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STUDY ON BEHAVIOURAL BIASES OF INVESTORS: THE EFFECT OF PROSPECT RULES

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ABSTRACT: Investment decisions of the investors are influenced by different objective and subjective factors. But we as investors ignore or not knowingly our emotions, feelings and sentiments make investment decisions. This disturbs our investment objective and the returns on investments gets effected. Hence, an attempt is made to understand the effect of prospect rules on investors' investment decisions. The research methodology is descriptive and causal in nature. The sample for the study are the retail investors from Belagavi city. The data to study the effect will be collected through primary source by the questionnaire. The result of regression analysis showed that there was impact of loss aversion and disposition effect on investor's investment decision. Even the way information is framed the investors get carried away by that, while making the decision of money to be invested. It was also found that less than 10% of the savings are getting invested by the investors. The results would be of use to the financial advisors and investors in knowing the subjective factors affecting their client's money related decisions.

Keywords: Investment decisions, Heuristics, Prospect rules, Behavioral Finance, Behavioral biases.

1. INTRODUCTION

Money related decisions of the investors gets influenced by many factors like risk, return, safety, emotions and sentiments etc. And while taking the investment decisions the investor adopts number of short cuts and without knowing their objective of investment they do the investment. At the end the investor does not receive the returns as expected. Because the investment returns are depending on investor behavior. And Investment behavior is driven primarily by greed and fear. Both the greed and fear affects the asset prices and returns. Collective investment behavior is reflected in stock market prices.

To make the investment decision lots of information is available to investors. And while processing this information an investor gets influenced by emotions and sentiments. In turn these affect the demand and supply to determine the market price.

The mental mistakes fall under the chapter of behavioral finance which throws light on investors' psychology. Behavioral finance helps in understanding the past trends and in turn tell the investors to be careful of their market behavior in order to prevent making mistakes (Sushmita, et al. 2018).

While there are, number of studies have been conducted to examine the impact of investor psychology on investment decision but the major factor among the objective and subjective factor was not touched upon. Hence, an attempt is made by the researcher to understand the same. And study also analyses among the effect of prospect biases on money related decisions of the investor.

2. LITERATURE REVIEW

Kengatharan Lingesiya & Navaneethakrishnan Kengatharan (2017) examined the influence of heuristics, prospect, market and herding variables on investment decisions and investment performance of individual investors at Sri Lanka. They employed cross sectional design for the study. Convenience sampling was used to collect the data through administering the questionnaire. The more than 50% of respondents from the sample had under 5 years of investment experience. Among the heuristics anchoring with M=4.16 had high impact on the investment decision making of investors and prospect variables had moderate impact on investment decision making at Sri Lanka. Market information and customer preferences did not had influence on investment performance.

Silwal Prasad Prem & Bajracharya Shreya (2021) studied the behavioral factors that is availability bias, representative bias, gambler's fallacy, overconfidence bias and representative bias impacting the investment decisions of individual investors of Nepal. The study was exploratory and descriptive in nature. Convenience sampling of 167 respondents' behaviour was observed in the study. The study found that majority of investors in stock market were youngsters between the age of 16 to 25. Exploratory factor analysis was used to remove unsuitable variables. Anchoring and overconfidence had impacted highly the investment decisions with mean value of 3.81 and 3.7 respectively which showed the investors dependence of their previous stock prices in the market and their overconfidence on their own investment opinion. In the prospect variables regret and loss aversion have highly impacted with mean values of 3.91 and 3.89 respectively. The results showed that anchoring and overconfidence while prospect variables had had positive and negative significant impact on investment performance respectively.

Erdogan H. Hilal (2020) analyzed the prospect theory explaining the investment decision. The experimental groups were corporate managers and the undergraduate students whose risk taking behavior was studied considering the profit conditioned scenarios. The results showed that greater risk taking behavior of managers and students when the scenarios are presented in terms of loss and in save condition they tend to avoid risk which is presence of framing effect. Through the interview the investigation was conducted. There was different in taking risk between the managers and students that is managers are more risk takers and they are more confident.

Khawaja Ali Hyder, Bhutto Ahmed Niaz & Naz Salma (2013), studied the relationship between the stock market development and human biases at Pakistan. 250 questionnaires were sent to teachers, students, and the other professionals. One sample t test and Pearson correlation coefficient techniques were used for analysis. There was high correlation between overconfidence and market development with correlation coefficient of 0.452. There was negative correlation coefficient (-0.029) between loss aversion and market development.

