#### **Understanding Behavioral Biases in Retail Investment**

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### Abstract

Retail investors, who are individual market participants, play a crucial role in the functioning of financial markets. Unlike institutional investors, they often lack formal training, relying instead on personal experience or informal advice. This makes them more susceptible to behavioral biases that deviate from the rational assumptions of classical finance theories. This paper explores the psychological biases influencing retail investment decisions—primarily overconfidence, herding, loss aversion, and anchoring. Using a structured questionnaire, we collected data from a diverse demographic of investors across different age groups and education levels. This primary data was supplemented with secondary sources and analyzed using regression and factor analysis techniques. The findings suggest that these biases significantly influence investment behavior, leading to suboptimal financial decisions. The study contributes to the growing body of literature in behavioral finance by offering insights into the specific biases affecting Indian retail investors. It also recommends behavioral interventions and educational strategies to help investors make better decisions in a volatile financial environment.

Keywords: Behavioral Biases, Retail Investors, Decision Making, Investment Psychology

### Introduction

Investment decision-making has traditionally been based on the rational framework of classical economic theories. According to the Efficient Market Hypothesis (EMH) proposed by Fama (1970), financial markets effectively process information, suggesting that securities consistently trade at their true value. Within this context, investors are perceived as rational actors who strive to maximize returns by utilizing all available information in their decision-making processes. Nevertheless, over time, real-world evidence has repeatedly questioned this premise, indicating that investors frequently act irrationally, swayed by emotions, cognitive limitations, and social influences.

This deviation from rational behavior is best elucidated by the domain of behavioral finance, which incorporates principles from psychology and economics to comprehend the systematic errors in financial decision-making. Thaler (1985) was one of the early advocates who presented the concept of mental accounting, demonstrating how investors categorize money into distinct accounts based on personal criteria. Subsequent advancements by Kahneman and Tversky (1979) in Prospect Theory revealed that individuals often place greater emphasis on losses compared to comparable gains, a phenomenon referred to as loss aversion. These and other biases including overconfidence, herding, anchoring, and regret aversion (Ritter, 2003; Pompian, 2012) have been proven to significantly distort investment decisions, frequently resulting in less-than-optimalfinancial results.

In recent years, there has been increasing interest in investigating these biases in relation to retail investors, who are generally non-professional individuals using their own savings to invest in the stock market. Unlike institutional investors, retail participants may lack financial knowledge, access to analytical resources, or systematic strategies, rendering them more vulnerable to behavioral influences (Statman, 2008). This vulnerability is especially evident during times of market instability or uncertainty, when decision-making is obscured by fear, optimism, or social pressure.

The significance of this matter is heightened in India, one of the rapidly expanding emerging markets. Following the COVID-19 pandemic, India has observed a notable rise in retail engagement in equity markets. According to the National Stock Exchange (NSE, 2023), the number of demat accounts in India surpassed 120 million, indicating a heightened interest in stock market investments, especially among younger and novice investors. Numerous studies

indicate that Indian retail investors still depend on heuristics, social signals, and media influence, instead of structured financial analysis (Pompian, 2012; Statman, 2008).

### **Literature Review**

Behavioral finance developed as an answer to the shortcomings of conventional finance theories, which frequently struggle to account for the irrational behaviors observed in financial markets. In contrast to the Efficient Market Hypothesis (Fama, 1970), behavioral finance asserts that investors are not always rational and are susceptible to psychological influences and cognitive mistakes (Barberis and Thaler, 2003). This framework incorporates psychological ideas such as heuristics, framing, and emotional responses to clarify discrepancies from anticipated utility maximization (Thaler, 1985; Kahneman and Tversky, 1979).

Overconfidence describes an investor's inclination to overvalue their knowledge, skills, or the precision of their forecasts. This bias frequently leads to excessive trading and inadequate diversification of portfolios (Barber and Odean, 2001). Overconfident investors tend to disregard opposing information and make decisions based on personal intuition rather than objective facts.

