THE IMPACT OF COGNITIVE BIAS ON THE INVESTMENT DECISION MAKING OF INDIVIDUAL INVESTORS OF KASHMIR

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Abstract

Individuals' psychology varies from person to person. The financial decisions for investment may be driven by behavioral preconceptions, as the people are not always rational while making their investment decision. This paper provide an insight about the psychological factors having an impact on the financial decision making of an individual investors of Kashmir. These factors includes the different biases depending upon the preference and perspectives of the investors. The study conducted on the individual investors of Kashmir affirms that these biases have a significant impact on the investment decision of these investors. The cognitive bias includes the fear and greed of the investors. There are a number of fears related to investing which influences the decision of the investors like losing money, others finding about the loss of investors and the bad luck that may hinder the gains of investors. Some of the investors attribute the gains to the good luck attached to them.

Keywords: Investment behaviour, Cognitive bias, Kashmir.

Introduction

Most of the financial theories are based on the idea that everyone is rational and before making any decisions takes careful account of all the available information which is not the case in reality. Quite often we are confronted with phenomena in financial markets that are difficult to explain with the traditional market theories. Behavioral Finance refers to the theories, which are based on psychology. It is an attempt to understand how emotions and cognitive errors influence investors' behaviors. It focuses upon how investor interprets and acts on information to take investment decisions. It explains that individuals do not always act rationally in their financial decisions and that their behaviors' cause them to make different choices about their financial decisions. Human decisions are subject to several cognitive illusions. Due to the fact that people are not always rational, their financial decisions may be driven by behavioral preconceptions.

Cognitive Bias is stated as what and how an investor thinks. In behavioral finance, Cognitive bias is an identified term and is referred to as propensities to anticipate in certain ways that can lead to systematic deviations from a standard of good judgment or rationality. These biases may sometimes lead to perceptual distortion, inaccurate judgment, illogical interpretation, or what is broadly called irrationality. A rational behavior decision-making process is based on making choices that result in the most optimal level of benefit or utility for the individual. Rational behavior does not necessarily always involve receiving the most monetary or material benefit because the satisfaction received could be purely emotional.

Literature Review

Statman (1988) observed that people trade for both cognitive and emotional reasons. People trade as they anticipate they have information, while in actuality they make solely noise and trade only since trading fetches them ecstasy and pride. When decisions made are profitable trading brings pride to them, but it brings regrets when they are not profitable. The pain of regret is often tried to dodge by the investors by eluding employing investment advisors as scapegoats, realization of losses, and avoiding stocks of companies with low reputations.

Hirshleifer (2001) argues that many or most familiar psychological biases can be viewed as outgrowths of heuristic simplification, emotion-based judgments and self-deception.

Kent et.al (2001) found in their study that the evidence for systematic cognitive errors made by investors and these biases affect prices.

Joseph and Francis (2010): the study suggests from its result that the behavior of individual investors is irrational to a larger extent. It also revealed that individual investors have high level of involvement and over-confidence while they are not much optimistic about the future outlook of market and moreover they have an aversion to risk.

Sun and Chun (2006) studied the influences of regret aversion, over-confidence, self-control and mental accounting on the disposition effect of selling winners too early and holding losers too long. The empirical data analysis of 290 investors indicated that all four psychological factors have significant influences on the disposition effect. The findings showed that mental accounting, self- control and over-confidence positively influence the disposition effect, and self-control negatively influences the disposition effect. The results also indicated that self-control can reduce irrational behavior of investor.

Kannadhasan (2008) Investigated on the role of behavioral finance in investment decisions and found that human decisions are subjected to various cognitive illusions. The susceptibility of an investor to a particular illusion is likely to be a function of various psychological variables, and the investor has to take necessary steps to minimize or avoid illusions for influencing their investment decision making process.

Mittal and Vyas (2008) explored the relationship between demographic factors and the investment personality exhibited by the investors. Empirical evidence advocated that elements such as marital status, income and education effect an individual‘s investment decisions. Further the results revealed that investors in India can be classified into four dominant personalities viz. technical, cautious, informed and casual.

Kaleem et.al (2009), in a study of factors affecting financial advisors perception in portfolio management in Pakistan, found that age, income, language and orientation of education have a significant role in determining the investment style of an investor.

