A STUDY ON INFLUENCE OF PERSONALITY TRAITS AND BEHAVIOURAL BIASES OF AN INVESTOR IN INVESTMENT DECISIONS

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Abstract:

This Study is with regard to know how personality traits and Biases of an investor get influence on the decisions taken by investors. Investors usually get unnoticed of the fact that they are being prejudice in their decisions and end up in not achieving optimum return. Hence it is necessary to identify such biases and try not to incorporate them in decision making. For the present study major five biases have been considered and personality traits are considered to see if there is influence of personality traits of investor to take such bias decision and few of steps that has to be taken in order to mitigate the bias is stated. A survey method have been considered where in sample of 100 investors are considered, were in questionnaire consisting of questions relating to their personal profile, to analyze what degree of personality they exhibit and see if there is influence of biases of investor in their decision and have been handed to them for response. After collecting these responses, using statistical technique an in deep analysis have been carried out and have been realized that there exists relationship between personality of an investor and biases they encounter.

Key words: *Behavioral finance, Behavioral Biases, Personality Traits.*

INTRODUCTION:

Many of them do not agree with the concept on that, why, when and how any psychological aspect influences an investor in their investment making decisions, it was only when the Nobel prize winner in economics, the psychologist Daniel Kahneman and other economist defended the concept of Behavioral finance, the concept arose. Daniel explains in his prospect theory on why an investor acts irrationally. He supports it by saying that an individual value their gains and losses differently

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and make decision on their perceived win than on their perceived loss.

In traditional finance (Standard finance model) , it is believed that the investors have Rational influence on investment making decisions. An Efficient market is assumed to have a rational, an unbiased investment making decision, and have believed to make no influence of Psyche or emotional feelings on their decisions pattern. Assumptions of Efficient Market Hypothesis that was developed by the university of Chicago, is that the decision making pattern of an investors is on free publically available information of the market. The stock price of the market is influenced, reflect or have dependency on the publically available information. The above set is defined as Market being efficient. But the concept of behavioral finance helps to know how few investors are influenced by irrational behavior and are biased and suffer cognitive and emotional influencing their decision making process.

However the concept of Behavioral Finance can't be assumed as contradicting to Traditional finance but it acts as supplement to it. The concept of Behavioral finance is that to identify the behavioral error, avoid them and not to mix emotions and decision, and achieve objective to at its optimum level. Behavioral finance can be defined as the study that shows the effect of social, cognitive and emotional attributes that an individual investors are influenced on, and accordingly these influences are reflected on the decision they take and its consequent effect is reflected on stock price and returns. In simple word it is defined as incorporating psychology into finance.

The concept of BIG five personality traits was developed at university of Michigan by Paul and Robert it helps at identifying the degree of personality that an individual exhibit and it is a mixture of five dimension namely 1) Openness is a dimension were in a person is curious, imaginative, wants to learn new things, thinks on new idea and experiment new things; 2) Conscientiousness is a form were in a person prefer in being well organized, enjoys leaving a disciplined life, who always aims at being at best than yesterday; 3)Extraversion a person who get along with people very well, who is adventurous, enthusiastic in doing thing; 4) Agreeableness a person who is very friendly, who does not demands anything, agrees with others and forgive thing; 5) Neuroticism is not being emotional stable, has frequent mood swings, gets angry, easily gets irritated and are majorly prone to negative feelings

Behavioral Biases

The word Biases is being prejudice that is to say our judgment on a think is knowledge on how we have perceive it. In the financial world of stock market it is assumed to be have free from biases, but it is impossible to have an unbiased decisions since the market deals with psychology of human mind that is to say

all minds of investors are not the same. Hence in order to avoid or mitigate this forms of biases or errors to better achieve the result one has to identify them, treat them by taking measures of applying investing rules. For analysis of present study five major biases are taken into consideration.

Disposition Effect:

It is an act were in people sell the profit making asset and keep in the lose making asset with them, buy this there is an effect on the opportunity cost that could have been earned if one would sold the loss making asset. There are real circumstances were people have sold the profit making stock in fear to lose the gained profit from them and waited for loss making securities to break even and have seen a major collapse in overall portfolio and had to rebuild the portfolio from scratch. This is the form were in investor make an irrational behavior. Measure to overcome are always look a watch on the opportunity cost that could have been earned, sell asset which are making lose and invest in an alternative that would yield best.

Overconfidence Bias:

Sometime people overestimate there perceivedknowledgeandendupexhibiting high degree of overconfidence. This bias develops as and when they start winning easy decisions investments. This bias can be either the prediction overconfidence or certainty overconfidence. Confidence on that can predict future is prediction overconfidence and having certainty of happening of a situation is certainty bias. In possessing this people often start trading too much than required, starts investing in an undiversified portfolio. Measure in order to avoid is seem to have a watch if you are trading frequently and check on to the diversified investment.

