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Risk Perception is a Mediator between Heuristic Bias and Risky Investment Decision; Empirical Evidence from Pakistan's Equity Markets

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Abstract
Investors play a vital role in stock exchange. Sometimes the decisions are based on rational behavior and sometimes these decisions consist of irrational behavior. Traditionally researchers argued that investors behave like a rational agent. **Objectives:** This study explores the investor's cognitive biases and how heuristic bias put effect on investor decision. At the same time due to globalization stock market situation is changed day by day even after few seconds. There are numerous biases which are putting effect on investor decisions but this study explores the effect of heuristic bias on risk perception, which is mediating variable and also examined the effect of heuristic bias on risky investment decision. **Place of the Study:** This study is conducted on Pakistan Stock Exchange. **Subject and Method:** As this study belongs to the behavior of investor so it comprise of primary data. For this purpose adapted questionnaire is used. 450 questionnaires are distributes out of which 400 questionnaires are returned. The data is run on SPSS. To check the reliability of questionnaire, Cronbach's alpha is applied and the result of reliability is above than 0.7 which is considered to be fit tool for research. **Results & Conclusion:** The study finds a significant relationship heuristic and and risky investment decisions. There is full mediation between heuristic and risky investment decision while risk perception is a mediating variable. Study also indicates that risk perception have also positive and significant relation with risky investment decisions.

Introduction
The investment in the stock market is a complex and important process for an ordinary person. Whenever a person or an investor wants to take a decision about how, where and why to invest in the stock market, there are several reasons which are effecting their behavior.

Nowadays a study is being used to take better decisions about the investment in the stock market. This study is called behavioral finance. Behavioral finance show how individualinvestors interpret and judge the information to take risky investment decisions. Behavioral finance defines the mental abilities which are about attention, Memory, reasoning, problem solving, decision making and comprehension. In psychology cognition is related to mind, thinking and intelligence. In simple words we can say that cognition is related to the higher mental process such as thinking, feeling, logical ability, analytical ability, problem solving and decision making (Shiller, 2003).

Study of behavioral finance shows the impact of psychology on the performanceand abilities of investors and it is important to study because it shows the main factors behind market inadequacy. Investor's decisions are reflected by the cognitive errors, feelings and emotions and these behavioral actions urge a investor to take decision. Bias is leaning of character to present a viewpoint often accompanied by rejection consider the possible alternative view. Bias can be defines as in simple words that biases mean one sided not having an open mind. People are biased toward individual, race and nation (Pedhazur, 1997).

The purpose of this study is to investigate those factors and biases which are effecting to investors while they are making risky decisions. Most of the studies explore the portfolio decisions but there is a lack of activity to investigate the biases who are effecting to risky investment decision.

Prospect theory
Kahneman and Tversky(1979) develop an alternative model which explains the risk in a different way. Prospect theory explains that potential outcome before reaching the final outcome.

Regret theory
Regret theory also postulate the risk perception and decision making behavior of the investor according to this theory sometimes investor wants to take risk and sometimes they avoid making investment. Both investment and risk are related to each other. (Loomes, Graham & Robert., 1982).

Biases

The developed market practices is positively related to emerging and diversified market .Firms' entry and survival in developed markets are features that are same in both the markets. However, cognitive biases are the biases that directly linked with the roles that are being played by other type of experience and knowledge (Shefrin, 2002).

Heuristic

The concept of uncertainty and risk always go hand in hand. According to Kahneman, and Tversky (1979) heuristic judgment constitutes the only practical way to evaluate uncertain elements.

Risky investment

Shah(2008)the subjective judgment and thinking of customer and market situation is not only affected to investor but it also affect to company.

Risk perception

Risk perception determines investor'sopinion when they evaluate pervious or how risk is associated with investment (Slovic,1987). Thus investor's opinion is totally linked the risk perception they possess.

Risky investment decision

A study is conducted by at South Korea in field experiment to evaluate that how stock prices influence investors trading decisions and investment performance. Questionnaire is distributed to 550 respondents. Such kind of investor has higher expectations about stock prices and they trade frequently but get lower realized returns.Researcher argued and concluded that heuristic bias and perceived competences of investors, subsequently effects investors trading patterns, frequency and performance.

Iqbal (2014) conducted a study in Karachi and sukkhar in Questionnaires are distributed to collect the data. 250 questionnaires were distributed to investors out of which 178 were considered as worth full. Data was analyzed through one sample t-test and Pearson correlation coefficient techniques to check the relationship between the variables.Results show that the most of biases are significant and they have positive relationship with market development and decision making.

