Impact of Overconfidence, Illusion of control, Self Control and Optimism Bias on Investors Decision Making; Evidence from Developing Markets

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Abstract
The study is conducted to explore the impact of behavioral biases on Investment Decision by incorporating the behavioral model. For this purpose four behavioral biases have been selected i.e. optimism, overconfidence, illusion of control and self-control. Data for behavioral biases and investment decision was collected from investors in Karachi Stock exchange through questionnaires. A total of 100 questionnaires were distributed but only 50 questionnaires were received back. For the analysis of data regression was used to check the impact of the behavioral biases under study on investment decision. All four biases (Overconfidence, self-control, illusion of control and Optimism) are found to have significant and positive impact on investment decision. The results of study reveal that in Pakistan investors are biased while making investment decision. This study has certain limitations such as the sample used in the study is too small for generalization of results. The biases used in this study are only four which can be extended to other investors biases for further study.
Keywords: Overconfidence, self-control, illusion of control, Optimism, Investment decision, Karachi Stock exchange.

Introduction

Market sharers are long term based on the conception of capable or competent markets and judicious or rational investor behavior while making financial decisions. However, thought of rational investors who are always focused on maximizing their satisfaction level and prove with certainty that self-control is becoming insufficient. Investors should be rational, free from prejudice and uniform in an efficient and competent market. They are supposed to make investment decisions without involving their sentiments and zeal. Their main aim should be to achieve a goal of maximizing their utility or more clearly their satisfaction level. Nevertheless, decision makers do not act like traditional economic models has assume. Contemporary researches has expressed that investment selection process is more human than relating to the analysis. Sensibility of loss, self-respect and grieve often trample down or eliminate rationality. Individual investor's decision making process has often rejected by finance research while taking financial investment decisions. Current study endeavor to understand the issue.

Behavioral finance focuses on irrational behavior through which investment decisions and market prices can be affected ultimately. It endeavors to know in better way that how sentiments and related mistakes put impact on investor and decision making process. Many researchers have faith that psychology and other social sciences have thrown off the lime light on efficiency of financial markets and also elaborate the instability of stock market and other irregularities. In worldwide financial markets different approaches are used which tend to lie on perfect predictions, completely volatile prices and the complete knowledge of all the decisions of all other players. These approaches being used in the markets are mostly unrealistic. The participation of behavioral finance is not to lessen the primary work. The work done by proponents of efficient market hypothesis apart from that, it aims to scrutinize the significance of unrealistic behavioral assumptions and to make it much more reality based. It can be done by the addition of more individual aspects of decision making process in financial markets. Certain aspects of financial markets cannot be properly understood without the help of behavioral finance. Except of individual's investment decisions, nevertheless there are many other factors that put impact on them. Due to negligence in individual's decision making process and financial investment decision there is a research gap in this area. Most probably it is being clearly accepted that psychological biases that has deformed the decision making and economic outcomes, are influenced by decision makers (Barber and Odeon 2001, 2002, Kahneman and Riepe 1998, Raghunathan and Corfman 2006). After an experience or observation it has been documented that analyst's opinions are contemplated in stock prices (Abdel-khalik, andAjinkya; 1982). The significance of behavioral model can be judged as there is a strong need to develop behavioral model to inquire the determinants of investor behavior and their influence on individual investor's financial decision making process. This paper searches into or scrutinizes whether the marginal investor correctly considerable for the biases in analyst earnings forecasts introduced by analyst's incentives. The current study directs the issue. This paper will ascertain and determine the existence and extent of a number of psychological phenomena. In lime light, it will analyze: excessive optimism and overconfidence on capital markets. In addition, illusion of control and Self-control will be exhibited.

HershShefrin, has defined bias as, bias is nothing else but the "predisposition towards error" (Shefrin, 2007). In other words, a bias is a prejudice in making of decisions while already being predominance by an underlying belief. There are many biases being expressed by the humans. This paper will address the following four: (1) excessive optimism, (2) overconfidence, (3) Self-control, and (4) illusion of control. In addition to biases, individuals often make decisions by engaging in other forms of psychological influences. This paper will put lime light on the framing effect, which says that decision of someone is predominance by the way a specific issue is presented to him/her (Shefrin, 2007) . More clearly it is stated that during making decisions, if investors are behaviorally biased then it is deliberately said that investor is rational on the other hand, if the investor is not biased then most probably we can say that investors are rational.

In optimism bias is a tendency for beliefs being align with interests: subjective probability is being increased by wanting something. Psychology and economics is being explained by optimism bias. Accuracy of knowledge and information more than what they actually do is the phenomena of overconfidence of decision makers. Such behavior is being conducted unconsciously so that available public information is being neglected due to overconfident behavior. Valuable information and lack of advantage of the information to make proper decisions is ignored by the decision makers.

