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Behaviour Patterns of Individual Equity Investors : A review of behavioural conduct of Indian stock market participants

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Abstract

Behavioural finance incorporates psychology, sociology, and other empirical approaches into the study of investment behaviour to elucidate how investors handle the information and take action. This investment process is influenced by a numerous interdependent variables, whereby investors employ various heuristics and may exhibit behavioural biases. This paper provides a comprehensive model of individual equity investors' behaviour based on a review of behavioural finance literature, in which investment decisions are seen as an iterative mechanism of interactions between the investor and the market environment. The paper spells out the extent to which their investment preferences are dominated by human emotions and cognitive errors. The findings indicate that, contrary to what conventional finance theory suggests, investors make a lot of irrational decisions based on their own cognitive and prejudice biases. In the guidance of the behavioural finance theory, the research will be closer to the reality and give more notable insight to the basis of individual equity holdings, and how their psychological characteristics give rise to market anomalies.

Keywords : *Behavioural finance, Psychological bias, Equity holdings, Risk aversion, Cognitive bias*

1. Introduction

Money is regarded as the most important of all discoveries. It has become a requirement for human survival. Thus, individuals hold money for various motives. One such purpose is to save money. The value of the money saved depreciates if it remains idle or not invested. Inflation, interest rate changes, and other factors may all contribute to the depreciation. So, investment plays an important role in a person's ability to prepare for and meet potential financial needs. A person can invest in a variety of ways and find a multitude of opportunities. One of the most well-known of these avenues is the stock market, which offers investors a functional place to put their funds. Investment helps both the investors and the organizations. While the equity market is a great avenue for investors to invest, it is also a great place for businesses to raise funds. They are supposed to work together to create an effective stock market, which ensures an efficient economy. Global financial markets pose new challenges for investors, and activities of all investors are based on continuous decision-making, which is not always rational, and, as a result, unexplained by the traditional economic theory, assuming that all investors operating in the market are rational, and the capital market is efficient. Contrary to popular notion, stock markets have repeatedly demonstrated since the 1929 Great Depression that their performance is not really linked to macroeconomic and business fundamentals rather it depends more upon how individual investors take and deal with the information around. According to the SBI Ecowrap article, "the current turnaround in stock markets reflects the eternal dilemma of the linkage between the real and financial sectors." By studying investors' characteristics, individual investment behaviour and its consequences for financial markets, scientists from various countries come to the conclusion that impulsive and irrational factors contribute to the random walk of the stock market.

1.1 Background for topic selection

As the dot-com bubble exploded in the late 1990s, investors were compelled to re-examine their investment laws. With the bursting of the speculative technology bubble in March 2000 and the real estate bubble in September 2008, this need became much more urgent. Since then, new attempts have been made to clarify financial market behaviour. As a result of these efforts, academic finance has progressed from efficient market theory to behavioural finance. The global financial crisis has highlighted the importance of studying investor conduct and its determinants, as well as the effects of irrational investor decisions on financial markets in general. Currently, scholars from different countries are involved in studying behavioural finance issues such as business complexity and inefficiency, as well as market anomalies and influence of investor psychology on their decisions with regard to different aspects. Real investor behaviour deviates from reasonable behaviour due to a variety of subjective factors such as knowledge, perception, and evaluation, risk tolerance and understanding, personal attributes, and investor emotions, mood, and expectations, according to financial behaviour researchers. It should be noted that researcher's interest in irrational investor behaviour and its consequences for financial markets is constantly growing. Above mentioned factors pose as questions, which is why this area of research has been hand-picked.

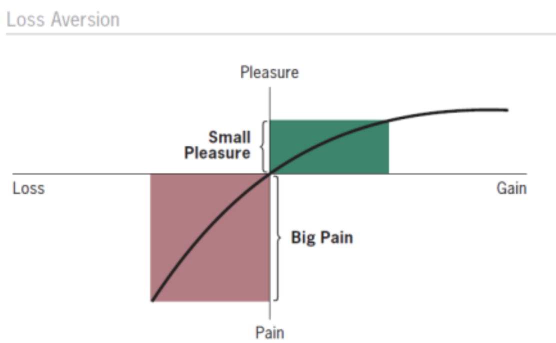
1.2 Literature Review

Definition : *Behavioral finance, a subfield of behavioral economics, proposes that psychological influences and biases affect the financial behaviors of investors and financial practitioners. Moreover, influences and biases can be the source for explanation of all types of market anomalies and specifically market anomalies in the stock market,* *such as severe rises or falls in stock price. (Investopedia.com)*

Behavioral finance theory has sparked many influential hypotheses through research into investor psychology, and can be used to describe market anomalies to some degree.

***1.2.1** Prospect Theory*

Identified by Kahneman & Tversky (1974) as systematic biases in investment-decision judgment, Prospect theory is a psychology theory that describes how people make decisions when presented with alternatives that involve risk, probability, and uncertainty.



It attempts to explain that investors repel to "loss" more than they're attracted towards same level of "gain".