Objectives of the study

- To discover the effect of Heuristic bias on risky investment decision.
- Effect of risk perception as a mediating variable between heuristic bias and risky investment decision.

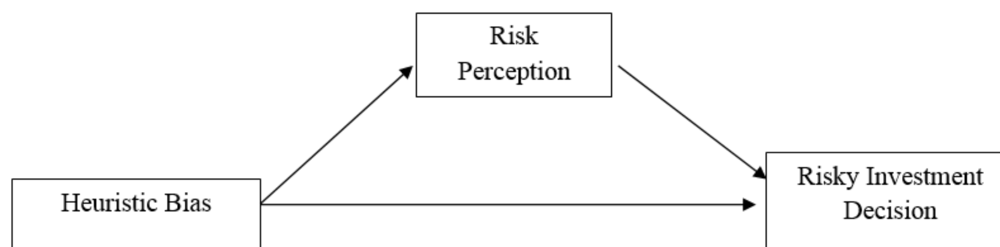
Significance of the study

In the present study we can say that factor that effect on decision making by individual investors is usually based on their age, education, income, investment portfolio, and other demographic factors. The impact of behavioral and cognitive biases aspect on risky decision making specially ignored. The objective of this paper is to explore the impact of behavioral factors and investor's psychology on their decision-making, and to examine the risk perception as mediator effect on decision making.

Academic significance

Practically, this study is also worthwhile for Business Administration students. Most of investors have lack of business education. They put money in risky investment just on the bases of their experience. Due to lack of business education they have not an idea of what is the basic reason behind that why share prices are reflected or fluctuated. Majority of investors rely on financial analyst who have chartered accountant and CFA analyst. Multinational companies hire those business students who have analyst and know the knowledge behind the fluctuation of prices. Business students perceive the risk in a better way as compared to those who are not qualified. They can observe that how various biases influence on share prices and how risk perception effect the decision making of an investor.

Conceptual Framework



Independent Variables **Mediating Variable** **Dependent Variable**

Theoretical Framework depicts the cause and effect relationship between heuristic bias and risky

investment decision while risk perception playing as a mediating variable.

Hypotheses of the Study

H1: There is a significant relationship between Heuristic and risky investment decision.
H2: There is a significant relationship between risk perception and risky investment decision.
H3: Risk perception is a mediator between heuristic bias and risky decision making.

Research Design and Methodology

This study is based on primary data. Questionnaires are personally handed over to the respondents for getting their responses. These respondents are individual investors who have interest to make investment in Pakistan stock exchange. The technique which is used in the present study is random sampling technique. Sobel test is applied to check the mediating effect of risk perception and also check direct and indirect effect of variables on risky investment decisions.

Population and Sample

The population of this survey is investors which belongs Pakistan stock exchange. There are more than 1200 companies registered in Pakistan stock exchange and also existing number of brokerage houses who are providing the facilities to investors to make investment in different stock exchanges.

Results:

Mediating Effect

Preacher and Hayes (2004) use SPSS Macro for Simple mediation. In this study, sobel test is used to check the mediating and cognitive biases affect on risky investment decisions. Sobel test is also worthwhile for direct and indirect effect.

Variables in simple mediation model

Y Risky investment decision (RID)
X Heuristic bias (HB)
M Risk Perception (RP)

Risky investment decision is dependent variable and heuristic bias is independent variable while risk perception is dependent variable.

Table

Direct and total effects

		Coeff	s.e	t	Significance(two)
1.	b(YX)	.3768	.0437	8.6260	.0000
2.	b(MX)	.4216	.0405	10.4173	.0000
3.	b(YM.X)	.9797	.0227	43.1148	.0000
4.	b(YX.M)	-.0363	.0207	-1.7525	.0805

There is a significant relationship between heuristic bias and risky investment decision as sig value is less than 5%. Value of coefficients (0.3768) depicts the value of risky investment decision as there is unit change in heuristic bias. There is a significant relationship between heuristic and risk perception.

Indirect and significanceusing normal distribution

	Value	s.e.	LL95CI	UL95CI	Z	Significance (two)
Effect	.4131	.0408	.3331	.4931	10.1234	.0000

To check the mediating effect firstly considers the indirect effect. Significance value is less than 5% so it means there is a significance relationship between risk perception and risky investment decision. Secondly 0.0805 value shows that there is insignificant relationship so it means that there is full mediation effect. Due to insignificant relationship coefficient value (-0.0363) is ignored.

