Tuijin Jishu/Journal of Propulsion Technology
ISSN:1001-4055
Vol. 44 No. 4 (2023)

Role of Herd Behavior on Investment Decision of Mutual Fund Investors in India - An Empirical Study

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Abstract

Behaviour finance helps to understand the attitude and perception of investors on their investment decisions. Every investor differs from others in all the aspects due to a range of factors like demographic and socio-economic background. An optimal investment decision plays a vital role and is a major deliberation.

This paper analyses the role of herding behaviour on Indian mutual fund investors. By referring to psychology and pointing out the imperfections of a human mind, it reveals mistakes committed by both individual and professional investors.

This study captures the impact of herding behavior and overconfidence biases on the investors' decision-making in India The proposed study will collects the necessary data through questionnaires distributed among 113 respondents who were investing in mutual fund. The results show that overconfidence and herding bias have significant positive impact on investment decision. Overall results conclude that individual investors have limited knowledge and more prone towards making psychological errors. The findings of the study also indicate the existence of these four behavioral biases on individual investment decisions. This study will be helpful to financial intermediaries to advice their clients.

Key Words:-*Behavioural Finance, Herd Behaviour, Investment Decision, Mutual Fund*

1. Introduction

Behavioural finance discovers the investor's emotions and psychology which influence the investment decision, and ordinary errors of common people while making their financial decision out of emotions. Decision making is the most multifaceted and demanding doings of investors. Every investor differs from the others in all aspects due to a range of factors like demographic factor, socioeconomic background, educational level, gender, age etc., An optimal investment decision plays a vital role and is a major deliberation however the ideal request could make a victorious investor gain. Several psychological and behavioural factors influence investors in decision making, which are also studied by authors like Merikas et al. (2007) who undertook an empirical survey of the factors that mostly influence individual investor behavior in the Greek Stock Exchange. Anderson et al. (2007) analysed the effects of financial incentives on herding in a simulated financial market with two different experiments.

There is a term in investor behaviour i.e. herding; which means the behaviour shown by investors by Following the investment decisions of other investors investing in stock market can cause huge, unfamiliar troops or cashing based on evidently small fundamental evidence to rationalize either. Herding is the key ground of illusion in finance. Herding effect in financial market is recognized as the propensity of investors to imitate the

actions of others (Al-Tamimi, 2006). Herding behaviour shown by an investor makes his decision depend on others, which results in dissatisfaction about returns on investment. If investors do not show herding behaviour, they are able to make independent investment decisions and everything they get out of their investments boosts their confidence as well (Torrecillas, Yalamova, &McKelvey, 2016). Practitioners generally carefully contemplate the presence of herding, due to the fact that investors depend on group information rather than on the information collected by them which causes price deviation of securities from fundamental value; hence, multiple good opportunities for investment at the current time can be impacted (Chen & Volpe, 1998) Herd behaviour is the proclivity of a person to follow the moves (rational or irrational) of an immense group. The herd mind is the outcome of two causes; firstly, there may be a social pressure of conformity. Mostly people do not want to move out from the group they belong to. Secondly, there is a common logic that a large group can't make mistakes. Purchasing stocks based on price momentum while ignoring basic economic principles of supply and demand is known in behavioural finance area as herd behaviour and it leads to faculty decision (Byrne, 2007).

It is a retort to not having ample information and assuming that others around us can actually give us an alternative to the way decisions are made. Studies have concluded that humans find the going against large number of people to be very hard, and they generally conceal their own perspective.

2. Review Of Literature

Scharfstein and Stein (1990) described the factors influencing the attitude of retail investors. The psychological factors influencing investor behavior were identified using principal component analysis. The results of principal component analysis revealed six behavioural axes that drive investor behavior in the Indian stock market and the six factors are conservatism, diligence and discreetness, remorse abhorrence, cognition, prudence, and precaution under confidence.

Bikhchandani (2000) gave an overview of the empirical research on herd behavior in financial markets, the meaning of herding, the causes of herd behavior, the success of previous work in identifying the phenomenon, and the outcome that herding had on financial markets.

Kutan and Riza (2006) used new methodology based on the approach of Hwang and Salmon (2004) and based it on a cross sectional dispersion of trading volume to analyse the herding behavior on Toronto stock exchange. It was found that herd phenomenon consists of three essential components: stationary herding which signals the existence of the phenomenon whatever the market conditions, intentional herding relative to the anticipations of the investors concerning the totality of assets, and the third component highlighted that the current herding depends on the previous one which is feedback herding.

Maditinos (2007) used a power-law distribution of stock price variations within a segment denoting herding behavior and the rise of the dot.com bubble. The results exhibited that DFA can be used to determine the origin of stock-market bubbles but not the start of crashes.

Chiang and Zheng (2010) revealed that well informed investors had an inclination to exhibit herding behavior especially, for consumer and technology sectors during up and down markets, respectively as the negative coefficient is not limited to the downward market and to risky and uncertain shares.

Jansirani and Shanmugasundaram (2012) examined investor behavior - whether they behave rationally or irrationally towards respective capital market information using descriptive study. The questionnaires were distributed to 500 investors and the data was analysed using SPSS. The result exposed that investors behave rationally towards the information of the particular capital market.

