

A Paper

On

*“A Study on the Investment Psychology -
Behavioural Finance*

(with special reference to Education Field)”

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Abstract:

Traditionally, money and rationality has definite relation. Traditional decision making is based on the assumption of complete rationality. But as a matter of fact, investors act irrationally in many respects. Acceptance of this fact by many research analysts has given birth to a new branch of study, viz., Behavioural Finance. This paper aims at studying the investors' behaviour on the basis of various aspects of behavioural finance. It is an attempt to examine the degree and type of irrationality of individual investors in stock market. As a result of it, share prices fail to reflect its true intrinsic value in stock market. This paper studies the behavioural pattern of two distinct categories of investors- professors and students. They differ widely in their behaviour as investors.

Here main aspects of Behavioural Finance are covered for the study of investors' behaviour. The aspects covered are: Anchoring, Hindsight Bias, Mental Accounting, Confirmation Bias, Over confidence, Herd Behaviour, Availability Bias and Overreaction, Gambler's Fallacy and Prospect Theory.

This paper studies behaviour of both the types of investors- professors and students- on all above mentioned grounds. Professors and students differ in their behaviour as investors. Finally, it aims at identifying the scope for further research work.

Key Words:

Rationality, Irrationality, Behavioural Finance, investors' behaviour

I. INTRODUCTION

Traditionally, money and rationality has definite relation. Human beings are assumed to be acting always rationally while taking financial decisions. Traditional decision making is based on the assumption of complete rationality. Rational decision making implies that share prices in the stock market always reflect its true intrinsic value but this is not so. Stock market performance and share prices are driven by emotional aspects and irrational behaviour of investors. This fact has now been realized by many research analysts. It has given birth to a new field of study called Behavioural Finance wherein the impact of investors' psychology on financial decisions is tested and studied. Present study is an attempt in the direction of examining the impact of psychology and emotional aspects on investors' decision making. In general, it aims at examining and studying the impact of irrationality in the field of finance and in particular, it is a study of psychology of a specific group of investors- faculty members of Suarashtra University (professors) and students.

II. LITERATURE REVIEW

So far many studies have been undertaken whereby the impact of psychology on investors' behaviour and decision making is studied. These studies have tried to establish the fact that investors' decision making is influenced by their psychology and thus, investors' behaviour is not completely rational. Major research studies in the area of investors behaviour has been done by experts called behavioural scientists such as Weber (1999), Shefrin (2000) and Shiller (2000).

Shanmugam selected a group of investors to study the factors affecting investment decision. The study examined the impact of two factors on investment decisions. The factors were investment objective and degree of awareness. And the study concluded that Indian investors possess adequate knowledge and information required to take investment decision and they are high risk takers.

Manish Mittal and R K Vyas (2007) examined the impact of demographic factors on the choice of investments in their study. It proves that investment choices are majorly affected by demographic variables.

Abhijeet Chandra (2009) studied the impact of competence of individual investors on their trading behaviour in stock market.

SushantNagpal and B S Bodla (2009) examined and discussed bases for segmenting the individual investors. In their study, they observed and concluded that demographics alone can no longer be used as the basis of segmentation of individual investors. The other important and relevant bases for the said segmentation are lifestyles or psychographics of individual investors.

III. OBJECTIVES OF THE STUDY

Following are the main objectives of the present study:

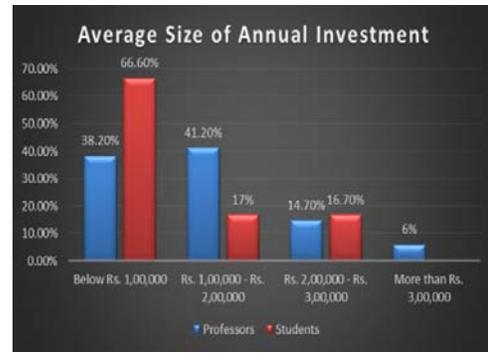
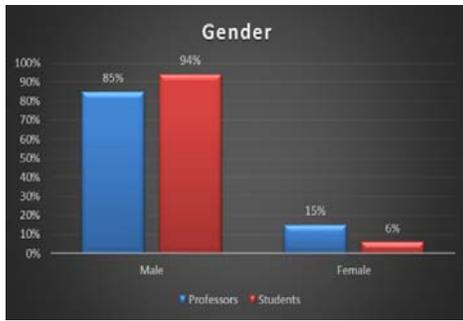
- To study investors' behaviour in the context of rationality. To examine investors' irrationality in terms of degree and type. A specific group of investors, viz., professors and students, is selected for this purpose.
- To make comparative study of behaviour of students and professors as investors.
- To identify the scope for further research work on the basis of present study- its results and conclusions.