Herding entails mimicking the behaviors of a larger group, especially in times of market uncertainty. Retail investors often replicate trends or the actions of peers without conducting independent analysis, resulting in asset bubbles or crashes (Bikhchandani and Sharma, 2000). In developing markets like India, where informal financial advice is significant, herding is particularly common. Anchoring takes place when investors depend excessively on an initial piece of information (the "anchor") while making decisions, even if it is no longer relevant or outdated. This may involve historical stock prices or target figures, resulting in poor decision-making when market conditions shift (Tversky and Kahneman, 1974).

Loss aversion, a fundamental idea within Prospect Theory, indicates that the distress from losses is psychologically more challenging than the pleasure derived from equivalent gains. Consequently, investors might retain losing stocks for too long or sell winning stocks too early to "lock in" gains (Kahneman and Tversky, 1979). Regret aversion entails the anxiety of making an incorrect investment choice and later experiencing regret. This can lead investors to shy away from risks or conform to group behaviors, even when such actions could be advantageous (Zeelenberg, 1999). It is particularly prevalent among novice or less experienced investors.

A multitude of studies has confirmed the presence of behavioral biases in both developed and emerging markets. Barberis and Thaler (2003) offered a thorough overview of how these biases affect asset pricing, trading actions, and market irregularities. Statman (2008) examined the impact of culture on investor behavior, underscoring the contextual nature of bias expression. Within India, behavioral finance has become increasingly relevant in recent years due to the swift rise in retail investor engagement. Chandra and Kumar (2011) discovered that Indian investors exhibit noteworthy levels of overconfidence and anchoring. Waweru et al. (2008) also emphasized herding behavior as a prevalent characteristic in the Indian stock market. Moreover, Pompian (2012) classified investors according to behavioral traits, which has been adapted in Indian research to categorize investor types and customize financial guidance.

Recent surveys indicate that Indian investors often depend on recommendations from friends, the media, and online influencers, highlighting the significance of heuristics over financial evaluation. Considering India's expanding middle class and technology-savvy youth, it is increasingly crucial to comprehend how demographic variables affect behavioral biases (NSE, 2023).

### **Research Gap**

Subrahmanyam noted the lack of empirical data from emerging markets like India. In 2016, Chandra & Kumar emphasized the need to explore the impact of socio-economic factors on behavioral biases. Jain &Mandot (2017), found limited studies comparing the degree of biases across demographic segments. Sehgal & Song (2018) suggested the need for behavioral finance education among Indian investors.

# **Research Methodology**

# **Research Design**

This investigation utilizes a quantitative, descriptive, and cross-sectional framework to examine the prevalence and factors influencing behavioral biases among Indian retail investors. The quantitative method facilitates statistical analysis of trends and connections, whereas the cross-sectional format captures behavioral trends at a singular moment in time.

The purpose of the research is exploratory, seeking to understand how demographic attributes and investment experiences correlate with the presence of five primary behavioral biases: overconfidence, herding, anchoring, loss aversion, and regret aversion.

## **Population and Sampling Method**

The research concentrates on Indian retail investors, defined as individual investors who engage in trading financial instruments (such as stocks, mutual funds, bonds, etc.) in their personal capacity rather than as professionals or institutional representatives. Given the extensive diversity present within India's investor demographic, the research implements a non-probability purposive sampling technique, focusing on individuals with hands-on investment experience.

### Sampling

For this research we have used purposive sampling technique for sample collection. Retail investors were contacted through online platforms such as LinkedIn, WhatsApp investment groups, Telegram stock market channels, and finance-oriented forums. This distribution method allowed for the incorporation of a geographically and demographically varied pool of respondents.

Data is collected from 150 respondents out of which 138 confirmed after data evaluation for completeness and consistency.

### **Research Instrument**

Primary data was gathered using a self-administered structured questionnaire, specifically designed for the Indian retail investor demographic. The instrument was organized into three primary sections:

To verify the content validity of the instrument, two academic experts in finance and behavioral psychology reviewed the initial questionnaire. Suggestions were incorporated to enhance clarity, relevance, and cultural suitability.