Baral Saurav & Pokhrel Raj Post examined the investors' behavior at Nepal stock exchange. The dependent variable was investment performance and independent variables were prospect, market, heuristic and herding factors. They found that on investment performance there was significant impact by market factors. And there was no significant relationship between heuristics, herding, prospect and performance of investment. Individual investors' expectation was moderately satisfied by the investment results. They also found the positive relations between the heuristic, prospect and herding with p values of less than 0.05.

Man Minh, Nguyen Nhu-Ty & Tuyen Thanh (2020) analyzed the relationship between financial behavior and investment decision of investors at Vietnam. They used EFA, CFA and SEM for analysis. The result showed that KMO=0.618 >0.5, Barlett's sig value is 0.000<0.05. Observed variables were correlated, indicating the factor analysis was appropriate. 5 pint Likert scale was used. Investment decision was highly impacted by prospect factor (β = 0.275) than heuristics (β = 0.257), and market (β = 0.189).

3. RESEARCH METHODOLOGY

The philosophical research design of the study is positive paradigm with deductive approach and the strategy choose for the study is survey method to collect the responses from the retail investors. For analyzing the data quantitative method is employed by the researcher. The cross-sectional data is used as the time frame of the research. The research methodology is descriptive and causal in nature. The independent variable is prospect variable (loss aversion, regret aversion, metal accounting, and disposition effect) and is dependent variable is investment decision. The questionnaire is sent to the retail investors of Belagavi city through google form and also self-administered. The 5 point Likert scale applied for the study is strongly disagree,

disagree, neutral, agree and strongly disagree. SPSS software is utilized to process and analyze the data. Chi square and regression analysis was done in the study.

4. OBJECTIVES OF THE STUDY

1. To study the most prominent factor among the objective and subjective factors effecting the investment decisions of retail investors.
2. To study the effect of prospect variables on investment decisions of retail investors.
3. To study the existence of framing bias among the retail investors.

5. HYPOTHESIS

H_1 - Subjective factors effect more the investment decisions of retail investors.

H_2 - There is a significant effect of loss aversion on investment decisions of retail investors.

H_3 - There is a significant effect of regret aversion on investment decisions of retail investors.

H_4 - There is a significant effect of mental accounting on investment decisions of retail investors.

H_5 - There is a significant effect of disposition effect on investment decisions of retail investors.

6. RESULTS AND DISCUSSION

Table 1 Demographic Profile of Investors

Title	Category	%
Gender	Male Female	60% 40%
Age	18-20 21-30 31-40 41-50 50 & above	2% 44% 28% 11% 15%
Educational Qualification	SSLC PUC Degree Diploma Post-Graduation and above	8% 13% 32% 7% 40%
Marital status	Single Married	37% 63%
Occupation	Salaried Professional	70% 8%

	Businessman Retired Others Housewife	10% 4% 5% 3%
Annual income	Rs. 2, 00,000 – Rs. 4, 00,000 Rs. 4, 00,001- Rs. 6, 00,000 Rs. 6, 00,001- Rs. 8, 00,000 Rs. 8, 00,001- Rs. 10, 00,000 Above Rs. 10, 00,000	72% 15% 6% 3% 4%
Work Experience	Less than 5 years 6-10 years 11-15 years Above 15 years	43% 21% 18% 18%
% of savings invested	Less than 10% 10%-20% 21%-30% More than 30%	45% 35% 12% 8%

Source: Primary Data

The above table 1.1 talks about the demographic profile of investors. In the sample male investors are 60% and female are 40%. Among the respondents the investors between the ages of 21-30 are more that is 44% followed by 28% of investors are between the ages of 31-40. In terms of marital status 63% are married and 37% are unmarried. Among the respondents 40% are PG and above degree holders.

With respect to occupation major percentage of investors are belonging to salaried category (70%). And annual income of majority of the investors is between Rs. 2 lakhs to Rs. 4 lakhs. When it comes to experience of investors' majority of them (43%) are having less than 5 years of experience and around 21% of investors are having more than 5 years of experience.

45% of investors and 35% of investors are investing less than 10% and between 10%-20% of their savings. There is a need to increase the investment percentage by the investors.

Type of investor based on risk tolerance capacity

50% of the investors risk tolerance level is low followed by 40% of the investors were moderate investors. And 10% of the investors are aggressive investors. Hence, in the study 50% of the respondents risk tolerance capacity is low.

Familiarity with the concept of behavioural finance

More than 50% of respondents are not familiar with the concept of behavioural finance which gives an opportunity to the brokerage firms, investment advisors and educational institutions to educate the investors in this regard and enhance their knowledge so that the investors become familiar with the mental errors and the mistakes.

