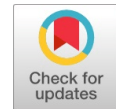


# Investment Decisions, Herd Behaviour and Retail Investors

Madhavan Devadas, T. Vijayakumar



**Abstract:** Behavioral finance explains that cognitive biases influences investor decision making. Due to the influence of different behavioral biases investors do tend to make irrational decisions. Behavioral finance has highlighted the failure of traditional finance theories to account for human emotions when making investment decisions. While traditional finance theories disregard human element in decision-making, behavioral finance theories take into account the human psychology while explaining theories. Many studies have found and explained many biases that are exhibited by investors which lead to irrational investment decision making on their part. One among the many the biases herding can be considered among the most important behavior which leads to low quality investment decisions by investors. While compared to studies about herd behavior of institutional investors, the studies about individual retail investors in less. The motive behind this study is to clarify the role of demographic factors and psychological factors that influence herd behavior among individual investors. In this study the impact of demographics and psychological factors on herd behavior was studied. For this survey, primary data was collected using Judgment sampling technique and the results analyzed. Retail investors in Chennai exhibited herd behavior with regard to investment decisions. Eight factors were found to influence herd behavior.

**Keywords:** Behavioural Biases, Personal values, Investment decisions, Demographics

## I. INTRODUCTION

Traditional finance has been unable to explain the anomaly prevailing in financial markets from time to time and irrational decisions from the stake holders and players involved the financial system. This has been understood better with the growth of Behavioral finance. Shefrin [1999] said that behavioral finance can be termed as the use of psychology to understand financial behavior. Lintner G [1998] defined behavioral finance as being study of human interpretation and subsequent acts based on acquired information to make decisions regarding investments. Behavioral finance mixes psychology with finance to explain irrational acts of investors. Behavioral finance says that cognition of humans has an influence on their investment decisions. Behavioral finance explains the impact of biases on ones' investment decisions. Cognitive Biases can be termed as the biased behavior of the investor. Herding is one among the important biases under behavioral biases.

Herding can be described as a behavior exhibited by an individual when he tries to imitate or follow the decisions or actions of a group which may be either rational or it can be irrational. Herd behavior is among the most frequently exhibited behavior among human beings in a normal way of life. People who socialize as a group tend to behave similarly. Abhijit V (1992) has indicated that people derive information from Economist Pigou linked social dynamics to cycles of the investment market. People are usually overtly critical of their individual decisions compared to the decision among a group. Herd behavior is one among the very important and influential bias with regard to biases Exhibited by investors. Herding are of two types. Rational and irrational. Rational herding is said to occur when one ignores his own knowledge and information in favor of other people's opinion and information. Sunil in 2014 in their study came to understand herding exists in the Indian secondary market. They learnt that herding existed in both the bull phase and the bear phase, but the herd behavior was more pronounced in the bear phase. Lakshmanan, Basu and Vidhyathan [2013] examined herding in India though it is not high and they also came to a conclusion of higher herding activity in mutual funds. Jaya Prosad, Sujatha and Sengupta in 2012, understood the existence of herding behavior in the bull phase of the market but non-existent in the bear phase. This situation of herding behavior noticed at the time of market going up (bull phase) was confirmed by Lao [2011]. They also found out that trading volumes do not influence herding in India but in china there is herding when the trading volume goes up. Chiang (2011) studied herding behavior in Asia and pacific markets and found that herd behavior existed in all the markets. Sumitagarwal [2011] while studying the stock market of Indonesia, found ample evidence of herd behavior. They ascertained that herding was more pronounced with foreign investors than domestic investors. Kapusuzoglu [2011] when conducting a research study in the Stock exchange of Istanbul found the presence of herding irrespective whether the market went up or down. Gunay [2011] looked into the relationship between investment decision making behavior and demographics. He realized that there was an association among herding and demographics. In the same study he also found no meaningful relation among herding and age. Demirer [2010] while studying the Taiwanese markets found that herding behavior is more obvious in periods where there were market losses. As more than a few research assignments have suggested herd behavior does exist among investors, there are also studies which have come to a conclusion that there has been no sign of herding among investors. There are several factors which influence herd behavior among investors.

