

An Analytical Study of Psychological behavior of investors investing in Mutual Funds with reference to endowment bias & Self-control bias

¹Abhijit P. Bobde, ²Dr. Pravin T. Bagde, ³Dr. Nitin S. Goje

¹Advisor-Training & Staffing, Outward Bound Bharat, Nagpur.

²Associate Professor, Department of Business Management, C.P & Berar E.S. College, Nagpur.

³Dean, School of Computer Science and Applications, Sandip University, Nashik.

Abstract: Investment decision making should be rational as it is the hard earned money of the investor and it should be exercised after a thorough study. Our education system teaches us to work hard to earn money but never teach how money will earn money through investments. People commit blunders while investing their hard earned money due to lack of knowledge and in turn gain insight about the pros and cons of investing. Practical experience with investing money makes investor to experience bright or dark side of investment. Investors investing in different market conditions and in different environment experiences high emotional turmoil, these experiences are stored in our cellular memory and further used for decision making of Investments thus creating behavioral biases. Study of Behavioral biases are studied under behavioral finance. Behavioral biases are of two types Cognitive Bias & Emotional Bias, in this paper we are studying emotional bias especially the endowment bias & the Self-control Bias.

Keywords: Behavioral Finance, Investor's Behavior, Mutual Fund, Emotional Bias, Endowment Bias, Self-Control Bias

I. INTRODUCTION

India being a developing nation, A big transformation is taking place in the investment behavior of Investors. The A grade cities like Mumbai, Delhi etc. had shifted their investment pattern long back, but B & C grade Cities have shifted the investment pattern in this decade and now rural markets are following them. This shift of Investment pattern is from fixed deposit to new options of Investment. Due to government efforts, effective marketing campaign and Systematic Investment Plan (SIP), Mutual funds have gained huge popularity and now the Mutual fund Industry is recording new high every day with an accelerated growth rate.

In India people work hard to earn money but unfortunately they do not give very high priority to invest time for Investment of money. This behavior of Investors affects the decision making of Investment. The ability to study, understand and act rationally which we call "responsible decision making" has been shifting to habitual behavior of reacting to situation which we call "Behavioral bias".

The traditional concept states that if responsible decision making is exercised, the decision maker takes rational decision.

Behavioral finance states that personal biases affects the exercise of responsible decision making and hinders in rational decision making of Investments.

This paper has taken into consideration the traditional concept as null hypothesis and behavioral finance concept as hypothesis 1 to analyse two emotional biases.

1. Endowment Bias
2. Self-Control Bias.

Endowment Bias:

According to Michael M Pompian, in his book Behavioral Finance and Wealth Management (2006) pg. no 154 has explained Endowment Bias as-

1. Endowment bias influences investors to hold onto securities that they have inherited, regardless of whether retaining those securities is financially wise. This behavior is often the result of the heirs' fear that selling will demonstrate disloyalty to prior generations or will trigger tax consequences.

2. Endowment bias causes investors to hold securities they have purchased (already own). This behavior is often the result of decision paralysis, which places an irrational premium on the compensation price demanded in exchange for the disposal of an endowed asset.

3. Endowment bias causes investors to hold securities that they have either inherited or purchased because they do not want to incur the transaction costs associated with selling the securities. These costs, however, can be a very small price to pay when evacuating an unwise investment.

4. Endowment bias causes investors to hold securities that they have either inherited or purchased because they are familiar with the behavioral characteristics of these endowed investments Familiarity, though, does not rationally justify retaining a poorly performing stock or bond.

Self-Control Bias:

Self-reverence, self-knowledge, self-control—these three alone lead to power.

Alfred, Lord Tennyson (1880)

Self-control bias is a human behavioral tendency that causes people to consume today at the expense of saving for tomorrow.

Self-control bias can also be described as a conflict between people's overarching desires and their inability, stemming from a lack of self-discipline, to act concretely in pursuit of those desires.

The need of money is different in different stages of life, Financial Advisors analyze the requirement of Investors and suggests financial planning for the Investors. The Financial plan consist of immediate, medium term, long term and retirement financial goals.

To achieve these goals the Investors has to invest in the disciplined manner.

Investing in a disciplined way requires self-control. In Life Human being has many priorities and many priorities arise immediately making the investor test his self-control.

Emotions of greed, fear of losing the opportunity, short term gains etc. plays a vital role in losing self-control and get away with emotions resulting in long term loss and missing on financial goals.