IV. DATA COLLECTION, ANALYSIS AND INTERPRETATION

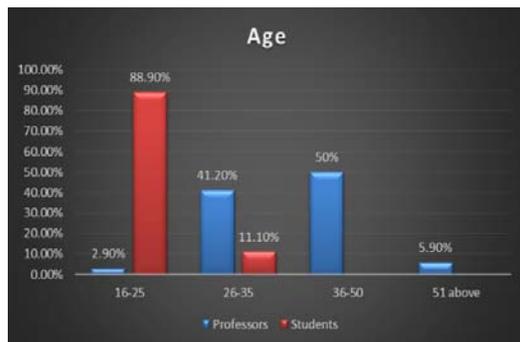
For examining different aspects of investors' behaviour, a sample of investors comprising professors and students of Saurashtra region was selected. A convenient sample was selected for the purpose of this study. The mode of data collection was through questionnaire. 75 questionnaires were given to professors and 50 questionnaires were distributed among students. 34 questionnaires were received from professors and 18 questionnaires were received from students. Particularly for the question based on prospect theory, 29 professors could attempt it properly and only 10 students could attempt question based on prospect theory. So for all aspects of behavioural finance except prospect theory, analysis is based on 34 questionnaires in professors category and 18 questionnaires in student category. The number of questionnaires gets reduced to 29 (professors) and 10 (students) for the analysis on prospect theory.

Following is the profile of respondents:

A. GENDER



B. AGE



Majority respondents in the selected sample were male (85.3% professors and 94.4% students). Majority professor respondents were in the age group 36-50 (50%) followed by 26-25 (41.2%) whereas in the student category, majority respondents (88.9%) were in the age group 16-25. Exactly 50% of the professor respondents have more than 5 years investment experience whereas majority students respondents have 1-3 years investment experience. So far as average annual size of investment is concerned, majority professor respondents fall in Rs. 1,00,000-Rs. 2,00,000 whereas students respondents' average annual investment size is below Rs. 1,00,000.

C. INVESTMENT EXPERIENCE



D. AVERAGE SIZE OF ANNUAL INVESTMENT

The study covers following behavioural aspects:

A. ANCHORING

The concept of Anchoring signifies the tendency of human beings to anchor their thoughts to a reference point inspite of the fact that it does not have any logical relevance to the decision under consideration. This phenomenon is widely found in practice when people deal with new concepts.

There is prevalence of this phenomenon in the field of investment also. Investors avoid researching all the relevant data because of difficulty in collecting and analyzing huge amount of data. The result is their taking decision based on a single figure or fact though it might not have any significant relevance to the particular decision at hand and on the other hand, very important data is ignored. This irrational mentality of investors is called "anchoring" in the field of Psychology.

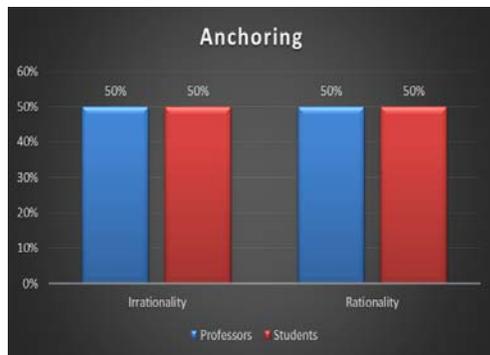
In the present study, two questions were asked to respondents to examine their irrationality in the form of Anchoring:

Q.1 As an investor what would you do if the stock has fallen down after so many consecutive increases?

- (a) I will purchase to take advantage of reduced price thinking that share is undervalued temporarily (indicates irrationality)
- (b) I will try to find out fundamental reasons of changes and act accordingly (shows rationality)

Q.2 How do you take decision to sell the security in the market?

