A Study of Herding Behaviour among Individual Investors across Market Phases in the Indian Stock Market

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Abstract

This paper aims to examine the phenomenon of herding behaviour of individual investors particularly in the Indian stock market across bullish and bearish market phases. Herding is a concept in behavioral finance which refers to the tendency of following the majority decision instead of relying on one's own judgement & perception. This paper analyses the influence of investor characteristics such as gender, age, level of income, investment experience, investment knowledge on herding behavior. For the purpose of study, primary data has been collected through a structured questionnaire using a Likert scale for measuring the responses. Various analytical tools such as Descriptive Statistics, One Way Anova, Sample T tests, Regression Analysis are applied to analyze variations in herding behavior across investor groups and market phases. The findings highlight significant differences in investor behavior across market phases, particularly age, income and other demographic factors determine a person's risk-taking capability making him less prone to herding biases of the market. Finally, the findings may help investors and financial advisors to make more informed and reasonable decisions.

Keywords- *Herding Behaviour, Behavioural Finance, Indian Stock Market, Market Phases, Investment Decision Making, Individual Investor*

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1. Introduction

Financial economics seems to be in the midst of a paradigm shift, from being neo-classically based to behaviorally based paradigm. As Werner Erhad and Micheal Jensen noted in 2015 " The progress in economics and finance over the last two decades-founded on the paradigm-altering insights from psychology about human behavior by scholars such as Kahneman, Tversky, Thaler, Sunstein,and others has been huge. This paradigmatic revolution has allowed us to focus on the existence and significant impact of widespread counter-to-self interest behaviour that was earlier unnoticed,ignored,or dismissed." Psychologists studying decision making behaviour have produced ample evidence to demonstrate that people donot behave as if they exercise consistent and rational preferences and people do not form judgements following the rules of classical statistics. Behavioural psychologists have proposed theories that throw light on the causes and effects associated with these systematic departures.

Behavioural finance is a branch of traditional finance that incorporates insights from psychology, neuroscience, sociology, organisational behaviour and law to offer a better explanation of how individuals make financial decisions. It assumes that human beings are not completely rational and are often subject to cognitive and emotional shortcuts – heuristics and biases (Agrawal, 2016). Behavioural finance also acknowledges that people are driven not only by utilitarian goals (profit maximisation), but also emotional and expressive wants. Some important theories in this field are: Prospect Theory – People experience losses more strongly than gains Behavioural Portfolio Theory – Investors look for other factors, such as social status and responsibility, as well as returns Behavioural Life Cycle Theory – The extent to which self-control influences saving and spending decisions

A key concept in behavioural finance is Kahneman's dual thinking systems: System 1 (fast and intuitive) and System 2 (slow and analytical). Investors often

rely on cognitive and emotional shortcuts that may bias their decisions, such as investing based on popularity or reacting emotionally to market volatility. Other key concepts include mental accounting, bounded rationality, different investor preferences, and the importance of social and cultural factors on financial behaviour. A key concept is Herding Behaviour, where investors copy others rather than using independent analysis. Herding is especially prevalent in emerging markets and can drive asset prices away from their fundamental values, increasing market volatility, instability and financial fragility.

2. Literature Review

The Behavioural Finance literature notes that investor behaviour is not always rational and is influenced by psychological, emotional and cognitive factors. Deb (2025), Li (2023), and Ankitha et al. have shown that investment decisions and financial outcomes are greatly influenced by biases such as overconfidence, anchoring, loss aversion, and representativeness. Market uncertainty often leads investors to make emotional decisions and to use heuristics rather than conducting proper financial analysis. Chandra and Kumar (2012) discovered that investors tend to anchor their decisions on stock prices and prefer information that is simple and easy to understand, rather than complex financial data. Similarly, Iyer and Bhaskar (2002) pointed out that the valuation mismatches and irregularities in the Indian capital market are due to investor psychology, information asymmetry and emotional reactions. These studies collectively demonstrate that behavioural factors strongly influence individual investment behaviour and market movements.