A pilot study was performed with 20 respondents to evaluate the questionnaire's clarity, understanding, and logical progression. Feedback was reviewed, and minor adjustments were made to refine wording and structure.

# **Reliability Testing**

Cronbach's Alpha was computed for each of the behavioral bias constructs. All constructs attained a Cronbach's alpha exceeding 0. 70, indicating acceptable to high levels of internal consistency. **Example:** o Overconfidence:  $\alpha = 0.78$  o Herding:  $\alpha = 0.74$  o Anchoring:  $\alpha = 0.80$  o Loss Aversion:  $\alpha = 0.76$  o Regret Aversion:  $\alpha = 0.72$ 

### **Data Analysis Tools and Techniques**

The gathered data from the questionnaire was compiled and analyzed through IBM SPSS (Version 26). The mean, median, standard deviation, and frequency distributions were utilized to describe the demographic and behavioral traits of the respondents.

# **Research & Findings of the Study**

This section provides a comprehensive examination of the primary data gathered through a structured questionnaire. The aim is to pinpoint the existence and effect of behavioral biases—specifically overconfidence, herding, anchoring, loss aversion, and regret aversion— among Indian retail investors. The results are organized demographically and analyzed both statistically and conceptually.

# **Demographic Profile of Respondents**

To guarantee diversity and the generalizability of findings, the survey sampled 150 Indian retail investors differing in age, gender, income, and investment experience. The demographic distribution is summarized below:

Category	Subcategory	Percentage
Age Group	18–30 years	42%
	31–45 years	35%
	46+ years	23%
Gender	Male	58%
	Female	42%
Annual Income	Below ₹5,00,000	38%
	₹5,00,000–₹10,00,000	45%
	Above ₹10,00,000	17%
Investment Experience	Less than 2 years	47%
	2–5 years	32%

More than 5 years	21%

The diversity of participants allows for the identification of trends across various investor categories.

#### **Behavioral Bias Scores**

Participants expressed their level of agreement with a range of statements reflecting behavioral bias using a 5-point Likert scale. The average scores for each bias were:

Behavioral Bias		Mean Score (out of 5)
Loss Aversion	4.01	
Overconfidence	3.82	
Regret Aversion	3.72	
Anchoring	3.65	
Herding	3.47	

As depicted in the data, loss aversion was found to be the most prevalent behavioural trait, followed by overconfidence and regret aversion. These elevated scores suggest that Indian retail investors frequently stray from rationality due to emotional and psychological influences, supporting Kahneman and Tversky's (1979) Prospect Theory.

### **Age-Based Analysis of Biases**

The analysis across different age groups revealed notable patterns:

Young Investors (18–30 years) exhibited significant herding behavior and regret aversion. As digital natives, they frequently depend on social media or peer recommendations, aligning with the observations of Statman (2008), who highlighted the social aspect of investing among younger populations. Middle-aged Investors (31–45 years) displayed heightened overconfidence and anchoring, likely a result of moderate market exposure and previous investment successes.Older Investors (46+ years) demonstrated a strong tendency towards loss aversion, favoring fixed-income or low-risk assets over equities, even in strong market conditions.

These findings emphasize the impact of life stages and financial aspirations on shaping attitudes toward risk and cognitive framing.

#### **Gender-Based Differences in Biases**

Male participants had higher scores on overconfidence (mean = 4.03), consistent with the findings of Barber and Odean (2001), who noted that men often trade more assertively, frequently overestimating their market acumen.

Female respondents exhibited greater regret aversion (mean = 3. 89), indicative of a cautious mindset and a tendency to avoid decisions that could lead to future regret—often resulting in missed investment opportunities or insufficient equity investments. This gender disparity implies that financial literacy initiatives should take into account gender-specific psychological inclinations regarding risk-taking and decision-making processes.