Love (2010) investigated the impact of demographic shocks on optimal decisions about savings, life insurance and most certainly assets allocation and found that marital status transition could have important effects on optimal house hold decisions particularly in the cases of divorcee and widowed. In this study, the empirical evidence indicates that divorce and widowhood have particularly strong effects on allocations and that these effects differ significantly by gender age and number of children.

Shaikh and Kalkundrikar (2011) contended that the factors influencing investors‘ investment decisions are based on various demographic factors like educational qualifications, level of income, level of market knowledge, marital status, gender, age, gender, and the number of dependents.

Jayaraj (2013): This study was attempted to identify the psychological biases which may influence individual investment behavior in Indian stock market. It was found that there are six underlying psychological axes that appear driving the individual investor behavior. The six apposite axes on the basis of underlying variable are named as prudence and precaution, remorse abhorrence, diligent and discreet, conservatism, cognition, under confidence. The results reveal that the psychological axes, diligent and discreet, remorse abhorrence, conservatism fall in line with the earlier research to some level. But under confidence and prudence are the contrary behavior axes reported by the multivariate analysis. These psychological modules appear to be influencing individual investors‘trading behavior in Indian Stock Market.

Hypotheses

H0: The investment behavior of an individual investor is irrational.

H1: The investment behavior of an individual investor is rational.

Research Design and Methodology

For the present study, data has been collected through questionnaire survey. The instrument was tested on a sample of 50 investors in Kashmir. The reliability of the instrument is measured through Cronbach‘s alpha which is equal to .831 and is considered be very good reliability according to Hair et al. (2010), Malhotra and Dash (2010) and Field (2009). While content validity is undertaken to ascertain whether the questionnaire is appropriate and relevant to the purpose of study. The Content Validity Index of the instrument is found to be .92. It is recommended to have scale-level content validity index (S-CVI) value of .80 (Davis. 1992; Champion et al. 2005; Smith et al. 2004). Hence, the questionnaire is fit for the study.

The Kashmir Valley has been selected for the research as it is the native place of the researcher and moreover, there has not been any genuine study related to the investment behavior of the individual investors of Kashmir. As such this study is proposed to fill the gap. Since the population for the present study is unknown, the sample size is calculated using the formula Population-sample dispersion tolerance limit, (Whitley, E., & Ball, J., 2002, 335–341). The formula is:

Sample size = (P_significance level* P_standard deviation) / P_standard error

Using this formula, we get 384 as our sample size at Significance level = 1.96, Standard deviation = 20 and Standard error = 2 and

P_significance level stands for the power of significance level,

P_standard deviation for the power of standard level and

P_standard error is the power of standard error.

The sample is stratified geographically covering major districts of Kashmir Valley viz. Srinagar, Anantnag and Baramulla. The total number of questionnaires distributed across all the three districts viz., Srinagar, Anantnag and Baramulla was 450 out of which only 424 were received back. Further, only 392 questionnaires were fit for the study, rest were eliminated due to incomplete responses or bias ratings. Out of these 392 questionnaires, 192 respondents are from Srinagar while Anantnag and Baramulla have 100 respondents from each district. The data has been collected from the investors who were approached by the researcher through brokers, banks and other organizations. The data collected for the present study is processed and analyzed using SPSS. For the present study, the Logistic regression is used, as the dependent variable of the study is categorical while the independent variables are continuous in nature.

Profile of Sample Respondents

In this section, the demographic characteristics of respondents including their domicile, gender, age, education level, occupation along with the annual income as well as their marital status with specifications of having children or not is exemplified in Table 1.1

The sample for the present study is composed from the three major districts of Kashmir Valley viz. Srinagar, Anantnag and Baramulla. The sample collected from these districts is on the basis of population. Srinagar being the capital district is more populated and the respondents from this district is twice to that of other two districts as shown in table. Further, the respondents i.e. the investors mainly comprises of the males which covers 75% of the sample size because the investment culture herein

Kashmir is male controlled. It is shown in the table that the investors are educated and qualified enough to earn and save and hence, have a capacity to invest in various avenues available.

