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RISK PREFERENCES OF BANGLADESHI INDIVIDUAL INVESTORS TOWARDS INVESTMENT IN CAPITAL MARKET

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ABSTRACT

This paper investigates the risk preferences of Bangladeshi individual investors towards investment in Capital Market. To conduct this study, qualitative (expert interview, focus group discussion) and quantitative methods were used. The study is based on primary data collection through structured questionnaires and secondary data. Statistical Package for Social Science (SPSS) was used to analyze the data. The study found that 27.3% of the investors are low risk taker; 50% average risk taker, 19.3% high risk taker and only 3.3% very high or extreme risk taker. The study also found that the income level of respondents was the most significant differentiating and classifying factor to determine the risk preference of the investors. The present study also found that gender, employment status, and educational background of the respondents are effective variables in discriminating levels of risk preference. Finally, the study came up with some recommendations to enhance awareness of individual investors regarding risk taking in investing capital market. Nevertheless, the results of the study are constrained by the small size of the sample, area and robustness of the analysis.

Keywords: Risk, Preference, Investor, Investment, Capital Market, Bangladesh.

1. INTRODUCTION

Risk is an integral part of any sort of investment, especially in case of investing in capital market. Assessing and measuring the risk preferences of individual investors is an important issue for the investors to make right investment decision in the capital market. Assessing and measuring the risk preferences of individual investors is also an important issue for the policy makers to ensure smooth operation of the capital market. The extent to which people are willing to take on risk constitutes their risk references. Risk preferences of individual investors vary investor to investor on the basis of their income level, existing wealth, economic condition, age, education, psychology, attitude, perception, experience and so on. There are mainly two types of investors – individual investor and institutional investor. These two types of investors are further classified into conservative, moderate, and aggressive investor on the basis of risk preference of the investors. This study was designed to classify individual investors into different risk preference categories and to determine the variables that influence risk preferences of the individual investors as per the degree of the influence.

At present, in the context of investment advice to individual investors, financial institutions all over the world have started to use so-called risk profiles of their clients. These risk profiles are standard questionnaires that are filled-up by potential clients. All have in common that they contain questions on both the time horizon of the investors and on their risk preferences. In the Netherlands, Canada, New Zealand, and the United States financial institutions are legally obliged to construct such risk profiles. In other countries, they are generally not compulsory. But unfortunately, such practice is not available in Bangladesh. The correct elicitation of risk preference could also be regarded as an opportunity by investment firms, since it can enhance efficiency and

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competitiveness. The accurate identification of the client's risk preference allows them to make appropriate suggestion for their clients. The results of this study can be potentially useful for the financial institutions in finding out which risks are most important for their clients. Result of this study may also be highly useful to postulate right policies and regulations by the policy makers regarding capital market.

2. LITERATURE REVIEW

Massah and Al-Sayed (2013) explained that inexperienced responders are affected by both political-religious orientation and risk behavior, though the political-religious orientation has more influence than risk behavior. Smeets (2012) mentioned the reasons why investors might mismatch their risk preferences could be that they do not understand which portfolio choices fit to their preferences. He also asserted an alternative explanation to the risk-mismatching hypothesis that risk adverse investors are affected differently by stock market and bond market developments than risk tolerant investors. Dorn and Gur (2010) highlighted that individual investors select stocks with volatilities commensurate with their risk aversion; more risk-averse individuals pick lower-volatility stocks. They also found that investors' portfolio perspective overlooks return correlations. The more risk adverse customers indeed hold less volatile stocks. Cross-sectional, the more risk adverse investors also have a stronger tendency to invest in more risky securities. Hanna, Waller and Finke (2008) explained that risk exposure given a client's preferences for risk, be it in risk management or portfolio allocation, financial planners can choose from a number of risk-tolerance questionnaires that may or may not be a true measure of the slope of the household's utility function.

