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An Empirical Study Of The Behaviour Of Indian Investors, With Special Reference To Loss Aversion And Anchoring

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ABSTRACT

Behavioural finance is a new approach to financial markets that has emerged in response to the Difficulties faced by the traditional investors. In general terms, it is argued that some financial performances can be better understood using models in which some agents are not completely rational. More specifically, it analyses what happens when we relax one, or both, of the two concepts that underlies individual rationality. In the model of behavioural finance it is understood that agents fail to update their beliefs correctly. In other models, agents make choices that are normatively Questionable. This paper gives a glimpse to behavioural finance, describes the background, aim and objectives of investor behaviour. It begins with a description of standard as well as behavioural finance, which often contradicts the modern financial theories and goes on to test the theories of risk aversion and anchoring using the Chi square test and finally gives some concrete conclusions and suggestions on how investors must behave in a volatile market scenario.

Keywords: Financial Theory, Indian Investors, Stock Analysis, Anchoring theory, Loss aversion

INTRODUCTION TO BEHAVIORAL FINANCE

The principles on which the behavioural finance is based are derived from the economic theory. Adam Smith, who is considered the father of the modern economics states that there is insight to the human psychology which is further developed today into behavioural finance. Behavioral finance and behavioral economics are closely related fields that apply scientific research on human behavior and on cognitive and emotional social prejudices to better understand economic decisions and how they influence prices and market returns and the allocation of resources

. The fields are primarily concerned with the rationality or lack of economic agents. Behavioral models usually incorporate fragments of knowledge of brain research with neo-ancient monetary hypotheses

. There is now a day's an increasing debate in theoretical finance between the efficient market hypothesis and the growing field of the behavioural finance. The efficient market hypothesis has been, since its development, the most important theory on understanding the behaviour of the various asset markets, but at the end of the 1970s and the start of the 1980s a growing number of studies showed anomalies comparing with this theory. From the 1990s a lot of the focus of the academic discussion shifted away from the analysis of these anomalies comparing the efficient market hypothesis towards a in-depth study of human psychology as related to financial markets leading to the growth of the behavioural finance, a new branch of finance that applies principles of psychology, sociology and other social sciences to finance.

LITERATURE REVIEW

S Ramesh, A Senthil Kumar (2019) conducted a study with a aim of analyzing the impact of Investors measures and biases in Chennai city ,the sample respondents taken for the study is 270.The opinion of the respondents are gathered through confirmatory research analysis .The study revealed that investors biases have a great impact on decision making skills of women investors and there is a significantly indirect impact on the decision making skills on investors biases.

Jhansi Rani MsBoda (2018) researched about factors affecting investment decisions of retail investors in Telangana state. The researcher has implemented structural equation modelling, ANOVA and Exploratory factor analysis. 600 total responses were collected and the study concluded that most of the individuals follow the herd behaviour as most of them rely on others for information. The study also describes in the state of Telangana most of the individuals need education or investor programs that can help them achieve their financial goals.

Geethu Gopi, D Priyanka and R. Preetha (2018) conducted a study to understand salaried employee preference of investors in private shipping industries in an Ernakulam district. The study suggested that the saving of employee is more directed toward children education, marriage and retirement plan. The study concluded that there is a positive relation between shows an important relationship among annual savings and the expected rate of return.

Tripuraneni Jaggaiah and Samiya Mubeen (2018) researched women perception towards investing in mutual funds. There were a total of 288 respondents that were chosen and there

Were 4 different brokerage firms that also were confined and the women who had been selected had prior experience in investment. The sampling method that was adopted was conceived sampling. The study concluded that women knew about the various types of schemes in mutual funds, major respondents belonged to age group 30-50 years and their income level was in the range 3, 00,000 and above 7, 00,000. Most of the women had a diversified portfolio which helped them to avail tax benefits also. The study suggested that the mutual fund houses should take active participation and try to organize consultancy to make to more impactful.

The Wall Street Journal (2009) found that where behavioural finance comes in. Most investors are smart people, neither irrational nor crazy. But behavioral finances tell us that we are also normal, with brains often full and emotions that often overflow

OBJECTIVES OF THE STUDY

☆ To test the applicability of Behavioural Finance theories on Indian Investors.

Sub-objectives

To study the concept loss averse nature of investors.

NEED OF THE STUDY

- To identify the actual reasons for the investment behaviour of Investors.
- To find possible solution for them to overcome their perception of risk

LIMITATIONS

- This study is conducted to analyze their pattern and not all those factors that really matter while investing
- It is conducted in Bangalore city
- The interpretation of this study is based on the assumption that the respondents have give correct information
- Besides the study has the limitations of time, place and resources
- The lack of knowledge of customer about the financial instruments can affect the validity of the responses

Research methodology

Type of research

The type of research used in the study is exploratory research. In this case descriptions of characteristics associated with the population of investors are formulated. Estimates of the proportions of investors who possess particular investment behaviour is evaluated.