- (a) When the price reaches to a level which is higher than the one at which you purchased it (indicates irrationality)
- (b) After a continuous fall in the price, it has recently increased (shows irrationality)
- (c) When the price reaches to the level where it correctly reflects its value (indicates rationality)



So far as Anchoring is concerned, respondents-both professors and students are divided equally into two categories: rational and irrational investors.

B. MENTAL ACCOUNTING

The tendency of separating money into separate mental accounts on the basis of some subjective parameters like objective of each account and source of the money is called Mental Accounting. According to research studies, individuals assign different functions to different classes of assets and as a result their behavior and consumption decisions get affected adversely.

This irrational tendency called Mental Accounting is also present in the investment field. For instance, investors segregate their total portfolio into safe portfolio and speculative portfolio in an attempt to prevent the negative effect on the total portfolio

return that speculative portfolio can bring. The point to be noted is that inspite of all the efforts of an investor to separate the portfolio, the net wealth is not much different than the net wealth that one would have if one holds a single larger portfolio.

Following two questions were asked to know the effect of mental accounting on investors:

Q.1 Situation I: You have purchased a movie ticket for Rs 100. On the way to theatre, it falls down somewhere.

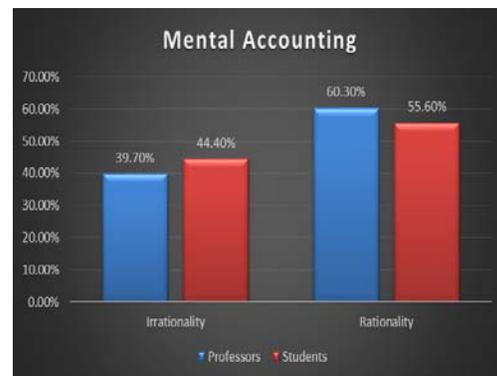
Situation II: You lose Rs. 100 while going to purchase movie ticket.

Under which of the above two situations, you will still purchase a movie ticket?

- (a) Situation I (indicates irrationality)
- (b) Situation II (indicates irrationality)
- (c) Both I & II (indicates rationality)
- (d) Neither I nor II (shows rationality)

Q.2 You have put Rs 2,00,000 in 10 years' FD for your daughter's marriage. After 2 years, crop fails in your farm due to bad monsoon. You are in need of some extra money to get back to normal situation in your business. You have two options with you. Which one will you choose and why?

- (a) Option I: I will use the amount which is put in FD for business (indicates rationality)
- (b) Option II: I will borrow money from any source at any rate of interest but will not use the amount that is put aside for a specific purpose (indicates irrationality)



Examining respondents' rationality on the basis of mental accounting, it was found that majority sample investors were found rational in both the categories.

C. CONFIRMATION AND HINSIGHT BIASES

All human beings have some pre conceived opinions. We have a tendency to pay more attention to the information that matches with our opinions and on the other hand, the information that does not support our opinions is ignored or rationalized. This is a tendency of our mind to introduce bias while processing the information and this selective thinking is known as “Confirmation Bias”.

The confirmation bias has its effect on investment decisions also. Investors seek information that confirms their original idea about an investment rather than their looking for the information that contradicts it. This bias creates an incomplete picture of the situation in the minds of investors resulting into irrational decision making.

In the context of another bias, a person believes the event could have been predicted (after the event happens) but in fact the said event could not have been actually predicted. This bias is hindsight bias.

Overconfidence, one of the most potentially dangerous mindsets that an investor can have is the result of hindsight bias. As a result of overconfidence, investors believe that they possess superior knowledge in the field of investment.

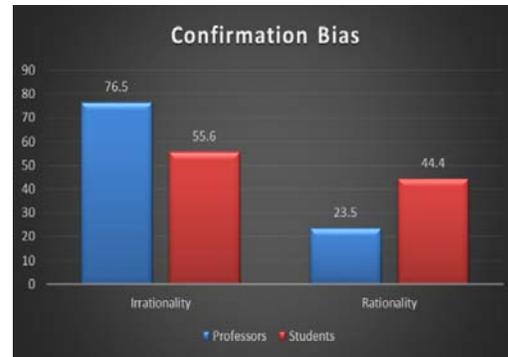
Following two questions were asked to study the impact of confirmation bias on investors:

Q.1 How much safe is it to invest money in private bank in comparison to nationalized bank in today’s era? Give your opinion as an investor.