Veld and Merkoulova (2006) found that most investors use more than one risk measure. For those investors who systematically choose one risk measure, semi-variance is most popular. Stock investors have a preference for semi-variance as a risk measure, while bond investors favor probability of loss. Investors state that they consider the original investment to be the most important benchmark, followed by the risk-free rate of return, and the market return. However, their choices in the experiment reveal that the market return is the most important benchmark. Veld and Merkoulova (2006) also found that most investors consider the initial investment to be the most important benchmark (58.95%). This is followed by the risk free rate of return (28.09%) and the stock market return (7.13%). The finding that investors strongly rely on the initial value is also documented in the behavioral finance literature. Grable and Lytton (1998) described that the educational level of respondents was the most significant differentiating and classifying factor. Gender, self-employment status, and income were also effective in discriminating among levels of risk tolerance according to them. They also found that demographic characteristics provide only a starting point in accessing investors' risk tolerance. The method developed by Eckel and Grossman (2002) was explicitly designed to be a simple way of eliciting risk preferences that produced enough heterogeneity in choices to allow for the estimation of utility parameters.

The perception and assumption of risk, finally, seem to differ greatly by gender. Women generally are more prudent when making investment decisions; as a consequence they seem to be far more likely than men to receive advice aimed towards less risky products (Eckel and Grosmann 2002; Merrill Lynch, 1996). Risk preference also varies according to the context: people may appreciate risk in their leisure activities but flee from it when making financial decisions. Therefore people's actual attitude to financial risk must be measured explicitly in the financial context. Even in the financial context people may exhibit different attitudes to risk depending on how they framed their assets and their choices. Financial risk preference depends on many factors, which need to be surveyed separately. Cordell (2001) classifies these factors into four categories: risk knowledge; risk propensity, with reference to the notion of objective risk, that is, to the risk return trade-off

which people are willing to accept; risk attitude, with reference to the notion of subjective risk, i.e. emotional capacity to deal with uncertainty; and risk capacity, determined by the current economic situation and income prospects. A valid questionnaire distinguishes between risk attitude, which is actually a psychological construct, and risk capacity, which is, instead, associated with people's socioeconomic condition. From this point of view, questions which lead to an answer depending on both risk attitude and financial capacity are not valid. Reliability is linked to the margin of error of the measurement.

3. OBJECTIVES

The key objective of this paper is to investigate the risk preferences of Bangladeshi individual investors towards investment in capital market. The specific objectives are:

i. to identify the factors that influence risk preference of individual investor,
ii. to quantify the risk preferences, and
iii. to identify the relationship among risk preferences, age, gender, education, income, and occupation.

4. METHODOLOGY

This research focused on both quantitative and qualitative analysis. Both primary and secondary sources of data were used for this research purposes. Primary data were collected from individual investors who invest in capital market through a structured questionnaire which focuses on both quantitative and qualitative data. Convenience method of sampling is used to collect the data from the respondents. Exactly 150 samples were collected from Dhaka city and most of the respondents were friends, relatives, colleagues, students, neighbors and certain customers coming in to stock broker's office. The questionnaire is constructed in such a way that the first alternative is less risky according to one risk measure, and the second alternative is less risky according to the other two risk measures. To measure the risk preferences of Bangladeshi individual investors towards investment in Capital Market, a four-point scale questionnaire is constructed in such a way that the first alternative "a" carries 1 point, alternative "b" 2 points, "c" 3 points, and "d" 4 points. Total fifteen different questions on risk preferences are asked to the respondents and then total points are calculated on the basis of given response as per the four-point scale. If total calculated points are in the range of 1-29, the respective respondent is a low risk taker, if total calculated points are in the range of 30-39, the respondent is an average risk taker, if total calculated points are in the range of 40-49, the respondent is a high risk taker, and if total calculated points are in the range of 50-60, the respondent is a very high risk taker. Statistical Package for Social Science (SPSS) was used for the purpose of analysis of data. Correlation, regression, mean and frequency are calculated in accordance of the objective of the study and the nature of data. The secondary sources of data include different books, journals, articles, dissertation, annual reports of Central Depository Bangladesh limited (CDBL), annual reports of Bangladesh Securities and Exchange Commission (BSEC), annual reports of Dhaka Stock Exchange (DSE), and different websites relevant to the topics.