Most of the Investors may have endowment & Self-control Bias, but very few acknowledge it. I find the need of understanding these behavioral bias and make investors aware of it for better understanding of their behavior towards decision making of Investments for achieving their financial Goals.

II. LITERATURE REVIEW

In behavioral finance framework of mutual funds selection, emphasis is on describing psychological biases that effect investor behavior. Numerous psychological biases have been discussed and described in detail in behavioral finance literature. Some of the important biases that have been identified to influence the Mutual funds investors are namely Representativeness heuristic (Tversky and Kahneman (1974) which further can cause biases like framing (Tversky and Kahneman (1974), mental accounting (Hirshleifer (2001), Kahneman and Lovallo, (1993), prospect theory (Tversky and Kahneman (1979) and the resulting loss aversion and disposition effect (Shefrin and Statman (2000) Odean (1999), cognitive dissonance (Goetzmann and Peles,1997), Status quo bias (Samuelsons and Zeckhauser (1988), the endowment bias (Kahneman et.al. (1990) and Self-control Bias (Hersh Shefrin and Richard Thaler,1998).

Professor John A. List, of the University of Maryland, authored a unique and highly relevant paper entitled "Does Market Experience Eliminate Market Anomalies?" reviewed some key aspects of endowment bias.

A study on endowment effect was done by Daniel Kahneman, Jack Knetsch & Richard Thaler, in which participants were given a mug and then offered the chance to sell it or trade it for an equally valued alternative (pens). They found that the amount participants required as compensation for the mug once their ownership of the mug had been established ("willingness to accept") was approximately twice as high as the amount they were willing to pay to acquire the mug ("willingness to pay").

Morewedge & Giblin, 2015 proposed two paths by which attachment or self-associations increase the value of a good. An attachment theory suggests that ownership creates a non-transferrable bonding between the self and the good. The good is incorporated into the self-concept of the owner, becoming part of her identity and imbuing it with attributes related to her self-concept. Self-associations may take the form of an emotional attachment to the good. Once an attachment has formed, the potential loss of the good is perceived as a threat to the self.

Shefrin and Statman (1985) commented upon the concept of Kahneman and Tversky's approach of loss aversion to loss realization. The authors discussed this phenomenon into wider theoretical framework, which included elements of mental accounting, regret aversion, self-control and tax consideration.

In 1998, Hersh Shefrin and Richard Thaler introduced a behaviorally explained life-cycle hypothesis, which is a descriptive model of household savings in which self-control plays a key role.

Pompian(2006) commented that fewer saving and more expenditures are being associated with self-control bias. Due to this, investor may suffer from quick retirement and less savings

III. OBJECTIVES OF STUDY

- To study whether psychological behavior has an impact on decision making of the investors.

Sub-objectives

- To study whether endowment bias is exhibited in decision making of Mutual fund Investments.
- To study the whether self-control bias is exhibited in decision making of Mutual fund Investments.

IV. RESEARCH METHODOLOGY

Research Design

To study behavioral finance applicability, the research is being carried with the use of primary data in which structured questionnaire is used as a tool for data collection.

A sample survey is conducted among the mutual fund investors of Nagpur city.

Research Type

Most quantitative research falls into two areas: studies that describe events and studies aimed at discovering inferences or causal relationships. Descriptive studies are aimed at finding out "what is," so observational and survey methods are frequently used to collect descriptive data (Borg & Gall, 1989).

Hypothesis for assessing the endowment Bias of Mutual Fund Investors:

The hypothesis to be tested is:

Hypothesis I

H0: There is no significant difference in investor’s behavior when he finds an opportunity to create profitable portfolio by selling non-performing funds which he owns or have endowed from ancestors and buy performing funds.

H1: There is significant difference in investor’s behavior when he finds an opportunity to create profitable portfolio by selling non-performing funds which he owns or have endowed from ancestors and buy performing funds.

For checking the validity of Endowment bias on Mutual fund Investors:

The hypothesis to be tested is:

H0: Investment decision is not governed by Endowment bias.

H1: Investment decision is governed by Endowment bias.

Sample Design and Size

The population from which sample is drawn comes from Mutual fund Investors. The sample size for the consumer survey is 470 and Random sampling method is applied for selection of samples.

Hypothesis Testing

Hypothesis I & II is tested by using Chi-square Analysis.

Hypothesis I

There is no significant difference in investor’s behavior when he finds an opportunity to create profitable portfolio by selling non-performing funds which he owns or have endowed from ancestors and buy performing funds.

