

Impact of Herding Behaviour and Risk Tolerance on Stock Investment Decision-Making

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Abstract: *This study looks into how risk tolerance and herding behavior affect Indian individual investors' decisions to buy stocks. The study intends to evaluate how herding behaviour and individual risk tolerance influence investment decisions by utilizing the concepts of behavioral finance. A structured questionnaire was used to gather data from 700 respondents as part of a quantitative research design. Simple linear regression and descriptive statistics were used to analyze the data. The results show that herding behavior has a moderately positive and significant influence on stock investment decisions, suggesting that many investors prefer to follow the market rather than do their own research. Those with higher risk tolerance, on the other hand, appear to be more self-assured and proactive in their investment management, as evidenced by the strong and highly significant positive correlation between risk tolerance levels and investment decision-making. The study emphasizes how crucial it is to comprehend behavioral biases and individual variances in risk tolerance in order to encourage logical and knowledgeable investing. It implies that more stable and successful investing practices can be achieved by improving financial literacy, creating risk profiling tools, and controlling herd-driven market activity. For investors, financial advisors, and legislators looking to promote wise decision-making in volatile market conditions, the findings offer insightful information.*

Keywords: Herding behaviour, Risk, Stock, Investment decision, financial literacy.

I. INTRODUCTION

Herding behavior is an intriguing occurrence in financial markets, which demonstrates the inherent human inclination to seek security by following the crowd and finding solace in uniformity. When investors or traders exhibit herding behavior, they relinquish their independent judgment and unquestioningly conform to the majority, frequently influenced by emotions rather than logical reasoning. Herding conduct fundamentally represents a deviation from autonomous decision-making. Instead of meticulously evaluating the advantages of an investment opportunity through own investigation and comprehension, many choose to imitate the actions of their peers. This phenomenon can result in a self-perpetuating pattern in which the force generated by the collective activities of a group of individuals amplifies their involvement, irrespective of the fundamental characteristics of the asset being considered (Tamplin, 2023).

Risk tolerance is a crucial measure in the complex field of investment, indicating the level to which an investor is willing to endure the volatile changes in the value of their assets. The barometer measures an individual's strength in dealing with uncertainty, helping them make decisions that match their psychological inclination towards taking risks (Neupane, 2021).

Investment decisions are crucial for individual prosperity and longevity. It entails assigning current monetary worth in expectation of future returns, which might be either guaranteed or uncertain. In essence, it involves obtaining financial resources in the present with the anticipation of gaining advantages in the future. When individuals choose to allocate their funds, they transition into investors. Their objective is to convert their savings into investments, whereas institutional investors strive to earn appropriate returns by utilizing unused capital (Saxena, 2015).

Problem statement

Many individual investors still base their decisions more on social behavior than on unbiased financial analysis, even in the face of financial markets becoming more accessible and the importance of informed investing growing. Herding is

one such behavioral bias that causes investors to imitate the behavior of others, frequently without taking into account their own information or risk tolerance. This tendency is especially noticeable in emerging markets such as India, where individual decisions are often influenced by media-driven hype and market sentiment. However, when making investment decisions, risk tolerance—a crucial component that determines how much uncertainty an investor is willing to accept—is not always fully recognized or taken into consideration. Investors who have a low or misaligned risk tolerance may make poor investment decisions, which would make them even more vulnerable to losses. Concerns concerning the efficacy and rationality of individual investment decisions are raised by the concurrent influence of these behavioral factors. A lack of knowledge about one's own risk tolerance can result in financial stress and less than ideal portfolio outcomes, even though herding can exacerbate market inefficiencies and investment bubbles. Therefore, this study's main issue is the ambiguity surrounding the ways in which risk tolerance and herding behavior affect individual investors' decisions to purchase stocks. Developing investor education resources, individualized financial advisory models, and regulatory policies that promote more knowledgeable and resilient investing behavior all depend on an understanding of this relationship.

Objective

- To evaluate impact of herding behaviour on stock investment decision-making.
- To evaluate impact of risk tolerance level on stock investment decision-making.

