

Impact of Behavioral Biases on Investment Decisions of Individual Investors in Mumbai

A sample study

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Abstract- To achieve financial goals individuals invest in different investment avenues and achievement of financial goals depends on selection of correct investment avenue. Traditional finance suggests that investors are rational and make optimal investment decision without the effect of emotions on their decisions. Behavioural finance explains that investor behavior is irrational as emotions have effect on investment decision making. The current study presents the impact of twenty three behavioural biases on investment decisions of individual investor of Mumbai and it is conducted for a sample size of 202 individual investors. It is observed that four factors such as erstwhile experience factor, Incongruity factor, Inducement factor and Dogmatic factor have impact on investment decisions of individual investors of Mumbai.

Index terms – Behavioural Finance, Investment, Decisions, Biases

I. INTRODUCTION

Prudent investment decision is absolutely necessary to achieve the desired financial goals. Investment decisions taken abruptly may lead to heavy financial losses and such decisions cannot achieve desired financial goals. To maximize return on investment various established theories in finance may be used by an individual to take investment decision. The investment decision may be done by doing fundamental analysis about the investment, analyzing various risk factors, expected return, appreciation on investment, time frame, liquidity, safety and overall economic condition. Even after doing initial study regarding investment avenues, the investments does not achieve the desired returns which results in delay in achieving the chosen financial goals or failure in achieving the looked- for financial goals. This may be due to error in judgment of investment decisions, as investment decisions may be influenced by emotions. Behavioral finance explains the irrational behavior of investors (Phung,2008). The current study presents the impact of twenty three behavioural biases on investment decisions of individual investors of Mumbai. The first twenty biases are measured as suggested by M. Pompain (2012). The study tries to find out the association of different behavioral biases with investment decisions of individual investors in Mumbai city.

II. CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

The literature available on the subject emphasizes the evidence of how emotions and behavior of individuals affect investment decisions of individuals. Homo economics is a simple model of human behavior stated that humans are perfectly rational in their economic decision (Simon, 1955)^[1]. Though, many psychologist believe that human are not perfectly rational and human behavior is less ruled by rationality than biased emotions (Michael Pompain, 2006)^[2]. It was also highlighted that there seems to be certain degree of correlation between the behavioral finance theory factors and individual investors behavior towards investment (Anna A Merikas 2000)^[3]. Investors perception over various investment avenues was also emphasized (N.Geetha and M.Ramesh, 2012)^[4]. In 1980's a new field was emerged known as behavioural Finance that combines the psychological and behavioral theories with traditional financial theories to provide the explanations of why people make irrational decisions (Phung, 2008)^[5]. Kahneman and Tvesky contribute a lot in the field of behavioural finance with their work on prospect theory. Behavioral finance explains the cognitive and emotional factors that influence the decision making process of individual, groups and organisations (Ricciardi & Simon, 2011)^[6]. Past experiences can impact future decision making and past decisions influence the decisions

people make in the future (Juliusson, Karlsson, and Garling, 2005)^[7]. From the above available literature on behavioral finance and investment decisions, it is quite understood that behavioral finance has a major impact on investor's decision regarding investments but few research studies explains the impact of behavioral factors on investment decision making of investors in Mumbai. Therefore, examining the subject is essential in order to understand the changing world of investment.

III. OBJECTIVE OF THE STUDY

The main objective of the study was to find out impact of behavioral biases on investment decisions of individual investors in Mumbai.

IV. RESEARCH METHODOLOGY

A. Research Design

The study was exploratory. It was conducted to find impact of behavioral biases on investment decisions of individual investors of Mumbai.

B. Hypothesis

The hypothesis for the study was suggested as follows: Ho :

There is no significant relationship between behavioural factors and investment decisions of individual investors of Mumbai.

Ha : There is significant relationship between behavioural factors and investment decisions of individual investors of Mumbai.

C. Sources of Information

The primary data was collected by interviewing 202 respondents through questionnaire method and the secondary data was collected from books, periodicals, websites and journals.

D. Target population and sample size

Target population was individual investors with sample size of 202 respondents and all the respondents were from Mumbai region. The questionnaire was distributed to 225 individuals out of which, 23 were discarded for blank responses and the balance 202 were used for data analysis.

E. Data Analysis

The data analysis was done by using factor analysis as there were twenty three behavioural biases in total that were studied. Out of twenty three behavioural biases the first twenty were as suggested by Michael Pompain (2012)^[8] The twenty three biases were as follows: Anchoring bias, Loss Aversion bias, Self-control bias, Regret bias, Endowment bias, Availability bias, Self- attrition bias, Status quo bias,

Overconfidence bias, Framing bias, Conservatism bias, Affinity bias, Mental

Accounting bias, Hindsight bias, Representative bias, Outcome bias, Cognitive dissonance bias, Control bias, Confirmation bias, Recency bias, fear of unknown bias, past events of life bias and earlier generation investment pattern bias.

F. Limitation of the study

One of the limitations of the current study is that it is based on relatively small sample hence; the results may not be adequately generalized. The other limitation of the study is, it examines the behavior pattern of the investors from Mumbai region only.

V. RESEARCH FINDINGS

A. Test of Reliability Statistics

Reliability Statistics test was done to check the reliability of data collected for further uses the results of it are presented in table 1 and table 2

Table 1 Case Processing Summary to study impact of behavioural biases on investment decisions of individual investors

		N	%
Cases	Valid	202	100.0
	Excluded ^a	0	0.0
	Total	202	100.0

a. Listwise deletion based on all variables in the procedure.

