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Impact of Behavioural Biases on Investment Performance

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Abstract: The present study examines the impact of behavioral biases on investment performance. The study was conducted in Gwalior region. The respondents are investors of Gwalior region. Sample size was 300. Factors analysis and regression analysis was conducted to explore the factors and also to check the impact of behavioral biases on investment performance. The study concluded that there is a significant impact of behavioral biases on investment performance.

Introduction

Behavioral biases

It is an irrational decisions and behaviors Behavioral biases have been advocated as a main driving force in portfolio choice. Maybe the most relevant manifestation of this bias is the way investors react to prior gains and losses. While it seems clear that investor behavior is affected by prior outcomes and by the changes in wealth as opposed to the mere level of it, the "direction" of this reaction is uncertain. People will refuse believing about their opponents could be right about anything. There are two categories of Behavioral biases Cognitive and Emotional biases.

Cognitive biases are inclination to think in certain ways that can lead to systematic deviations from a standard of rationality or fair judgment, and often studied in psychology and behavioral economics.

Emotional biases relate to the excessive influence of emotion on our decision-making.

While humans cannot make completely emotionless decisions, advisors can focus on areas where emotions control rather than support client decisions. There are many factors, such as short-term thinking and herding, that may influence investment decisions negatively, but one of the most significant is loss aversion.

Investment Performance

Investor behavior frequently changes from logic and purpose, and investors showing many behavior biases that influence their investment performance. Investor behavior often changes from logic and purpose. Emotional procedures, mental faults, and individual personality traits obscure investment decisions. So investing is more than just analyzing numbers and making decisions to buy and sell many assets and securities. There are numerous empirical studies refuting that any performance "persistence" of investment funds can be identified through the study of the past trends. To varying degrees, many investors are aware of the futility of extrapolating historic performance trends,

yet many investors continue to screen the fund universe using performance. Past performance information alone is of no help to a fund buyer. Any comfort you feel from buying into a top performing fund is false.

Literature Review

Kumar et.al (2016) examined various anomalies in the investors' behavior that deviate them from the rational and logical decisions and violate the standard financial theory. They found that the structural path model closely fits the sample data, indicating investors follow a rational decision-making process while investing. Although, behavioral biases also rise in unrelated phases of the decision-making process. It further discovers that gender and income have a significant difference with respect to rational decision-making process. They establish Male investors are more prone to overconfidence and herding bias in India.

Yu- Chich (2011) observed that decision-making perspective to integrate the literature on behavioral decision-making biases and the alliance life cycle. They discussed three common decision-making biases overconfidence, single outcome calculation, and adjustment and anchoring. Likewise, single outcome calculations can be enhance the efficiency of decision making. Therefore, they suggested that future work be directed to when and how decision-making biases facilitate inter organizational collaboration.

Barberis & Shleifer et.al (1998) developed Bayesian models to describe the behavioral biases of investors by the use of conservative heuristics and representative heuristics in making decisions. Lam, Liu, and Wong [2010] extend their work; they have developed a model of weight assignments by the use of pseudo-Bayesian approach that shows investors' behavioral biases.

Jain et.al (Jul 2015) observed that individual investor take right investment decision under the influence of just about combining of cognitive and emotional behavioral biases which mainly consist disposition effect, mental accounting, investors overconfidence, representativeness, averting to unclearity, availability bias and regret aversion. Investors take irrational investment decision under the influence of some biases or the combination of such biasesAnd therefore individual investors approximately earn poor long-run returns.

Albaity & Rahman (2014) explored the effect of cognitive ability on behavioral biases. In addition, it looked at demographic differences in cognitive abilities. They observed that minimum CRT scores are indeed correlative with overestimation of probability in a conservatism task and impatience in a time-preference judgment.

Bailey & Kumar observed that Behaviorally-biases investors mostly take bad decisions about fund style and expenses, trading frequency, and timing, resulting in bad performance. moreover, trend-chasing appears related behavioral biases, rather than to rationally inferring managerial skill from previous performance.

