

FACTORS INFLUENCING BEHAVIOUR OF INDIVIDUAL INVESTORS AND INVESTMENT PATTERNS IN DERIVATIVE MARKET

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Abstract

Investment is the most trending topic in today's financial world. There are various reasons for an investor to invest in different avenues depending upon his objectives. There are multiple demographics factors like age, income, education and qualification which reflect the investment patterns. This study aims to analyse the influence of various demographic factors and perceived risk factors on the investment behaviour of the investors in the equity markets. Investment behaviour components like heuristic biases, prospect biases, market biases and herding biases. This study was taken in Bangalore city with coverage of 100 respondents who are investors or potential investors in equity markets. Karl Pearson's correlation is used to test the significance of the relationship between investment behaviour components, demographics and attitude. The findings and conclusions of the study aim to give a better picture of the investors' behaviour to the companies with equities and derivatives.

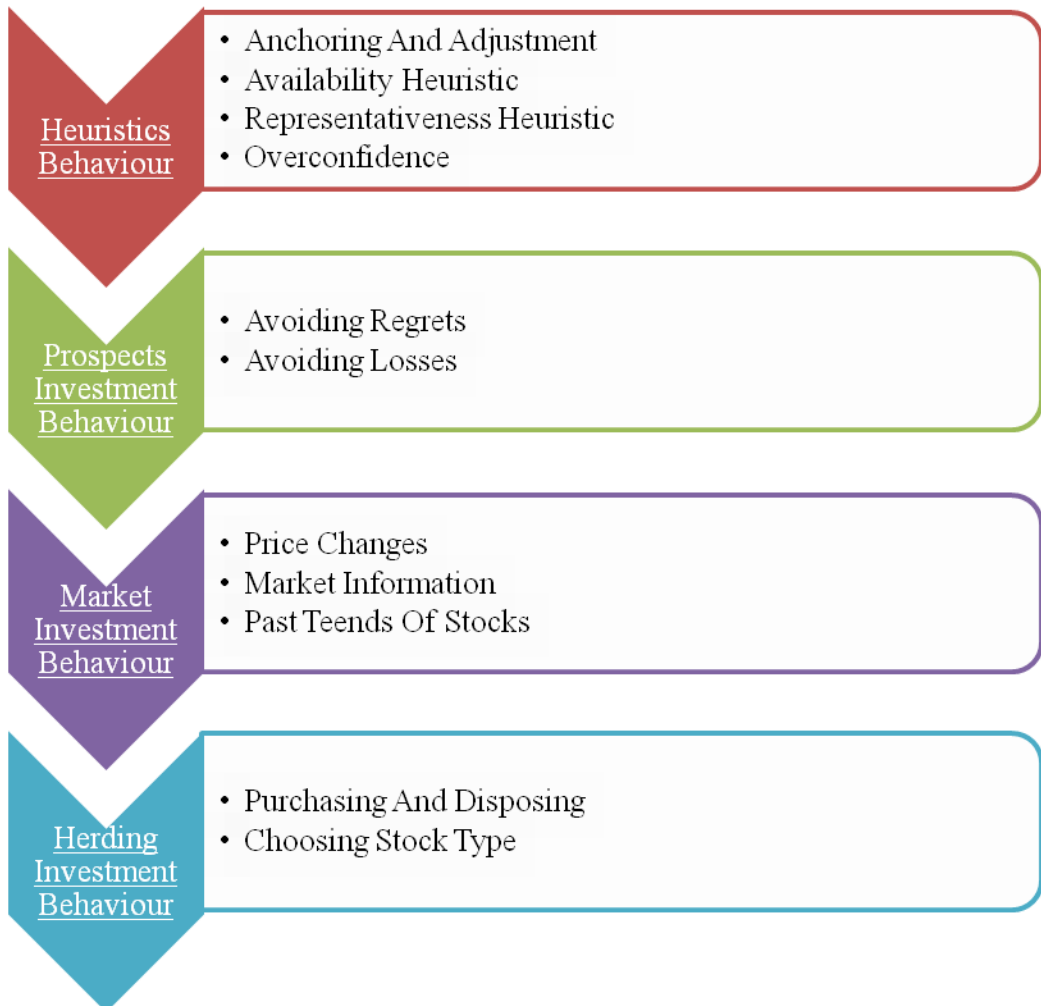
Keywords: Behavioural finances, investment behaviour, equity market, derivatives market heuristics biases, herding biases, affect, cognition, demographics

I.INTRODUCTION

Behavioural finance is a field of finance that proposes psychology-based theories to explain stock market anomalies such as severe rises or falls in stock price. Within behavioral finance, it is assumed the information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes. Behavioural finance attempts to fill this void by combining scientific insights into cognitive reasoning with conventional economic and financial theory. More specifically, behavioural finance studies different psychological biases that humans possess. These biases, or mental shortcuts, while having their place and purpose in nature, lead to irrational investment decisions.