Prosad, Kapoor, and Sengupta (2012) studied the herding behavior in the Indian equity market. To test the existence of herding linear regression model and linear regression using quadratic functional form was applied. The results revealed that the Indian market was so efficient that no herding was notified.

Cakan and Balagyozyan (2013) studied the existence of investors herding in the Turkish banking sector. The methodology of Chang et al. (2000) used for daily stock returns between 2007 and 2012 was applied and

herding was found to exist. Test was done for asymmetric with respect to the direction of market returns and it was found that herding was only present when the market was rising.

Jayaraj (2013) offered a new method de-trended fluctuation analysis' (DFA); an econo-physics method of finance and herding research for identifying the change from efficient-market behavior to herding behavior. It was examined whether DFA recognizes the transition from efficient market trading to herding behavior and the growing of the NASDAQ dot.com stock market bubble.

Dehghani and Sapian (2014) examined herding behaviors of not well-informed (non-private placement) and informed (private placement) investors in the IPO aftermarket from 2011 to 2011 using Christie and Huang's method. It was found that not well-informed investors exhibit rational behavior during market downswing for consumer, industrial, trading, and services sectors.

Paulo Lao and Harminder Singh (2011) in their study examine herding behavior in the Chinese and Indian stock markets. The study employs the Cross Sectional Absolute Deviation (CSAD) approach proposed by Tan, Chiang, Mason and Nelling (2008) to measure herding behavior. The findings suggest that herding behavior exists in both the Chinese and Indian stock markets depending on some market conditions. In the Chinese market, herding behavior is greater when the market is falling and the trading volume is high. On the other hand, in India the study finds herding behavior during the up market. Herding behavior is more predominant during large market movements in both markets. Relatively, there is lower prevalence of herding behavior detected in the Indian stock market. However, Chinese and Indian stock markets are believed to be riskier and less mature than the developed stock markets.

However, review of previous studies indicates that many behavioral biases are overlapping or expansion of other behavioral biases. This study considers only four biases which frequently observed in investment decision-making. Even though the herding behavior has been examined in some studies, we have tried to contribute to the literature by proving the evidences of herding in Indian Mutual funds. Through this paper the present study covers a recent time period, to our knowledge, not investigated before in Indian Context.

3. Research Methodology

The present study is a cross-sectional study and Quantitative method used for data analysis. A questionnaire designed and survey method is applied to obtain responses. The actual sample size for the study was 125, but few questionnaires found not adequately filled. Therefore, only 113 questionnaires were found useful and selected as sample size. Convenience sampling technique is used to collect data from investors in Mutual Funds. The purpose of this research analysis is to interpret and draw a conclusion from the collected data. Inferential statistics, as well as descriptive statistics, are applied for data analysis. SPSS software used for statistical computation. Firstly, Cronbach Alpha is applied to check the reliability of data. The range from 0.70- 0.90 is considered to be acceptable. Secondly, the correlation coefficient is carried out to test the relationship among variables that is investment decision making and behavioral biases. Then, finally, regression analysis is conducted to identify the impact among variables.

4. Data Analysis & Interpretation

This section comprised of results and interpretation of the data. First, the Cronbach's alpha test for measurement of reliability done. Secondly, the correlation coefficient among the behavioral biases and investment decision making is studied. The results of the reliability test (Table 1) indicated that the value of Cronbach Alpha is 0.762. Therefore, the scale is reliable as the value of Cronbach alpha is more significant than 0.6.

Table 1. Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.762	0.740	5

Table 2. Investor's demographic profile

Demographic Components	Frequency	Percentage
Age		
18 -25	34	30.0
25 – 30	30	26.5
30 – 35	07	6.1
Above 35	42	32.5
Gender		
Male	84	74.3
Female	29	25.6
Level of Education		
Undergraduate	28	24.7
Graduate	34	30.0
Postgraduate	38	33.6
Other	13	11.5
Profession		
Business	59	52.8
Salaried	54	49.2
Experience		
Under 5 years	44	38.9
6 -7 years	16	14.1
8 - 10 years	19	16.8
11 - 15 years	18	15.9
Above 15 years	16	14.1

Table 3. Results ofcorrelation

		Investment Decision Making	Overconfidence	Anchoring	Disposition	Herding
Investment Decision Making	Pearson Correlation	1	0.409**	0.378**	0.325**	0.402**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	113	113	113	124	138

	Pearson Correlation	0.409**	1	0.498**	0.541**	0.463**
Over-confidence						
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	113	113	113	124	138
	Pearson Correlation	0.378**	0.498**	1	0.614**	0.604**
Disposition						
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	113	113	113	124	138
	Pearson Correlation	0.402**	0.463**	0.604**	0.523**	
Herding	Sig. (2-tailed)	0.000	0.000	0.000	0.000	1
	N	113	113	113	124	

**. Correlation is significant at the 0.01 level (2-tailed)

From the analysis of the relationship among variables (table 3), it found that all the variables have a strong relationship with each other. There is a positive relationship between investment decision-making and overconfidence variables, that is 0.409 at 1% level of certainty. This shows that if the overconfidence of investor increases, the investor's decision making for investment also increases. The degree of relationship between Anchoring bias and investment decision making is 0.378, which is critical at a 1% level of certainty. This expresses that there is a significant positive relationship between Anchoring bias and investment decision making variable, and when anchoring increases, then investment decision making also rises. The connection between disposition bias and investment decision making also significantly positive, which is 0.325 noteworthy at 1% level of certainty. This expresses that investment decision making also increases with increase in disposition bias also. The degree of relationship among herding bias and investment decision making is 0.402 at 1% level of certainty which shows that there is a positive relationship among these two variables and if herding bias increases then investor make investment decisions accordingly.