Tendency of people to have faith that outcomes can be controlled and influenced by them but in reality it does not happens is being defined as illusion of control. On a very simple note, self-control bias is a human behavioral tendency through which people to consume today at the expense of saving for tomorrow are being caused. Lack of self-control is being expressed by people in regard of money.

This study is conducted in order to investigate that whether investors in Pakistan are biased emotionally or logically while making investment decision. Furthermore it is conducted to investigate that whether investors of Pakistan are rational or irrational toward investment decision. This study is important because in developing countries like Pakistan where environment is more volatile due to security threats, terrorism, inflation, energy crises which are changing the thinking pattern of investors related to the investment decisions. Such as Wagner (2006) stated that Global terrorism is indeed on the mind of some investors. Because of these problems making investment is becoming tougher, that make investors more serious about their investment decisions. It is well accepted that decision makers are often influenced by multiple psychological biases that distort their decision making and economic outcomes (Barber and Odean 2001, 2002, Kahneman and Riepe 1998, Raghunathan and Corfman 2006). So this study provides a tool for the incorporation of behavioral model to investigate into the determinants of investor behavior and their impact on individual investor's financial decision making process. This study also contributes literature on scope of behavioral concepts in finance. The literature review, data collection, methodology and finally results and discussion are comprised in the next sections of the paper.

Literature Review

Arbitrage principles of Miller and Modigliani, the portfolio principles of Markowitz, the capital asset pricing theory of Sharpe, Lintner and Black and the option-pricing theory of Black, Sholes, and Merton" are the pillars on which knowledge of standard finance is being built (Statman, 1999). For the efficient markets, these approaches are highly systematic. Suppositions about the "individual behavior" that is needed to be possessed by the economic agent so that the financial markets can be modeled and studied are being hold by traditional finance. Firstly, all choices and consequences are being considered by the economic agent who has relation and computational capacities and a genius mind (Simon, 1955). Economic agent always wants to maximize his self-interest and focuses on the importance of money, as these values are not being influenced by the factors like temper, intimacy with specific acts, unexpected increase in fear or regret etc. and improves his convictions in regard of getting new information. More clearly it can also be stated that economic agent is either risk neutral or a risk averse.

In worldwide financial markets, approaches lies on perfect predictions, flexible prices, and complete knowledge of investment decisions of other competitors in market are unrealistic. Behavioral Finance is a new model of finance theory, through which implications of psychological decision making is being understood and predicted by financial market (Olsen, 1998). Behavioral aspects and aims on application of psychological and economic principles for the improvement of individual financial decision making process are being acquainted by Behavioral Finance. Shefrin (2000) has written in his book named as "Beyond Greed and Fear" which is based on behavioral finance and EMH that people are "imperfect processors" of information and are usually biased, mistakes are being consigned and perceived by the people. In present era, no unified theory of behavioral finance is being existed. Shefrin and Statman (1994) have started their work keeping in view this direction. Apart from that their literature is highly emphasized on identifying behavioral decision making qualities which put positive and systematic effects on financial market behavior.

Different sort of societal effects are being provided by social psychology which helps in understanding the behavior of investors in context of equity markets. Individual investors use to exhibit themselves in regard to invest which is unsuitable for traditional example. Particularly, they are not being variegate (Benartzi and Thaler 2001), avoid loss (Odean; 1998), and overconfident (Odean; 1999). According to Barber and Odean (2000) document that is being traded too much and holds on to loser stocks excessively and for a long time span, apart from that sold to winners too early. Traders are risk averse, and trade is being done for non-rational reasons frequently, and presented by reference price effects (Grinblatt and Keloharju; 2001). It is being analyzed that investors' moods are dependent on number of hours of daylight which ultimately affects financial markets (for example, Hirshleifer and Shumway, 2003 and Kamstra, Kramer and Levi, 2003). People are limited in their mind frame for receiving information and understanding it, this is the apparent reason that they lack capabilities of performing tasks frequently (Kahneman, 1973). According to Miller, (1956), only seven pieces of information can be processed at the same time, that is the reason complex and difficult problems may exceed people's abilities to solve them.

To resolve problems being arose people adopt rules of thumb, or heuristics, due to which behavior that is not being fully rational can cause (Simon, 1955, 1979, Newell and Simon, 1972, Tversky and Kahneman, 1974, Gabaix and Laibson, 2000). In the lime light of above evidence, a theory due to which cognitive biases is being involved and niche in recent finance literature has been found. Most probably, many investors believe that they know much more better than other do (Shiller, 1998) and basically they are being tangled in this phenomena that they are good enough, this thing resultantly lead them towards overconfidence and excessive trade activity hitting the stock prices. Barber and Odean has conducted a research in which trading behavior and individual investors are being targeted. 35000 investors are being aimed by Barber and Odean, by whom accounts at discount brokerage were being managed.