Derivatives are latest fragment of secondary market business in India. So investors need to recognize the intricacy of this trade. Technological advancement and rapid growth of derivative market since the new economic policy of 1991 has given more significance to investors. Investor behaviour also tend to move into savings to investment, More number of brokers also entered into the capital market due to the liberalized regulation in capital market. Brokers are providing number of services under single umbrella to the investors based on their need. So, this study aims to discover that how these services are perceived by the investors and how these services are utilized by the investors. The researcher will identify and evaluate the dynamics influencing investors' perception towards investment decision on equity and derivatives market. The study would like to inspect the Investors behaviour towards selecting the type of investment instrument for investment.

Investment behaviour of individual investors' model



II. REVIEW OF LITERATURE

This Chapter aims at analyzing the related literatures of investment behavior.

Barberis and Thaler (2003, p.1063) are considered as one of the famous writers who provide an excellent study about various types of behavioral biases that affect decision making as well as financial markets

According to **Weber and Hsee** (2000, p.34), “the bottom line is that the topic of culture and decision making has not received much attention from either decision researchers or cross cultural psychologists”

According to **Ritter** (2003, p.429), behavioral finance is based on psychology which suggests that human decision processes are subject to several cognitive illusions. These illusions are divided into two groups: illusions caused by heuristic decision process and illusions rooted from the adoption of mental frames grouped in the prospect theory

According to **Kahneman & Tversky**, (1974, p.1124). Heuristics are defined as the rules of thumb, which makes decision making easier, especially in complex and uncertain environments by reducing the complexity of assessing probabilities and predicting values to simpler judgments Kahneman and Tversky seem to be ones of the first writers studying the factors belonging to heuristics when introducing three factors namely representativeness, availability bias, and anchoring.

Waweru et al., (2008, p.27). Waweru et al. also list two factors named Gambler's fallacy and Overconfidence into heuristic theory .Prospect theory describes some states of mind affecting an individual's decision-making processes including Regret aversion, Loss aversion and mental accounting. He also identifies the factors of market that have impact on investors' decision making: Price changes, market information, past trends of stocks, customer preference, over-reaction to price changes, and fundamentals of underlying stocks.

DeBondt & Thaler (1995, p.396) state that financial markets can be affected by investors' behaviors in the way of behavioral finance. If the perspectives of behavioral finance are correct, it is believed that the investors may have over- or under-reaction to price changes or news; extrapolation of past trends into the future; a lack of attention to fundamentals underlying a stock; the focus on popular stocks and seasonal price cycles. These market factors, in turns, influence the decision making of investors in the stock market.

Caparelli et al., (2004, p.223) In the security market, herding investors base their investment decisions on the masses 'decisions of buying or selling stocks. In contrast, informed and rational investors usually ignore following the flow of masses, and this makes the market efficient. Herding, in the opposite, causes a state of inefficient market, which is usually recognized by speculative bubbles. In general, herding investors act the same ways as prehistoric men who had a little knowledge and information of the surrounding environment and gathered in groups to support each other and get safety.

III. RESEARCH DESIGN

3.1 STATEMENT OF THE PROBLEM

After a thorough literature review, a need was felt to study the demographic and perceived risk attitude which influences the decisions of investors in Bangalore to invest in securities market. Further, impact of such variables on their preferences of investments respectively was an area found to be where research was found to be lacking.

An analysis of the available literature revealed that there are no studies or researches related investment behavior in Bangalore city. Bangalore is the fastest growing city where it is compulsory to study the behavior of investors likely to attract more investors and frame the investment policies keeping in mind the study. Investment behaviour constitute to a major aspect of behavioral finance which explains use of Heuristics biases, Prospect biases, Market biases and Herding biases by investors to take investment decisions. These biases influence the decision of individual investors and were found to be the most important topics of research.

3.2 OBJECTIVES OF THE STUDY

- To analyse the impact of demographic factors on the investment behaviour of individual investors in equity and derivatives markets
- To study the effect of perceived risk attitude on the decision making towards investments in equity and derivatives markets
- To suggest ways to overcome the effects of various paradigms of behavioural influences on investor investments in select equity and derivative market.

