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Behavioral factors influencing individual investor's investment decision and performance, Evidence from Pakistan Stock Exchange.

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ABSTRACT

This paper's objective is to study the behavioral factors that influencing the decision andperformance of individual investor in Pakistan stock exchange. There are many behavioral factorslike over confidence, representativeness, anchoring, mental accounting, loss aversion and regret aversion can affect the individual investor'sinvestment decision and performance. Research was conducted to identify that which behavioral factors are more influencing in Pakistan stock exchange and there effect on the investors who are investing in Pakistan stock exchange. This study discussed the two theories heuristic and prospect theory. Heurist theory involves representativeness, overconfidence, anchoring, gambler fallacy, availability bias and prospect theory involves loss aversion, regret aversion and mental accounting. This research is based on the primary data. The sample data comprising of 150 individual investors of Pakistani stock exchange. Preliminary results show the height positive relation of heuristics on the investment performance while prospect not affect the investment performance. Findings were developed through the regression analysis with the usage of statistical SPSS. Finding shows that representativeness, over confidence; anchoring, availability bias, and gamblers fallacyhave positive impact on investment performance.

Key words: Behavioral finance, Pakistan, Pakistan Stock Exchange, Heuristic theory, Prospect theory.

INTRODUCTON

That market in which buying and selling of stocks are take place is called stock market (Zuravicky, 2005). Stock market plays a vital role in decision making of the investors and it also improves the efficiency of Cooperate governance (Samuel, 1996). There are many benefits of investment in stock market like "long term growth of capital, dividend income and control over the inflation". (Tewelves& Bradly,1998). The liquidity of stock market is more attractive for the investor for investment purpose (Jaswani, 2008).

There are many perception to invest the money in stock market, some investor are invest for the purpose of becoming the owner of the firm , some for taking dividend and some invest for capital gain. (Croushore, 2006). Some people purchases the shares for the purpose of control over the firm. Investors needs a major number of share to set a position in the board of directors and major decision marking of the firm in which they invest.

Many researcher conclude that the behavioral finance is a good concept of understand and define the emotions, feelings and other behavioral factors affecting investment decision making and performance. (Waweru .2008). Many theories argued that the behavioral finance is more effective in emerging markets as compare to developed markets. In this study, behavioral finance use Pakistan as a Pre-emerging market of the world.

The psychology which is the part of social sciences effect the behaviors of investors who invest in stock market and it is the strong argument of the investors who believes the theory of behavioral finance that behavioral factors make impact on market bubbles and crashes. (Gao and Schmidt, 2005)

The implications and effects of behavioral factors is applied very effectively in Pakistani stock exchange and it is very important for individual and institutional investor for secure their investment. These are two reasons behind the study of behavioral factors in Pakistan stock exchange. 1st reason is that it is new area of study and 2nd we can say according to analysis that cognitive bias is more effective and implemented in Asian stock exchanges including Pakistan Stock Exchange so we cannot the eliminate of behavioral factors in Pakistan Stock Exchange.

The theory of Behavioral finance is very popular in developed markets like USA and European markets (Caparrelli,Arcangelis&Cassuto , 2004)

The ignorance of behavioral factors are very harmful for investment decision because when investor is rational, he takes the decision without acknowledge the behavioral factors like emotion and bias, in the end result he blames ourselves in case of loss (Kahneman and Riepe, 1998).

Behavioral Factors involves two theories one is heuristic theory and second is prospect theory. Heuristic theory involves Overconfidence, representativeness, anchoring, gambler's fallacy and availability bias and prospect theory involves Loss aversion, regret aversion and Mental accounting. These are the factors which involves in the behavior of individual investor and affect the performance and decision making of investor.

Heuristics theory applies those investors who take the decisions in unusual and uncertain environment and make it easy (Ritter, 2013) these investors ignore the probabilities and make the decision according to self-prediction (Kaheeman&Tversky 1974). In Limited time period Heuristic investor's investors approach is most useful (Waweru 2008) .