***1.2.2** Overconfidence or Wishful Thinking*

It is a tendency to hold a false and misleading assessment of our skills and holding a notion that one can outsmart others and outperform the market.

***1.2.3** Cognitive Dissonance*

Basically, being uncertain and restless about one's own decisions and being unnecessarily vigilant.

***1.2.4** Mental Compartments*

Splitting the equity portfolio into two parts as in to have few holdings for long term as investment and rest for trading on the short term basis.

***1.2.5** Attention Anomalies (Herding)*

Impact of everyone else's selection of a particular stock and getting along with that i.e. having influence of others' investment decisions on personal holdings.

***1.2.6** Anchoring*

Equity investment decisions majorly judged on the scale of past experiences. Also includes forecasting on the basis of past trends.

***1.2.7** Representativeness Heuristic*

Representativeness Heuristic refers to the tendency to see best fit rather than evaluating what is most probable.

***1.2.8** Magical Thinking*

This brings up to the likelihood to attach some sort of superstitious patterns while taking investment decisions.

1.3 Objective

The objective of the paper is to examine behavioural factors that frame Indian individual investors' conduct in the equity market. The aim of the project is to identify the categories of psychological and heuristic biases that the sample population of equity investors fall in.

The study attempts to achieve the following objectives:

- *To locate the psychological factors influencing the decision of investment.*
- *To categorize Indian investors' behaviour in accordance to the prevalent theory of behavioural finance.*
- *To study the effect of demographic factors (like age, gender and income) on investor's preference.*

2. Methodology

The study has been based on "model Onion" of research. Thus the strategy most suited for the research is survey method. The information was gathered by the use of a questionnaire. The data has been collected from major Indian cities namely Pune, Surat, Vadodara, Bhopal. The sample population targeted on the people who keep considerable knowledge about equity market with or without training and are active participants of the stock market. The list of investors was obtained from prominent investment firms in urban areas, and the subjects were chosen from the list using a random number table. The number of properly filled questionnaires was found to be 34 out of 40 distributed. The questionnaire first obtains the demographic details of the respondents and then gets along with extracting individual preferences. The data extracted is completely a qualitative data. The statistical methods used to analyze this qualitative data are particularly "Content Analysis" and "Narrative Analysis".

The main goal of this study is to investigate behavioural variables affecting investor decision-making that are already "out there," rather than inferring and constructing theory. The deduction method appears to be the most suitable option. The study begins by analysing behavioural finance theories in general, and stock market theories in particular, in order to gain a theoretical and conceptual background as well as empirical results from previous studies, from which the research model is presented. The questions for questionnaires are then prepared.

The validity of the questionnaire was assured with the consultation of the subject experts.

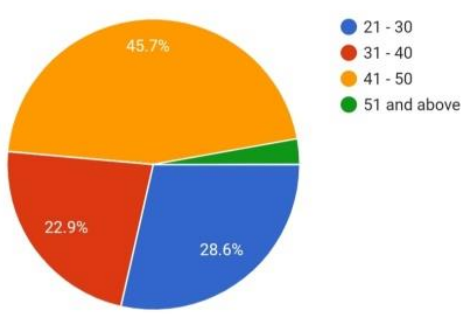
In addition to that, the method of visual representation of data is used to present the data with the help of graphs and charts.

3. Data Analysis and Findings

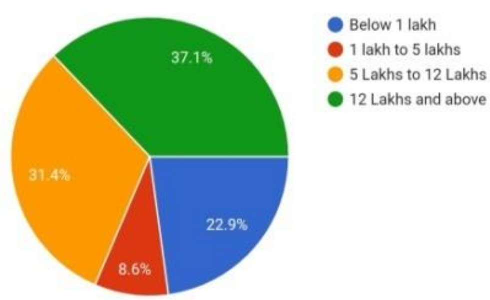
The questions from 1 to 18 of the questionnaire, which are coded from Qu1 to Qu18, are designed to explore the levels of behavioral dimensions' impacts on the individual investment decisions around the eight major categories propounded in behavioural finance.

3.1 Demographic Data

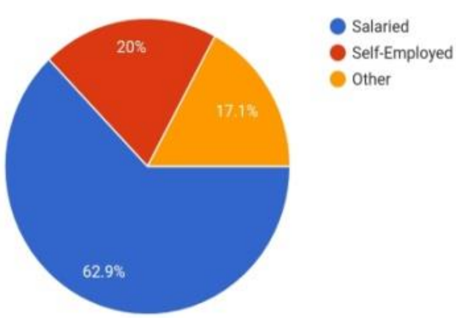
3.1.1 Age group:



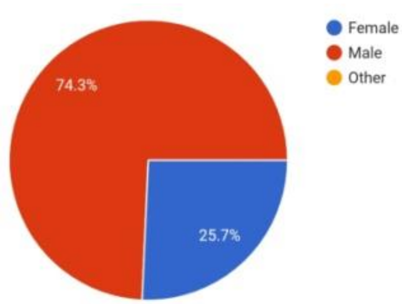
3.1.3 Annual Income:



