

# EMOTIONAL FINANCE: AN EMPIRICAL STUDY ON PSYCHOLOGY OF INVESTORS IN AHMEDABAD

Karan Bhatt<sup>1</sup>, Shreya Shah<sup>2</sup>, Bansari Panchal<sup>3</sup>

<sup>1</sup>Assistant Professor, <sup>2</sup>Student, <sup>3</sup>Student  
Department of Public Policy and Governance (DPPG), Gujarat University, Ahmedabad, Gujarat (India)  
Email: <sup>1</sup>karanbhatt1325@gmail.com, <sup>2</sup>shreya5122000@gmail.com  
<sup>3</sup>bansaripanchal2704@gmail.com

## ABSTRACT

**PURPOSE** – The author aims to examine the psychology of investors and relationship between different Behavioral biases. Author also examines the impact of emotions influence the behaviour of investors. Author has also mentioned the principal concerns associated to investors.

**DESIGN** – This study investigates the influence the influence of behavioral biases and emotions on investors. It also studied the relationship between biases through correlation.

**ORIGINALITY/VALUE** – Prior studies focus merely on the aspect of emotions finance. Our study provides comprehensive outlook on both behavioral finance and emotional finance.

**Keywords** – Psychology of investors, Behavioral biases, Emotions

## BEHAVIORAL FINANCE

According to Shefrin (2000), Behavioral finance as “a rapidly growing area that deals with the influence of psychology on the behaviour of financial practitioners”. Behavioral finance can be defined as a field of finance that proposes explanation of stock market anomalies using identified psychological biases, rather than dismissing them as “chance results consistent with the market efficiency hypothesis.” (Fama, 1998). It is assumed that individual investors and market outcome are influenced by information structure, and various characteristics of market participants (Banerjee, 2011).

## BEHAVIORAL BIASES

Investors are susceptible to a variety of behavioral biases, which can lead to cognitive errors. When confronted situation, people may make predictable, suboptimal decisions. Because of heuristic simplification, tough and ambiguous conclusions are made. Biases in behaviour, in judgement, they are defined in the same way that systematic errors are, (Chenet al, 2007). In recent investigations, researchers identified a broad list of distinct biases, applying over fifty of them to individual investor behaviour. When one considers the derived and unknown biases that have yet to be applied to personal finance, the number of systematic investors grows considerably. The list of errors appears to be quite large. More excellent research tries to classify the biases in accordance with some form of logical structure Biases are sometimes referred regarded as heuristics by some authors. Others refer to them as beliefs, judgments, or preferences; still others refer to them as ‘rules of thumb’ Sort biases into cognitive and emotional categories.

"This type of bias taxonomy is useful—"There has not been any work done on the basic notion of why individuals are biased. Rather than a behavioral finance, study is on a wide understanding of investment behaviour. (Pompian, 2006).

**Overconfidence Bias:** “In this most basic form, Overconfidence can be summarized as unwarranted faith in one’s intuitive reasoning, judgments, and cognitive abilities” (Pompian, 2006).

**Representativeness Bias:** “An assessment of the degree of correspondence between a sample and a population, an instance and a category, an act and an actor or, more generally, between an outcome and a model.” (Gilovich et al 1983).

**Herding Bias:** Herding in financial markets can be defined as mutual imitation leading to a convergence of action (Hirsh Leifer and Teoh, 2003).

**Anchoring Bias:** “In many situations, people make estimates by starting from an initial value that is adjusted to yield the final answer. The initial value, or starting point, may be suggested by the formulation of the problem, or it may

be the result of a partial computation. In either case, adjustments are typically insufficient (Slovic and typically, insufficient (Slovic and Lichtenstein, 1971).

**Cognitive Dissonance Bias:** "Cognitive Dissonance is the mental conflict that people experience when they are presented with evidence that their beliefs or assumptions are wrong." (Montier, 2002).

**Regret Aversion Bias:** "I should have computed the historical covariance of the asset classes and drawn an efficient frontier. Instead, I visualized my grief if the stock market went way up and I was not in it-or if it went way down and I was completely in it. My intention was to minimize my future regret, so I split my [pension scheme] contributions 50/50 between bonds and equities."- Harry Markowitz, Founder of Modern Portfolio Theory (Pompian, 2006).