Kaiser & Lukas (2017) founded that financial education importantly affects financial behavior and, to an even larger extent, financial literacy. These outcomes also hold for the subsample of randomized experiments (RCTs). Although, intervention affects were highly heterogeneous: Financial education was less effective for low-income clients as well as in low and lower-middle income economies. The average effect of financial literacy was substantially higher than the one on financial behavior.

Cole & Shastry (2007) analyzed greater cognitive ability and educational attainment lead to significant increases in financial market participation. However, and in contrast to previous findings, they examined that high school financial literacy education affects savings or investment decisions.

Lusardi and Mitchell found that households with higher levels of financial literacy are more likely to plan for retirement, and that planners arrive at retirement with substantially more assets than non-planners.

Gupta & Sehgal (1998) analyzed the investment performance of 80 schemes managed by 25 mutual funds, 15 in private sector and 10 in public sector for the time period of June 1992-1996. The study has examined the performance in terms of fund performed variegation and consistency of performance. The paper concludes that mutual fund industry's portfolio variegation was well. But it supported the consistency of performance.

Gbolahan & Oluwole (2017) examined the return attributes of equity REITs (real estate investment trusts), common stocks, and direct commercial real estate by investigating the risk adjusted performance and inter-asset correlation levels between the three assets in the United The study found that securities have the highest risk-adjusted performance relative to equity REITs and direct commercial real estate. However, equity REITs was found to exhibit low autocorrelation with common stocks implying the significant possibilities for risk diversification benefits.

Barber (1990) the study observed that "performance of investor had centered almost exclusively on the institutional investors's performance, in simply, and more specifically, equity mutual funds. That was result of data availability the short-run return predictability and the poor performance of individual investors were easily conciliated as the average holding period for individual investors is much longer than a few weeks"

Objectives of the Study

To examine the impact of Behavioral biases on Investment performance.

Research Methodology

The study is exploratory and descriptive in nature.Total population was stock market investors of Gwalior region.Total sample size will be 300 approx.Individual investors were sampling element.Purposive sampling technique was used.Standardized self- administered Questionnaire of Behavioral biases and Investment performance (Phuoc Luong & Thi Thu Ha, 2011), Reliability test,Regression and Factor analysis tools were used for the data analysis.

Hypothesis

H_{01}: There is no impact of Behavioral biases on Investment performance

Results and Discussion

Reliability:

It is being considered that the standardized reliability value should be more than 0.7

and it can be seen that reliability value for both behavioral biases and investment performace is .0793 and .807 is higher than the standard value, so all items in the questionnaire are reliable.

KMO and Bartlett's Test and Explanatory Factor Analysis:

Table no. 3:

KMO and Bartlett's Test for Behavioral biases		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.804
]Bartlett's Test of Sphericity	Approx. Chi-Square	750.748
	Df	55
	Sig.	.000

The value of KMO is 0.804. Thus the data is adequate and could be used for further factor analysis.

The Bartlett's Test of Sphericity was tested through Chi-Square value represented in the table significant at 0.000 level of significance. Therefore, the above hypothesis is rejected which indicated the collected population were not an identical in nature and the data was suitable for factor analysis.

Factor Analysis for Behavioral biases

Table no. 4:

Factor no.	FactorName	Eigen value	Items converge		Factor Loading
		Total	% of variance		
1	Representative	2.304	20.944	4. I rely on my previous experience in the market for my next investment.	.789
				3. I believe that my skills and knowledge of stock market can help me to outperform the stock market.	.763
				2. I use past performance of some representative stocks to make investment decisions.	.581
				5. I forecast the changes in stock prices in the future based on the recent stock prices.	.566
2	Loss aversion	2.109	19.176	6. After a prior loss,I become more risk averse.	.753
				8. I avoid selling shares that have decreased in value and readily sell shares that have increased in value.	.728
				7. After a prior gain,I am more risk seeking than usual	.683
3	Disposition	1.800	16.364	11. I prefer selling shares when the prices of the stocks decreases.	.732
				1. I buy popular stocks which are in news or 'hot'stocks and avoid stocks that have performed poorly in the recent past.	.626
				10. I usually prefer holding stocks when the prices of the stocks increases.	.619

Description of Factors

Representative: This factor emerged as the first important determinant of the research with a Eigen value of 2.304 and Percentage of variance explained was 20.944.