LITERATURE REVIEW

A number of studies were conducted in many countries around the world to examine the behavioral factors and there implication on investment decision and performance. Although finance is part of interest in the economy from several thousand years ago, behavioral finance is getting prominent within the passage of the time. The reason is all that it talks about the rights and behavior activities of the human in a modern way. Almost all theories that are on the behavioral finance are on the psyche of the human, their emotion involvements and mistaken errors having impact on the decision making of the individual investor (LoangThiTho, 2011).

Many researchers adopted this study to explore the facts that are involved in it affecting individual investor's decision making process. Most of the scholars researched to find the relation between these affecting factors and in turns to their performance. Stocks are closely related to the level of the investment and largely hit by the decision making of the individuals to invest in certain stock or not. In a proper definition, it is the market for selling and buying of the stocks or shares of a firm (Zoraviky, 2006). In a economy, stocks are not only meant for the sale and purchase point of the stocks but also provide a place where managers of finance can get the wave of knowing the understanding about the character of the stock that where they are moving in future and will be the consequences of that move. They get the understanding that makes them an environment where they can easily make the decision for certain financial planning and stepping toward the better decisions (Samuel, 1996). Stock is considered to be the most perfect place for capital raise of an organization (Zoraviky, 2006). Individual investments in the stock are because of the reason that they want to enhance their capital, dividend ratio and to benefit themselves against the risk in their share invest (Tewels&Bardly, 1999). There are some other reasons too that makes the people to prefer it over the other types of investments that is its ratio of liquidity (Jeswani, 2009). Not only people want to enhance their investment in more capital but another logic behind investment in stock is that they are seeing themselves as the owner of certain business and to provide the dividends to their stock holders when there is increase I the profit of the business and also to value their business people moves their directions towards the stock investments (Croushor, 2007). Management of a firm is investing in the stock to improve their firm control. In order to be a part of the business and to get the knowledge about the decisions make by the firm holder or the directors and CEO, investors are required to have some of the shares of that firm. In this way they can be inner side of the firm and will get informed about any meeting held on the director's level (Bardelly, 2001).

PROBLEM STATEMENT

Stock market having direct relation on the economic condition of the country. If index of stock market increase its means the country have good economic conditions. For market trend the decisions of investors on stock market is very important. It is very important for investment decision we have an idea about behavioral factors influencing the decisions of individual investors at Pakistan stock exchange. For better return, understanding of behavior it is very helpful for investment decisions. It is also very helpful for security organizations that they can predict more precisely and give better suggestions to the investor and identify which behavioral factors influence more the investment decision of individual investor at Pakistan Stock Exchange.

OBJECTIVES

As evident from the above narrated facts it is evident that behavioral factors affect the individual investor's investment decision and performance. Significant objectives are stated below:

- Appling behavioral finance to examine the factors that having impact on investment decision making related to individual investor.
- How behavioral factors influencing on investment decisions and performance of individual investor.
- How can Individual investor control behaviors to attain better investment results?
- Set the base for further research on behavioral finance in Pakistan

SIGNIFICANCE OF THE STUDY

This research is very useful for the individual investor for taking the investment decisions and also identify the stocks trends in stock market, it also provide a good reference.
This research provide better understand of the markets trends and provide more precise information to the investor.
The concept of behavioral finance is new for pre emerging markets and the application behavioral finance is more in developed markets. Behavioral finance is very limited scope in underdeveloped countries like Pakistan but it notifying that the scope of behavioral factors are increasing in Pakistan stock exchange so This research provide the application of behavioral finance in a pre-emerging market like Pakistan .

LIMITATION OF THE STUDY

This research is limited to only for individual behavior of Pakistan stock exchange. For further research it is necessary for investor is that to obtain total picture of Pakistan stock exchange. Institutional investors should also explore the behavioral factors which affect the Pakistan Stock exchange.