Anchoring Bias:

It is the type of cognitive bias were in people usual revolve around a piece of information and try avoiding other or try correlating with the initial piece of information. For instance while negotiating we stick on to the initial price offered and keep on beating around it, any price below the initial price offered we consider that as the best price, even without evaluating if its real worth the price there arises a bias in understanding and taking up other information. In order to mitigate it one got to make less of emotional driven information and be more inclined on data based information decision.

Herd Behavior:

It is also called as Herd Behavior it is a form of bias were in people do because some else is doing it without not even realizing that if it's really good for them. This might be because of the underestimating themselves and depending on others decisions to follow the same. However this can be avoided by filtering information analyzing, stop following the herd, keeping emotions aside and do what is good for one's self.

Cognitive Dissonance:

It is a form, were in disequilibrium caused in mind were in plan for A and end up executing B. It is a state were there are two contradicting belief or thoughts in mind thinking on executing the belief but end up doing the contradicting. For instance one would think of adopting a buy-and- hold strategy but end up trading it.

Literature Review

Ravindra Jain, Prachi Jain and Cherry Jain

The study has given the insight on how traditional finance assumption has contrary impact on real life. Its helps one for the better understands of various behavioral biases and its likely impact on investors in situations. It also gives out few of the solution to mitigate the biases and reason behind the poor earnings of investors in the light of biases encountered. Secondary data of research articles, books, recent form of google search is made used to analyze the study. The study concludes that the investors are affected by combinations of biases at times which is leading to poor earnings and also gives a base for future study.

Marcin Rzeszutek, Adam Szyszka, Monika Czerwonka

The paper aims at finding if whether there is any susceptibility of behavioral biases to personality traits and increased expertise. A survey method and a series of questionnaire are collected for analyses. Chi square test, univariate analysis and regression analysis are used and found out that the level of expertise has impact of exhibiting the behavioral biases and also proved that few personality traits are influenced in investor exhibiting biases.

H Kent baker and John R Nofsinger

The examination of various investment errors by influence of emotional and cognitive minds of investors. The analysis on how investors think and how the act is drawn light upon. Two main emotion greed and fear and other emotion of hope, pride, greed and regret influence on decision making is depicted. 5 steps that an investor can to overcome the investment errors are explained. Identifying, understanding, avoiding, the psychological biases, review, diversifying by reallocating asset given that has to be followed.

Phung Thai and Mai Ngoc Khuog

The effect of big five personality traits on the investment performance is measured by way of considering survey method. A questionnaire consisting of variables of personality traits, biases. Nearly 255 respondents are considered into survey and found that conscientiousness, openness and agreeableness had direct impact, conscientiousness, openness and extraversion has positive impact and agreeableness, neuroticism affects negatively impact. Correlation, path coefficients are the statistical tool used.

Statement of the Problem:

It is assumed that investors are rational and make use of all available information of market in their decision making process, but it has been observed the occurrence of many irrational behavioral aspect of investor. Supporting this behavioral finance has come into existence, the subject that deals in application of psychology in the field of finance. Behavioral finance gives insight on influence of behavioral biases i.e., emotional and cognitive weakness that encounters in earning poor long-term returns, weak portfolio construction, overall failing in meeting their investment objective. Hence identifying, analyzing and overcoming these behavioral biases are necessary to benefit investor as a whole.

Objectives of the Study

- To investigate the behavioral biases, degree of personality traits among the individual investors.
- To examine if there exist relationship between personality traits and behavioral aspect of investors.

Scope of the Study:

This research will cover mainly the study on the behaviour of Indain retail investors with respect to Bengaluru city, which study the factors which affecting the investor behaviour.

Research Methodology:

Research Type: Exploratory

Sampling Technique: Non-Probabilty

Sampling Type: Convenience Sampling

Sampling Unit: Retail Individual Investors

Sample Size: 100

Data Used: Primary Data

Data Tool: Questionnaire

Area Under Study: Bengaluru, Karnataka State

Limitations of the Study:

1. The study is limited to Bengaluru city only.
2. The views of respondents will be subjected to their bias & prejudice.
3. The findings of this study would be based on sample size, so they cannot be generalized.

Analysis & Result:

VALIDITY AND RELIABILITY TEST

Cronbach's Alpha is a measure that measures the reliability of the data on how the data's inter- items are correlated. Higher the value of Cronbach's Alpha, higher the inter-item correlation of data set. The value between 0.2 - 0.4 is average, 0.4 - 0.7 is good and 0.7 - 0.9 is excellent.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.763	.761	35

From the above table we can get to know that the Cronbach's Alpha is more than 0.7 hence the data is good and Reliable. Total of 35 factor are considered consisting of Personality traits and Behavioral biases. Usually standard of 0.5 and more the reliability is accepted, hence for the present study the reliability is good and we can consider that the data is fit for further study.