- (a) Very safe
- (b) Reasonably safe
- (c) Not safe comparatively
- (d) Not at all safe

Q.2 A well known private bank comes up with an attractive scheme of FD with very good rate of interest. Bank is financially sound. Will you prefer investing?(confirmation bias)

- (a) Yes
- (b) No

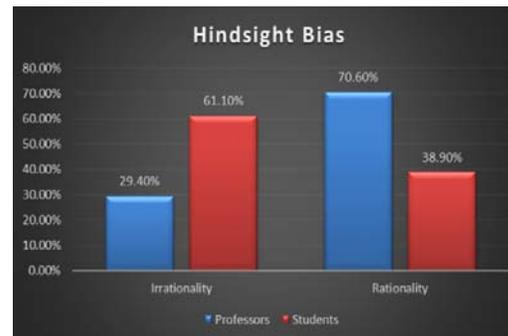


In both the categories, viz. professors and students, respondents were found more irrational. The proportion of irrationality was found more in case of professor respondents (76.5%) comparing to that found in case of student investors (55.6%).

Following question was asked to respondents for examining impact of hindsight bias on the minds of investors:

Q.1 In your opinion, how many times you could have predicted happenings of stock market before they actually took place?

- (a) All the times (100% cases)
- (b) In majority cases
- (c) Hardly
- (d) Not a single time



Majority respondents in the professor category were of the opinion that they hardly could have predicted happenings in the stock market before actually they would have occurred whereas student respondents were of the opinion that they could have predicted stock market happenings before their actual occurrence in majority of the cases. Thus, element of irrationality was found more in case of student investors.

D. GAMBLER'S FALLACY

A lack of understanding in the field of probability can result into wrong and faulty assumptions about the onset of events. Gambler's fallacy is one of these assumptions. It is a tendency to believe that the probability of happening a particular event is less following an event. This is an erroneous line of thinking because the probability of happening of a certain event in the future does not depend on the past events.

Investors can easily become victim of Gambler's policy under certain situations. For instance, when share price goes up in the consecutive trading sessions, investors think that they should liquidate the position because the chances of any further increase are less as it has gone up so far. On the other hand, some investors decide on holding the stock after observing a consecutive decrease because according to them now further decrease is impossible. This line of thinking can lead to incorrect and unprofitable decision in the financial world.

To study irrationality among investors in the context of Gambler's fallacy, following question was asked to respondents:

Q.1 Share prices have gone down in last consecutive sessions, what do you think on its next move?

- (a) As it has decreased for so long, the chances of its increases are more now (shows irrationality)
- (b) It does not have any connection with its previous movement. Move can be in either direction (indicates rationality)



Majority professor respondents were found to be rational in the context of Gambler's fallacy (70.6%) whereas student respondents were found equally divided in this context. Thus, comparatively professor investors are more rational in this context.

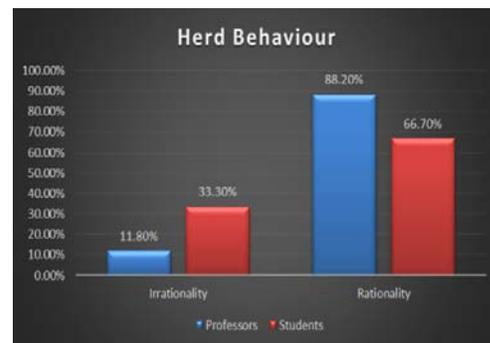
E. HERD BEHAVIOUR

People have a tendency to mimic the actions of a larger group whether it is rational or irrational whereas acting on individual basis, one would not make the same choice in most of the cases. This is known as herd behavior. There are many reasons behind this kind of behavior. Investors think that a larger group that is majority can never be wrong. Moreover, if such decision or action turns out to be negative in future, they can reduce their regret thinking that majority have done the same mistake.

Following question was asked to all respondents to study the impact of herd behaviour:

Q.1 Do you consider buying or selling behaviour of other investors in market while taking your decision?