**Gamblers fallacy Bias:** "Perhaps the most bizarre argument for being bullish is the belief that markets can't go down for four years in a row. This is a prime example of the Gamblers' Fallacy." Montier (2003).

**Mental accounting Bias:** "Set of cognitive operations used by individuals and households to organize, evaluate and keep track of financial activities."

## EMOTIONAL FINANCE

According to Richard Taffler, Emotional finance is an important way to think about investment decision-making and markets. In terms of comprehending speculation action and forecasting advantage costs and market behaviour, an enthusiastic fund represents a different viewpoint. It differs from traditional fund theory, which is based on the assumption that investors are "discerning," and behavioral finance, which believes that despite the fact that financial experts are predisposed to predilection, they can currently figure out how to be balanced. Individuals, according to passionate back, are typically stupid and driven to a large extent by their sentiments, both those of which they are purposefully aware and, more importantly those of which they are clueless. Due to the fact that they are not specifically available to the cognizant personality, these are far more effective. Neuro-scientists point out that no less than 95% of our psychological action is unconscious, and that, in practise, activity comes before thought and mindful mindfulness. To describe how oblivious processes drive speculation choices and market elements, and are a crucial piece of all money related basic leadership Passionate Back -draws specifically on the experiences of psychoanalytic understanding of the human personality. By recognising the critical role that oblivious needs, dreams, and drives play in financial specialists' investment decisions, enthusiastic fund provides an extremely practical system that can help clarify and anticipate those aspects of venture basic leadership and market action that are not accessible to discerning models and traditional points of view.

**IMPACT OF EMOTIONS:** You will be surprised if you do not think emotions have an impact on financial planning. Negative emotions might lead to poor investment choices since they impair your mental state. Fear and grief are felt at a higher intensity than positive emotions, according to one study. In fact, both sentiments are 2.5 times as intense. This indicates that if you are having a bad day, you are more likely to splurge than if you are having a good day. A biological response causes an immediate impulse to deal with an unpleasant emotion when you are experiencing it. Given how difficult it is to make financial decisions, it is only natural that the process is fraught with anxiety. You must strike a balance between your emotions and your financial decisions. The good news is that after you have identified these negative emotions, it will be much easier to overcome them. Some of these negative emotions are Sadness, Anxiety, Envy and Over-Confidence.

**HOW DO EMOTIONS INFLUENCE BEHAVIOUR:** Some states, according to Elster (1998), are definitely emotions, as wrath, hatred, remorse, regret, fear, pride, elation, and so on. Happiness and love Elster goes on to say that these feelings are "emotionally charged." On the other hand, states can be distinguished from other mental states. Based on a set of six features proposed a long time ago these characteristics are beneficial. Because there is not a complete definition of emotion. Every emotion contains at least one aspect. Nonetheless, these six characteristics are still in the forefront of contemporary debates and give useful information a framework for comprehending the concept of emotion.

**Cognitive antecedent:** Beliefs trigger emotions. An investor is remorseful about a decision she made because she believes it could have resulted in a negative outcome.

**Intentional objects:** Emotions have a specific purpose. The cognitive is usually the object of an emotion antecedent. For instance, consider the underperforming the regretful investor's aim is investment.

**Physiological arousal:** Physiological arousal is triggered by changes in hormonal conditions as well as the autonomic nervous system emotions. A regretful investor may experience aches and a sense of betrayal.

**Physiological expressions:** Visible manifestations describe your feelings. Body language, facial expressions, and posture are all factors to consider and posture are all factors to consider. Outward appearance and speech tone are

noteworthy. The disappointed investor may appear pallid.

**Valence:** Emotions can be ranked on a scale from one extreme to the other, with pleasure at one end and pain at the other. The perception of pleasure against suffering is referred to as valence. Happiness or unhappiness is a state of mind. The hapless investor is I am quite dissatisfied with the investment outcome

**Action tendencies:** Emotions are linked to certain behaviours. Inclination to act the remorseful investor may resort to ways to avoid being subjected to the same type of investment opportunities.