3.1.2 Profession:



3.1.4 Gender:



3.2 Behavioural Manifestation

Factors	Questions	Factor Loading
Prospect Theory	*Qu5: Include minimum volatile stocks in their portfolio despite lower income incentive.*	*52%*
	Qu12: Becoming more risk averse after a prior loss.	*63.6%*
	Qu14: Impulsive decisions while selecting or eliminating stock due to fear of loss.	*36.4%*
	Qu15: Selling out holdings as there's a possibility of market to fall.	*17.6%*
Overconfidence	*Qu7: Believing that their knowledge about stock market, they can outperform the market.*	*67.6%*
	Qu16: Presenting oneself as "risk taker"	*58.8%*
Cognitive Dissonance	*Qu9: Disturbing long term portfolio just to seek current profitability.*	*69.7%*
	Qu11: Minutely observing market ups and downs; taking short term instability critically.	*67.6%*
Mental Compartments	*Qu10: Bifurcating equity portfolio on long-term and short-term basis, former to hold as investment and latter to play around.*	*53.1%*
Attention Anomalies (Herding)	*Qu13: Having impact of other investors' decisions of buying and selling stocks on personal investment decisions.*	*20.6% (mostly)* *61.8% (to some extent)*
	Qu14: Impulsive action on holdings due to change in other investors' stock volume.	*36.4%*
Anchoring	*Qu6: Forecasting the changes in stock prices in the future based on the recent stock prices.*	*45.5% (mostly)* *30.3% (sometimes)*
	Qu8: Observing current positions of stock prices and peruse its returns before actually putting money into it.	*72.7%*
Representativeness heuristic	*Qu14: Preferring companies' value i.e being value expressive more than considering stocks' value and momentum i.e. utilitarian approach.*	*82.4%*
	Qu5: More people going with large but steady growth companies than high growth companies although smaller.	*38.2%*
Magical Thinking	*Qu18: Managing to take part in "Mahurat trading" even if there's shortage of funds to invest; picking up stocks for long-term investment motive on special occasions (birthdays, new year, auspicious calendar day)*	*82.8%*

4. Observation and Discussion

4.1 *Based on regularity of managing equity portfolio : It has been observed that investors do not attend to their holdings as often as they should. This was reflected when 25.7% investors agreed that it takes them to manage their holdings yearly or even more.*

4.2 *Effect of demographic factors:*
According to the demographics of age, it has been observed that age group of 40-50 and above 50 was found majorly to be risk averse as compared to those falling under the age group of 20-30 or 30-40. They cared upon large, steady gowth companies with minimum volatility. The people falling under this age group covered 45.71% of the total respondents. Also, this age group is the one depicting "representativeness heuristic" and "magical thinking" the most.

Another very key and salient finding of this research has come out to be that gender difference somehow does affect individual conduct towards investment decisions. In fact, participation level as well. The participation of females has been observed to be just 25.7% of total population. And in addition to that, females have been noticed to be more "risk averse" regardless of earning any level of income while compared to the male participants.

Based on income level, earners of 12 Lakh and above consisted of 7.6% females and 72.4% males. Among all these investors, the ones between the age of 40 and above were found the most to be risk averters i.e. around 70%.

This study has given a considerable outcome that can be summarized that Men who are middle-aged and fall under the income slab of 5 Lakh to 12 Lakh and 12 Lakh+ are found to be more of risk averse, even after earning this high level of income.

The middle aged men who are counted in the income slab of 1 Lakh to 5 Lakh are also concluded to repel more against risk but the men who are young aged, falling in the same income slab are surprisingly seen to be risk takers.

Furthermore, while we look at investors falling under the income level that's below 1 Lakh, only15% women are noticed to be risk takers while 50% men seem to be allured towards risky securities. Almost all these investors are young aged, as illustrated by the sample.

5. Conclusion

Stock markets are always futuristic in nature. In simple terms, this means that the stock markets always crash at the slightest indication of economic downturn and latches on any positive sentiment/news to move towards recovery. This is what has happened during the current bullish recoveries in Indian, US and European stock markets.

Therefore, study of individual as well as institutional investors' behaviour appears to be essential to be added into the academia.

The paper has reviewed the literatures associated with behavioral psychology such as Prospect theory, analytical biases, including representativeness heuristic, anchoring, and cognitive bias which consists of over-confidence, over-reaction and herd effect. These psychology characteristics can provide explanations and solutions to the market anomalies to some extent.

The paper also studies some demographical factors affecting the decisions of the stock market participants. As seen from above analysis, individual investors connect some sort of prejudices to their equity portfolio selection, which shapes their decisions that are not really rational. Loss-aversion, Overconfidence, Attention Anomalies and Anchoring are four major psychological biases according to the research.

Behavioral Finance is an exciting and interesting new field in terms of stock market research. Behavioral finance theory evidence aids in a deeper understanding of behavioural psychology and provides further insight into stock market anomalies and investment strategy selection.

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