Several researchers have also studied the differences in investor preferences based on personal traits, financial literacy and social influence. Krishna et al. (2019) and Singh et al. (2019) found that investors decide on investment avenues depending on their income level, background, risk appetite, financial goals and expected returns. Kumari et al. (2019) also studied the relationship between personality traits and herd behaviour by classifying investors into aggressive, compliant and detached under Horney's tripartite model. Trehan

and Sinha (2019) stated that herd behaviour is often observed in the investors due to regret aversion, lack of knowledge about the market, emotional factors and reliance on external information sources. These findings challenge traditional financial theories such as the Efficient Market Hypothesis and Capital Asset Pricing Model, which assume that investors are fully rational and markets are efficient. Behavioural finance emerged as an alternative approach to explain these irrational and psychologically driven investment patterns.

Herding behavior is considered one of the most widely studied behavioral finance concepts in Indian markets. Loang OK (2025), Bharati and Kumar Ashish (2021), Mondal (2011), Wong et al. (2006), and Patro and Kanagaraj (2012) find that herding is observed most during financial crises and turmoil, and under market volatility and economic uncertainty. Due to the fear of losses, insecurity, low financial literacy, and emotional stress, investors prefer to replicate the behavior of larger entities or market leaders, rather than conducting their own analyses. The study conducted by Chauhan et al. (2019) finds that herding behavior influences asset prices and stock returns, especially in large-cap stocks of the National Stock Exchange (NSE). Although some of the studies, such as Batchu and Padmasree (2018), found herding behavior to be almost nonexistent during normal market conditions; the majority of the research community concurs that herding behavior becomes most evident during extreme positive and negative market conditions as well as during high trading activities. The studies conducted to date find that investors' behavioral biases, herding behavior, and lack of market awareness are negatively correlated with market efficiency and financial stability, thereby emphasizing the critical need for financial education and effective regulations.

2.1. Research Gap:

After studying the existing literature on herding behaviour the following research gap has emerged which motivated the further study of this topic. Most studies examine herding across individual market phases than evolution during

transition phases in the market. They tend to lack integration of behavioural biases with market phases.Moreover there is absence of comparison whether herding is stronger in the bullish or the bearish phases of the market.

2.2. Research Problem:

To examine whether herding behaviour among individual investors varies across different market phases (bull, bear, and recovery) in the Indian stock market.

2.3. Research Questions

Does herding behaviour vary significantly across bullish or bearish market phases?

3. Research Methodology:

The type of research conducted in the study is Descriptive Research. We analyse different demographic variables such as-

- Age of the respondents
- Gender of the respondents
- Level of income
- Educational Qualification
- Investment experience in the stock market
- Knowledge of investing among the respondents

Primary research has been conducted through a structured questionnaire. We have collected responses from over 175 individuals who are young adults, stepping into the world of investing, or people who are already have an experience of investing in the stock market. To narrow down the population of investors, recommendations from similar papers by researchers were taken for the sample composition.

Hence, the sampling method adopted was judgement & snowball sampling. Each question was graded with a 5 point Likert scale to quantitatively analyse the categorical variables. A short quiz was attached to the end of the

questionnaire to assess the knowledge of the respondents. Each question came with a range of responses from 'Strongly Agree' having to 'Strongly Disagree' containing 5 to 1 marks respectively to measure the degree of herding biases of the investor.

Research Design:

As mentioned earlier, the study adopts a descriptive research design to analyse investor awareness and behaviour regarding herding in the stock market. Descriptive Research is the most commonly used type of design for surveys.It is a non-experimental,systematic method used to identify,record & analyze the characteristics, behaviours, and trends within a population or phenomenon.For example, in this case with the help of a survey we are using different demographic variables to analyse the rationality and the tendency to herd among the investors or respondents.

Type of Data:

The study is mainly based on primary data. It is collected in the form of responses from a structured questionnaire circulated among the respondents in accordance with the research objectives to acquire insights about their behavioural biases and investment decisions. However, the aid of secondary data is taken in the form of papers from previous researchers, books, newspaper articles, journals, investment websites, to support the theoretical framework.