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\*Correspondence Author(s)

Madhavan Devadas, School of Management, SRM Institute of Science and Technology, Chennai, India. Email : Madhavan.devadas@gmail.com

Dt.T.Vijayakumar, School of Management, SRM Institute of Science and Technology, Chennai, India. Email : vijayakt@srmist.edu.in

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## Investment Decisions, Herd Behaviour and Retail Investors

Gender can be an influence on herd behavior. Women and men may not think alike and may react differently when taking investment decisions. Men may be overconfident about their knowledge of the stock market than women and hence women may show higher herding bias. Age too may be an influence on herd behavior as people tend to gain more experience as they age and hence older people may exhibit lower herd behavior compared to younger people. Income can also be an influence on herd behavior. People who earn more might have better knowledge of the investment market than the lower income people, hence exhibiting lower herd behavior. Occupation may also have an influence on herd behavior. People in certain occupation may tend to be better informed and may exhibit lower herding behavior. Accepting professional investment advice can also be an influence on herd behavior. People with advisors may not exhibit herd behavior as advice reduces or eliminates their herd mentality. The frequency of information gathering on investments and their avenues may also be an influencing factor on herd behavior. People who regularly and frequently gather information may tend to exhibit lower herd behavior than the people whose information seeking tendencies are lower.

The source of information can also be an influencing factor on herding behavior. Some sources from which information is gathered may reduce the herd mentality of the investor and others may not have the same influence. Information from friend and relatives may have a different influence over information from a newspaper. Information from a financial investment advisor may be better than from colleagues. The information assimilated by the investor may or may not be authentic. This too can influence investment decisions. The objective which is an underlying reason for the investment can also have an influence on herding behavior.

### II. METHODOLOGY

The objective of this research enquiry was to clarify the presence of herding and to check for contributing psychological factors influencing herding.

For this research, the following null hypotheses was framed: H01: Behaviour of Herding does not exist in Indian investment market.

A questionnaire was designed for this study for the purpose of accumulating primary data which would help in identifying the psychological factors behind herd behavior among individual investors. It would also highlight the objective of the investment. This questionnaire was put forward to investors across Chennai region. This

questionnaire would help to understand more about the investors' demographic factors which invariably is a major influence on investment decisions and a basis for bias and herd mentality too. Further the questionnaire looks at the objective behind the investment. Different investment scenarios were put forward to investors to study their choice. The questionnaire also looks at acceptable risk levels to the investors and the motivation behind the investment, factors influencing the investment decisions and also their sources of information.

In the questionnaire various statements were put forward using a Likert scale. The respondents were required about their agreement with the statements found in the questionnaire. The questionnaire was examined for its validity and its reliability. The questionnaire was put across online mode to investors of Chennai. Subjective sampling method was chosen for this study. Also for this study corbach's Alpha is used to determine consistency. The survey elicited 233 complete responses and the results collated. The analysis was done with the help of SPSS. Multivariate is used for this study. Barletts Sphericity test was used here to check sampling adequacy. Factor analysis technique was used to analyze the collected data. PCA technique was used in this study and with this technique relevant factors were identified. The factors were extracted from statements put forward to the respondents using a Likert scale. Here the statements were assigned to relevant factors through PCA.

### III. RESULTS & DISCUSSION

Post data collection 233 complete questionnaires were selected for further analysis. An analysis of the demographic profile showed that males constituted 74% and females constituted 26%. The majority of the investors were professionals and private sector employees with 59% of the respondents and were followed by businessmen at 19%. Income was also a critical component while making investments. People who earned over 40,000 constituted 69% of the investors which shows that higher income leads to more investment and people with low income were unable to save more and invest. The respondents who sought broker's advice stood at 43%. The respondents who did a company analysis before investing was at 77%. Historical performance of an equity was considered by 80% of the investors before investing.

**TABLE I**

Cronbach's Alpha of Reliability Coefficients	
Cronbachs Alpha	No. of Items
.648	53

Post demographic analysis, the associated factors which exhibited herd behavior were extracted. Bartlett’s Sphericity test was employed to check sample adequacy and the result was .663 which is above the stipulated level of 0.5. Hence it was deemed that sample size was adequate and could be considered for factor analysis. Factor analysis was used on the likert scale and eight associated factors were identified. The identified factors were explained with the equation

$$Y_i = \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon_i .$$

TABLE II

KMO and Bartlett's Test Result		
Kaiser-Meyer-Olkin Measure		.663
Bartlett's Sphericity Test	Approx. Chi-Square	1240.554
	Df	253
	Sig	.000

TABLE III

ROTATED COMPONENT MATRIX									
	COMPONENT								
	1	2	3	4	5	6	7	8	9
S5	0.727		0.169	0.119	0.11			-0.109	-0.102
S9	0.732	0.128		0.121					0.103
S20	0.678			0.121		0.213		0.318	0.167
S7	0.591	0.138	0.213			0.305		0.139	
S22	0.215	0.745							
S3	0.478	0.588				0.321			
S12	0.181	0.597		-0.124	0.365	-0.335	-0.134		
S21	0.198	-0.11	0.771	0.316					
S17			0.688	0.155	0.422				-0.131
S23	-0.169	0.496	0.597		0.254				
S10	0.292	0.108	0.186	0.655	-0.134		-0.21		0.236
S8	0.327	0.23	0.306	0.641			0.168		-0.181
S11	-0.206	-0.183		0.688	0.217			0.206	
S14			-0.123		0.815	0.124			0.146
S4					0.55	0.383			0.304
S18	0.163			0.172		0.789			
S15	-0.174	-0.35	-0.258	0.252		0.527	0.145	-0.128	-0.302
S6	0.122			0.161			0.81		
S1		0.16		-0.247	-0.237		0.751		
S16	-0.327	-0.313		-0.27	0.191	0.147	0.379	0.203	-0.291
S2			0.193					0.836	
S13			-0.325	0.375		0.171		0.643	
S19			0.13				0.102		0.882

