

## **An Analytical Study of Investor's Psychological Biases and its Impact on Mutual Funds Investment Decisions**

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### **Abstract**

This study is aim to determine the impact of Loss Aversion psychological bias and Optimistic Bias on mutual funds investment decisions of individual investors. This study includes the three major derivatives of mutual fund that is Systematic Investment Plans, Open ended mutual funds and close ended mutual funds for study. The study having an assumption to find out the significant or insignificant relationship between psychological biases and mutual funds investment decisions. Investor's behavior sometime unknowingly and unintentionally influenced with some psychological biases. Various researchers are studied the investment behavior of individual investors and the influence of psychological factors are identified. Generally investors are not aware about the impact of psychological biases in their decision making process So, this study is help to understand the irrational investment behavior of individual Investor while taking investment decisions in future in order to avoid risk and uncertainties for their choices. The uniqueness of the study is that it considered the impact on the basis of multiple derivatives which are not included in previous researches. The study having a significant effect on not only individual investors but it is also helpful to other stock market participants for making better decision choices for their investments.

**Keywords:** Psychological biases, mutual funds, behavioral finance, investment decisions

### **1. Introduction**

In India saving and investment trends since 1950 has been consistent increase and Lucknow city is growing fast in terms of infrastructure and private players are making huge investments which are accelerating the demand for investment.

India is by land mass, seventh largest country in the world and it is also the world's seventh largest economy.

It was growing fast in recent years and is expected to become a top three economy globally within the next 15-20 years. In India people work hard to earn money but unfortunately they are not willing to invest their money because of loss aversion and sometime people mistaken beliefs that our chances of experiencing a loss or negative are minimum.

This study is help to identify the individual investor's behavioral biases and its impact on mutual fund investment which affect the decisions and investment patterns.

This paper has taken into consideration two psychological bias; Loss aversion and Optimistic bias. The study conducted to considering only three types of mutual funds i.e. SIP, Open ended mutual funds and close ended mutual funds

### **2. Literature Review**

Behavioral bias is not a complex sounding investment theory. It is a concept that has intrigued researchers around the world. The case of this theory is very basic because of our experiences, conditioning and personalities we think rational and follow certain non-existent thumb rules. The Presence of psychological biases make our decisions irrational.

According to Smith & Moraitis (2010) [7], the field of behavioral finance has developed and it is complex to explain on scientific groups why people behave irrationally while dealing with money. There are two common psychological biases that can affect your relationship with money.

**2.1. Loss Aversion:** The Loss-Aversion was explored by Prospect Theory by Kahneman & Tversky (1979) [1]. This theory consist that investor does not value the profit and loss in the same way. Investors under this bias uses gain to make decisions rather than a loss because he tried to avoid loss. Thaler and Johnson (1990) [2] showed that the degree of loss aversion primarily depends on past result when it is about gain and loss. Barberies (2001) [4] studied loss aversion in a consumption based model to evaluate the financial assets as illustrated by the prospect theory. Shiller (1998) [3] says loss aversion is a particular case of regret aversion. There is a human tendency to feel the pain of regret when facing errors and they wish to avoid that pain of regret.

**2.2. Optimistic Bias:** in this bias individual investors having a tendency of overestimates their chances of positive experience in comparison to negative. Puri and Robinson (2007) [5] suggest that optimistic people in real life tends to invest more in individual stocks. Felton (2010) [6] suggests that optimism bias lead to different behavioral tendencies in men and women according to domain.

**3. Objective of the Study**

To identify the significant impact of psychological biases loss aversion and optimistic on mutual funds investment patterns including SIPs, open ended and close ended mutual funds.

**4. Research Methodology**

Research design is Cross Sectional is employed. Primary Data was collected for the study through questionnaire. Random sampling has used for collecting data from various financial institutions and brokerage houses. Sample size is 100 and only Individual Investors are considered for this study.

**5. Hypothesis**

**5.1. Hypothesis 1**

**H1:** There is a significant impact of Loss Aversion psychological biases on Stock Market Investment pattern.

**5.2. Hypothesis 2**

**H1:** There is a significant impact of Optimism psychological biases on Stock Market Investment pattern.

**6. Data Analysis and Interpretation**

According to the objective of the study data have analyzed by using regression analysis on Advance Excel for estimated the impact to satisfy the assumed hypothesis. After tested Reliability of data by Cronbach’s Alpha test it was found that  $\alpha = 0.80$ . In the formula, it is explained that if the Alpha Value  $(0.80) > 0.6$ , then the instrument declared as reliable.

