective and efficient aim to decision making. Under these circumstances a more comprehensive and careful decision making is notpossible. The author maintains that biases and heuristics present and effective way to estimatethe appropriate decisions.

Mohd Shahid Ali (2018) The main objective of the study is to examine the relationship between the individual investors, behavioral biases with decision making process and risk attitude with demographical and financial variables and also to check whether the individual investors are rational or not. Descriptive research was used for this particular study. The study was conducted through survey method. The sample for the survey was selected through convenient and snowball sampling. The sample size was 380. The research was analyzed by descriptive statistics, t-test, ANOVA, EFA, CFA and SEM. The result of the study reveals that stages of decision-making process is influenced by different cater of biases and rational factor.

Objectives of the Study

- To identify and verify the impact of the various behavioral Factors such as psychological biases and other mental errors affecting individual investor's decision- making process in the context of investment.
- To examine the existence of irrationality among investors as far as the investment decision-making is concerned.
- To examine at what level investor's are irrational towards the investment decision- making. determine various biases from the various investment activities of the investors.

Research methodology:

Research design: Descriptive

Source of data: Primary and secondary

Data collection method: For the collection of the Primary data, structured Questionnaire was used. Secondary data were sourced from websites, research paper, books and various literatures.

Sampling method: Non-Probability Convenience Sampling

Sample size: 150 respondents.

DATA ANALYSIS & INTERPRETATION

Demographic profile of respondents:

Gender: 88% were males while 12 % were female.

Age: The rrespondents of age 36 – 45(34.67%) were the highest among this category. The second highest were the age group 18 – 25 (23.33%). And thereafter comesthe 26 – 35 age composition with 21.33% of respondents. And rest 20.67% are of more than 45 age group.

Education: The highest category of respondents i.e. 42% are Graduated. The second highest are having post - graduation (30.0%). And thereafter24.67% of the respondentsare having education till school-level.

Occupation: The highest number of the respondents i.e. 54.67% are salaried. While 37.33% of the respondents are doing business and rest of 8.0% of respondents are of others category.

Mean Analysis for determining the biasedness of the investors:

Representative Bias:					
	N	**Mean**	**SD**	**SK**	**Remarks**
I consider past performance of a stock before buying.	150	3.82	1.275	-.976	We can interpret that the investors are having **Representative bias** as their mean is >3 and the data is skewed as SK ≠ 0
I buy stocks of those companies which reflectgood performance.	150	3.67	1.096	-.715	
I invest in companies with perceivedcompetent managers.	150	3.26	1.108	-.021	
I invest in popular companies.	150	3.09	1.220	.012	
Availability Bias:					
I buy stocks always in the news	150	2.79	1.265	-.066	For these statements investors are **not biased** as their mean is <3
I buy stocks experiencing high trading volume.	150	2.61	1.192	.499	
I buy stocks whose aggressive advertisement campaigns are done.	150	2.69	1.188	.143	
I buy stocks of companies with names I can easily recall.	150	3.34	.975	-.421	For this statement, investors are

					having **Availability Bias**
Herding Behaviour:					
Other investor's decision of choosing stock types have impact on my investment decisions.	150	3.02	1.277	-.234	Investors do not have **herding behaviour bias.** This means that they think before they invest, they don't rely upon the mass/groups for the investment decision.
Other investor's decisions of stock volumehave impact on my investment decisions.	150	2.80	1.253	.095	
I usually react quickly to changes of other investor's decisions.	150	2.84	1.147	.211	
Anchoring Bias:					
I prefer to buy local stocks than international stocks.	150	3.27	1.164	-.447	We can interpret that the investors are **biased** as their mean is >3 and the data is skewed as SK ≠ 0
I forecast the future changes in stock prices based on recent stock prices.	150	3.59	1.264	-.526	
I consider purchase price when selling a stock.	150	3.66	1.247	-.613	
I do not consider prevailing inflation rates when a making decision to sell a stock.	150	3.35	1.164	-.450	
Overconfidence Bias:					
I believe my skills & knowledge of stock market can help to predict market.	150	3.62	1.162	-1.062	We can interpret that the investors are **biased** as their mean is >3 and the data is skewed as SK ≠ 0
I am able to anticipate the good or bad market conditions.	150	3.35	1.050	-.292	
When it comes to trusting people, I can usually rely on my "gut feeling".	150	3.39	1.067	-.321	