KMO and Bartlett's Test: Before we load the items for factor analysis it is imperative to know the sample adequacy for the study we are using. To confirm the sample size is sufficient for the study the researchers used the KMO test. The value of KMO for the good study should be more than 0.50 and in our study it is 0.593 which is more than the required. This means that the selected sample for the study is sufficient as per the KMO.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.593
Bartlett's Test of Sphericity	Approx. Chi-Square	1008.945
	Df	595
	Sig.	.000

Relationship between the Personality Traits of Individual investors:

This relation is analyzed by comparing the correlation coefficient of all the above results by interpreting the same from the table below.

Table shows the correlation coefficient of personality traits

	Openness	**Conscientiousness**	**Extraversion**	**Agreeableness**	**Neuroticism**
Openness	1.00				
Conscientiousness	.009	1.00			
Extraversion	.104	.185	1.00		
Agreeableness	.171	.231	.121	1.00	
Neuroticism	.054	.119	.272	.244	1.00

The correlation coefficient shows that Openness is positively correlated to Conscientiousness, Extraversion, Agreeableness, and Neuroticism. It also indicates that Conscientiousness is positively correlated to Extraversion, Agreeableness

and Neuroticism. An extraversion trait shows that they are positively correlated to Agreeableness and Neuroticism. And Neuroticism have positively correlated with agreeableness.

Relationship between the Behavioral Biases of Individual investors:

Table shows the correlation coefficient of Behavioral Biases

	Disposition Effect	Over-confidence	Anchoring Bias	Social proof bias	Cognitive Dissonance
Disposition Effect	1.00				
Overconfidence	.226*	1.00			
Anchoring Bias	.289**	.250*	1.00		
Social proof bias	.275**	.268**	.201*	1.00	
Cognitive Dissonance	.223*	.070	.274**	.381**	1.00

From above it shows that correlation coefficient of Disposition effect is positively correlated to Overconfidence, Anchoring Bias, Social proof bias and Cognitive Dissonance. Overconfidence bias is positively correlated to Anchoring Bias, Social proof bias and Cognitive Dissonance. Social proof bias and Cognitive Dissonance are positively correlated.

Relationship between Personality traits and Behavioral Biases: Correlation between Personality Traits and Behavioral Biases

Table shows the correlation coefficient of Behavioral Biases

Inter-Item Correlation Matrix

	(O)	(C)	(E)	(A)	(N)	(DE)	(OB)	(AB)	(SB)	(CD)
Openness(O)	1.000									
Conscientiousness(C)	.009	1.000								
Extraversion(E)	.104	.185	1.000							
Agreeableness(A)	.171	.231	.121	1.000						
Neuroticism(N)	-.054	.119	.272	.244	1.000					
Disposition Effect(DE)	.060	.226	.072	.211	.214	1.000				
Overconfidence Bias(OB)	-.054	.305	.261	.043	.145	.226	1.000			
Anchoring Biases(AB)	.133	.155	.036	.161	.070	.289	.250	1.000		
Social proof Bias(SB)	.216	.246	.245	.056	.091	.275	.268	.201	1.000	
Cognitive Dissonance(CD)	.000	.119	.229	.142	.362	.223	.070	.274	.381	1.000

From above we can conclude that disposition effect are positively with the Personality Traits, Overconfidence Biases is negatively correlated with openness to experience and positively correlated with other personality traits, Anchoring Biases, Social Proof Biases and Cognitive dissonance are positively correlated to other personality traits except that there exist no relationship between Cognitive Dissonance and Openness.

Multiple linear Regression analysis of Personality traits and Behavioral Biases

1. Analysis of Multiple linear Regression considering the Big five personality traits and Disposition Effect:

Table shows the Regression analysis for Personality traits and disposition effect

Model	Un standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.729	.633		2.732	.008
Openness	.047	.094	.050	.498	.619
Conscientiousness	.222	.125	.182	1.786	.077
Extraversion	-.026	.093	-.029	-.280	.780
Agreeableness	.099	.085	.122	1.165	.247
Neuroticism	.170	.103	.173	1.651	.102

R	R Square	Adjusted R Square	Std. Error of the Estimate
.324[a]	.105	.057	.58404

Predictors: (Constant), Neuroticism, Openness, Conscientiousness, Extraversion, Agreeableness

Dependent Variable: Disposition effect

ANOVA:

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3.755	5	.751	2.201	.061[b]
Residual	32.063	94	.341		
Total	35.818	99			

From the above we can interpret that there is no impact of personality traits on disposition effect since p value is more than 0.005.

Analysis of Multiple linear Regression considering the Big five personality traits and Overconfidence bias.