### Influence of Income and Investment Experience

Low-income investors (below ₹5,00,000) showed higher herding and anchoring due to media influence and limited expert access. High-income investors (above ₹10,00,000) tended to be overconfident, likely from past financial success. Even experienced investors (5+ years) exhibited anchoring bias (mean = 3.71), indicating that experience may reinforce rather than reduce behavioral biases (Pompian, 2012).

### **Qualitative Insights from Open-Ended Responses**

A 28-year-old investor shared about leaving the market during the 2020 crash due to panic, only to regret not participating in the rebound. A senior respondent highlighted that his conservative investment approach originated from past losses, which aligns with regret and loss aversion biases. Others confessed to following stock tips from influencers or Telegram channels, illustrating the effects of herding and anchoring. These stories enrich the quantitative data, emphasizing that emotions, memory, and social influence significantly shape real-world investment choices.

#### **Summary of Findings**

Loss aversion is the most common bias, particularly among older and risk-averse investors.Overconfidence is more pronounced in males and experienced participants,

resulting in excessive trading or risky investments. Herding behavior is prevalent among younger and low-income investors, underscoring the necessity for objective decision-making tools. Anchoring and regret aversion are widespread, irrespective of experience, revealing deeply ingrained psychological patterns. This section affirms that Indian retail investors often display cognitive and emotional biases that diverge from conventional economic assumptions. These findings establish the basis for the next section, where targeted recommendations and policy implications will be proposed to mitigate the effects of such biases and encourage rational investment behavior.

### **Conclusion and Recommendations**

This research aimed to investigate the behavioral biases that affect the investment choices of Indian retail investors—a demographic that has significantly expanded recently, particularly following the pandemic. Utilizing an extensive survey-based methodology, this study evaluated the existence and impact of five key behavioral biases: loss aversion, overconfidence, regret aversion, anchoring, and herding. The findings, supplemented with demographic factors like age, gender, income, and investment experience, provide a comprehensive perspective on investor behavior in India.

The findings strongly indicate that retail investors do not consistently behave in line with established economic theories, such as the Efficient Market Hypothesis (Fama, 1970), which presupposes rationality and the use of complete information. Instead, their choices are frequently influenced by emotional and cognitive biases, demonstrating the increasing importance of behavioral finance theories (Kahneman and Tversky, 1979; Barberis and Thaler, 2003).

Loss aversion, recognized as the most significant bias, shows a psychological inclination to fear losses more than appreciate gains. Older and more risk-averse investors are especially susceptible to this bias, often leading to excessively conservative investment choices or hesitance to realize losses. Overconfidence, predominantly seen among male and seasoned investors, frequently results in over-trading or high-risk choices driven by an inflated belief in their knowledge or predictive abilities.

Herding behavior, more prevalent among younger and lower-income investors, denotes a propensity to conform to the majority—often swayed by peer actions, social media, or current market trends—rather than performing independent evaluations. This illustrates the

susceptibility of inexperienced or financially illiterate investors to collective decision-making pitfalls. Anchoring and regret aversion were widely observed irrespective of experience level, demonstrating that even veteran investors can succumb to emotional psychological traps rooted in prior decisions.

These results highlight that no investor group is completely rational or exempt from psychological influences. The widespread occurrence of behavioral biases emphasizes the necessity of incorporating behavioral finance into both academic programs and practical financial advising. More critically, it signals a requirement for systemic actions focused on educating, guiding, and safeguarding retail investors within India's ever-evolving capital market environment.

The study further recommends that to tackle the prevalent behavioral biases among Indian retail investors that government should initiate national investor awareness initiatives that concentrate not only on financial education but also on behavioral challenges. Incorporate behavioral finance topics into the curricula of schools and colleges in commerce and business to prepare future investors with psychological perspectives. While this study illuminates the behavioral biases of Indian retail investors, but in future longitudinal studies could yield deeper understanding of how behavioral trends change with varying market conditions and life phases. Comparative research across various regions, investor categories, or nations could highlight cultural or socio-economic differences in biases.

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