Data Collection Method:

The data for the study was collected using an online questionnaire circulated through social media platforms and personal contacts. The data for study was collected using a structured questionnaire method. The questions are close ended in nature and are designed to study the biases, attitudes, perception of investors with regard to their investment decision making. A Likert scale was used to measure responses, ranging from "Strongly Agree" to "Strongly Disagree" quantitatively.

Tools used for Analysis:

The collected raw data was analysed using statistical tools such as Microsoft Excel and SPSS. Statistical methods such as mean, percentage, are used to summarize and analyze the primary data effectively. Also, One Way Anova, the different types of T-tests (Paired & Independent), Regression Analysis is applied to examine the difference between groups, variables, testing the significance of different factors affecting herding behavior. The results are further represented by various charts, diagrams, tables for better clarity.

3.1 Results and Discussions

This chapter describes the analysis and inferences of the primary data which we have collected using a questionnaire, the objective being examine herding behaviour among investors and analyse its variation across different market phases.

Dependent Variable	***Independent Variables***
Herding Behaviour Score	Age of the respondents Gender of the respondents Level of income Educational Qualification Experience in investing Knowledge in investing

Additionally taken into consideration is the 'Market Phase' as a variable to segregate investors who are prone to herd during bullish/bearish phases in the market according to the mean herding score.

Descriptive Statistics:

We separately analyse each of the independent variables using descriptive statistics before going on to an elaborate analysis of how each of the tests were applied.

Gender	***Frequency***	***Percentage (%)***
Male	73	41.1
Female	103	58.9
Total	175	100

Table 3.1 Showing gender distribution along with percentage.

Age of the Respondents	***Frequency***	***Percentage (%)***
Below 25 yrs	94	53.7
25-45 yrs	57	32.6
Above 45 yrs Total	24	13.7
	175	100

Table 3.2: Showing age distribution of the respondents

Level of Income	***Frequency***	***Percentage (%)***
Below ₹25000	83	47.4
₹25001-50000	35	20.0
₹50001-75000	26	14.9
₹75001-100000	13	7.4
Above ₹100000	18	10.3
Total	175	100

Table 3.3 Showing income distribution of the respondents

Educational Qualification	***Frequency***	***Percentage (%)***
10th or Lower	-	-
12th	3	1.7
Undergraduate	92	52.6
Postgraduate	58	33.1
Higher Education (PhD, etc.)	11	6.3
Others	11	6.3
Total	175	100

Table 3.4 Showing educational qualification of the respondents

Investment Experience	***Frequency***	***Percentage (%)***
Less than 1 year	129	73.7
1-3 years	23	13.1
3-5 years	15	8.6
More than 5 years	08	4.6
Total	175	100

Table 3.5 Showing investment experience of the respondents

Investment Percentage Mean Standard Deviation Variance Skewness Kur

Knowledge (%) Deviation

Score

0	20.6					
1	24.6					
2	30.9					
3	18.9					
4	2.9					
5	2.3					
Total	100	1.66	1.212	1.468	0.392	-0.188

Table 3.6 Showing investment knowledge of the respondents

Measurement of Herding Behaviour:

Herding Behaviour score is measured using select Likert-scale questions from Q13. to Q22 in the questionnaire circulated. Responses were coded from 1 (Strongly Disagree) to 5 (Strongly Agree).A composite herding score was calculated by averaging the responses.

Herding Behaviour across Market Phases:

The weightage of herding behaviour was calculated in each of the phases using the average responses of selected questions from the questionnaire.

For Bearish Phase- (Q16+ Q19 Q21)/3

For Bullish Phase-(Q17 + Q18 + Q20)/3

HYPOTHESIS TESTING:

We take the first hypothesis,

H0 -Herding Behaviour does not vary across market phases (bullish & bearish) for individual investors in the Indian stock market.

H1 -Herding Behaviour varies across **market phases (bullish & bearish)** for individual investors in the Indian stock market.

For this purpose, **Paired Sample T Test** is applied, because we tend to compare two related groups of observations coming from the same set of respondents.