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.435	.698		2.056	.043
Openness	-.069	.103	-.066	-.669	.505
Conscientiousness	.374	.137	.271	2.724	.008
Extraversion	.209	.102	.206	2.041	.044
Agreeableness	-.045	.094	-.049	-.482	.631
Neuroticism	.072	.113	.065	.633	.529

R	R Square	Adjusted R Square	Std. Error of the Estimate
.384[a]	.147	.102	.64386

Predictors: (Constant), Neuroticism, Openness, Conscientiousness, Extraversion, Agreeableness

Dependent Variable: Overconfidence bias

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.720	5	1.344	3.242	.010[b]
Residual	38.968	94	.415		
Total	45.688	99			

From above we can tell that conscientiousness personality traits have impact on overconfidence biases since value is less than 0.05 and all other personality traits have no impact on overconfidence biases since value is more than 0.05.

2. Analysis of Multiple linear Regression considering the Big five personality traits and Anchoring Bias

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.952	.724		2.697	.008
Openness	.123	.107	.118	1.149	.253
Conscientiousness	.176	.142	.129	1.236	.220
Extraversion	-.024	.106	-.024	-.230	.819
Agreeableness	.093	.097	.104	.961	.339
Neuroticism	.046	.118	.042	.393	.695

R	R Square	Adjusted R Square	Std. Error of the Estimate
.233[a]	.054	.004	.66778

Predictors: (Constant), Neuroticism, Openness, Conscientiousness, Extraversion, Agreeableness

Dependent Variable: Anchoring Bias

ANOVA:

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2.415	5	.483	1.083	.375[b]
Residual	41.918	94	.446		
Total	44.333	99			

From above table it can be concluded that there is no impact of personality traits on behavioral biases since the value of p is more than 0.05.

3. Analysis of Multiple linear Regression considering the Big five personality traits and Social proof bias.

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.433	.820		.529	.598
Openness	.257	.121	.208	2.124	.036
Conscientiousness	.357	.161	.220	2.213	.029
Extraversion	.212	.120	.179	1.766	.081
Agreeableness	-.067	.110	-.062	-.607	.545
Neuroticism	.056	.133	.043	.420	.676

R	R Square	Adjusted R Square	Std. Error of the Estimate
.379[a]	.144	.098	.75650

Predictors: (Constant), Neuroticism, Openness, Conscientiousness, Extraversion, Agreeableness

Dependent Variable: Social proof bias

ANOVA:

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	9.016	5	1.803	3.151	.011[b]
Residual	53.796	94	.572		
Total	62.812	99			

From the above we can interpret that openness and conscientiousness personality traits has impact on social proof bias and other personality traits has no effect on social proof bias.

4. Analysis of Multiple linear Regression considering the Big five personality traits and Cognitive Dissonance.

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.579	.626		2.521	.013
Openness	-.004	.093	-.004	-.046	.964
Conscientiousness	.060	.123	.049	.491	.625
Extraversion	.119	.092	.131	1.298	.198
Agreeableness	.033	.084	.040	.395	.694
Neuroticism	.310	.102	.311	3.048	.003

R	R Square	Adjusted R Square	Std. Error of the Estimate
.392[a]	.154	.109	.57797

Predictors: (Constant), Neuroticism, Openness, Conscientiousness, Extraversion, Agreeableness

Dependent Variable: Cognitive Dissonance

ANOVA:

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5.709	5	1.142	3.418	.007[b]
Residual	31.401	94	.334		
Total	37.110	99			

From above we can conclude that Neuroticism personality traits has impact Cognitive Dissonance since it has its significance value less than 0.05 and other personality traits has no impact on cognitive dissonance since p value is more than 0.05.

Findings:

- The Big five personality traits Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism are perfectly positively correlated toward

each other but few has a weaker correlation.

- The Behavioral Biases Dispositional effect, Overconfidence bias, Anchoring Bias, Social Proof Bias and Cognitive Dissonance are perfectly correlated.
- We also found that there exist relationship between Personality traits and Behavioral biases.
- Through Regression analysis the results were that there was association found between overconfidence bias and Extraversion personality traits, social proof bias and openness personality traits, social proof bias and conscientiousness personality traits, cognitive dissonance and neuroticism personality traits.

Conclusion:

This particular study gives a basis and insight on the emerging topic of Behavioral Finance were psychological aspect is adopted in field of finance for better achievement of objectives. Most of the investors adopt 'Rule of Thumb', in processing information that leads to committing errors or even mixing up the emotional aspect into investment and end up have negative impact and making Irrational Decisions. Hence this study helps investors in realizing the influence of biases in their investment decisions .Investors can use the findings from this study and reduce the dissonance that they would encounter and take necessary possible steps in order to mitigate the same. This particular study dwelled upon understanding the relationship between the investor behavioural factors and the personality traits of investors in Indian Market Scenario.

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