Hypothesis

- H_0 : There is no significant impact of herding behaviour on the stock investment decisionmaking of individuals.
- H_1 : There is significant impact of herding behaviour on the stock investment decisionmaking of individuals.
- H_0 : There is no significant impact of risk tolerance level on stock investment decision-making.
- H_2 : There is significant impact of risk tolerance level on stock investment decision-making.

II. LITERATURE REVIEW

(Widyari et al., 2024) explained, when it comes to investing in shares, it is crucial to make well-thought-out decisions, as they directly impact the potential profits and dangers involved. However, during transactions, investors frequently exhibit irrational behavior, specifically by blindly adhering to judgments made by other investors, a phenomenon known as herding behavior. Investors may exhibit herding behavior, disregarding their own information and personal decisions in favor of following the decisions of groups or other individuals. Herding is a behavioral finance concept that examines how people make financial decisions from a psychological standpoint. It specifically focuses on the tendency of individuals to follow the actions and decisions of others. This idea examines the degree to which internal emotions will impact the decisions made by investors. An investor may engage in herding behavior as a result of being affected by prevailing market conditions. In addition, herding encompasses other forms of behavior that investors can engage in when making decisions about stock investments.

(Kanojia et al., 2022) This study examined herd behavior and conducts tests using primary respondents from Indian markets. The research presents empirical evidence using the cross-sectional absolute deviation approach to analyze herd behavior among decision-makers involved in trading in the Indian stock market. The study aims to analyze the overall herding behavior in the Indian stock market by examining the Nifty 50 stock returns over a nine-year period from April 1, 2009 to March 31, 2018. The analysis includes 2230 daily, 470 weekly, and 108 monthly observations, covering normal market conditions, extreme market conditions, and both increasing and decreasing market conditions. Over a period of ten years, the authors' findings indicate that there is no indication of herding behavior in the Indian stock market, regardless of the market conditions. This can be attributed to the significant presence of institutional investors and the relatively low participation of individual investors. The findings indicate that herd behavior does not have any influence on stock returns in the Indian equities market under normal market conditions. The statement emphasizes that those who are more likely to follow the crowd are more noticeable in short-term investments compared to long-term holdings.

(Nguyen, 2022) This study utilized the CSAD model, to examine herding behavior in the Vietnamese stock market. The empirical data provide evidence of a tendency for individuals in this market to engage in herding behavior. The market return is divided into subgroups to demonstrate the occurrence of herd behavior in different market scenarios. The results indicate that during periods of market volatility, investors exhibit a heightened inclination to conform to prevailing market trends, whether it be upward or downward movement, or exceptionally high or low returns. An assessment is made regarding the influence of the Singapore stock market on the Vietnam stock market. Investors can utilize this empirical discovery to build investing strategies and expand their opportunities for financial gain.

(Rahayu et al., 2021) This study seeks to analyze the phenomenon of investor herding behavior in the Indonesian stock market, specifically focusing on the impact of social and informational factors on the Book Value Per Share (BVPS). Recent stock market conditions indicate that a majority of investors exhibit a consistent pattern of making investment decisions that lead to financial losses. The experiment includes two distinct variables: BVPS information and social impact. This study employed a 2x2 factorial design in a laboratory setting using an experimental method. Data collection was conducted by treating a sample of 100 individual investors who were listed on the Indonesia Stock Exchange. The Univariate Two-Way Analysis of Variance (ANOVA) statistical tool was employed to examine the impact of the independent variable on the dependent variable. The research findings indicate that the impact of expert investors' social influence on the decision-making behavior of herding investors is greater than the influence of Book Value Per Share (BVPS) information. These findings indicate that investors possess knowledge of their psychological aspects, leading to enhanced self-control and investing analyzing abilities. Subsequent investigations can employ psychological bias and additional indicators, such as Earning Per Share (EPS), to examine herding behavior in investment decision making within the capital market.