The methodology used for calculating the average scores in each of the phases has already been discussed above.

Market Phases	**Mean**	**Correlation (r)**	**Significance (p)**
Bearish	3.089314	-0.048	0.532
Bullish	3.455805		

Table 3.7 Table showing the descriptive statistics between bearish and bullish market phases.

The descriptive statistics suggest that herding behaviour is more prominent during bullish market conditions as compared to bearish market conditions. The correlation between the two variables is negative (- 0.048) signifying that there is no relationship between the respondent's behaviour in the two different market phases. This means that investors do not behave consistently across the market phases.

Paired Sample T-test results

Pair 1	**Mean**	**Std. Deviation**	**95% Confidence Interval of the Difference**	**t-value**	**df**	**p-value**
Bullish & Bearish Market Phases	0.3672	0.94626	Upper=0.22623 Lower= 0.50941	5.127	173	0.000

Table 3.8 Table showing the results of paired sample T tests conducted.

Since the p-value is less than 0.05 the result is statistically significant, signifying a considerable difference in herding across bullish and bearish markets. The respondents seem to be more influenced by herding behaviour during bullish market.

3.2 Findings:

Concluding our analysis on the data collected by primary survey,by using various statistical models and methods,we now summarize our findings in the following points:

As for examining whether herding behaviour score varies across the different market phases, from the test results **we reject the null hypothesis** stating that **Herding behaviour among individual investors differs significantly across bullish & bearish phases of the Indian Stock market.** More so, in the bullish phase where the investors tend to show greater herding. Our results are backed by the findings of **(Mondal A.,2011)** who uses a price-based model using market indices to measure herding behaviour. However, it contradicts the findings of **Wong et al (2006)** who concludes that investors tend to herd more during bearish market conditions rather than bullish conditions and **Batchu & Padmasree (2018)** have endorsed that herding behaviour was found to be negligible during their course of study. Our

findings of this study also contradict **Dhuri V et al (2024)** which suggest that significant herding behaviour was noticed during extreme market phases (both positive and negative) rather than general bullish or bearish trends.

Summary of Findings:

Research Objective	**Null Hypotheses**	**Decision**	**Interpretation**	**Supporting/Contradicting Literature**
To measure the influence of herding behaviour across bullish and bearish market phases in the Indian Stock market.	There is no significant difference in herding behaviour across bearish and bullish markets.	**Null Hypothesis is rejected.**	Investors show greater herding tendencies during a bullish market rather than a bearish market.	Supporting Literature- **(Mondal A.,2011)** Contradicting Literature- **Wong et al (2006), Batchu & Padmasree (2018)** **Dhuri V et al. (2024)**

Summary and Discussions

Behavioural Finance is an ever-evolving concept in finance dealing with investor psychology. It challenges the assumption of rationality in stock markets, and enunciates the concept of different types of biases such as overconfidence bias, anchoring bias, confirmation bias and so on. In this study, we highlight one such concept that is the Herding Bias or the tendency of individual investors to follow the market sentiment blindly without having to make independent investment decisions. In this study, we have attempted to make a study on herding biases of individual investors across market phases in India. Our data was primarily collected by floating a structured questionnaire. Here are some the conclusions derived during the course of

our study:

A significant difference in herding behaviour was observed across market phases was observed, especially during the bullish phases indicating that people's expectation increases during uptrends in stock prices.

Overall, the study demonstrates that herding behaviour is not just a market anomaly but a natural outcome of human psychology. By validating key concepts of behavioral finance, the research highlights that investor decisions are shaped more by **biases, emotions, and social dynamics** than by rational evaluation alone. This underscores the importance of behavioral awareness in improving investment decision-making

Directions for future research

1. Expanding the sample size and demographics that is use of more diverse sample size to derive more meaningful conclusions in terms of age, gender, income, education, etc.
2. Comparative studies between two or more countries to identify global pattern and key differences.
3. Impact of artificial intelligence & technology advancements- easier to gather information about the investment pattern of people.
4. Moving on to Sector Specific Analysis.
5. Influence of social media & other digital media.

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