Testing of hypothesis

H1: Subjective factors affect more the investment decisions of the retail investors

Table 2 Emotions affect more than objective factors

	Observed N	Expected N	Residual
1	70	50.0	20.0
2	30	50.0	-20.0
Total	100		

Source – Primary Data

Table 3 Test Statistics

	Emotions affect more than objective factors
Chi-Square	16.000[a]
df	1
Asymp. Sig.	0.001*

Source – Primary Data

Chi-square Goodness-of-Fit-Test was conducted to examine prominent factor among the objective and subjective factors affecting the investment decisions of retail investors of Belagavi city. The result above shows that since the p-value is less than 0.05 that is 0.001* we shall reject null hypothesis and have enough evidence to say that objective factors effect more the investment decisions than the subjective factors like risk, safety and return etc.

Testing of Hypothesis

H_2 - There is a significant effect of loss aversion on investment decisions of retail investors.

H_3 - There is a significant effect of regret aversion on investment decisions of retail investors.

H_4 - There is a significant effect of mental accounting on investment decisions of retail investors.

H_5 - There is a significant effect of disposition effect on investment decisions of retail investors.

Regression Model Summary

Table 4 Regression Analysis

Type of bias	Independent variable	Dependent variable	R	R Square	F-Value	p-Value
Loss aversion	Loss aversion	Investment Decision	.372	.138	7.766	.001
Regret aversion	Regret aversion		.255	.065	3.384	.038
Mental accounting	Mental accounting		.340	.116	4.182	.008
Disposition effect	Disposition effect		.493	.243	15.441	.000

Source – Primary Data

The above tables provides R and R^2 values of all the prospect biases in the study. The R value represents the simple correlation and R^2 value indicates how much of the total variation in the dependent variable investment decision can be explained by the independent variable prospect bias. The R values of loss aversion, regret aversion, mental accounting and disposition effect are 0.372, .0255, 0.340 and 0.493 respectively. The R value of loss aversion, regret aversion, and mental accounting are indicating low degree of correlation. Whereas disposition effect has (0.493) positive correlation with close to moderate association between the selected variables in the model. In this case R^2 values are 13.8%, 6.5%, 11.6% and 24.3% for loss aversion, regret aversion, mental accounting and disposition effect respectively. Among the same the **R^2 = 0.243** that means the linear regression explains 24.3% of the variance in the investment decision by the disposition effect.

ANOVA talks about how well the regression equation fits the data. p-Value's (Sig. column) of the prospect variables that is loss aversion, regret aversion, mental accounting and disposition effect are less than. 005 that is 0.001, 0.038, 0.008 and 0.000 respectively indicating significant result and reveal that there is significant impact of loss aversion regret aversion, mental accounting and disposition effect on investment decision of the retail investors. Hence, alternative hypothesis 2, 3 4 and 5 are accepted. The model is a good fit for the data.

1.1. <u>Framing Bias</u>

Table 5 Test Statistics

	Framing Bias	Framing Bias
Chi-Square	43.560[a]	27.040[a]
Df	1	1
Asymp. Sig.	0.001*	0.001*

Source – Primary Data

The above test statistic talks about the framing bias of retail investors of Belagavi city. It shows that p-Value is 0.001* which is less than the 0.05. This shows that the investors' investment decisions are heavily influenced by the manner in which the information is presented. This occurred despite the fact that the net expected values of both the instances were identical.

CONCLUSION

The study has highlighted the various aspects relating to emerging field of finance that is behavioral finance which highlights the irrational behavior of investor while making investment decisions. The result of the study showed that the individual investors (more than 50%) are unfamiliar with the concept of Behavioural finance. This talks about the risk for these people by falling into psychological traps and thus reap financial losses.

The investors also opined that the emotions and sentiments affect more the investment decisions as compared to subjective factors of traditional finance theories (p-Value 0.001*****). And these psychological factors effect definitely the selection of investment avenues.

Further the researcher made an attempt to study the effect of behavioural factors that is prospect biases on investment decisions of the retail investor and the test of regression proved the impact. The loss aversion regret aversion, mental accounting and disposition effect had significant impact on investment decisions with p-values of less than 0.05. Framing bias was present in investors proved by the chi square test with p-value of 0.001*****.

The financial advisors, brokerage firms and government regulatory bodies along with creating awareness about the investment avenues, risk, return aspects even needs to concentrate on the psychological factors in money related decisions of the investor. As these biases really harm the financial lives. Knowing these biases is a great step in learning how to reduce and avoid them. The education on these mental mistakes would lead to earning expected financial gains from investing in the various investment avenues.

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