Variables in simple mediation model

Y (Dependent variable) Risky investment decision (RID)
X (Independent variable) Heuristic Bias
M (Mediating) Risk Perception (RP)

Table

Directs and Total effects

		Coeff	s.e	t	Significance (two)
1.	b(YX)	.7505	.0438	17.1404	.0000
2.	b(MX)	.8482	.0355	23.8995	.0000
3.	b(YM.X)	1.0711	.0307	34.8577	.0000
4.	b(YX.M)	-.1580	.0339	-4.6539	.0000

Firstly check the effect of heuristic biases on risky investment decision. Result shows that there is significant relationship between heuristic bias and risky investment decision as the sig value is less than 5%.

Risky perception is a mediating variable. Thirdly check the effect of risk perception (mediating variable) on risky investment decision as bias is controlled variable. There is a significant relationship between

risk perception and risky investment decision.

Value of unstandardized (0.750) depicts the value of risky investment decision if there is one unit change in heuristic bias.

Indirect and significanceusing normal distribution

	Value	s.e.	LL95CI	UL95CI	Z	Significance (two)
Effect	.9085	.0461	.8181	.9988	19.7059	.0000

Conclusion

Investors while taking investment decisions must consider these biases as risk factor associated with their investment portfolios. So there is a need to understand, utilization and interpret of these two biases This research will help them to judge investors attitudes towards risk with a new perspective, and in a better way, thus leading to better investment decision making.The present study is also helpful for investors to aware about the consequences of their demographic roles and behaviors regarding risky investments thathow business tenure effecting to their investment decisions. Understanding of the cognitive biasesplaying vital role, especially when there is prevailing uncertainty in the market. The current study will increase the confidence of individual investors to prefer risky investments by providing them guidance that how to control the constraint factors to achieve higher returns and secure their capital. Emotional and personality factors need to be incorporated in the investment strategies formulated for individual investors.

Findings and limitations

It is common human tendency to make investment decision which give huge returns and safe investment. Previous studies concluded that traditionally an investor decisions are based on rational. Only market forces and factors affecting and influence to investors to take decisions. Behavioral finance advances the concept that investor's perception is based on some psychological thinking and beliefs. Investor's decisions are not based on the market situation and forces.

There are several other biases which are affecting to investment. Some biases are relates to own mental capabilities and some relates to thinking level of an investor's. It is difficult to access and know the each and every investor behavior because behavioral finance is based on the personal observations and thinking and decisions made by the investors depends on the biases.

References

Iqbal (2014).Determinants of Retail Investors Behavior and its impact on investment decision, *"International Letter of Social and Humanistic Sciences"* 7, 31-43.

Kahneman, D. &Tversky, A. (1979) Prospect theory: An analysis of decision under risk, *Econometrica, (47)* 263 – 291.

Loomes, Graham & Robert (1982)."Regret theory: An alternative theory of rational choice under uncertainty," *Economic Journal 92*, 805–24.

Preacher, K. J., & Hayes, A. F.(2004). SPSS and SAS procedures for estimating indirect effect in simple mediation models. *Behavior Research Methods,* 2004*, 36 (4)*, 717-731

Pedhazur, E. J., (1997). *Multiple Regression in Behavioral Research* (3rd ed.). Orlando, FL:Harcourt Brace.

Shah, A., & Oppenheimer, D. (2008). "Heuristics made easy: an effort reduction framework", *Psychological Bulletin, 134(2),* 207-222.

Shefrin,H.(2002) Behavioral decision making, forecasting, game theory, and role-play. *International Journal of Forecasting 18,* 375–382

Shiller R. 2003. From Efficient Markets Theory to Behavioral Finance, *The journal of Economic perspectives,(17)*,83-104.

Slovic, P. (1987), "Perception of Risk." Science, 236*(4779)*,280–285.

Thaler & Richard J., (1999). Mental Accounting Matters, "*Journal of Behavioral Decision Making"* (12), 183-206.

Tseng, S., & Yang, C. (2011). "The role of information searches in investment choice variation: Digital information, advice seeking and heuristics", *African Journal of Business Management 5 (12),* 4934-4944.

Tversky, A., & Kahneman, D. (1986). Rational choice and the framing of decisions. *Journal of Sbusiness*, 251-278.

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and uncertainty,*297-323.