Prospect Factors:					
After a prior loss, I become more risk averse.	150	3.19	1.374	-.307	We can interpret that the investors are **biased** as their mean is >3 and the data is skewed as SK ≠ 0
I tend to treat each element of my investment portfolio separately.	150	3.37	.965	-.387	
I ignore the connection between different investment possibilities.	150	3.07	1.060	.037	We can interpret that the investors are **Neutral** as their mean is =3 and the data is skewed as SK approximately near to 0
I avoid selling shares that have decreased in value & readily sell shares that have increased in value.	150	2.86	1.215	-.114	
Status Quo:					
I have not changed composition of my portfolio in last one year.	150	3.13	1.005	-.258	We can interpret that the investors are **biased** as their mean is >3 and the data is skewed as SK ≠ 0
If I were to buy stock, I will buy more of the stock I already own.	150	3.43	1.108	-.505	
I will demand a higher price to sell a stock I own than I am prepared to pay for the same object.	150	3.39	1.092	-.254	
I do not compare returns of my stockwith other stocks in the market.	150	2.99	1.210	.026	We can interpret that the investors are **Neutral** as their mean is =3 and the data is skewed as SK approximately near to 0

Source: SPSS

ANOVA test:

Variable 1: Level of education

Variable 2: All Biases

H0: Level of education of an investor do not play a significant role towards different biases.
H1: Level of education of an investor play a significant role towards different biases

Sr no	Dependent Variable (Respective Bias)	P value	>/<	Level of significance	Decision
Representative bias:					
1	I consider past performance ofa stock before buying	0.003	<	0.05	H1 accept
2	I buy stocks of those companies which reflect goodperformance	0.241	>	0.05	H0 accept
3	I invest in companies with perceived competent managers	0.102	>	0.05	H0 accept
4	I invest in popular companies.	0.010	<	0.05	H1 Accept
Availability bias:					
1	always in the news	0.677	>	0.05	H0 accept
2	experience the high trading volume	0.006	<	0.05	H1 accept
3	aggressive advertisement campaigns are done	0.003	<	0.05	H1 accept
4	of companies with names I caneasily recall	0.550	>	0.05	H0 Accept
Herding Behavior:					
1	Other investor's decisions of choosing stock types have impacton my investment decisions	0.163	>	0.05	H0 accept

2	Other investor's decisions of stockvolume have impact on my investment decisions	0.422	>	0.0 5	H0 accept
3	I usually react quickly to changesof other investor's decisions.	0.046	<	0.0 5	H1 Accept
Anchoring Bias:					
1	I prefer to buy local stocks thaninternational stocks	0.080	>	0.0 5	H0 accept
2	I forecast the future changes in stock prices based on recent stockprices	0.023	<	0.0 5	H1 accept
3	I consider purchase price whenselling a stock	0.390	>	0.0 5	H0 accept
4	I do not consider prevailing inflation rates when making adecision to sell a stock	0.053	>	0.0 5	H0 Accept
Over-confidence Bias:					
1	I believe my skills & knowledge of stock market canhelp to predict market	0.053	>	0.0 5	H0 accept
2	I am able to anticipate the goodor bad market conditions	0.001	<	0.0 5	H1 accept
3	When It comes to trusting people, I can usually rely on my "gut feeling"	0.007	<	0.0 5	H1 Accept
Prospect factors:					
1	After a prior loss, I become more risk averse	0.397	>	0.0 5	H0 accept
2	I avoid selling shares that havedecreased in value & readily sell shares that have increased in value	0.077	>	0.0 5	H0 accept
3	I tend to treat each element ofmy investment portfolio separately	0.114	>	0.0 5	H0 accept
4	I ignore the connection betweendifferent	0.025	<	0.0 5	H1 Accept

	investment possibilities				
Status Quo Bias:					
1	I have not changed compositionof my portfolio in last one year	0.123	>	0.05	H0 accept
2	If I were to buy stock, I will buy more of the stock I alreadyown	0.203	>	0.05	H0 accept
3	I do not compare returns of mystock with other stocks in the market	0.022	<	0.05	H1 accept
4	I will demand a higher price tosell a stock I own than I am prepared to pay for the same object	0.011	<	0.05	H1 accept

Source: SPSS

Conclusion:

The study was aimed to identify whether the respondents were influenced by the behavioral biases or not. We can conclude that the investors are significantly biased towards majority of the biases and their investment decision also gets impacted due to that. With the proper information and analysis, we can recommend the investors that they would be able to overcome such biases and would be able to make a well informed and a calculated decision. Educational qualification of an investors also plays significant role in the degree of biasedness of a person which is evident from the ANOVA test results displayed above.

