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Applying Behavioural Finance by Analysing Investor Behaviour In Lucknow City

KEYWORDS: Behavioural Finance, Market Efficiency, Indian Investors, Stock Analysis, Anchoring theory.

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ABSTRACT *Behavioural finance is part of finance that seeks to understand and explain the systematic financial market implications of psychological decision processes. It utilises knowledge of cognitive psychology, social sciences and anthropology to explain irrational investor behaviour that is not being captured by the traditional rational based models.*

Empirical research has shown that, when selecting a portfolio, investors not only consider statistical measures such as risk and return, but also psychological factors such as sentiment, overconfidence and overreaction.

As a consequence, the purpose of the paper is to identify those psychological factors that play an important role in their decisions. It gives a glimpse to behavioral finance, describes the background, aim and objectives of the paper. It begins with a description of standard as well as behavioral finance, which often contradicts the modern financial theories.

INTRODUCTION

Behavioral finance is an extension of behavioral economics, which uses psychological insights to inform economic theory, for which Daniel Kahneman was awarded the Nobel Prize in economics in 2002 for his contribution to behavioral economics. Kahneman's insight that led to the prize was his recognition of the important role of emotion and intuition in people's decision making, which in certain circumstances leads to systematic and predictable errors (Kahneman, 2003).

Behavioral finance is the paradigm where financial markets are studied specifically, behavioral finance has two building blocks: Cognitive psychology and the Limits to arbitrage. Cognitive refers to how people think. There is a huge psychology literature documenting that people make systematic errors in the way that they think: they are overconfident, they put too much weight on recent experience, etc. Their preferences may also create distortions. Behavioral finance uses this body of knowledge, rather than taking the arrogant approach that it should be ignored.

The Efficient Markets Hypothesis (EMH) argues that competition between investors seeking abnormal profits drives prices to their "correct" value. The EMH does not assume that all investors are rational, but it does assume that markets are rational. The EMH does not assume that markets can foresee the future, but it does assume that markets make unbiased forecasts of the future. In contrast, behavioral finance assumes that, in some circumstances, financial markets are informational inefficient.

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 behavioral finance, a new branch of finance that applies principles of psychology, sociology and other social sciences to the finance.

Lucknow popularly known as the seat of the Nawabi culture, it stands out as a city that takes pride in the endearing but subdued articulation of its essence and identity. At the same time, Lucknow is placed among the fastest growing cities of India and is rapidly emerging as a manufacturing, commercial and retailing hub. This unique combination of rich cultural traditions and brisk economic growth provides Lucknow with an aura that refuses to fade away.

LITERATURE REVIEW

Petter Roger Eiving (1970) carried out a study to identify those factors which motivate (or) Guide the investment decisions of the common stock investors. The study identified the factors (i) Income from dividends (ii) rapid growth (iii) purposeful investment as a protective outlet of savings (iv) Professional investment management.

Warren, et. al., (1996) attempted to develop lifestyle and demographic profiles of investors based on the value and types of investment holding.

Krishnan and Booker (2002) analyzed the factors influencing the decisions of investor who basically used analysts' recommendations to arrive at a short-term decision to hold or to sell a stock.

Jay R. Ritter (2003) provides a brief introduction to behavioral finance. According to the author, Behavioral finance encompasses research that drops the traditional assumptions of expected utility maximization with rational investors in efficient markets. The two building blocks of behavioral finance, mentioned in the article, are cognitive psychology (i.e., how people think) and the limits to arbitrage (i.e., when markets will be inefficient).

OBJECTIVES OF THE STUDY

- To test the applicability of Behavioral Finance theories on Indian Investors and in particular the investors of Lucknow city.

Sub-objectives

- To study the concept of behavioral finance and various theories associated with it.
- To prove the loss averse nature of investors of Lucknow city.

RESEARCH METHODOLOGY
RESEARCH DESIGN

To check the applicability of Behavioral finance, it is essential to conduct a sample survey among the investors of Lucknow city. This is to know the investing behavior of the investors. A questionnaire has been designed to get information.

RESEARCH TYPE

Descriptive Research – are those studies which are concerned with describing the characteristics of a particular individual or of a group which will be done in the form of collec-

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tion of secondary data.

Hypothesis For checking the loss averseness of Lucknow Investors, the hypothesis to be tested is: **"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 Lucknow 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 five days in a row."**

SAMPLE DESIGN AND SIZE
The population from which sample is drawn comes from Lucknow. The sample size for the consumer survey is 200 in which 195 consumers gave proper response and they were drawn randomly.

HYPOTHESIS TESTING
Hypothesis is tested by using Chi-square Analysis.