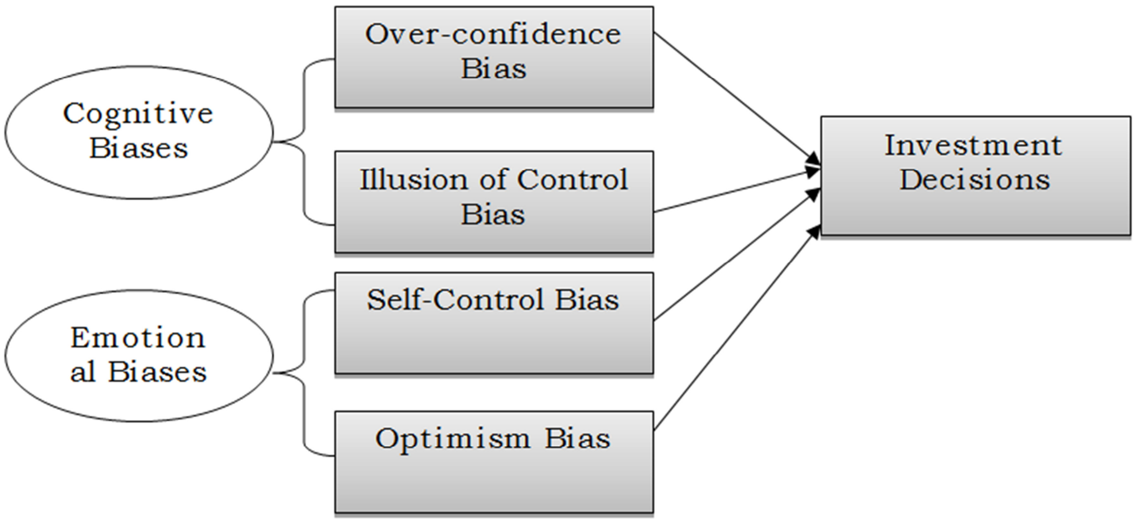
Investors are overconfidence because of which excessive trading is being done by them. Resultantly, this behavioral trait leads them to the path of diminishing returns. People should form a proper pattern of judging and observing the behavior of others while decisions are being made (Asch, 1956). It can be called conformity bias, in which investors have herding behavior. Investors are full of overconfidence and it can be defined as ignoring the apparent reasoning and having inopportune believes judgments and person's capabilities (Sadi, Ghalibaf, Rostami, and Gholipour, 2011). "Prediction Overconfidence" may be defined as confidence intervals being predicted by the investors and "Certainty Overconfidence" may be defined as the sure and certain judgments being done by the investors. Risks being linked with prediction overconfidence are ignored by the people; on the other hand, undiversified portfolio is being maintained by the investors having certainty overconfidence (Pompian, Behavioral Finance and Wealth Management, 2006). Because of being overconfident behavior investors increased their trading in the era of technological bubble of 1990's. Investors were full of zeal that super returns will be achieved by them but when bubble burst all the gains were being dropped down (Pompian, Behavioral Finance and Wealth Management, 2006). Investors being overconfident in choosing stocks could not achieve average return but the lower return (Odean, 2002). Ability to control events, underestimation of risks and overestimation of knowledge being arouse by overconfidence of investors (Nofsinger, 2002).

Decision making is being affected by overconfidence bias, in corporate world as well as individual investments. Shefrin defines overconfidence as "showing concern about knowing one's own abilities and boundaries of knowledge" (Shefrin, 2007). People are being over evaluating in their abilities of performing. Resultantly, as manager is being overconfident so it leads towards impellent decisions. That is the reason, investors do not demand for help in decision making. It was being found by Cooper, Folta and Woo, (1995) that before committing decisions entrepreneurs search out for information. Difference is being explained by the successful entrepreneurs. Survival in short run as well as long run is being led by over confidence in context of positive trait of entrepreneurs. Negativity in bias occurs when entrepreneurs are not aware of their boundaries and therefore, wrong decisions are being made on erroneous bases.

Illusion of control is being stated by (Shefrin, 2007) as "believe of people of controlling and influencing the outcomes but in reality it's not being done the way people think and do not influence at all". Confirmation bias in regard to decision making of individual and corporate, in present era, ideas of others is being fully ignored but focusing on their own. Impression is being influenced by the personal involvement rather reality opposes this phenomenon. More it can be said that illusion of control, accentuating of predispositions towards error are being connected with people's overconfidence.