(Rahayu et al., 2020) The paper seeks to demonstrate the presence of herding behavior in multiple stock markets across different regions of the world and identify the underlying variables that contribute to this behavior. The approach employed in this work involves doing a comprehensive literature review by extracting data from 80 worldwide publications and 4 local journals. Our analytical findings indicate that herding behavior is present in nearly all global stock markets. Herding behavior in stock markets can be attributed to various factors, such as negative news sentiments, analysts' incentives and career concerns, market risk and uncertainty at the firm level, market uncertainty, extreme market conditions, periods of high information flow, volatility risk, analysis of multiple types of small stocks, economic or financial crises, declining market conditions, increasing interest rates, currency depreciation, poor information environment, and low quality disclosures. An inherent restriction of this article is the uneven distribution of data obtained from research conducted across multiple stock markets, including the lack of data retrieval from the stock market in the American continent.

(Economou et al., 2018) The paper investigated herding behavior in three well-established stock markets, specifically examining the influence of investors' "fear" on herding calculations. In order to achieve this objective, we utilize daily data for all publicly traded stocks from the United States, United Kingdom, and Germany, spanning from January 2004 to July 2014. We analyze herd behavior using the cross-sectional dispersion approach. Furthermore, we examine the asymmetrical tendency of herding in various market conditions and sub-periods. The examined stock markets offer comparable implied volatility indexes, which are utilized as a substitute for fear. In addition to the conventional herding calculations inside and across markets, we enhance the benchmark model by incorporating the fear indicator. The empirical findings demonstrate a statistically significant influence of fear on estimations of herding. Additionally, there is empirical support for the occurrence of cross-market herding, as well as evidence of herding specifically in the United Kingdom during certain sub-periods.

(Li et al., 2017) Study analyzed the disparities in herding behavior between institutional and individual investors by employing a metric based on trading volume. Institutional investors who are more knowledgeable tend to be more discerning in their trading, while less knowledgeable people distribute their investments evenly throughout stocks. Furthermore, individual investors heavily depend on publicly available information to make their trades, as they are swayed by market mood and attention-catching events. Furthermore, institutional investors demonstrate an asymmetrical response to both upward and downward movements in the market, but individual investors do not exhibit

this behavior. Ultimately, despite the variations in herding behavior between individual and institutional investors, both groups closely monitor each other's trades to establish a collective agreement.

(Hammami & Boujelbene, 2015) This study aims to examine the occurrence of investor herding behavior in the Tunisian stock market. In addition, we investigate the elements that explain the likelihood of stock market booms and busts by integrating the herding behavior of investors with economic and financial realities. Our analysis reveals that investors display varying degrees of herding behavior, with strong herding observed during both stock market booms and collapses. Our findings indicate that the tendency to follow the crowd plays a significant role in the likelihood of stock market booms. Furthermore, the economic and financial factors contribute to the occurrence of boom-bust cycles in the Tunisian stock market.

III. RESEARCH METHODOLOGY

The present research examines how individual investors' decisions about stock investments are influenced by herding behavior and risk tolerance levels. The chosen methodology is quantitative in nature and uses statistical analysis to present empirical evidence.

Research design

This study examines the relationship between behavioral factors, such as risk tolerance and herding behavior, and the dependent variable, which is the decision to invest in stocks, using a descriptive research design and correlational analysis. While the correlational component determines the direction and strength of relationships between variables, the descriptive component aids in profiling the demographics of respondents. To gather primary data, a cross-sectional survey was carried out.

Population and Sampling

Individual retail investors who actively participate in Indian stock market investments make up the study's population. Using a non-probability purposive sampling technique, a sample size of 700 respondents was chosen with the goal of identifying people who are currently trading and investing in the stock market and who have a fundamental understanding of how to make investment decisions.

Data Collection Method

A structured questionnaire was used to gather data, which included Likert-scale-based items measuring herding behavior, risk tolerance, and investment decision-making tendencies in addition to demographic questions about age, gender, and investment experience. In order to ensure diverse representation in terms of age, gender, and experience levels, the instrument was distributed via both offline and online channels.

Data Analysis

The collected data were analyzed using SPSS software.