Table 1.1

Demographics	***Frequency***	***Percent***
1. Domicile:		
• Srinagar	192	49.0
• Anantnag	100	25.5
• Baramulla	100	25.5
TOTAL	**392**	**100**
2. Gender:		
• Male	294	75.0
• Female	98	25.0
TOTAL	**392**	**100**
3. Age:		
• 20-25 years	65	16.6
• 26-30 years	113	28.8
• 31-35 years	110	28.1
• Above 35 years	104	26.5
TOTAL	**392**	**100**
4. Qualification:		
• Upto 12th Standard	41	10.5
• Graduation	196	50.0
• Post-Graduation	132	33.7
• Above Post-Graduation	23	5.9
TOTAL	**392**	**100**
5. Marital Status:		
• Single	140	35.7
• Married	252	64.2
TOTAL	**392**	**100**
6. Children:		
• Yes	227	57.9
• No	165	42.1
TOTAL	**392**	**100**
7. Occupation:		
• Student	28	6.9
• Self Employed	136	34.7
• Govt. Employee	83	21.2
• Private Employee	106	27.0
	14	3.6

• Unemployed	26	6.6
• Retired **TOTAL**	**392**	**100**
8. Annual Income:		
• Below 2 lakhs	93	23.7
• 2-4 lakhs	184	46.9
• 4-6 lakhs	84	21.4
• Above 6 lakhs	31	7.9
TOTAL	**392**	**100**

Results and Discussion

Impact of Demographic Factors on Investment behavior:

Demographics have a bearing on Investment behavior. Each demographic variable like gender, age, education, marital status, children, occupation and annual income creates a varied impact on investing behavior and, as such, all important demographics were put in the analysis. The impact is determined using statistical tools like t test and ANOVA analysis. The effect of gender, marital status and children is found through t test in table 1.2 while ANOVA is used for finding the impact of residence, age, qualification, occupation and annual income of an investor on the investment behavior as shown in table 1.3.

Table 1.2

		N	**Mean**	**T value**	**P value**
GENDER	Male	294	3.0735	.468	.641
	Female	98	3.0459		
MARITAL STATUS	Single	140	3.1379	2.085	.038
	Married	252	3.0270		
CHILDREN	Yes	227	3.0352	-1.425	.155
	No	165	3.1097		

* *Source:* Primary Data

** t value above 1.96 is significant at 0.05 level

The psychology of the respondents is same with regard to Gender, conveying thereby that men and women perceive investment related issues in similar fashion. The psychological underpinnings are same between the two genders. The psychological factors of fear and greed about Investment are same between the two genders. While introspecting the figures on marital status, it is found that significant difference were found in terms of cognitive bias with regard to the marital status of investors. The behavior during unexpected and sudden negative change in the market, varies with the marital status of the investor. Whether an investor remains calm or rational during market changes, discuss it with family members, seek help from friends or colleagues or takes advise from the broker or an expert, it all has nothing to do with the fact whether the investor has children or not. Children does not make any difference psychologically on the financial decision making process of an investor. The fear of losing money and the greed of earning more has no significant relationship with the investor having children or not.

Table 1.3

		N	**Mean**	**F**	**Sig**
DISTRICTS	Srinagar	192	1.51	.719	.488
	Anantnag	100	1.53		
	Baramulla	100	1.45		
	Total	392	1.50		
AGE	20-25 years	65	3.0554	1.821	.143
	26-30 years	113	3.1212		
	31-35 years	110	2.9755		
	Above35 years	104	3.1106		
	Total	392	3.0666		
QUALIFICATION	upto 12^{th}	41	3.2512	3.602	**.014**
	Graduation	196	3.0291		
	Post-Graduation	132	3.0288		
	Above Post Graduation	23	3.2739		
	Total	392	3.0666		
OCCUPATION	Student	27	3.3259	2.699	**.021**
	Self Employed	136	2.9971		
	Govt. Employee	83	3.1060		
	Private Employee	106	3.0179		
	Unemployed	14	3.2786		
	Retired	26	3.1192		
	Total	392	3.0666		
ANNUAL INCOME	Below 2 lakhs	93	3.0892	2.040	.108
	2-4 lakhs	184	3.1065		
	4-6 lakhs	84	3.0250		
	Above 6 lakhs	31	2.8742		
	Total	392	3.0666		

The thinking capacities or the cognitive bias has no relation with the location of the investor as shown in the table 1.3 where the p value is .411. The reaction towards market, fear of investing and dependence on others or the access to the market information has no relation with the age and qualification of the respondents. The rationality of investors also vary from the private employee investor to that of the government employee.