- (a) That is major consideration
- (b) That is one of the considerations
- (c) That is not at all a factor to be considered



Majority respondents in both the categories were found under some impact of herd mentality. But student respondents were found more irrational in this context as one third of respondents in the student category take other investors' behaviour in the market as major consideration while taking their decision.

F. OVERCONFIDENCE

There is a thin line of difference between confidence and overconfidence. Realistic trust in one's abilities and caliber is confidence whereas an overly optimistic assessment of one's abilities and knowledge is overconfidence. Overconfident people think that they have a control over a situation than their actual capacity to control the situation.

According to the research conducted by Terrence Odean, overconfident investors trade more than their less confident counter parts. Overconfidence adversely affects one's stock picking ability in the long run. Overconfident people have the impression that their ability to select the best stock and to determine the best time enter/exit is better than others in the market. Overtrading is the direct outcome of overconfidence and it yields less than average market return to an investor.

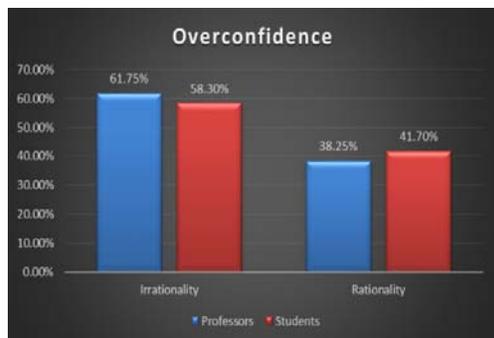
Following two questions were asked to the respondents to check out the level of overconfidence among investors:

Q.1 How much confident you are in your investment knowledge and judgement?

- (a) Very much
- (b) To a larger extent
- (c) To some extent
- (d) Not at all

Q.2 To what extent you feel that movements in prices of assets can be judged well?

- (a) To the fullest extent
- (b) To a larger extent
- (c) To some extent
- (d) Not at all



Professor respondents were found almost normally distributed among four categories whereas student respondents were found concentrated showing their over confidence.

G. OVERREACTION AND THE AVAILABILITY BIAS

Investors overreact to the new information in the

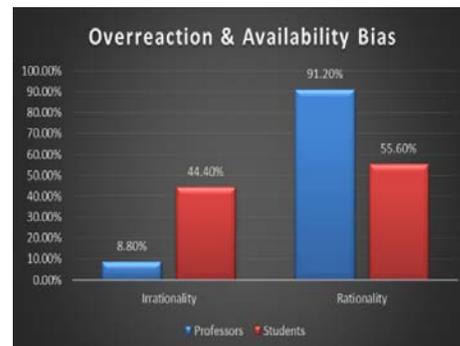
market. One of the characteristics of the efficient market is the immediate incorporation of new information in the market price. But in reality this incorporation of new information in the market price is more than appropriate as a result of overreaction to new information by the investors. The outcome of overreaction is price surge which is not a permanent trend and thus leads to erosion over a period of time.

What is made readily available to mind is given more importance by the investors. This bias is known as availability bias. This is the reason why recent news greatly affects the opinions and decision of investors in the market.

Following question was asked to examine the impact of availability bias and over reaction:

Q.1 A company is coming up with a very good new project, wherein the expected profitability is very high. How will you react to this news?

- (a) There will be quick reaction of purchasing the shares of this company (indicates irrationality)
- (b) Reaction would be after considering other information and fundamentals of the company (indicates rationality)



Professor respondents were found rational to a very large extent in this context whereas student respondents were divided almost equally in two categories.

H. PROSPECT THEORY

Traditionally, desirability of a choice is considered by combining the net effect of gains and losses associated with the choice. This is called 'utility' by the academicians and a choice maximizing utility is selected.

But in the real world, investors do not process information in this rational way. According to the idea proposed in the research conducted by Kahneman and Tversky in 1979, investors do not consider the gains and losses in the same way

rather investors take their decision on the basis of perceived gains rather than perceived losses. This idea was coined as prospect theory by these two experts. According to it, if a person is given two equal choices resulting into the same economic result, one stated in terms of possible gains and the other stated in possible losses, people would choose the former one.