HYPOTHESIS

Hypothesis H10: The Heuristics have impacts on the investment decision and performance of individuals at the Pakistan Stock Exchange.
H11 : The Heuristics have no or small impact on the investment decision and performance of individuals at the Pakistan Stock Exchange.

Hypothesis H2o : The Prospect have not positive impacts on the investment decision & Performance of individual investors at the Pakistan Stock Exchange.

H21 The Prospect have not positive impacts on the investment decision & Performance of individual investors at the Pakistan Stock Exchange.

Research model

As mentioned in the literature review above, it is undoubtedly that behavioral factor impact the investment decisions of investors in the financial markets, especially in the stock markets. This study explores the influence levels of the behavioral variables on the Individual investors' decisions and their investment performance at the Pakistan Stock exchange, as in the following research model and hypotheses. These hypotheses are tested by using regression analysis that presents the Correlation indexes among the behavioral factors and investment performance.

DEFINATION OF VARIABLE

Heuristics Include Over confidence, Representativeness, Anchoring, Gambler's fallacy, Availability bias,

Prospect Theory included loss aversion, regret aversion and mental accounting.

Overconfidence

When peoples think that they are much reliable and accurate according to their knowledge and they over estimates, that state of thinking is called the over confidence. It has much more impact on the investment decision making and performance.

Representativeness

Representative means when the investor follows the recent experience and forgets the previous things about taking the investment decision then it is called representativeness. It has positive impact on investment decision and performance.

Anchoring

When t investor follow the initial value not follow the historical value of share then it is called anchoring. Investor always sees the opening value of share for sailing and analyzing so in result un-expected change is happened.

Gambler's fallacy

It is the thinking of investor that if something happens frequently it will not happen next time or if something is not happening currently it can be happen is future. So gambler's fallacy impact on investment decision and performance of individual investor.

Availability bias

When the investor takes decision according to easily available information in the market it is called availability bias. Most of the investor invest in local companies because the information of these companies are easily available but it is against the principal of finance like diversification so it cause of availability bias.

Regret aversion.

Regret is the emotion factor which is happen with the investor when share price is increate the investor want to sale the share soon and when the price of the stock is decrease the investor want to hold and he have not the capacity to sale , loss in low price so it is called regret aversion.

Loss aversion

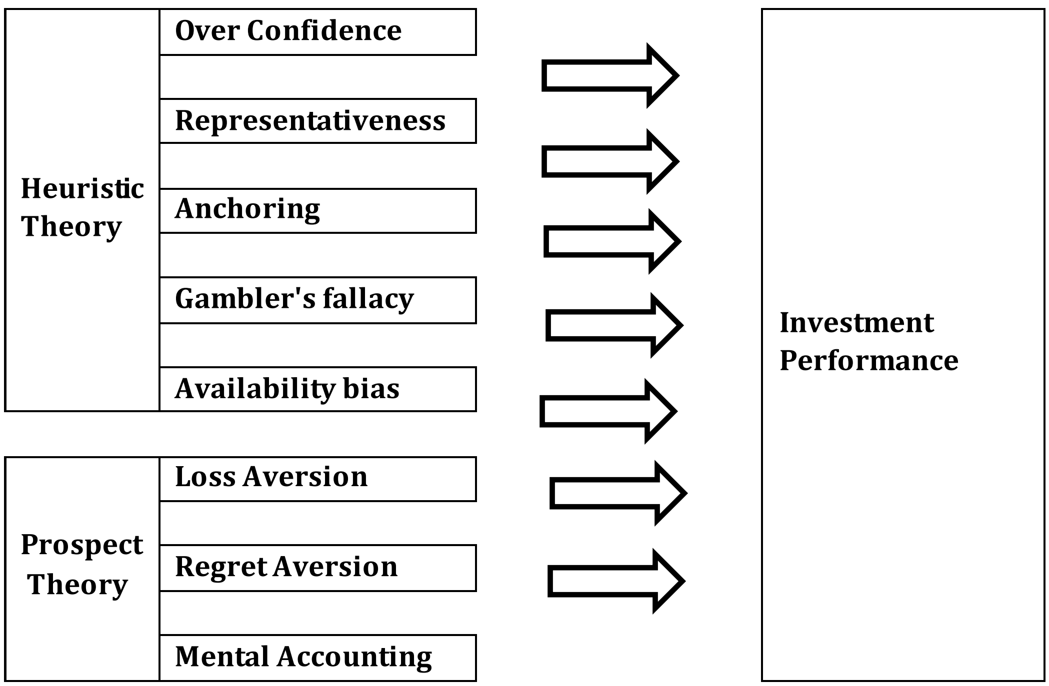
If investor gains profit in the investment he will be happy but if investor have in loss with similar weight he feel most distress are compare to the profit that mental penalty is called loss aversion.