5. ANALYSIS AND FINDINGS

5.1 Demographic Analysis of Respondents

Gender: Out of the 150 samples, 136 respondents (90.7%) are male and 14 respondents (9.3%) are female.

Age: 26.7% of the respondents are between18 and 29. 42% of the respondents are between 30 and 39. 22.7% of the respondents are between 40 and 49. 6.7% of the respondents are between 50 and 59. 2% of the respondents are above 60.

Education: 6% of the respondents did not complete high school but completed primary school. 2% of the respondents completed only high school. 29.3% of the respondents completed HSC but did not complete graduation. 62.7% of the respondents completed graduation.

Marital Status: 76.7% of the respondents are married and 23.3% unmarried.

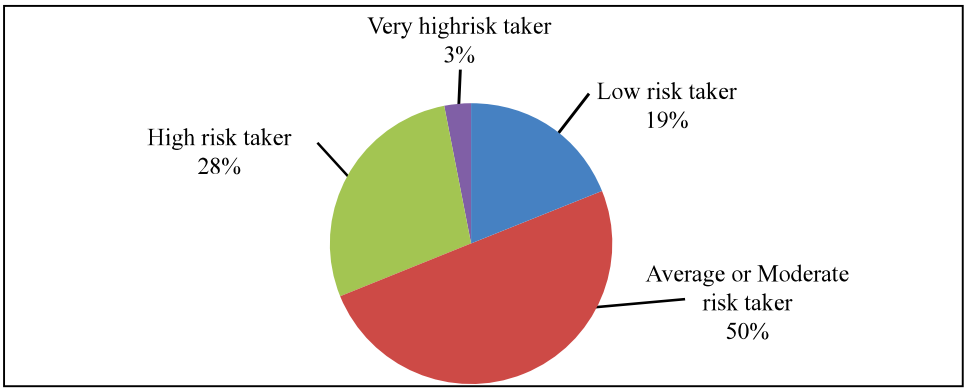
Occupation: 12.7% of the respondents are students, 18.7% businessman, 55.3% employed, 2.7% retired persons, 5.3% housewives and 5.3% unemployed.

Source of Information: Only 8% of the respondents collect information from brokerage firms, 60.7% collect information from friends and relatives, 7.3% collect information from advertisements, and 24% collect information themselves.

5.2 Results

Eliciting the risk preferences of individual investors is not an easy job. Studies confirm that people generally do not accurately estimate their own risk preference. While the pattern of estimates is scattered, there is a slight overall tendency to under-estimate. A possible explanation for this is that the majority of the population is, in absolute terms, more risk-avoiding than risk seeking. An additional difficulty is that, even the meaning of "risk" can depend on the situation. When individuals talk about "risk" as they experience it in their personal financial affairs are not talking about the same thing as investment researchers discussing the "risk" of an investment. However, study found that 28% of the investors are low risk taker; 50% average risk taker, 19% high risk taker and 3% very high risk taker. The study also found that the income level of respondents was the most significant differentiating and classifying factor. Gender, self-employment status, and education were also found to be effective in discriminating among the levels of risk preference.