According to prospect theory, the emotional impact of losses is more than the equivalent amount of gains. For example, according to traditional theory, the amount of utility that results from receiving Rs. 50 should be equal to a situation in which one gains Rs. 100 and then loses Rs. 50 as in both the cases, the end outcome is net gain of Rs. 50. But according to prospect, theory, majority people prefer receiving Rs. 50 rather than receiving Rs. 100 and then losing Rs. 50.

Respondents' rationality was studied in the context of prospect theory using following question:

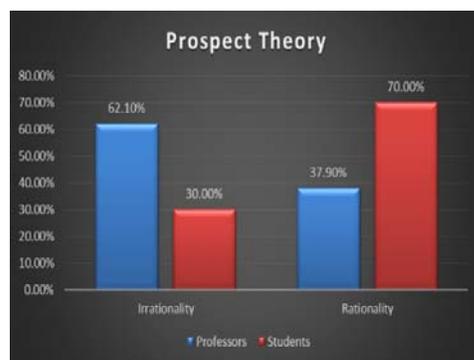
Q.1 Select any one option in both the following situations:

Situation I:

- (a) Sure gain of 500
- (b) 50% chance of getting nothing and 50% chance of getting 1000

Situation II:

- (a) Sure loss of 500
- (b) 50% chance of losing nothing and 50% chance of losing 1000

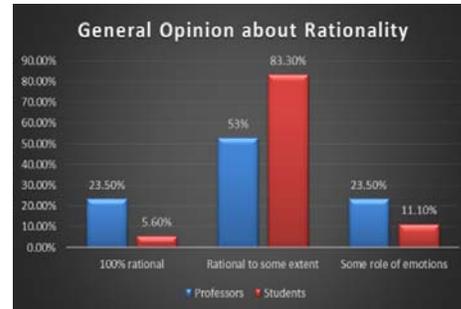


In the context of prospect theory, majority professor respondents were found to be irrational whereas majority student investors were found to be rational.

Following question was asked to know respondents' own perception towards their own rationality as investors.

Q. What is true for you as an investor?

- (a) I am 100% rational while taking financial decisions
- (b) I am rational to a larger extent while taking financial decisions
- (c) Emotions play some role in taking financial decisions
- (d) Emotions play major role in taking financial decisions



In both the category of respondents, majority investors (53% professors and 83.3% students) feel that they are rational to a larger extent. But student respondents think of themselves to be more rational proportionately.

V. FINDINGS AND CONCLUSIONS

Following are main concluding remarks on the basis of above analysis:

1. So far as Anchoring is concerned, both the category of respondents- professors and students are equally divided in the context of rationality.
2. In the context of mental accounting, respondents in both the categories are rational.
3. Both the category of respondents are irrational in the context of confirmation bias but professor respondents are more irrational.
4. In the context of hindsight bias, professor respondents are rational but student respondents are found irrational.
5. Professor respondents are found rational in the context of Gambler's fallacy but student respondents are equally divided in terms of rationality so far as Gambler's fallacy is concerned.
6. Student respondents are found more irrational in the context of herd behavior.

7. Comparatively student respondents are found more over confident as investors.
8. Student respondents are equally divided in terms of rationality in the context of availability bias and over reaction whereas professor respondents are found rational in this context.
9. In the context of prospect theory, professor respondents are found more irrational whereas student respondents are found more rational in this context.

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As a whole, respondents were not found irrational in all contexts in both the categories the way it has been proved by behavioural scientists. Professor respondents were found irrational in the context of confirmation bias and prospect theory whereas they were found rational to a greater extent in the context of mental accounting, hindsight bias, gambler's fallacy, herd behaviour, over confidence and availability bias.

Student respondents were found rational in the context of mental accounting and prospect theory. Whereas they were found more irrational in the context of confirmation bias, hindsight bias, herd behaviour and over confidence.

Comparatively, professor respondents were found more rational than student respondents.

VI. LIMITATIONS OF THE STUDY AND SCOPE FOR FURTHER RESEARCH

The present study suffers from the following major limitations and thus, indirectly it creates scope for further research:

1. The size of the sample was very small for the present study. This area of study requires large sample. So further research can be conducted on the same lines taking bigger sample size.
2. A convenient sample was selected here for the study. Same study can be conducted using probability sampling.
3. Few aspects of behavioural finance were included in the study. Many more aspects can be included in the study to examine the rationality of investors.

VII. REFERENCES