Two questions have been put in questionnaire asking responses from respondents on their behavior for Endowment Bias.

Responses are tabulated to prepare contingency table.

262 investors chose not to sell the endowed funds, 110 chose to sell it, and 98 could not decide. In case of purchased securities & commission aversion 221 s chose not to sale the fund while 165 opted for selling the fund and 84 were unable to decide. This has been further shown with the help of Chi-Square Analysis.

Contingency Table

Decision	Sell Aunt's endowed funds	Sell excess funds of same category	Total
Yes	110	165	275
No	262	221	483
Can't Say	98	84	182
Total	470	470	940

The expected Frequency of all the given cells is worked out as:

Expected Frequency of a cell (Fe) = (Row total of the cell X Column total of the cell) /n

CALCULATION OF CHI-SQUARE

Row	Col	Fo	Fe	Fo-Fe	(Fo-Fe) ²	(Fo-Fe) ² /Fe
1	1	110	137.5	-27.5	756.25	5.50
1	2	165	137.5	27.5	756.25	5.50
2	1	262	241.5	20.5	420.25	1.74
2	2	221	241.5	-20.5	420.25	1.74
3	1	98	91	7	49	0.54
3	2	84	91	-7	49	0.54
					Σ	15.55

Chi-Square value (x2) = Σ(Fo-Fe)²/Fe
= 15.55

The degree of freedom is {(r-1)*(c-1)}, where r equals to row involved, and c is the no. of columns, so degree of freedom is {(3-1)*(2-1)} i.e. 2. The level of significance (α) is chosen as 0.05. The tabulated value of χ² (Chi-Square) is 5.991.

The calculated value of χ² (Chi-Square) value is 15.55.

Since the calculated value is greater than tabulated value it falls in rejection region.

Hence null hypothesis that there is no significant difference in investor’s behavior when he/she finds an opportunity to create profitable portfolio by selling non-performing funds which he owns or have endowed from ancestors and buy performing funds is rejected and alternate hypothesis is accepted.

Generally, endowment bias tends to impact investors in four main contexts:

- (1) Inherited securities, (2) Purchased securities, (3) Commission aversion, and (4) Desire for familiarity.

Most of the Investor's chose to hold the funds which they endowed or bought by mistake. The Investor's emotional attachment with endowed funds or getting attached to the decision taken earlier makes to exhibit endowment bias in decision making of Mutual fund Investments.

Hypothesis. II

Relevance of Self-Control Bias in respect to Indian Investors.

The present study examines the existence of self-control bias amongst the investors and market participants in Indian mutual funds market

Self-control bias is a human behavioral tendency that causes people to consume today at the expense of saving for tomorrow. Money is an area in which people are notorious for displaying a lack of self-control

There is no significant difference in investor's behavior when he/she finds an opportunity to prioritize financial spends on short term lucrative gain from shopping or from other requirement popping up in life and lose self-control by breaking the discipline of Investment for achieving financial goals. Two questions have been put in questionnaire asking responses from respondents on their behavior for Self-control Bias.

Responses are tabulated to prepare contingency table.

115 investors prioritize the investment goals and chose for disciplined investment, 277 had other priorities for spent money in lucrative offers or personal & family timely priorities and 78 were not able to decide.

In another question 140 chose disciplined investment for medium to long term investment goals while 255 were not able to invest because of other priorities and 75 were not able to decide. This has been further shown with the help of Chi-Square Analysis.

Contingency Table

Decision	Investment Goals	Disciplined Investment	Total
Prioritize	115	140	255
Different Priority	277	255	532
Can't Say	78	75	153
Total	470	470	940

The expected Frequency of all the given cells is worked out as:

Expected Frequency of a cell(F_e) = (Row total of the cell X Column total of the cell) /n

CALCULATION OF CHI-SQUARE

Row	Col	Fo	Fe	Fo-Fe	(Fo-Fe) ²	(Fo-Fe) ² /Fe
1	1	115	129	-14	196	1.52
1	2	143	129	14	196	1.52
2	1	277	264	13	169	0.64
2	2	251	264	-13	169	0.64
3	1	78	77	1	1	0.01
3	2	76	77	-1	1	0.01
					Σ	4.35

Chi-Square value (χ^2) = $\sum(F_o - F_e)^2 / F_e$
= 4.35

The degree of freedom is $\{(r-1)*(c-1)\}$, where r equals to row involved, and c is the no. of columns, so degree of freedom is $\{(3-1)*(2-1)\}$ i.e. 2. The level of significance (α) is chosen as 0.05. The tabulated value of χ^2 (Chi-Square) is 5.991.