References:

- Jaya Mamta Prosad (July,2015). Impact of Investors Behavioral Biases on the Indian Equity Market and Implications on Stock Selection Decisions : An Empirical Analysis.http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/44601
- Ganatra Darshita (Nov,2017). Study on psychology of Individual Investors.
- Yasser K.M.(June,2019). Dynamics of herding behavior in Indian Stock Market.
- Gupta Yamini(July,2018). Behavioral Finance a study on investors behavior towards Equity Market Investment with reference to investors of Delhi. https://shodhganga.inflibnet.ac.in/handle/10603/209575
- Bhatt Kruti Pankajbhai(May,2019). Impact of Behavioral Biases on Individual InvestorBehavior – A study of Equity Investor in Surat. http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/242441
- Sachan Abhisekh(March,2018). A relationships between Personality Traits and Demographic characteristics with Behavioral Biases of Individual Investors.

http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/195968

- Amit B. Mirji(may,2018). Influence of behavioral biases on Investment decisions.

  http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/203432

- Archana T.S.(March,2019). Behavioral Finance in Individual Investors decision making in Portfolio investment on analysis.
- Pankajam A. (2016). Influence of Behavioral Factors on Investment decision makingbehavior of Individual Investors. https://scholar.google.co.in/scholar?q=pankajam+a.+(2016)+influence+decision+mak ing+behavior+of+individual+investors&hl=en&as_sdt=0&as_vis=1&oi=scholart
- Skala D. (2011). https://scholar.google.co.in/scholar?q=skala+d.+(2011)&hl=en&as_sdt=0&as_v is=1 &oi=scholart
- Sairafi K., Selleby K., Stahl T. (2011)
- Kent Daniel(2012) https://scholar.google.co.in/scholar?q=kent+daniel(2012)&hl=en&as_sdt=0&as _vis= 1&oi=scholart
- Jaya M Prasad, Sujata Kapoor, & Thumar(2013)Impact of Over-confidence and Disposition Effect on Trading Volume; An Empirical Investigation of Indian Equity Market. http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/44601
- Abdulaho Dakane Athur(2014).Effect of Behavioral Biases on Investment Decisions ofIndividual Investors in Kenya.
- Maartje Marchand(2012) Behavioral Biases in Financial Decision Making https://scholar.google.co.in/scholar?q=maartje+marchand(2012)+behavioral+bi ases+i n+financial+decision+making&hl=en&as_sdt=0&as_vis=1&oi=scholart
- Mohd Shahid Ali(2018) https://scholar.google.co.in/citations?use=0MZafs4AAAAJ&hl= en
- Rahul Subhash(2012)Role of Behavioral Finance in Portfolio Investment Decisions-Evidence from India https://scholar.google.co.in/scholar?q=rahul+subhash(2012)+role+of+behaviou ral+fin ance+in+portfolio+investment+decisions+evidence+from+india&hl=en&as_sdt= 0&a s_vis=1&oi=scholart
- Ranganathan K.(2013) A study of Fund Selection behavior of Individual Investors toward Mutual funds with reference to Mumbai city. https://www.researchgate.net/publication/249961702_A_Study_of_Fund_Select ion_Behaviour_of_Individual_Investors_Towards_Mutual_Funds_-_with_Reference_to_Mumbai_City

- Sultana S.T(2010) An Empirical study of Indian Individual Investors behavior. https://scholar.google.co.in/scholar?q=sultana+s.+t(2010)+an+empirical+study+of+in dian+individual+investors+behavior&hl=en&as_sdt=0&as_vis=1&oi=scholart
- Tripathi Vanitha(2008) Investment strategies in Indian Stock Market :A Survey http://www.indianjournaloffinance.co.in/index.php/IJF/article/view/71563
- Agrawal Neha(2018) Herd Behavior and Investment decision making an empiricalstudy of Mutual fund Portfolio Selection.