3.3 HYPOTHESIS

- **H1:** There is no significant relationship between demographic factors and investment behaviour
- **H2:** There is no significant relationship between perceived risk attitude and investment behaviour

3.4 RESEARCH METHODOLOGY

Research Methodology is a way to systematically solve the research problem .It may be understood as a science of studying how research is done scientifically. Data was collected freshly for the purpose of research using the following methodology. Cluster Random Sampling technique of probability sampling is used to collect the data. Since the number of investors is very large – Bangalore- a cluster is used and respondents are selected on random basis.Interview schedule and Questionnaire were used for collecting the data from the selected respondents. Karl Pearsons Correlation is the best statistical analysis which shows the relationship between variables. Hence, it was used to analyse the data collected.

VARIABLES UNDER STUDY

INDEPENDENT VARIABLES		DEPENDENT VARIABLES
Demographic factors	Age Education qualification Income level Occupation level	Investment behaviour Heuristics biases Prospect biases Market biases Herding biases
Perceived risk attitude	Affective Cognitive	

IV. ANALYSIS AND INTERPRETATION

Table:1 Showing relationship between demographic factors and heuristic biases investment behaviour

Demographic Factors		Age	Education	Occupation	Annual Income
Investment Behavior HEURISTICS	Representativeness	0.0231	(0.0823)	0.0071	0.2076
	Overconfidence	0.0251	0.0541	0.0151	(0.4871)
	Anchoring And Adjustments	(0.0191)	0.1672	(0.0331)	0.3612
	Availability Bias	0.0181	0.0431	(0.0671)	0.2161

At 5% level of significance

Analysis: The components of heuristic biases investment behaviour are associated with the demographic factors to study the extent of impact of these factors on one another. Age has no significant impact on heuristic investment behaviour since all the r values are very far from 1. Education has a significant relationship with the heuristics biases approach, where representativeness (0.0823) and anchoring 0.1672 are more closely associated with the education patterns. In case of occupation on heuristics components there is no relationship and annual income has highest significant relationship with the heuristic factors as compared to other demographic factors in decision making for individual investors in equity markets.

Table: 2 Showing relationship between demographic factors and prospects biases investment behaviour

Demographic Factors →		Age	Education	Occupation	Annual Income
Investment Behavior PROSPECTS ↓	Avoiding Losses	0.0961	(0.2761)	0.0187	0.1439
	Avoiding Regrets	0.1761	(0.1871)	0.0033	(0.1612)

At 5% level of significance

Analysis: Demographic factors like age, education qualifications, occupation and income may have a relationship with the investment behaviour of the investors. The above table shows the statistical values of association of the factors with the prospects biases. The education levels of an individual have high significant relationship in case of avoiding losses and avoiding regrets attributes of prospects biases. The other r values also indicate that there is significant relationship between the demographic factors and prospects biases components.

Table: 3 showing relationship between demographic factors and market biases investment behaviour

Demographic Factors →		Age	Education	Occupation	Annual Income
Investment Behavior MARKETS ↓	Price Changes	(0.0874)	0.2311	0.3571	0.1097
	Market Information	0.3271	0.4538	(0.4191)	0.2371
	Past Trends Of Stocks	0.0972	(0.3912)	0.1061	(0.1091)

At 5% level of significance

Analysis: Price changes, market information and past trends of stocks are some of the components of the market biases that influence an individual investor in investing options in equity markets. Correlation between the demographic factors and market biases investment behaviour components is tested in the above table. The age of the investors has a significant relationship with all the factors of market biases, education levels of the investors on market biases also show a significant relationship. Occupation of the investors also influences the decision of the investors in relation to the market biases, which means there is a significant relationship. Annual income also show significance in association to markets biases components.

Table:4 showing relationship between demographic factors and herding biases investment behaviour

Demographic Factors		Age	Education	Occupation	Annual Income
Investment Behavior HERDING	Purchasing And Disposing	0.0751	(0.0541)	0.0151	(0.1875)
	Choosing Stock Type	(0.3571)	0.1097	(0.0874)	0.2311

At 5% level of significance

Analysis: Purchasing and disposing of stocks, choosing the type of stocks are the components of herding biases investment behaviour of individual investors. Demographics such as age, education, occupation and annual income on purchasing and disposing of shares has no significant relationship. In the herding dimension all the demographic factors have significant relationship with the investment behaviour herding biases components.

H1 Alternate Hypothesis: there is a significant relationship between demographic factors and investment behaviour- ACCEPTED AT 5% significance level

Table:5 showing relationship between perceived risk attitude and heuristics biases investment behaviour

Perceived Risk Attitude		Affect	Cognitive
Investment Behavior HEURISTICS	Representativeness	0.4598	(0.0754)
	Overconfidence	(0.0956)	(0.7541)
	Anchoring And Adjustments	(0.0355)	(0.3573)
	Availability Bias	0.4376	0.3521

At 5% level of significance

Analysis: The above table shows the correlation r values between the perceived risk attitude factors and investment behaviour heuristic factors. Affect has a significant relationship with representativeness and availability bias. In case of cognition factor of perceived risk attitude there is a significant relationship with heuristic dimensions such as over confidence, anchoring and adjustments and availability bias.