**PRINCIPAL CONCERNS:** In their interview research of elite fund managers, Tuckett and Taffler (2012) reveal that while they are all aware with traditional risk measurements, what risk really means to them is different. In practise, they are very different. There are four major categories.

**Information risk:** concerns regarding the accuracy of the information that fund managers use to make investments decisions and whether or not they can put their trust in a particular company.

**Anxiety risk:** Anxiety risk of the market's inherent unpredictability of investment task.

**Business risk:** The risk of poor performance leading to failure to the detriment of the client.

**Career risk:** Threats to pay and advancement if the fund manager's job is terminated for whatever period of time underperforms.

## LITERATURE REVIEW

**Hoffmann, Shefrin and Pennings (2010)** The studies in this study are based on transaction records from a sample of clients from the largest financial institution in the world. In the Netherlands, there is an online broker. An online questionnaire was used to collect the information.

**Chandra (2008)** The influence of behavioral elements and investor psychology on their decision-making, as well as the relationship between risk aversion and behavioral decision-making. The study was based on secondary information.

**Chira, Adams and Thornton (2008)** The goal of this project is to investigate the cognitive biases and heuristics that business students are exposed to the study's major goal was to see how students are influenced by biases, heuristics, and framing effects. A behavioral survey was conducted a sample of 68 students at Jacksonville University in the United States by distributing a questionnaire and gathering empirical facts about both in November 2007.

**Sairafi, Selleby and Stahl (2008)** The researchers looked at the features of investment-interested business students, as well as their decision making process and choices, from the perspective of behavioral finance in their paper 'Behavioral Finance' a Student Perspective.

**Waweru, Munyoki and Uliana (2008)** The Nairobi Stock Exchange's institutional investors were polled. The study looked into how behavioral finance and investor psychology affect investment decisions. According to the findings, behavioral factors such as Overconfidence, Anchoring, and the Gamblers' Fallacy, Availability, and loss Regret, Aversion, and Mental Accounting Institutional decisions were influenced by aversion. The Nairobi Stock Exchange is a hub for investors.

**Maheran, Muhammed and Ismail (2008)** According to the study's findings, the economic situation and frame of mind Investor decision-making is influenced by references. Malaysians, according to the report, Investors make decisions that are only half-reasonable.

**Baker & Ricciardi (2014)** According to their book, behavioral finance is a new field of investor behaviour that attempts to explain Investor behaviour by combining the concepts of psychology and investment at both a micro and macro level. They said that Investor Behaviour encompasses both cognitive and emotional aspects of investing. Individuals, finance experts, stockbrokers, and agents encounter biases during the process of investing.

**Aregbeyen and Mbadiugha (2011)** A study of Nigerian investors found 20 variable groups impacting investment decision under the headings of social, economic, psychological, and cultural aspects. **Kabra et al (2010)** investigated the elements that influence individual behaviour. Factor analysis is used to make financial decisions. Their research on Indian investors was narrowed down to initially, there were 18 variables, which were then decreased to 14 variables, and then further reduced to 12 variables. Security, opinion, awareness, hedging, and longevity are the six components factors as well as advantages.

**Idris (2014)** Emotion intelligence and emotion capital should be applied in business financial decisions. Human capital can also be used to reduce biases in investment decision-making. The decision maker should be able to perceive and control others' feelings and emotions, as well as their own.

**Mitroi and Opriou (2014)** The researchers used the stock market to illustrate emotions and biases. Emotions and psychological biases are the ultimate effects of stock movement, and they represent the psychological profile of market participants in general.

**Abe (2011)** Individuals' emotional intelligence processes are aided by positive emotions, which also aid effective thinking and problem solving.

**Laborde et al (2014)** When pressure is applied to decision-making, the emotional intelligence findings at the conclusion of the process will vary.

**Armstrong (2011)** The variables employed to find the negative and good occurrences were emotional self-awareness, emotional expressiveness, emotional self-control, and especially emotional self-management investor psychology is affected. These figures are based on the population of the United States and the United Kingdom, Australia and the United Kingdom

## SCOPE OF STUDY

This is empirical study on psychology of investors residing in Ahmedabad towards their investment. The study is conducted to identify the objectives of the investors while investing their funds. The points considered for the study includes behavioral biases, impact of emotions and risk which influences the investors.