Sampling technique

Initially, a rough draft will be prepared keeping in mind the objective of research. A pilot study will be undertaken in order to know the accuracy of the questionnaire. The final questionnaire will be arrived at only after certain important changes are incorporated. Convenience sampling technique will be used for collecting the data from investors. The selection of units from the population based on their easy availability and accessibility to the researcher is known as convenience sampling.

Population

The population choose for this study is investors in Bangalore, as the research revolves around the investment pattern of investors.

Sample size

The sample size will be restricted to only 50 respondents.

Sampling procedure

The sampling procedure followed in this study is non-probability convenient sampling. Simple random procedures are used to select the respondent from the available database. The research work will be carried on the basis of structured questionnaire. The study is restricted to the investors of Bangalore.

Sources of information

Secondary data: This data is collected by using the following means

1. Articles in financial newspaper (economic times)
2. Books written by various foreign and Indian authors.
3. Data available on internet through various websites

RESEARCH METHODOLOGY

RESEARCH DESIGN

To check the applicability of Behavioural finance, it is essential to conduct a sample survey among the investors. This is to know the investing behavior of the investors. Some brokers and financial institutions are also included with the general investors. A questionnaire has been designed to get information.

RESEARCH TYPE

Emperical and Descriptive Research - in the form of collection of primary and secondary data.

Hypothesis framed is null hypothesis:

For checking the loss averseness of Indian Investors, the hypothesis to be tested is:

HO: "The hypothesis being tested is that there is no difference in investors' behavior when a stock is losing in the market and when it is gaining in the market." For checking the validity of Anchoring on Indian Investors, the hypothesis to be tested is: "The hypothesis being tested is that there is no difference in investors'perception when the index of a stock market has consequently increased or decreased for three days in a row."

SAMPLE DESIGN AND SIZE

The population from which sample is drawn comes from India. The sample size for the consumer survey is 135 and they are drawn randomly.

HYPOTHESIS TESTING

Hypothesis is tested by using Chi-square Analysis, which involves following steps:

1) Calculate the expected frequency of all the given cells, which is worked out as:

Expected Frequency of any cell = (Row total of the cell) X (Column total of the cell)

2) Obtain the difference between observed and expected frequency and find out the difference between such differences i.e., calculate (Oij – Eij) 2.

3) Divide the quantity (Oij – Eij) 2 by the corresponding expected frequency to get (Oij – Eij) 2/ Eij for all the cell frequencies.

4) Find the summation of (Oij – Eij) 2/ Eij values. This is the required Chi-Square value (x2). X2 = ? (Oij – Eij)2

5) The computed value is then compared to a tabular chi-square value.

If the compared chi-square value is great then the tabular chi-square value at predetermined level of significance, the hypothesis is rejected, otherwise the hypothesis is accepted.

RESULTS AND DISCUSSION

Loss aversion is greater sensitivity to losses than to gains. It can be explained by the tendency of investors to hold on to loss making stocks while selling winning stocks too early. There is a sharp asymmetry between the values that people put on gains and losses. This has been collected from the questionnaire that 86 investors chose to hold the stock in case of loss that means 49 will sell it, while 90 opted for selling the stocks when it was winning in the market that means 45 will hold it. This has been further shown with the help of Chi-Square

ANALYSIS

The hypothesis being tested is that there is no difference in investors' behavior when a stock is losing in the market and when it is gaining in the market.

TABLE 5.1 OBSERVED FREQUENCY (Oij)

	LOOSING STOCK	GAINING STOCK	TOTAL
SELL STOCK	49	90	139
OLD STOCK	86	45	131
TOTAL	135	135	270

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

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

(Grand Total)

TABLE 5.2 EXPECTED FREQUENCY (Eij)

	LOOSING STOCK	GAINING STOCK	TOTAL
SELL STOCK	69.5	69.5	139
HOLD STOCK	65.5	65.5	131
TOTAL	135	135	270

TABLE 5.3 CALCULATION OF CHI-SQUARE

Cell (i,j)	Oij	Eij	(Oij – Eij)	(Oij – Eij)2	(Oij – Eij)2/ Eij
(1,1)	49	69.5	-20.5	420.25	6.047
(1,2)	86	65.5	20.5	420.25	6.416
(2,1)	90	69.5	20.5	420.25	6.047
(2,2)	45	65.5	-20.5	420.25	6.416

Chi-Square value (x2) (Oij – Eij)2/ Eij= 24.926

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 {(2-1)*(2-1)} or 1. The level of significance chosen is 0.05. On this basis tabular x2 (Chi-Square) is 3.84.