Table 4. Regression analysis

Model	R	R Square	Adjusted R Square	Standard error of the estimate
1	0.477[a]	0.235	0.218	0.6582

Predictors: herding, overconfidence, disposition, anchoring

The analysis mentioned above (table 4) shows the results of linear regression. Investment decision-making considered as the dependent variable and four independent variables considered for the study, i.e., Overconfidence, anchoring, disposition, and herding bias. To assess the model fitness, the results of the model summary evaluated. The model summary indicates that R Square shows 0.235 variations in investment decision making is explained by the model, while adjusted R squared is 0.218, which is close to r squared. A reliable model indicated because of the high value ofR. The results show 23.5% of predictability level, which is low. However, this may be because of the other variables not considered in this model.

5. Discussion

While dealing with different investment options, there is one fundamental question people face that what is the best plan of action for investing in the financial instruments and to what magnitude can the historical price movements in the stock market can be used to forecast of the future price movements? Based on the assumption of rationality, it appeared that mutual fund investors would choose those financial instruments that maximize gains and minimize losses (Ahmad Zamri, Ibrahim, Haslindar, Tuyon, 2017). People are considered partly rational and irrational in their investment behavior. Behavioral finance studied the irrational aspect of human as an investor in their investment decision process. This branch of discipline indicated that cognitive biases prevent investors from realizing a complete sense of rationality at the time of investment decision-making. An act of rationality linked with a magnitude of uncertainty and risk, which is associated with every investment decision option (Paul Slovic, 1972). Various behavioral biases influence these risk and uncertainty. These behavioral biases focus on investor's behavior and their investment decision-making process. Behavioral biases are considered to be building blocks of behavioral finance that combine individual behavior and market phenomenon. In behavioral finance domain, various biases exist. For the present research, four biases have considered for a study that is overconfidence, anchoring, disposition effect, and herding bias.

After studying research papers on various behavioral biases, it documented that most of the financial and economic theories displayed that individuals behave rationally in the process of investment decision making only when they have all available relevant information. When information is not fully available to them in that case, empirical evidence indicated repeated patterns of irrationality that appeared like the way individual investors arrive at decisions and choices when confronted with risk and uncertainty. The four common behavioral biases also documented that their presence exists in the stock market or portfolio selection during decision making. Their presence leads to excessive trading volume and results in higher transaction cost. The present study also throws light on market psychology whereby it indicated that investors buy or sell stocks and why sometimes they do not buy or sell at all hence, the most critical challenge faced by investors is in the field of investment decisions. It reflected in the present study that the gains and losses realized by investors mainly depend on his investment decision-making competences. It observed that in the present scenario, investment decision-making process needs a better understanding of individual investor's behavioral biases as the existence of these behavioral biases have also been found both before and during the global financial crisis as well. The focus in the present study was on individual investors as they found to have limited knowledge about the application of conventional finance theories in decision making and hence more inclined towards making psychological errors. The result of our study shows that from four independent variables only two variables namely Overconfidence and herding bias have a significant impact on investment decision making with t-values of 3.759, 2.561 respectively while other variables namely disposition and anchoring have no significant impact on investment decision making. The present study was focussed on mainly formulation and analysis of four behavioral bias, namely, anchoring, overconfidence, disposition effect, and herding behavior. In future study can be elaborated by analyzing other behavioral biases that too have a substantial impact on individual investment decision making in their unique way. Moreover, the study can also further be elaborated to investigate the impact on a group or corporate investment decision making as well.

6. Conclusion

The discipline of behavioral finance has emerged in response to handle the difficulties faced by the traditional finance discipline. In essence, behavioral finance explains that investment choices not always influenced based on rationality. Behavioral finance also tried to understand the investment market anomalies by unwinding the two assumptions of standard finance, that is, (i) investors fail to update their beliefs precisely and (ii) there is a systematic variation from the normative process in making investment choices (Kishore, 2004).

In the 1960s, Kahneman and Tversky concentrated on different fields of research. After the energy crisis of the 1970s, they came together and conducted research and found inconsistent results with the Efficient Market Hypothesis and Expected Utility theory (Daniel Kahneman and Amos Tversky, 1979). In the 1980s, behavioral finance has emerged as an alternative perspective that combined the behavioral and psychological aspects in

economic and financial decision-making or in another way we can understand that this field of behavioral finance provides behavioral and psychological explanations (Abay, Blalock, & Berhane, 2017). Scientific work on the normative theory by Tversky

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