## OBJECTIVES OF STUDY

1. To understand the psychology of investors.
2. To identify the relationship between different behavioral biases.
3. To study the reliability of behavioral biases.
4. To study the comparison between different behavioral biases and income groups.

## RESEARCH METHEDODOLOGY

**Research design:** Descriptive research is chosen for this particular study in order to obtain complete and accurate information.

**Sources of Data:** the study is based on primary data that is collected using structure undisguised questionnaire.

**Sampling Area:** Ahmedabad

**Sample Size:** Sample size of this particular study is of 100 respondents.

**Sampling Technique:** Structured questionnaire was sent to investors by circulation of google form.

## DATA ANALYSIS AND INTERPRETATION

**Table 1: Frequency Tables of Demographic Attributes**  
**Table 1.1: Table showing frequency of Gender of Investor**

Gender of Investor					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	52	52.0	52.0	52.0
	Female	48	48.0	48.0	100.0
	Total	100	100.0	100.0	

(Sources: Research Output)

**INTERPRETATION:** From the above table, we can conclude that majority of respondents are male i.e. 52% followed female i.e. 48%.

**Table 1.2: Table showing frequency of Age of Investor**

Age of Investor					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Upto 20	10	10.0	10.0	10.0
	21-30	74	74.0	74.0	84.0
	31-40	11	11.0	11.0	95.0
	41-50	4	4.0	4.0	99.0
	Above 50	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

(Sources: Research Analysis)

**INTERPRETATION:** From the above table, we can conclude that majority of respondents fall under the age group of 21-30 Years i.e. 74%, followed by 31-40 years i.e. 11%, followed by age group of Upto 20 years i.e.

10%. The respondents who are falling under the age group of 41-50 years is 4% and above 50 years is 1% in total.

**Table 1.3: Table showing frequency of Monthly income of Investor**

(Sources: Research output)

Monthly income of Investor					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Upto 50000	66	66.0	66.0	66.0
	50001-200000	22	22.0	22.0	88.0
	200001-500000	8	8.0	8.0	96.0
	Above 500000	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

**INTERPRETATION:** From the above table, we can conclude that majority of respondents have monthly Income Upto 50000 i.e., 66%, followed by 50001-200000 i.e., 22%. The respondents monthly income is 200001-500000 i.e., 8% and above 500000 i.e. 4%.

**Table 2: Table showing the Reliability of behavioral biases**

Item Statistics			
	Mean	Std. Deviation	N
Overconfidence bias	3.62	2.845	100
Representativeness Bias	3.97	2.110	100
Herding Bias	3.95	1.951	100
Anchoring Bias	4.29	1.539	100
Cognitive Dissonance Bias	4.58	1.701	100
Regret Aversion Bias	5.08	1.947	100
Gamblers Fallacy Bias	5.22	2.377	100
Mental Accounting Bias	5.29	2.907	100

(Sources: Research output)

**INTERPRETATION:** Here all the variables taken in the study to measure the psychology of investors in the Ahmedabad city shows that all the variables taken into consideration are highly reliable to measure the psychology of investors through different behavioral biases.

**Table 3: Table showing Normality of behavioral biases**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Overconfidence bias	.231	100	.000	.783	100	.000
Representativeness Bias	.187	100	.000	.884	100	.000
Herding Bias	.217	100	.000	.927	100	.000
Anchoring Bias	.185	100	.000	.942	100	.000
Cognitive Dissonance Bias	.198	100	.000	.931	100	.000
Regret Aversion Bias	.232	100	.000	.922	100	.000
Gamblers Fallacy Bias	.223	100	.000	.859	100	.000
Mental Accounting Bias	.262	100	.000	.766	100	.000

(Sources: Research output)

**INTERPRETATION:** From the above normality table, for checking the biases of investors of Ahmedabad city. It has been noticed that the P value for all the variables are less than 0.05 which indicates the rejection of Null Hypothesis due to which they are not normally distributed among each other. Hence, the researcher needs to go with a non-parametric version of testing for further analysis as a part of proving inferential statistics.