Rotated component matrix was deployed on the statements and 8 factors were identified which had an influence on herding. They are (1) Confidence (Low): This factor can be seen as habit of investors to react quickly without proper self-analysis of their decision. This habit also induces investors to frequently change their decisions and get easily influence by other factors. These type of investors may lack the mental strength to make their one decisions and hence find an easier way out by copying others decisions. This factor accounted for 15.9% of the variance and after rotation of variables it was 11.34% of the data. (2) Low awareness:

Ignorance or low awareness may push an investor to start following others instead of thing one’s own decisions. This tendency may have arisen due to the lack of knowledge or awareness. This factor accounted for 9.018% of the data variance prior to rotation and 8.32% after rotation. (3) Optimism: In a bull market investors might feel optimistic to earn more returns.



In this scenario they may tend to stop relying on themselves with regard to decisions and might tend to follow other investors in the market with an intention to earn more in the bull market. The data variance for this factor is 8.01% and after rotation is 8.04%. (4) Reputation: Investors are very particular about their reputation. They would not like their reputation to be spoiled and hence they frequency go with the advice of other people rather than to decide on their own. Being conservative also promotes herd behavior as the investor feels comfortable to decide as a part of the group.

The data variance for this factor before rotation was 6.68% and after rotation was 7.78%. (5) Speculation: Investors at times may follow the market sentiments for gains through speculation during market movement. These investors are frequent traders in the market. Here the data variance was 6.37 before rotation and 6.80% after rotation. (6) Volatility: markets are frequently volatile. During such situations investors tend to shed their own decisions and look out for the decisions and intention of others to make investment decisions. Such turbulent market may induce investors to exhibit herd behavior. The variance here was 5.49% and after rotation it was 6.28%. (7) Social influence: investors may look to others and their decisions to validate their own decisions. Uncertainty or market rumors may lead to such situations. Here the variance was 5.01 % and after rotation it was 5.88 %. (8) Familiarity: For this factor the variance was 5.11% before rotation and was 6.31% after rotation. No matter how good the investors are in taking rational decisions, familiarity of investment options and opportunities leads to herding tendencies.

#### IV. CONCLUSION

The study finds the market is occupied by male investors than female investors. The tendency to invest increases as the income of the investor goes up. The younger investors are found to be aggressive may be less mature. Majority of the investors are confident of their decisions and feel that they get a majority of their decisions correct. The investors look to safety of their investment and tend to choose investments that guarantees high returns. More investors look to coworkers for advice and decision making in case of lack of knowledge or awareness. The investors consider available sources of information with a view to make investment decisions. The results derived from factor analysis gives us the reasons for investors to exhibit herd behavior. Investors show herd behavior by imitating actions of others. They tend to do so when they are in a confused state and are unable to decide on the course of action. Investors intentionally and un-intentionally start to follow leads of others in making investment decisions.

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#### AUTHORS PROFILE



Educational Qualifications: B.com, MBA

Mr. Madhavan Devadas is an Entrepreneur with interests in the field of Banking and Education. He has over 22 years of experience in the field of Banking and Education. He has worked in various foreign and domestic banks for a period of 11 years. His area of expertise is Risk Management. He is currently an independent consultant for financial services institutions and various Educational entities. He is currently a research scholar with SRM Institute of Science and Technology. His areas of interests include Financial Services, Behavioral economics, Behavioral finance, Consumer Behavior, Market research. He has attended various National and International conferences.



Educational Qualifications: Ph.D., MA, MLM, MFM, M.Phil. MBA, BBA

Dr. T. Vijayakumar, is a Professor & HOD Finance in SRM Institute of Science and Technology with over 18 years of teaching experience in the field of Management. His research interests are Customer Relationship Management, Retail banking, Service Quality, Finance, and Marketing. Systems His area of interests include Financial Management, Financial and Management Accounting, Security Analysis and Portfolio Management, Financial Services, System Analysis and Design, Database Management Systems, E-Business Technology and Management, Information Storage Management, Management Information Systems, Business Analytics, Marketing Research, and Consumer Behavior. He has published papers in various International and National journals. He has also presented papers in various national and international conferences.