IV. RESULTS

The empirical results drawn from the statistical examination of the information gathered from 700 individual investors are shown in the results section. In addition to offering thorough insights into the connections between herding behavior, risk tolerance, and stock investment decision-making, this section methodically describes the demographic distribution of respondents.

Table 4.1: Age wise distribution of participants

Age	Frequency	Percent
Below 25 years	125	17.9
25 - 34 years	180	25.7
35 - 44 years	153	21.9

45 - 54 years	163	23.3
55 - 64 years	75	10.7
Above 65 years	4	.6
Total	700	100.0

The age distribution of the responses indicates that most participants fall among the younger and middle-aged demographics. The highest percentage (25.7%) is found in the 25–34 years age group, followed closely by the 45–54 years group at 23.3% and the 35–44 years group at 21.9%. Individuals under 25 years comprise 17.9% of the sample, signifying a substantial degree of engagement among young investors. Individuals aged 55–64 constitute 10.7% of the sample, whilst those above 65 years are negligible at just 0.6%.

Graph 4.1: Graphical representation of age wise distribution of participants

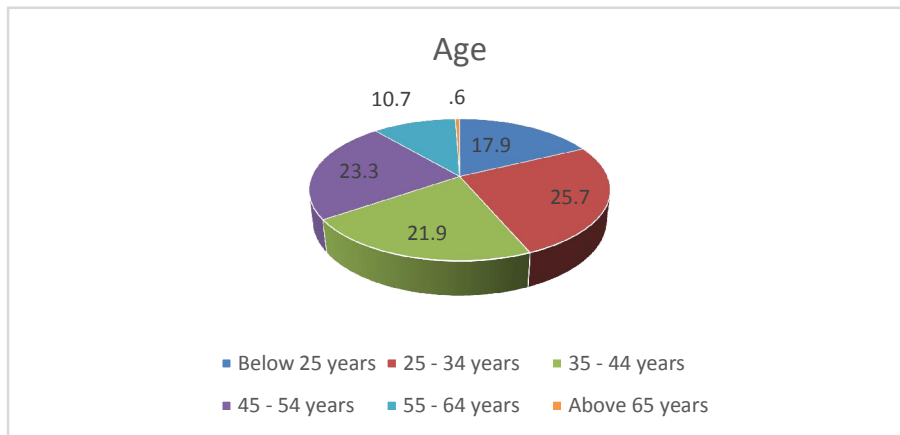


Table 4.2: Gender wise distribution of participants

Gender		
	Frequency	Percent
Male	461	65.9
Female	239	34.1
Total	700	100.0

The gender distribution among respondents indicates a significant male majority, with 65.9% identifying as male and 34.1% as female. This indicates that men constitute the predominant portion of the sample engaged in stock investing decision-making in this study.