Mental Accounting

Mental accounting is the common phenomenon in finance it is refer to the physiological position of a person or investor in which he evaluate financial transaction in own mind and evaluate their gain or losses.

CONCEPTUAL FRAME WORK

Independents Variables **Dependent Variables**



METHODOLOGY

The methodology of this research is based upon the method of researchers which is suggested by the Saunders, Lewis and Thornhill,(2009), it based upon the research "onion" , in this type of research philosophy researcher should be answered by the basic questions related to this research and it will be summaries, follow the research approaches, research tactics, research choice, time limits and methods and ways for data collection and analysis. The chapter of methodology is emphasis on research philosophy as well as the research type, approach in which research is conducted, strategy which is applying in this research**.**

RESEARCH STRATEGY

Research strategy discussed about the direction of the study, it is based upon the existing theories, researches and existing knowledge. On that base the researchers can adopt one strategy from qualitative and quantitative. In this research we take both quantitative and qualitative but more emphasis on the quantitative method. Quantitative method is used for testing and exploring the behavioral factors and in impact on decision making of individual investor in stock exchange which is best method. For valid result in the research sample size should be more reliable and use sample collection techniques which are identified in the research. In quantitative method we can analysis the data through different statistical methods for the usage of different statistical software. In moderate world researcher use statistical models through statistical software for analysis the collected data.

SOURCE OF DATA

To check the behavior of individual investor data is collected from the primary source, which is individual investor in the Pakistan stock exchange. The sample of the data should be individual investor because research is specifically conducted to check the behavior of individual investor. Data are collected through questioner method. Different questions are asked in questioner related to the topic.

POPULATION

Population of this research is individual investor in Pakistan stock exchange. We collect the samples from this population.

SAMPLE SIZE

The sample size of the research is consisting of 150 samples of individual investors in Pakistan Stock exchange.

ANALYSIS

The results through regression analysis through SPSS are below.

Heuristics

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Availabilities, Gamblersfallacy, Anchoring, Representativeness, Overconfidence	.	Enter

a. Dependent Variable: Investment performance
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.470[a]	.221	.194	.44450

a. Predictors: (Constant), Availability bias, Gamblersfallacy, Anchoring, Representativeness, Overconfidence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.964	5	1.593	8.062	.000[b]
	Residual	28.056	142	.198		
	Total	36.020	147			

a. Dependent Variable: Investmentperformance
b. Predictors: (Constant), Availability bias, Gamblersfallacy, Anchoring, Representativeness, Overconfidence