Since, the computed x2 (Chi-Square) value is 24.926, the hypothesis is rejected. Thus, there is a difference in investors' behaviour when a stock is losing in the market and when itis gaining in the market. The risk aversion in gains causes investors to sell too quickly into rising stock prices, thereby depressing prices relative to fundamentals. Conversely, risk seeking in losses causes them to hold on too long when prices decline, thereby causing the prices of stocks with negative momentum to overstate fundamental values.

Relevance of Anchoring in respect to Indian Investors Anchoring describes how individuals tend to focus on recent behaviour and give less weight tolonger time trends. The anchor is the most recently remembered price. The tendency of investors to use this anchor enforces the similarity of stock prices from one day to the next. The tendency of past prices to serve as anchors may explain the observed tendency for trends in individual stocks prices to be reversed. This has been collected from the questionnaire that 51 respondents are rational which say that the market cannot be predicted, in case of uptrend in the market for three days, 37 investors believed that there would be a similar trend while 47 believed that it will reverse. Whereas, in the case of downtrend, 51 respondents are rational which say that the market cannot be predicted 27 respondents believed in similar trend, and 57 believed in reverse trend. The validity of Anchoring is checked by the Chi-Square Test. The hypothesis being tested is that there is no difference in investors' perception when the index of a stock market has consequently increased or decreased for three days in a row.

TABLE 5.4 OBSERVED FREQUENCY (Oij)

Market Trend	Increase*	Decrease*	Total
SELL STOCK	37	57	94
HOLD STOCK	47	27	74
TOTAL	84	84	168

* Indicates the market trend on the fourth consecutive day.

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

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

TABLE 5.5 EXPECTED FREQUENCY (Eij)

	LOOSING STOCK	GAINING STOCK	TOTAL
SELL STOCK	47	47	94
HOLD STOCK	37	37	74
TOTAL	84	84	168

TABLE 5.6 CALCULATION OF CHI-SQUARE

Cell (i,j)	Oij	Eij	(Oij – Eij)	(Oij – Eij)2	(Oij – Eij)2/ Eij
(1,1)	37	47	-10	100	2.128
(1,2)	47	37	10	100	2.703
(2,1)	57	47	10	100	2.128
(2,2)	27	37	-10	100	2.703

Chi-Square value (x2) = ⍰ (Oij – Eij)2 = 9.662

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 {(2-1)*(2-1)} or 1. The level of significance chosen is 0.05. On this basis tabular x2 (Chi-Square) is 3.84.

Since, the computed x2 (Chi-Square) value is 9.662, the hypothesis is rejected. Thus, there is a difference in investors' perception when the index of a stock market has consequently increased or decreased for three days in a row, which shows that the anchoring theory is relevant in case of Indian Investors.

Findings: The risk aversion in gains causes investors to sell too quickly into rising stock prices, there by depressing prices relative to fundamentals. Conversely, risk seeking in losses causes them to hold on too long when prices decline, thereby causing the prices of stocks with negative momentum to overstate fundamental values.

Relevance of Anchoring in respect to Indian Investors Anchoring describes how individuals tend to focus on recent behaviour and give less weight to longer time trends. The anchor is the most recently remembered price.

CONCLUSIONS AND SUGGESTIONS

Following conclusions may be drawn on the basis of study findings:

1) Majority of investors prefer stable returns, irrespective of the fact that they may be lower.

2) Information from companies as a basis for Fundamental Analysis has greatest importance for majority of respondents, while investing. Historical Performance and Professional's forecasts are also considered well before making investments.

3) The investors would prefer to gamble and hold on to the loosing stock in the hope that the prices will increase. This shows investors are risk lovers when confronted with losses.

4) The investors chose to sell a winning stock early, which shows their risk aversion in gains.

5) A great part of respondents would sell a losing stock to invest in a gaining one, which is a rational decision.

6) Majority of the investors feel that market would either show a similar trend or reverse its direction if the sensex has been bullish or bearish for three days in a row.

7) The Indian Investors are found to be Loss Averse, i.e., there is difference in investors' behavior in case of losses and gains.

8) There is an investors' perception about market trend is influenced by the past performance of a stock market on three consecutive days, which shows that the anchoring theory is relevant in case of Indian Investors.

SUGGESTIONS

The following suggestions are made on the basis of the findings of the study to avoid mistakes in

Investment decisions by applying behavioural finance:

1) Fundamental Analysis, alone can lead to wrong conclusions. The Psychological mood of the market should be studied before making investments.