Graph 4.2: Graphical representation of gender wise distribution of participants

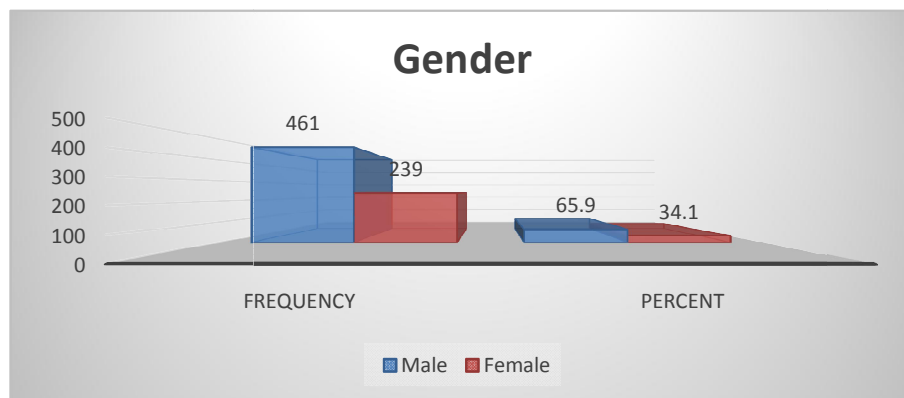
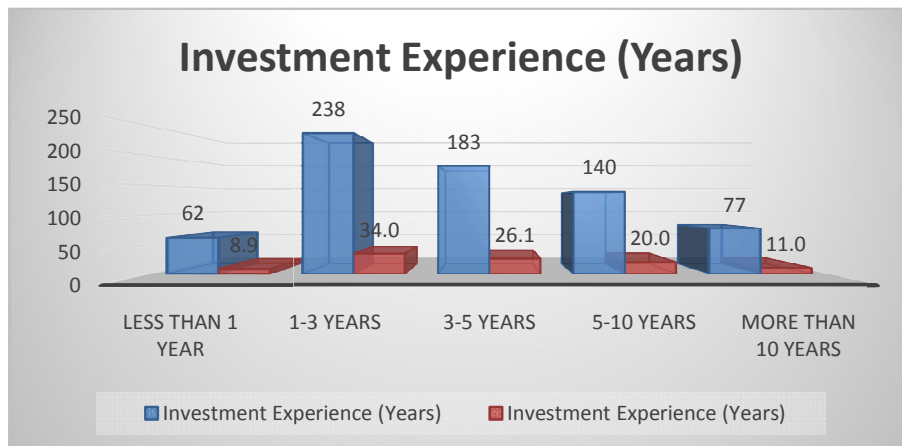


Table 4.3: Experience wise distribution of participants

Investment Experience (Years)		
	Frequency	Percent
Less than 1 year	62	8.9
1-3 years	238	34.0
3-5 years	183	26.1
5-10 years	140	20.0
More than 10 years	77	11.0
Total	700	100.0

The distribution of respondents' investment experience indicates, approximately 34% of participants possess 1–3 years of experience, being the biggest group, followed by individuals with 3–5 years of experience at 26.1%. Investors with 5–10 years of expertise constitute 20% of the sample, whilst 11% have above 10 years of experience. Only 8.9% of respondents own less than one year of investment experience.

Graph 4.3: Graphical representation of experience wise distribution of participants



Hypothesis testing

Hypothesis 1: There is no significant impact of herding behaviour on the stock investment decisionmaking of individuals.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418 ^a	.174	.173	9.81823
a. Predictors: (Constant), Herding behaviour				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14211.732	1	14211.732	147.428	.000 ^b
	Residual	67285.617	698	96.398		
	Total	81497.349	699			
a. Dependent Variable: Stock Investment Decision-Making						
b. Predictors: (Constant), Herding behaviour						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.951	1.477		10.123	.000
	Herding behaviour	1.014	.084	.418	12.142	.000

a. Dependent Variable: Stock Investment Decision-Making

The first hypothesis stated that "There is no significant prevalence of herding behavior in the stock investment decision-making of individuals." A straightforward linear regression was performed, utilizing herding behavior as the independent variable and stock investing decision-making as the dependent variable. The Model Summary reveals an R-value of 0.418, signifying a moderate positive association between herding behavior and stock investing decisions. The R Square score is 0.174, indicating that around 17.4% of the variance in stock investing decision-making is attributable to herding behavior. The ANOVA table indicates that the regression model is statistically significant, with an F-value of 147.428 and a p-value of .000, which is below 0.05. This suggests that herding behavior is a strong predictor of stock investing decision-making. The Coefficients table indicates that the unstandardized coefficient (B) for herding behavior is 1.014, accompanied with a t-value of 12.142 and a significance level of .000. This indicates that for every unit increase in herding behavior, stock investing decision-making rises by around 1.014 units, assuming all other factors remain unchanged. The regression analysis reveals a substantial positive correlation ($p < 0.05$), leading to the rejection of the null hypothesis, which posited the absence of any herding behavior. Consequently, it may be concluded that herding behavior substantially impacts stock investing decision-making among people in the sample.