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.186	.372		8.562	.000
	Representativeness	.128	.050	.196	2.535	.012
	Gamblersfallacy	-.066	.047	-.106	-1.415	.159
	Overconfidence	.219	.062	.280	3.521	.001
	Anchoring	.149	.071	.163	2.103	.037
	Availability bias	-.222	.056	-.311	-3.941	.000

a. Dependent Variable: Investment performance

Prospect

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	MentalAccounting, RegretAversion, LossAversion	.	Enter

a. Dependent Variable: Investmentperformance

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.098[a]	.010	-.011	.49804

a. Predictors: (Constant), MentalAccounting, Regret Aversion, Lossaversion

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.349	3	.116	.469	.704[b]
	Residual	36.215	146	.248		
	Total	36.564	149			

a. Dependent Variable: Investmentperformance

b. Predictors: (Constant), MentalAccounting, RegretAversion, LossAversion

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.720	.349		10.656	.000
	LossAverison	.047	.053	.075	.901	.369
	RegretAverion	.022	.065	.028	.341	.734
	MentalAccounting	-.038	.051	-.061	-.732	.465

a. Dependent Variable: Investmentperformance

Case Processing Summary

		N	%
Cases	Valid	147	98.0
	Excluded[a]	3	2.0
	Total	150	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.682	29

Table 1

R^2 is known as coefficient of determination; it is the statistic that describes the total variation cause by the independent variable. Our model is explaining 22.10% variation in case of heuristic theory and 1.0% in prospect theory. Our independent variables are in case of heuristic theory are Over confidence, Representativeness, Anchoring, Gambler's fallacy, Availability bias, and in case of prospect theory are loss aversion, regret aversion and mental accounting. These variables have satisfactory effect on investment performance.

Table 2

The P value of Anova is the significance level 0.0000 in Heuristics which is below 0.05 therefore there is statistical significance at 95% confidence of interval for the dependent variable. In case of prospect alpha p value .704 therefore statitcs is not significant at 95% confidence of interval for the dependent variable.

Table 3

Out of five variables four variables are significant in heuristics because they affect the investment performance. These variables are representativeness, over confidence, anchoring and availability bias. Gambler fallacy is insignificance in this table. The table also shows the most influencing variable overconfidence as the magnitude among the entire variables. The variable availability bias has the low magnetite among all the variables.

While on the other hand in prospect, regret aversion, mental accounting and loss aversion are the insignificant variables. The variable loss aversion in most influencing magnitude wise and the variable mental accounting is less influencing among all the variables magnetite wise.

Representativeness, over confidence, anchoring, , regret aversion and loss aversion are the positively correlated with the investment performance. Gambler fallacy, availability bias and mental accounting are the negatively correlated with the investment performance.

DISCUSSION

Representativeness has positive relation with the investment performance, if the one unit of investment performance increase then .196 unit of representativeness is increase. It is determinate through the beta value.

Anchoring also has the positive relation with the investment performance. If one unit of investment performance is increase then .163 unit of anchoring is increase.

Availability bias has the negative relation with the investment performance. If on unit of investment performance is increase then .311 unit of availability bias is decrease .

Gamblers fallacy has the negative relation with the investment performance. If one unit of gamblers fallacy is increase then .106 unit of gamblers fallacy is decrease.

Overconfidence also has the positive relation with the investment performance. If one unit of investment performance is increase then 0.280 units overconfidence is increase.

Loss aversions have the positive relation with the investment performance. If 1 unit of investment performance is increase then .075 units of loss aversion is increase.

Regret aversion have the positive relation with the investment performance. If one unit of investment performance increases then .028 unit of regret aversion increases.

Mental accounting has negative relation with the investment performance. If one unit of investment performance increases then 0.061 unit of mental accounting is decreases.

CONCLUION

The aim of this paper is to test behavioral factor which effect the investment decision and performance of individual investor. Results are gain through the SPSS analysis. Result shows that there are significant relation between behavioral factors and investment performance. Representativeness, over confidence, anchoring, availability bias, gamblers fallacy is positively correlated with investment performance. While on the other hand mental accounting, loss aversion and regret aversions are negatively correlated with investment performance in Pakistan stock exchange according to this research. Keeping in view that mentioned facts we recommend that behavioral factor cannot be ignored in emerging market like Pakistan. Individual investor keeps in mind those facts while taking investment decision. Finally it is concludeBehavioral factor have the effective role on the investment decision and performance of individual investor according to this paper.

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