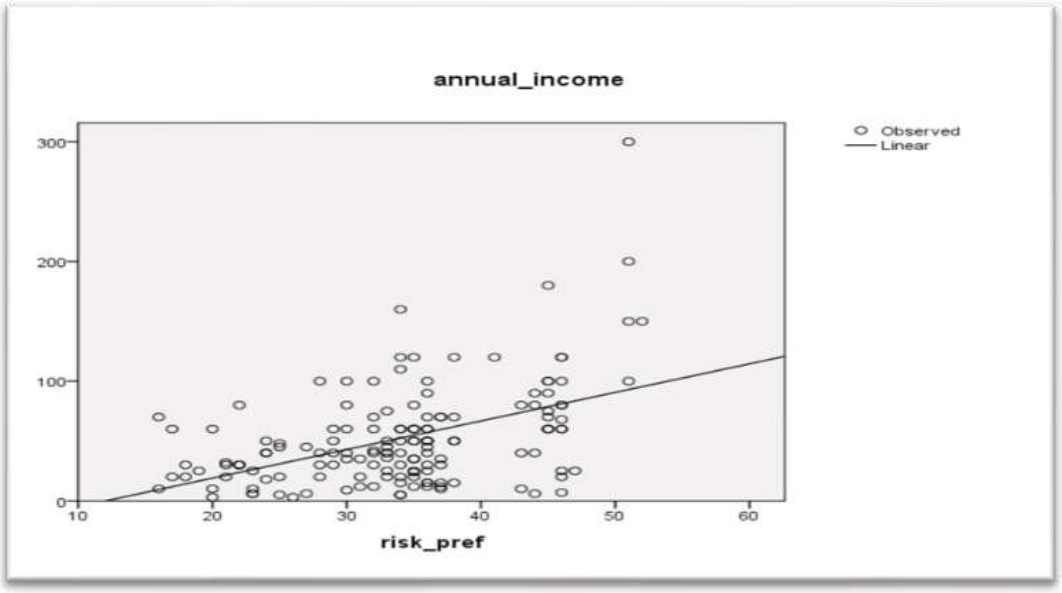
Figure 01: Risk preference categories of individual investors



Source: Author's calculation based on primary data.

Females are less risk tolerant than males, risk preference decreases with age, unmarried investors are more risk tolerant than married investors, individual investors employed in professional occupations tend to be more risk preferring than those in nonprofessional occupations. Study also found that self-employed individuals are more risk tolerant than those employed by others; risk preference increases with income. Correlation between age and risk preference is 0.022, which denotes that there is very weak and positive correlation. Correlation between year of schooling and risk preference is 0.094 which denotes that there is very weak and positive correlation. Correlation between annual income and risk preference is 0.466 which denotes that there is moderate and positive correlation.

Figure 02: Linear and moderately positive correlation between income and risk preference



Source: Drawn by author based on primary data using SPSS 17.1

R^2 of Risk Preference: Table 04 of appendix shows the r^2 of risk preference is 0.281 which denotes that change of dependent variable or risk preference is explained in 28.1% by the change of independent variables like age, year of schooling and income level.

6. RECOMMENDATIONS

Although this research is very simple in its nature but its implications are very much significant for the individual investors as well as for the policy makers for ensuring a good investment environment in the capital market of Bangladesh. Based on the findings of this study the researcher prescribes the following suggestions for the policy makers and individual investors:

- Policy makers like BSEC, DSE, CSE, and BB should consider the risk preferences of individual investor to formulate policy as well as in implementation of any new issue in the capital market. For example, recent initiative of DSE and CSE to inaugurate derivative securities like options, futures and forwards which are highly risky financial securities.
- The researcher also suggests to the respective policy makers to make it mandatory for measuring risk preference by the brokerage house, so that they can make appropriate suggestion to their clients regarding investment decision.
- Investors also should measure and realize their risk preferences and risk taking capacity themselves so that they can make efficient investment decision towards capital market which will further match their risk taking ability or risk preference.

7. LIMITATIONS AND FURTHER SCOPE OF THE STUDY

In order to conducting this study researcher faced some constraints like small size of sample which is only 150 individual investors as population size is very large regarding this study which is 3,124,802 individual investors, conservatism of respondents about giving their financial information, and lack of fund to conduct survey study as it is a self-financed research. The survey

study is not incentive-induced to the respondent. Even though there are arguments in favor of financially rewarding the respondent, in the viewpoint that monetary stimulus will motivate them to think more deeply and carefully about their choices, there are important reasons not to reward them. In addition, different questionnaires classify the same individual in different ways. Therefore, to prepare an ideal questionnaire regarding this research was very difficult. The researcher expects that, this study will be a resourceful paper for the future researchers and they can do this research with a large sample size and incorporate incentive for the respondents for getting better attention, better data and better result about the risk preferences of Bangladeshi individual investors towards investing in the capital market.