Hypothesis 2: There is no significant impact of risk tolerance level on stock investment decision-making.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.900 ^a	.811	.810	4.70144

a. Predictors: (Constant), Risk Tolerance Levels

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66069.051	1	66069.051	2989.066	.000 ^b
	Residual	15428.298	698	22.104		
	Total	81497.349	699			

a. Dependent Variable: Stock Investment Decision-Making
b. Predictors: (Constant), Risk Tolerance Levels

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.982	.445		22.413	.000
	Risk Tolerance Levels	1.447	.026	.900	54.672	.000

a. Dependent Variable: Stock Investment Decision-Making

The second hypothesis stated that "Risk tolerance levels do not significantly correlate with individuals' stock investment decision-making." A straightforward linear regression was conducted, utilizing risk tolerance levels as the independent variable and stock investing decision-making as the dependent variable. The Model Summary reveals an R-value of 0.900, signifying a robust positive association between risk tolerance levels and stock investing decision-making. The R Square value is 0.811, indicating that about 81.1% of the variance in stock investing decision-making is attributable to risk tolerance levels, reflecting considerable explanatory power. The ANOVA table demonstrates that the regression model is extremely significant, with an F-value of 2989.066 and a p-value of .000, which is much below the 0.05 significance level. This affirms that risk tolerance levels are a crucial determinant of stock investing decision-making. The Coefficients table indicates that the unstandardized coefficient (B) for risk tolerance levels is 1.447, accompanied by a t-value of 54.672 and a significance level of .000. This indicates that for each one-unit rise in risk tolerance, stock investing decision-making escalates by about 1.447 units, assuming all other factors remain same. The regression results indicate a highly significant and robust positive correlation ($p < 0.05$), leading to the rejection of the null hypothesis, which posits that risk tolerance levels do not significantly influence stock investing decision-making. Consequently, it can be concluded that risk tolerance levels exert a strong and considerable impact on the stock investing decisions of individual individuals within the sample.

V. CONCLUSION

The purpose of this study was to investigate how individual investors' stock investment decisions are impacted by herding behavior and risk tolerance levels. The findings, which are based on an empirical analysis of 700 participants' responses, offer important new information about the behavioral dynamics of investor decision-making. The findings showed that decisions about stock investments are moderately positively impacted by herding behavior, which is statistically significant. This implies that rather than depending exclusively on their own research and analysis, a sizable portion of investors have a tendency to adopt the decisions of others. Herd-driven volatility and irrational market movements may result from such a tendency. There was a strong and significant positive correlation between risk tolerance levels and the decision to invest in stocks. According to theories of rational financial behavior, this suggests that investors who have a higher risk tolerance are more assured and decisive when making investment decisions. All things considered, the results highlight how herding and risk tolerance factors work together to shape investment behavior. These observations are especially pertinent to the changing Indian stock market, where rising retail participation is changing the way people invest.

According to the study's findings, behavioral biases and personal risk tolerance are important factors that influence investment choices. More logical and knowledgeable investing practices can be encouraged by addressing these factors through investor education, financial literacy initiatives, and strong advisory systems.

Suggestions

Programs for financial literacy should be improved in order to assist investors in identifying and controlling behavioral biases such as herding. Instead of depending on peer pressure or market trends, these programs ought to encourage logical and autonomous decision-making. Before making an investment, investors ought to be encouraged to carry out independent research and evaluate the company's fundamentals.

By analyzing investors' risk tolerance and propensity for group behavior, investment advisors and portfolio managers can integrate behavioral finance insights into their advisory services. More specialized and successful investment strategies may result from this. In order to help investors avoid making rash decisions, investment platforms should incorporate risk profiling tools that provide guidance based on each investor's unique risk appetite.

To avoid market distortions, regulatory agencies such as SEBI should keep an eye out for indications of herd-driven trading behavior and take prompt action by disseminating information and offering investor advice. The prevalence of speculative behavior can be decreased and more stable investment patterns can be encouraged by promoting a long-term investing culture through awareness campaigns.

It is recommended that future research be conducted to track shifts in investor psychology, particularly in reaction to changing market dynamics and digital trading environments. This will facilitate the creation of stronger instruments and tactics to direct investor behavior in a financial environment that is changing quickly.

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