Table 1 shows the case processing summary to study impact of behavioural biases on investment decisions of financially conversant investors which consists of 202 valid cases of financially conversant investors and no missing value.

Table 2 Test of Reliability Statistics for individual investors in Mumbai

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.707	.710	11

Table 2 shows the test result of reliability statistics that consists of 0.707 as Cronbach's Alpha value, it indicates that variables are consistent and consequently these variables are appropriate for conducting factor analysis.

B. Impact of Behavioural factors on investment decisions of individual investors in Mumbai

The impact of twenty three behavioural biases was studied on investment decisions of individual investors by

performing exploratory factor analysis. After some rounds of removing unsuitable variables, the results of the analysis shows that variables are grouped into four factors. Here, Bartlett's test of Sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy are used. The Kaiser-Meyer-Olkin measure of sampling adequacy is .770 and value of Barlett's test of Sphericity is 274.223 with 55 degrees of freedom and significance is .000. It indicates that null hypothesis is rejected and these indexes prove that factor analysis for these variables is totally suitable and accepted. The results are presented in table 3.

Table 3 KMO and Bartlett's Test results of factor analysis for individual investors in Mumbai.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.770
Bartlett's Test of Sphericity	Approx. Chi-Square	274.223
	Df	55
	Sig.	.000

Factor loadings of the items on a factor are greater than 0.5 (with the sample size is 202) It ensures that Exploratory factor analysis has a practical significance to the analyzed data. Eigen value greater than one suggests that the four factors explain a sizable variation contained in the data. Since these four factors have Eigen values greater than one, which together explains a variance of 56.068%; therefore, the factors confirmed the factorial validity. The table 4 and table 5 explain these results.

Table 4 Total Variance Explained results of factor analysis for individual investors of Mumbai

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	2.873	26.115	26.115	2.873	26.115	26.115	2.056	18.693
2	1.248	11.345	37.460	1.248	11.345	37.460	1.450	13.184	31.876
3	1.037	9.424	46.884	1.037	9.424	46.884	1.422	12.932	44.808
4	1.010	9.184	56.068	1.010	9.184	56.068	1.239	11.261	56.068
5	.957	8.703	64.772						
6	.758	6.894	71.665						
7	.745	6.777	78.443						
8	.662	6.021	84.463						
9	.607	5.520	89.984						
10	.570	5.184	95.168						
11	.532	4.832	100.000						

Extraction Method:Principal ComponentAnalysis.

	Component			
	1	2	3	4
Investment decision is affected by concern for fear of unknown	.716			
Endowment bias	.696			
Investment decision is influenced by earlier generations' investment pattern.	.599			
Investment decision is influenced by past events of my life.	.535			
Status quo bias				
Cognitive dissonance		.820		
Outcome bias		.795		
Representative bias			.764	
Anchoring bias			.627	
Affinity bias				.788
Mental accounting				.739

Extraction Method: PrincipalComponent Analysis.

RotationMethod: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 5 shows that behavioural biases that impact investment decisions of individual investors in Mumbai are reduced from twenty three to ten biases and further grouped into four factors that are classified as follows:

Factor 1

- ∑ Fear of unknown
- ∑ Endowment bias
- ∑ Investment pattern of earlier generations
- ∑ Past events of life

Factor 2

- ∑ Cognitive dissonance
- ∑ Outcome bias

Factor 3

- ∑ Representative bias
- ∑ Anchoring bias

Factor 4

- ∑ Affinity bias
- ∑ Mental accounting bias

The four factors above are renamed as follows: Factor 1- Erstwhile experience factor

Factor 2- Incongruity factor Factor 3- Inducement factor

Factor 4- Dogmatic factor

VI. RESULTS

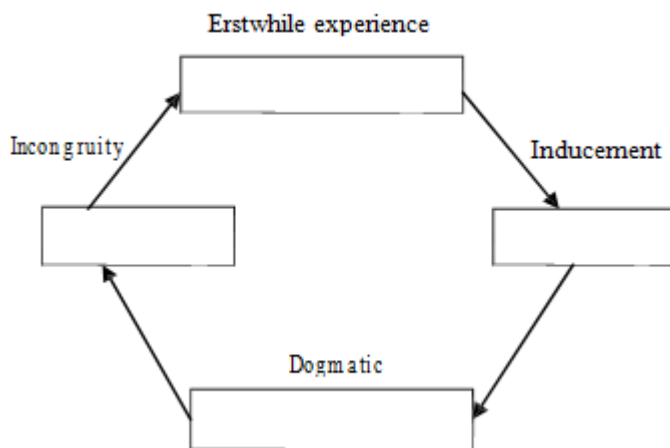


Fig 1

Thus, from the fig 1 we can conclude that four factors have significant impact on investment decisions of individual investors of Mumbai. The four factors are erstwhile experience factor, Incongruity factor, Inducement factor and Dogmatic factor. It can further be observed that erstwhile experience factor, induces one to take decisions on the basis of past experiences without considering the changes in the current circumstances of investment, this leads to rigid or dogmatic behavior due to which the investment decisions taken are inappropriate.

VII. CONCLUSION

The result of the study highlight for achievement of financial goals it is necessary to learn from past experiences and based on those learning's take future course of investment actions rather than depending on past experiences and making mistakes by showing rigid behavior of not adopting to current dynamic circumstances of investment. At the same time past experiences also teaches investors positive aspects of investing which, can be utilized to achieve financial goals by making correct investment decisions. The investment decisions also depend upon the prevalent economic condition and the ambiance for the investment avenues. The individual financial and investment goals though are subjective in nature but they largely affected by the behavioral biases as discussed in this study.

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