Table:6 showing relationship between perceived risk attitude and market biases investment behaviour

Perceived Risk Attitude		Affect	Cognitive
Investment Behaviour MARKETS	Price Changes	(0.1618)	0.1765
	Market Information	0.6541	(0.0658)
	Past Trends Of Stocks	0.4539	(0.3657)

At 5% level of significance

Analysis: Market dimensions such as price changes, market information and past trends of stocks have a high correlation with the affect component of the perceived risk attitude. In case of cognition past trends of stock are highly significant and the other are no very significant.

Table:7 showing relationship between perceived risk attitude and prospect biases investment behaviour

Perceived Risk Attitude	→	Affect	Cognitive
Investment Behavior PROSPECTS	↓	Avoiding Losses (0.0711)	0.0032
		Avoiding Regrets 0.0577	(0.3412)

At 5% level of significance

Analysis: Perceived risk attitudes such as affect and cognition have no significant relationship with the prospects investment behaviour like avoiding losses and regrets. Only in case of cognition, avoiding regrets has a significant relationship where the correlation r is equal to 0.3412 which indicates a relationship.

Table:8 showing relationship between perceived risk attitude and herding biases investment behaviour

Perceived Risk Attitude	→	Affect	Cognitive
Investment Behaviour HERDING	↓	Purchasing And Disposing 0.0051	0.0541
		Choosing Stock Type (0.0071)	(0.0097)

At 5% level of significance

Analysis: herding investment behaviour components such as purchasing and disposing, choosing stock type are affected by the perceived risk attitude components like affect and cognition. But in the study it clearly indicates that there is no relationship between herding components and perceived risk attitudes.

H2 Null Hypothesis: there is no significant relationship between perceived risk attitude and investment behaviour- ACCEPTED AT 5% level of significance

V. FINDINGS AND SUGGESTIONS

- Majority of the individual investor respondents are of the age group between 27 years – 36 years who are very interested in investing in the equity stock market
- Most of the individual investors were highly qualified either with graduation or post-graduation levels
- In occupational demographics majority of the individual investors are business men and some are employees of public companies
- Majority of the individual investors are having an annual income band of Rs 100000 to 300000 per annum.
- Demographic elements play a very important role in decision making for any individual investor, therefore it can be seen that there is a significant impact of demographics on the investment behaviour or behavioural finances
- Perceived risk attitude like affect do not have an impact on the decision making of the individual investors
- Cognition refers to thinking or an intellectual process of gaining knowledge, interpreting and taking decisions. Cognition factor influences the individual investor behaviour in all investment behaviour components.
- Heuristic dimensions, prospects dimension, market dimension and herding dimensions of investment behaviour are studied and correlation between the investment behaviour and demographic and perceived risk factors was analysed.

- Heuristics dimensions and market dimensions are prevailing among the individual investors for decision making to invest in the stock markets.
- The study concludes that there is a significant relationship between the demographic factors and the investment behaviour dimensions since the correlation values are nearing to 1
- There is no significant relationship between perceived risk factors and investment behaviour of individual investors in equity market in Bangalore city
- There should create awareness among the investors as only heuristics and market dimensions are mostly preferred by the investors and perceived risk factor of cognition should also be considered.
- The result of the study is useful in guiding the companies to understand the behaviour of the investors in regards to investments in equity markets.
- The common errors committed by the investors can also be studied to frame the investment policies of different companies.
- The study also enables managing of portfolios and locating profit opportunities' in the equity markets.

VI. CONCLUSIONS:

This study was taken in Bangalore city were 100 respondents who are investors or potential investors were interviewed in equity markets. Karl Pearson's correlation is used to test the significance of the relationship between investment behaviour components and demographics and attitude. Heuristic dimensions, prospects dimension, market dimension and herding dimensions of investment behaviour are studies and correlation between the investment behaviour and demographic and perceived risk factors was analysed. Heuristics dimensions and market dimensions are prevailing among the individual investors for decision making to invest in the stock markets. Demographics such as age, education, occupation and annual income on purchasing and disposing of shares has no significant relationship. In the herding dimension all the demographic factors have significant relationship with the investment behaviour herding biases components. The findings and conclusions of the study aim to give a better picture of the investors' behaviour to the companies with equities.

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