**Table 4: Table showing Mann-Whitney Test**

**H0:** There is no significance difference among the perception of gender and the different behavioral biases in Ahmedabad city.

**H1:** There is significance difference among the perception of gender and the different behavioral biases in Ahmedabad city.

(Sources: Research output)

Test Statistics <sup>a</sup>								
	Overconfiden ce bias	Representativen ess Bias	Herdin g Bias	Anchori ng Bias	Cognitive Dissonan ce Bias	Regret Aversio n Bias	Gamble rs Fallacy Bias	Mental Accounti ng Bias
Mann-Whitney U	1185.000	1240.000	1036.500	1171.500	1241.000	1169.500	1090.500	1179.500
Wilcoxon W	2361.000	2618.000	2212.500	2347.500	2619.000	2547.500	2468.500	2557.500
Z	-.453	-.056	-1.486	-.543	-.050	-.553	-1.108	-.489
Asymp. Sig. (2-tail)	.651	.955	.137	.587	.960	.580	.268	.625

**INTERPRETATION:** From the above test statistics table researcher can examine that there is no significance difference among the various attributes as all the values are greater than 0.05 and hence the Null Hypothesis would be accepted.

**Table 5: Table showing Kruskal Wallis Test**

**H0:** The means of all the variables are equal.

**H1:** The mean of at least one of the variable is not equal.

Test Statistics <sup>a,b</sup>								
	Overconfiden ce Bias	Representativen ess Bias	Herdin g Bias	Anchorin g Bias	Cognitive Dissonanc e Bias	Regret Aversio n Bias	Gamble rs Fallacy Bias	Mental Accounti ng Bias
Chi-Square	5.69	3.632	1.098	6.541	4.884	1.236	0.663	4.126
Df	3	3	3	3	3	3	3	3
Asym p. Sig.	0.128	0.304	0.778	0.088	0.18	0.744	0.882	0.248

(Sources: Research output)

**INTERPRETATION:** From the above test statistics table researcher can examine that there is no significance difference among the various attributes as all the values are greater than 0.05 and hence the Null Hypothesis would be accepted.

**Table 6: Table showing the correlation between different behavioral biases.**

Inter-Item Correlation Matrix								
	Overconfide nce bias	Representative ness Bias	Herdi ng Bias	Anchori ng Bias	Cognitiv e Dissonan ce Bias	Regret Aversio n Bias	Gamble rs Fallacy Bias	Mental Accounti ng Bias

Overconfidence bias	1	0.654	0.504	-0.108	-0.367	-0.656	-0.601	-0.589
Representativeness Bias	0.654	1	0.566	-0.087	-0.234	-0.523	-0.645	-0.685
Herding Bias	0.504	0.566	1	-0.052	-0.259	-0.603	-0.588	-0.512
Anchoring Bias	-0.108	-0.087	-0.052	1	0.259	0.019	-0.327	-0.222
Cognitive Dissonance Bias	-0.367	-0.234	-0.259	0.259	1	0.297	-0.077	-0.155
Regret Aversion Bias	-0.656	-0.523	-0.603	0.019	0.297	1	0.415	0.233
Gamblers Fallacy Bias	-0.601	-0.645	-0.588	-0.327	-0.077	0.415	1	0.574
Mental Accounting Bias	-0.589	-0.685	-0.512	-0.222	-0.155	0.233	0.574	1

**INTERPRETATION:** From the above table researcher examines that there is negative relationship between Overconfidence bias and anchoring bias, cognitive bias, regret bias, gamblers fallacy, mental accounting bias respectively, Representativeness bias and anchoring bias, cognitive bias, regret bias, gamblers fallacy bias, mental accounting bias respectively, Herding bias and anchoring bias, cognitive bias, regret aversion bias, gamblers fallacy bias, mental accounting bias respectively, Anchoring bias and overconfidence bias, representativeness bias, herding bias, gamblers fallacy bias, mental accounting bias respectively, Cognitive dissonance bias and overconfidence bias, representativeness bias, herding bias, gamblers fallacy bias, mental accounting bias respectively, Regret aversion bias and overconfidence bias, representativeness bias, herding bias respectively, Gamblers fallacy bias and overconfidence bias, representativeness bias, herding bias, anchoring bias, cognitive bias respectively and Mental accounting bias and overconfidence bias, representativeness bias, herding bias, anchoring bias, cognitive bias respectively. Rest all other factors have positive correlation with each other.