The calculated value of χ^2 (Chi-Square) value is 4.35.

Since the calculated value is less than tabulated value it falls in rejection region.

Hence null hypothesis that there is no significant difference in investor's behavior when he/she finds an opportunity to create profitable portfolio by selling non-performing funds which he owns or have endowed from ancestors and buy performing funds is rejected and alternate hypothesis is accepted.

V. CONCLUSIONS

Following conclusions can be drawn on the basis of study

- Behavioral bias plays an important role in decision making of mutual funds
- Investors gets emotionally attached to its owned entity which becomes more valuable for him when it comes to sale, reflecting endowment bias.
- Investors are more inclined towards the inherited investments and avoid selling it.
- Endowment bias tends to impact investors in four main contexts:
 - inherited securities, ii. purchased securities, iii. commission aversion, and iv. desire for familiarity.
- Familiarity due to pre-ownership of funds creates a comfort for most of the investors and leaving comfort zone for a small opportunity cost is not acceptable for them exhibiting endowment bias.
- Discipline investment is very important for achieving medium and long term financial goals.
- Spending on lucrative offers on the cost of breaking discipline investments is exhibited by maximum investors confirming Self-control bias in mutual fund investments.

8. Less Income and high expenditure has become a way of life for most of the middle class people, Investments in mutual funds is an option whole heartedly accepted by this segment, the demanding situation and reacting habit leads to self- control bias resulting in breaking the discipline of investing for long term goals.

VI. BIBLIOGRAPHY AND REFERENCES

- [1] Prasanna Chandra, Investment Analysis and Portfolio Management,(2004) Tata McGraw-Hill publishing company ltd.
- [2] Kothari, C.R., Research methodology, 2nd edition.
- [3] William Zikmund, Business Research Method , 7th Edition, Cengage Learning,2010
- [4] Levin Richard I, Rubin David S, Statistics For Management, Prentice Hall of India Pvt. Ltd., 2002, Seventh Edition
- [5] Michael M. Pompian, Behavioral Finance & Wealth Management (2006) John Wiley & Sons, Inc.
- [6] Fromlet, Hubert; "Behavioral Finance – Theory and Practical Application"; Business Economics; Jul 2001.
- [7] Fama, Eugene F.; "Market efficiency, Long-term returns, and Behavioral Finance"; Journal of Financial Economics, 1998; Pg. 283-306 Ritter, Jay R.; "Behavioral Finance"; Pacific-Basin Finance Journal, September 2003
- [8] Behavioral Finance: Testing applicability on Indian Investors Dr. Deepak Sahni, International Journal of in Multidisciplinary and Academic Research (SSIJMAR) Vol. 1, No. 2, July-August (ISSN 2278 – 5973)
- [9] Worldwide journal, Volume : III, Issue : VI, June - 2013. Applying Behavioural Finance by Analysing Investor Behaviour In Lucknow City. Dr. Vikram Bisen, Madhulika Pandey.
- [10] Prospect Theory: A Study of the Endowment Effect by ,Jurandir Sell Macedo Jr,Rosilene Marcon,Emílio Araújo Menezes, Patrícia Nunes
- [11] <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.880.6127&rep=rep1&type=pdf>
- [12] Chu Ying, & Qin Ping. (2007). An Empirical Study of Herding Behavior of Mutual Funds in China (Working Paper)
- [13] Impact of Overconfidence, Illusion of control, Self-Control and Optimism Bias on Investors Decision Making; Evidence from Developing Markets by Tabassum Riaz & Haroon Iqbal
- [14] <http://www.iiste.org/Journals/index.php/RJFA/article/viewFile/23358/24184>
- [15] https://en.wikipedia.org/wiki/Endowment_effect
- [16] http://www.indiaonline.com/article/news-top-story/indian-mutual-funds-industry-aum-of-indian-mf-industry-crosses-rs-17-lakh-crore-in-fy2017-117041300472_1.html
- [17] <https://www.amfiindia.com/research-information/mf-history>
- [18] <http://en.wikipedia.org>
- [19] <http://www.behaviouralfinance.net>
- [20] <http://www.mutualfundonline.com>
- [21] <http://economictimes.indiatimes.com>