8. CONCLUSION

Risk preferences differ from person to person, gender to gender, time to time, situation to situation, income level to income level, educational background to educational background, age to age, and so on. People react differently to risk. Some are habitually inclined to reject it, others to accept it. Risk preference is the level of risk a person prefers to take. It should be thought of as a continuum, with people ranging from risk-avoiders to risk-seekers or low risk taker to high risk taker. Investing in stock markets is a major challenge ever for professionals because of existence of risk there. Therefore, investors should be aware about their risk preferences and risk taking capacity to avoid any unexpected outcome from their investment.

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APPENDIX

IMPORTANT TABLE AND QUESTIONNAIRE

Table 01: Demographic Detail of the Respondents Taken as a Sample

Gender		Age Distribution					Level of Education			
Male	Female	18-29	30-39	40-49	50-59	60+	Didn't complete high school	completed high school	Didn't complete graduation	completed graduation
136	14	40	63	34	10	3	9	3	44	94
90.7%	9.3%	26.7%	42%	22.7%	6.7%	2%	6%	2%	29.3%	62.7%

Source: Field Survey, 2014

Table 02: Demographic and Other Data in Detail of the Respondents

Marital Status		**Occupation**						**Source of Information**			
Married	Unmarried	Student	Business	Service	Retired	Housewife	Unemployed	Brokerage Firm	Friend & Relative	Advertising	My-self
115	35	19	28	83	4	8	8	12	91	11	36
76.7%	23.3%	12.7%	18.7%	55.3%	2.7%	5.3%	5.3%	8%	60.7%	7.3%	24%

Source: Field Survey, 2014

Table 03: Risk Preferences of Respondents

Score	1-29	30-39	40-49	50-60
Risk Preference	Low	Moderate	High	Very High
Frequency	41	75	29	5
Risk Preferences of respondents	28%	50%	19%	3%

Source: Author's calculation from the survey result

Table 05: ANOVA Calculation

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2986.572	3	995.524	18.998	.000[a]
	Residual	7650.422	146	52.400		
	Total	10636.993	149			
a. Predictors: (Constant), annual_income, years_schooling, age						
b. Dependent Variable: risk_pref						

Table 04: Model Summery of regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.530[a]	.281	.266	7.239
a. Predictors: (Constant), annual_income, years_schooling, age				

Table 06: Coefficients Calculation

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	39.643	3.624		10.939	.000
	age	-.218	.073	-.235	-2.992	.003
	years_schooling	-.285	.196	-.104	-1.456	.147
	annual_income	.119	.016	.598	7.537	.000
a. Dependent Variable: risk_pref						

Table 07: Correlations Calculation

Correlations						
		age	gender	years_schooling	annual_income	risk_pref
Age	Pearson Correlation	1	-.064	.094	.446**	.022
	Sig. (1-tailed)		.220	.127	.000	.393
	N	150	150	150	150	150
gender	Pearson Correlation	-.064	1	-.008	-.142*	-.474**
	Sig. (1-tailed)	.220		.460	.042	.000
	N	150	150	150	150	150
years_ schooling	Pearson Correlation	.094	-.008	1	.179*	-.018
	Sig. (1-tailed)	.127	.460		.014	.411
	N	150	150	150	150	150
annual_income	Pearson Correlation	.446**	-.142*	.179*	1	.475**
	Sig. (1-tailed)	.000	.042	.014		.000
	N	150	150	150	150	150
risk_pref	Pearson Correlation	.022	-.474**	-.018	.475**	1

	Sig. (1-tailed)	.393	.000	.411	.000	
	N	150	150	150	150	150
**. Correlation is significant at the 0.01 level (1-tailed).						
*. Correlation is significant at the 0.05 level (1-tailed).						

Risk Preference Score Calculation Table

Option, a = 1	No. of option “a” * 1 =	=
Option, b = 2	No. of option “b” * 2 =	=
Option, c = 3	No. of option “c” * 3 =	=
Option, d = 4	No. of option “d” * 4 =	=
Total Score		=

Risk Preference Determination Model:

Score	1-29	30-39	40-49	50-60
Risk Preference	Low	Moderate	Moderately High	High