2) Check the source of your information, before reacting to it. The announcements from the companies should be sufficiently adjusted in the portfolio as soon as possible

3) The losing stocks should be disposed off if there is negative news associated with it.

4) Anchoring to an expectation can be reasonable, but the quality of anchored figure can be insufficient and should be checked.

REFERENCES

- VS Rekha, K Maran (2012), ADVERTISEMENT PRESSURE AND ITS IMPACT ON BODY DISSATISFACTION AND BODY IMAGE PERCEPTION OF WOMEN IN INDIA, Global Media Journal: Indian Edition,Violume.3, Issue 1, 2012
- KS Sathyanarayana, DK Maran (2011), Job Stress of Employees - International Journal of Management (IJM), Volume 2, Issue 2, PP:93-102.
- TK Mily Velayudhan, K Maran (2009), A study on Mapping Core Competencies and development of Employees for Excellence with reference to HCL Technologies - Journal Of Contemporary Research In Management, Volume 7, Issue 2, PP:11-23.
- PP Nanda kumar, KM Kaliamoorthy (2009),An empirical study on the burnout of IT professionals employed for middle east countries – Buletinul Universitatii Petrol-Gaze din Ploiesti,Seria, Volume 61, Issue 4, PP:26-35.
- V Suresh, K Prabhakar, K Santhanalakshmi, K Maran (2016), Applying technology acceptance (TAM) model to determine the factors of acceptance in out-patient information system in private hospital sectors in Chennai city - Journal of Pharmaceutical Sciences and Research, Volume 8, Issue 12, PP:1373.
- V Suresh, M Chitra, K Maran (2016), A study on factors determining social media on cosmetic products, - Journal of Pharmaceutical Sciences and Research, Volume 8, Issue 1, PP:1.
- V Suresh, K Maran (2018), A Study On Impact Of An Affiliate Marketing In E-Business For Consumer's Perspective, SP AR - International Journal of Engineering and Technology, Volume 10, Issue 2, PP:471-475.

- KK Maran, J Badrinarayanan, P Kumar (2017), A study on branded apparels customers purchase behavior with reference to India - International Journal of Applied Business, Volume 21, Issue 15, PP:215-222.
- S Sankar, K Maran (2013), Market Trading in India-Customer Perception - International Journal of Engineering and Management, Volume 3, Issue 2, PP:1-13.
- K Maran, V Chandra Shekar (2015), A study on student's perception of employability skills with respect to engineering institutions - International Journal of Research in Engineering, Volume 5, Issue 3, PP:21-34.
- K Maran, S Usha (2014), Work Life Balance of Women Employees Satisfaction-A Study With Reference to IT Sector in India' - Asia Pacific Journal of Research, Volume: 1.
- MV Selvakumar, K Maran (2019), ROLE OF E-LEARNING PRACTICES FOR TEACHING FACULTY ON ENHANCING INSTITUTIONAL CLIMATE AT SELF-FINANCE ENGINEERING COLLEGES AT CHENNAI CITY - The Online Journal of Distance Education, Volume 7, Issue 1.
- Venkatesh.P (2013) "Viral Marketing of Digital Products Using Social Media" PEZZOTTAITE JOURNALS, ISSN: 2319-9016, online ISSN No: 2319-9024, Volume. 2, PP. 120-125.
- Venkatesh.P (2019)"A Study On Job Satisfaction Of Employees With Reference To Titanium Equipment And Anode Manufacturing Company Ltd." Journal Of The Gujarat Research Society, ISSN: 0374-8588, Volume 21 Issue 17, December 2019, PP: 1569-1581.
- Venkatesh.P (2020), "A Study And Analysis On Impact Of Brand Equity With Reference To Air India", Studies In Indian Place Name, ISSN: 2394-3114, Vol 40 issue 40 (s1) March 2020, PP: 304

- S Ramesh, A Senthil Kumar (2019) Indian Journal of finance,issue 13,issue no 4.april 2019 pg 7 to pg 19.
- Ks-1655-DP049A-Evaluating-Building-Energy-Efficiency-Investment-Options-for-SA_web.pdf

- Geethu Gopi, D. Priyanka and R. Preetha An Insight Into the Savings and Investment
- Pattern of Salaried Employees Working in the Private Sector of Shipping Industries at Ernakulam.
- International Journal of Pure and Applied Mathematics Volume 118 No. 18 2018, 1347-1363
- Dr.Tripuraneni Jaggaiah & Samiya Mubeen PERCEPTION OF INDIAN WOMEN INVESTOR TOWARDS INVESTMENT IN MUTUAL FUNDS . International Journal of Applied and Advanced Scientific Research (IJAASR) Impact Factor: 5.655, ISSN (Online): 2456 - 3080 (www.dvpublication.com) Volume 3, Issue 1, 2018