Table 1.4

	B	Wald	df	Sig.	Odd's Ratio Exp(B)
Cognitive Bias	.650	6.305	1	.012	1.915

Table 1.4 depicts the relation of cognitive bias and investment behavior of individual investors of Kashmir. Here, logistic regression has been used and the results of the same is shown in table 1.4. Cognitive Bias has a significant relation vis-à-vis investment decision with B= .650, Wald = 6.305 and the p = .012 in association with the Odds ratio = 1.915 which again is >1 describes that the investors way of thinking is 1.91 times related to the investment decisions. Thus, cognitive bias is an important determinant of the investment behavior.

With reference to cognitive bias it is inferred that the fear and greed of investors along with the reaction towards market during unanticipated changes are significantly related to the investment decision of an individual investor. The investors' consideration of taking the opinions of family and friends as well as of the advisors/ brokers during the fluctuations of market is one measure while a sizeable number of investors believe to be rational during these unanticipated fluctuations. The marital status of an investor along with the occupation and qualification of an investor has a significant impact on the cognitive bias. The cognitive bias also includes the fear and greed of the investors. There are a number of fears related to investing which influences the decision of the investors like losing money, others finding about the loss of investors and the bad luck that may hinder the gains of investors. Some of the investors attribute the gains to the good luck attached to them. It is also found that a number of investors invest more in a particular scrip when there is an upward trend or also many of the investors do not take the sell position and keep on waiting for further increase thereby depicting greed. Thus, it can be concluded that the overall thought process of an individual investor of Kashmir while taking an investment decision may be more likely towards being irrational as depicted by the significant result mentioned above. There might be few investors who invest by analyzing the financial performance and dominations of market but by and large the results have revealed that the investors in Kashmir behave irrationally thereby supporting the 'prospects theory'. Hence, as the results exhibit that the cognitive bias (a psychological factor) has a significant impact on the decision making of the investors is in line with a number of researchers like Mittal and Vyas (2008), Kim and Nofsinger (2008), Kent et al. (2001), Hirshleifer (2001) and Aduda (2012).

Conclusion

Individual psychology varies from person to person. It is seen that some individuals have longer time frame, some mid-time whereas some have smaller time frame. It is revealed through the results that individual investors do not behave in accordance with the tenets of the classical finance theory, i.e. the individual investors of Kashmir do not always act rationally while making investment decisions. To explore the investors' behavior, the most pertinent technique is to interact directly with the investors with an effort to excerpt their opinions and analyze them. Thus, questionnaire survey technique is adopted and statements were based on these psychological biases. Since investors are found to be subject to several psychological and cognitive biases which play a key role in their decision making processes, the results also displayed significant outcomes, thereby confirming that the investment environment of individual investors of Kashmir is coherent with biases already identified. It is through the findings of the study, the investment behavior of Individual Investors of Kashmir with regard to their cognitive is mapped and further suggestions are put forth for the individuals who invest in the financial markets.

Recommendation

While analyzing the cognitive capabilities of the respondents, it was observed through the analysis that the respondents are biased towards the investment decisions. This guides to conclude that there is substantial evidence of irrationality. Cognitive capabilities are measured by mapping the fear & greed emotion and dependency thinking that have a pervasive effect on investment behavior of individual investors. Thus, there is a need to rationalize the behavior of individual investors by way of making them informed about the benefits of staying long in the market and helping them removing the dependent thinking by way of making them knowledgeable about financial assets.

- The individuals should try to invest for a longer time horizon and should not take hasty decisions when the market fluctuates heavily.
- Additionally, the investors should condense unnecessary dependence on the broker either for trading or for financial information. Dependence on broker may increase the trading but it may not necessarily increase the profit earning by the investors. Frequent trading may benefit the broker rather than the investors.

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