Here the result indicated that the statement 4 "I rely on my previous experience in the market for my next investment" is with highest loading value 0.789 and statement 5 "I forecast the changes in stock prices in the future based on the recent stock prices" with lowest loading value 0.566.

Loss Aversion: This factor emerged as the important determinant of the research with a total variance of 2.109 and Percentage of variance explained was 19.176. Here the result indicated that the statement 6 ". After a prior loss ,I become more risk averse" is with highest loading value 0.753 and statement 7 "After a prior gain ,I am more risk seeking than usual" with lowest loading value 0.683.

Disposition: This factor emerged as the important determinant of the research with a total variance of 1.800 and Percentage of variance explained was 16.364. Here the result indicated that the statement 11 "I prefer selling shares when the prices of the stocks" is with highest loading value 0.732 and statement 10 "I usually prefer holding stocks when the prices of the stocks increases." with lowest loading value 0.619.

Underlying factors:

Principle component factor analysis with Varimax rotation and Kaiser Normalization was Period details about factors, the factor name variable number and convergence and that Eigen Values are given in the table.

KMO and Bartlett's Test for Investment performance

Table no. 7:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.710
Bartlett's Test of Sphericity	Approx. Chi-Square	281.614
	Df	3
	Sig.	.000

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is an index used to evaluate the appropriateness of factor analysis. High values (between 0.5 and 1.0) indicate factor analysis is appropriate. Values below 0.5 imply that factor analysis may not be appropriate.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy value for Investment performance 0.710 indicating that the sample was adequate to consider the data suitable for factor analysis.

The Bartlett's Test of Sphericity was tested through Chi-Square value represented in the table significant at 0.000 level of significance. Therefore, the above hypothesis is rejected which indicated the collected population were not an identical in nature and the data was suitable for factor analysis

Regression Analysis:

H_{01}: There is no impact of Behavioral biases on Investment performance

Model summary: This table provides the R, R square, Adjusted R Square & Std. Error of the Estimate values. The value of R lying between the range from -1 to 1. The sign of R indicates the direction of relationship (positive or negative). The R value represents the simple correlation.

The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, can be explained by the independent variable. The value of R squared ranged from 0 to 1.

Table no. 8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the estimate	Durbin-Watson
1	.550	.303	.300	2.37630	1.825

Interpretation:

The R value is 0.550 which indicates a low degree of correlation. It can be concluded that there is a weak correlation of Behavioral biases with Investment performance. The value of R square which was found to be .303 indicates that Behavioural biases explained 30.3% variance on Investment performance.

ANOVAb

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	700.482	1	700.482	124.049	.000[a]
	Residual	1614.987	286	5.647		
	Total	2315.469	287			

a. Predictors: (Constant), behavioural

b. Dependent Variable: investment

Interpretation:
The goodness fit for the model was tested using ANOVA table and F value was found to be 124.049 significant at 0% level of significance indicating that the model is showing good fit.

Table no. 10:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.344	.695		4.811	.000
	Behavioural	.201	.018	.550	11.138	.000

a. Dependent Variable: investment

Interpretation:

The result of coefficient table indicate the covariance of independent variable i.e. Behavioral biases on dependent variable i.e. Investment performance. The beta value which is .550 T- value of the variable is 11.138 to be significant 0% level of significance the hypothesis in the current status is rejected indicating that there is significant impact behavioral biases on investment performance.

Implications &

This study is intended to be a useful contribution to the academicians to understand the investor's psychology towards stock market investment. The academicians for their further research may use questionnaire. Reference of the study can also be helpful for the academicians for their research. It is also intended to be useful contribution for further research because it provides a link between theory and practice. The scope of further research may be extended to other components determining the impact of Behavioral biases, Financial literacy and Investment performance with respect to Mutual funds, Insurance and Systematic Investment Plan etc.

Conclusion

An extensive survey is done to measure the Impact of Behavioral biases on Investment performance.

Investors invest their money on the basis of their risk seeking capacity we studied the various biases which plays an important role in investor's decision making

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