Results and Discussion
Loss Averseness of Investors
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 116 investors chose to hold the stock in case of loss that means 79 will sell it, while 150 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 1.1
OBSERVED FREQUENCY (Oij)

	Sell Stock Now	Hold Stock for a month	Total
Loosing Stock	79	116	195
Gaining Stock	150	45	195
Total	266	124	390

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 1.2
EXPECTED FREQUENCY (Eij)

	Sell Stock Now	Hold Stock for a month	Total
Loosing Stock	133	62	195
Gaining Stock	133	62	195
Total	266	124	390

TABLE 1.3
CALCULATION OF CHI-SQUARE

Cell (ij)	Oij	Eij	(Oij-Eij)	$(Oij-Eij)^2$	$\frac{(Oij-Eij)^2}{Eij}$
(1,1)	79	133	-54	2916	21.92
(1,2)	116	62	54	2916	21.92
(2,1)	150	133	17	289	2.17
(2,2)	45	62	-17	289	4.66

Chi-Square value (x^2) = $\frac{\Sigma (Oij - Eij)^2}{Eij} = 50.67$

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 50.67 so the hypothesis is rejected.

Thus, there is a difference in investors' behavior when a stock is losing in the market and when it is 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 or focalism is a cognitive bias that describes the common human tendency to rely too heavily on the first piece of information offered when making decisions. When anchoring, people base decisions or estimates on events or values known to them, even though these facts may have no bearing on the actual event or value.

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.

The data has been collected from the questionnaire that 65 respondents think rationally which say that the market is unpredictable, in case of uptrend in the market for five days, 50 investors believed that there would be a similar trend while 80 believed that it will reverse. Whereas, in the case of downtrend, 65 respondents are rational which say that the market is unpredictable 40 respondents believed in similar trend, and 90 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 five days in a row.

TABLE 2.1
OBSERVED FREQUENCY (Oij)

	Increase*	Decrease*	Total
Increase for five days	50	80	130
Decrease for five days	90	40	130
Total	140	120	260

* Indicates the market trend on the sixth 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)
(Grand Total)

TABLE 2.2
EXPECTED FREQUENCY (Eij)

	Sell Stock Now	Hold Stock for a month	Total
Loosing Stock	70	60	130
Gaining Stock	70	60	130
Total	140	120	260

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TABLE 2.3
CALCULATION OF CHI-SQUARE

Cell (ij)	Oij	Eij	(Oij-Eij)	$(Oij-Eij)^2$	$\frac{(Oij-Eij)^2}{Eij}$
(1,1)	50	70	-20	400	5.71
(1,2)	80	60	20	400	6.67
(2,1)	90	70	20	400	5.71
(2,2)	40	60	-20	400	6.67

$$\text{Chi-Square value } (x^2) = \Sigma \frac{(Oij - Eij)^2}{Eij} = 24.76$$

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 x^2 (Chi-Square) is 3.84. Since, the computed x^2 (Chi-Square) value is 24.76, 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 five days in a row, which shows that the anchoring theory is relevant in case of Indian Investors.

CONCLUSIONS

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

1. To mobilize their savings in wealth creation, majority of investors preferred to invest in financial instrument

2. Investors like to analyze market sentiments and trend before investment so that they can understand the market and are able to take good investment decision, most of the investors said that after active participation in investment they are addicted to market analysis and they take active participation in this when ever and where ever they get time.

3. Stock prices in majority are governed by social, political, economical, regulatory, technology, environment, legal factors and the investors take help from fundamental analysis, technical analysis, media, friends & family as well as analyst to invest in worthy shares.

4. Most of the investors said that anchoring plays an important role in decision making as many investors rely on newly arrived information and they adjust their decisions according to that information.

5. Many investors purchase stocks when they are at their down trend as they have feeling that they are purchasing those shares at discounted rate.

6. Investors become optimistic at the time of loss, as they never loose hope of outstanding performance of their shares in future even though their stocks are loosing presently.

7. Investors are risk lovers when confronted with losses as they prefer to gamble and hold on to the loosing stock in the hope that the prices will increase.

8), There is difference in investors' behavior in case of losses and gains i.e the investors are found to be Loss Averse.

9) The investors' perception about market trend is influenced by the past performance of a stock market on five consecutive days, which shows that the anchoring theory is relevant in case of Lucknow investors.

SUGGESTIONS

The following suggestions are made on the basis of finding of the study to avoid mistakes in financial investments decisions by applying behavioral finance:

1) At the time of decision making for investment Fundamental as well as Technical analysis should also be consider because fundamental analysis some times fails to justify short term fluctuation in the price of securities, this is because the security price movement are based more on psychological factors than on economical factors. Technical analysis comes to help investors where fundamental analysis proves inadequate so both the methods should be considered at the time of decision making.
2. Market is efficient, it reacts on each and every piece of newly arrived information but it is advised to investors that they should check the relevancy of information before relying on it or before reacting on it and the announcements from the companies should be sufficiently adjusted in the portfolio as soon as possible.
3. Instead of following optimistic approach or expectation theory approach in selling or holding of stocks they should use hedging concept and is also suggested to investors that losing stocks should be disposed off if there is negative news associated with it instead of showing risk lover nature in case of loss.
4. Anchoring is some time worthy and some time its not worthy to be used, it depends on the reliability of used information resources for anchoring and dependency on that so it is suggested that anchoring to an expectation can be reasonable, but the quality of anchored figure can be insufficient and should be checked.

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