**6.1. Analysis for Loss Aversion Psychological Bias**

**Table 1:** Descriptive Statistics of Loss Aversion Bias

Mutual Funds	SIP	Close Ended Mutual	Open Ended
		Funds	Mutual Funds
Mean	3.36	3.53	3.47
Standard Error	0.10	0.11	0.11
Median	3.00	4.00	4.00
Mode	4.00	4.00	4.00
Standard Deviation	0.97	1.11	1.09
Sample Variance	0.94	1.22	1.18
Kurtosis	-0.54	-0.59	-0.93

The above table shows the description about the inferential statistics of collected data from using 100 respondents

**Table 2:** Regression Statistics Results of Loss Aversion Bias

Variable	Multiple	R	Adjusted R	Standard	Observations
	R	Square	Square	Error	
SIP	0.68989 4	0.47595 4	0.470607	0.705353	100.0000
Close Ended Mutual Funds	0.67883 7	0.46082	0.455318	0.815614	100.0000
Open Ended Mutual Funds	0.65533 2	0.42946 1	0.423639	0.825003	100.0000

**Table 3:** ANOVA on Loss Aversion Bias in Mutual Funds Investment Patterns.

Variables		df	SS	MS	F	Significance F
SIP	Regression	1	44.28278	44.28278	89.00655	2.05E-15
	Residual	98	48.75722	0.497523		
Close Ended Mutual Funds	Regression	1	55.71778	55.71778	83.75756	8.38E-15
	Residual	98	65.19222	0.665227		
Open Ended Mutual Funds	Regression	1	50.20825	50.20825	73.7673	1.38E-13
	Residual	98	66.70175	0.68063		

**Table 4:** Regression Model on Loss Aversion Bias in Mutual Funds Investment Patterns

Variables	Coefficients	Standard Error	t Stat	P-value
SIP	0.583282	0.061826	9.434328	2.05E-15
Close Ended Mutual Funds	0.654272	0.07149	9.151916	8.38E-15
Open Ended Mutual Funds	0.621082	0.072313	8.588789	1.38E-13

The above mentioned table shows regression results of Loss Aversion Bias clearly shows the significant relationship with mutual funds investment. The p-value of regression helps to determine the relationship of dependent and independent variable. P-Value is 0.00 in this case which less than the significant level i.e. 95% is. So the hypothesis 1 is accepted and shows the significant impact of Loss Aversion psychological Bias and Mutual funds Investment patterns.

**6.2. Analysis for Optimistic Psychological Bias**

**Table 5:** Descriptive Statistics of Optimistic Bias

Mutual Funds	SIP	Close ended Mutual Funds	Open Ended Mutual Funds
Mean	3.54	3.47	3.46
Standard Error	0.111392	0.114992	0.113191
Median	4	4	4
Mode	4	4	4
Standard Deviation	1.113916	1.149923	1.131906
Sample Variance	1.240808	1.322323	1.281212
Kurtosis	-0.60852	-0.59141	-0.96073

Above table is inferential statistic of 100 respondents in data collection.

**Table 6:** Regression Analysis Results of Optimistic Bias

Regression Statistics					
Variable	Multiple R	R Square	Adjusted R Square	Standard Error	Observations
SIP	0.7321	0.5360	0.5313	0.7626	100.0000
Close Ended Mutual Funds	0.5023	0.2523	0.2447	0.9994	100.0000
Open Ended Mutual Funds	0.6464	0.4178	0.4118	0.8681	100.0000

**Table 7: ANOVA Results of Optimistic Bias**

ANOVA						
Variable		df	SS	MS	F	Significance F
SIP	Regression	1.0000	52.9900	52.9900	70.3184	0.0000
	Residual	98.0000	73.8500	0.7536		
Close Ended Mutual Funds	Regression	1.0000	33.0291	33.0291	33.0693	0.0000
	Residual	98.0000	97.8809	0.9988		
Open Ended Mutual Funds	Regression	1.0000	52.9900	52.9900	70.3184	0.0000
	Residual	98.0000	73.8500	0.7536		

**Table 8: Regression Model Results of Optimistic Bias**

Variable	Coefficients	Standard Error	t Stat	P-value
SIP	0.7179	0.0675	10.6406	0.0000
Close Ended Mutual Funds	0.5085	0.0884	5.7506	0.0000
Open Ended Mutual Funds	0.6440	0.0768	8.3856	0.0000

In the case of Optimistic psychological bias the regression analysis results shows the presence of correlation between dependent and independent variables. In this case also the p-value is less than the significance level and it confirm the presence of optimistic psychological bias in mutual funds investment patterns so hypothesis H2 is accepted and proved that there is a significant impact of optimistic bias.

## 7. Conclusion

The findings of the study satisfied the objective of the research paper which identify the significant impact of Loss aversion Bias and optimistic Bias in mutual funds investment patterns. The study describes the role of psychological biases in the investment decision which affect the rationality of individual investors. People in Loss aversion bias not consider profit and loss in same manner. They have twice pain in the case of loss rather than the pleasure of gain and also optimistic about their future investment decisions. This study is conducted in Lucknow city so the scope of the study is limited the collection of data from individual investors as respondents and reflect the view of individual investors only. Going beyond the geographical restriction it makes a comparative analysis of different regions in India can bring different dimension to the study. It is helpful for investors to take better investment decisions in future in order to avoid risk and uncertainties about their choices.

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