Overestimation of favorable outcomes and their comparison with unfavorable outcomes is being related to the optimism (Shefrin; 2007). Different fields are being filled with such kind of bias e.g. debt equity ratio for financing. It has been pointed by Meinert that, corporate management's excess of optimism has caused debt problems (Meinert, 1991). Forecasting bias remains during introduction of new products in the market. (Golden, Miliewicz and Herbig, 1994) said most of the time forecasting is erroneous. Existence of company's excessive optimism is being dependent on favorable forecasts. Excess of optimism has highly influenced the corporations as well as individuals when they make decisions in context of investment. Brown and Cliff (2005) concluded after studying value of stock prices that asset valuation is being influenced by sentiments.

Illusion of control and behavioral bias are almost same in which individuals think that control and influence on outcomes can be done any time they want. According to Ellen Langer illusion of control bias is that personal success which has been inappropriately higher than objective probability that will warrant. Creevy, Nicholson, Soane, and William (2003) performance of traders in financial instruments has been influenced by illusion of control beliefs. Trader's performance has been linked with illusion of control bias. The study has told about comparison of high and lower illusion of control and their impact on the financial instruments. Barber and Odean (2001) argued about illusion of control and illusion of knowledge. Investors were been more overconfident due to these illusions. Stock market traders are being badly influenced by the investor's overconfidence, more clearly less experience belongs to them. Fewer saving and more expenditures are being associated with self-control bias. Due to this, investor may suffer from quick retirement and less savings. Repeatedly, efforts to recover lost time incurred in risk portfolios are being made by investors. Resultantly, problems may rise (Pompian 2006).



Fig, 1. Research model

Research Methodology

Data on four biases, which serve as independent variables in this research model, has been collected through questionnaire. Questionnaires of over confidence and optimism bias were taken from the previous research conducted by (Awan, Bukhari and Ghufran; 2009) on "understanding investment behavior of individual investors: how they handle investment decisions? Do they act rationally?" Questionnaires of self-control and illusion of control bias were taken from Behavioral Finance and Wealth Management by Pompian (2006). The questionnaire consists of 16 items, 4 questions for each biased. 100 questionnaires were distributed bur received back 50 with response rate of 50%. The data on dependent variable which is investment decision was taken from questionnaires used by (Awan, Bukhari and Ghufran; 2009) in their research. Regression has been applied to see the impact of these biases on investment decision. Biases and investment decision captured through questionnaire have been quantified through five point Likert scale ranging from strongly disagrees to strongly agree. Reliability statistics for all items of dependent and independent variable was measured and found that cronbach's alpha for all 25 items is 0.784.

Results and Conclusion

Table 1 below shows that R square is .658 which shows that 65.8% variation in Investment decision is caused by the biases under study.

"Table 1"

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-.811[a]	.658	.627	.20534

a. Predictors: (Constant), S.C, O.M, O.C, I.C

Table 2 shows the results of ANOVA statistics. It is shown that value of F-significance is .000 which is less than 0.05. This shows that overall regression model is significant.

"Table 2"

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.649	4	.912	21.633	.000[a]
	Residual	1.897	45	.042		
	Total	5.546	49			

a. Predictors: (Constant), S.C, O.M, O.C, I.C

b. Dependent Variable: I.D

The value of regression coefficient for overconfidence bias is 0.236 which is significant at p value less than 0.05. Thus it can be said that there is positive and significant impact of overconfidence bias on investment decision. Similarly for optimism bias and self-control biases the value of coefficient is positive and significant at p value less than 0.05 which shows that these biases have also positive and significant impact on stock returns. The p value of Illusion of control bias is greater than 0.05 which shows that there is an insignificant impact of illusion of control on investment decision.

"Table 3"

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.446	.501		-.891	.378
	O.C	.236	.076	.283	3.095	.003
	O.M	.241	.092	.241	2.622	.012
	I.C	.165	.102	.157	1.625	.111
	S.C	.561	.102	.533	5.495	.000

a. Dependent Variable: I.D

Conclusion

This study was aimed at exploring the impact of four biases (Overconfidence, Optimism, self-control and illusion of control biases) on investment decision. Data was collected through questionnaire. Regression was employed to see the impact of these biases on investment decision. It is founded that out of four three biases have positive and significant impact on investment decision which shows that these investors in Pakistani capital markets are irrational because they are biased both logically and emotionally while one bias has insignificant impact on investment decision. This study has certain limitations for example the sample used in the study is too small for generalization of results, there could be other biases explaining the investment decision. This research also provides a threshold for upcoming researchers to investigate investor biases in developing market.

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