## REFERENCES

- [1] Shefrin, Hersh. 2000. Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing New York: Oxford University Press.
- [2] Panchal Nilam, Venture Capital Financing – A comparative analysis of selected banks in Gujarat , “*Innovation and Business Success*”, 3, Feb-2010 , 64
- [3] Pompian, Michael M. 2006. Behavioral Finance and Wealth Management. USA: John Wiley & Sons.
- [4] Sairafi, Kamran., Ståhl, Thom., and Selleby, Karl. 2008. Behavioral Finance – The Student Perspective. Jönköping International Business School, Jönköping University.
- [5] Waweru, Nelson Maina., Munyoki, Evelyne., and Uliana, Enrico. 2008. The effects of behavioral factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange International Journal of Business and Emerging Markets 2008.
- [6] Panchal Nilam, Non-Performing Assets: A comparative Study of Public & Private Sector Banks, Journal of Management Research and Analysis, March, 2018, 2394-2770, International, Main, Paper in Journal, Journal, Article, 4.878, 5, Both
- [7] Fama, Eugene F. 1998. Market Efficiency, long-term returns, and behavioral finance. Journal of Financial Economics 49 (1998).
- [8] Chen, Gongmeng., Kim, Kenneth A., Nofsinger, John R., and Rui, Oliver M. 2007. Trading Performance, Disposition Effect, Overconfidence, Representativeness Bias, and Experience of Emerging Market Investors. Retrieved : February 2012.
- [9] Hirshleifer, David., and Teoh, Slew Hong. 2003. Herd Behavior and Cascading in Capital Markets: a Review and Synthesis. European Financial Management.

- [10] Gilovich, Thomas., Griffin, Dale., and Kahneman, Daniel.2002. Heuristics and Biases: The Psychology of Intuitive Judgement Cambridge : Cambridge University Press.
- [11] Panchal Nilam, Inclusive Growth and Financial Inclusion, Prestige International Journal Of Management, April, 2018, 0974-6080, International, Main, Paper in Journal, Journal, Article,, 10, Both
- [12] Montier, James. 2002. Cognitive Dissonance. Retrieved: February 2012.
- [13] Elster, J. (1998). Emotions and Economic Theory. Journal of Economic Literature
- [14] Chandra, Abhijeet.2008. Decision Making in the Stock Market: Incorporating Psychology with Finance. New Delhi.
- [15] Cipriani, Marco., and Guarino, Antonio. 2008. Herd Behavior in Financial Markets: An Experiment with Financial Market Professionals. IMF Working Paper.
- [16] Maheran, Nik., Muhammad, Nik., Ismail, Nurazleena. 2008. Investment Decision Behavior: Does Investors Rational or Irrational? Faculty of Business Management, Mara University of Technology, Malaysia.
- [17] Cianci, Anna M. 2008. The Impact of Investor Status on Investors' Evaluation of Negative and Positive, Separate and Combined Information. The Journal of Behavioral Finance.
- [18] Tripathi, S. (2020). An Empirical Study of Mutual Fund Awareness Among the People of Ahmedabad. *Gap Interdisciplinarity-A Global Journal of Interdisciplinary Studies*.
- [19] Shiller, Robert J. 2002. From Efficient Markets Theory to Behavioral Finance. Journal of Economic Perspectives 17.
- [20] Panchal Nilam (2020), " Holistic Performance Assessment of Indian Private Sector Banks : An empirical study with Multiple Model Approach", Panchal Nilam, Himalaya Publishing House, pp.: 30-41, ISBN: 978-93-89652-97-0
- [21] Abe, J.A. (2011). Positive emotions, emotional intelligence, and successful experiential learning. Personality and Individual Differences.