

RISK TOLERANCE BEHAVIOUR OF INDIVIDUAL NEPALESE INVESTORS

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This paper seeks to examine the relationship between risk tolerance and demographic characteristics such as gender, education, age, income and type of work. This paper is based on the questionnaires developed by Dow Jones and Company in 1998, distributed and collected from 390 individual investors in the stockbroker's offices of the Kathmandu Valley in Nepal in June and July 2017 using convenience sampling technique. The descriptive statistics, i.e., frequency, percentage, mean, standard deviation and univariate analysis are used. The results show that men are more risk-seeker than women, educated investors are more risk-takers; age also affects risk tolerance significantly, and less wealthy investors are less risk tolerant than wealthy investors. Investment companies, financial institutions, mutual funds and portfolio managers need to develop and launch new products and schemes suitable for risk-averse and risk-seeker investors based on the gender, age, education, income level and type of employees.

Keywords: risk tolerance, gender differences, investment decision

INTRODUCTION

According to Cramer, Hartog, Jonker, and Van Praag (2001), individuals who are more risk tolerant can earn more money. They also pointed out that more productive people having more risk tolerant such as entrepreneurs who can contribute to the national income. It indicates that a country needs more risk tolerant people to activate the economy towards a higher economic growth. Shaw (1996) highlighted that the behavior of risk taking individuals is those who tend to work more in risky environments. Thus, the risk is one of

the important factors of investment. The investor always needs to assess the trade of between the risks and returns on their investment. Investors are more conscious about the rate of return and the risk involves in their investment.

According to Rahmawati, Kumar, Kambuaya, Jamil and Muneer (2015) explained that both financial and investment decisions are mainly effect by risk. Risk tolerance is a property of the investor's preferences. Determinants of risk attributes of individual investors are of great interest in behavioral finance Investment decision depends

on the risk tolerance of an individual, how much risk an individual can bear while making an investment.

The main issue of the study is to look at differences between the risk tolerance of individual investors and their gender, education, age, wealth and type of work. The objective of the paper is to examine the risk tolerance and fundamental factors that determine investment decisions of individual investors in Nepal.

REVIEW OF LITERATURE

Investment is always for returns with associate with substantial risk. So, Burton (2001) argued that investment decision should be realistic about market return in exchange for the risk is taken by investors. Risk on investment is guided by the different factors, such as, gender, education, age, income and type of work.

Bruce and Johnson (1994), and Al-Ajmi (2008) found that women take less investment risk as compared to men. Schubert (2006) describes that men are less risk averse than women. Similarly, Jianakoplos and Barnesek (1998) reported that a far lower percentage of women than men are willing to take any financial risk at all. It indicates that males are higher risk taker than the female investors

Educated investors have studies and understand the market phenomena. They have knowledge about the market cycle, market trend and other market influence fundamental factors. They also aware with the market rumor, news and own personal biases. So, the highly educated investors have

high risk tolerance in compare to lower educated investors. Similarly, Christiansen, Joensen and Rangvid (2006), and Al-Ajmi (2008) found that investors with high level of education, taking investment risk, invest a large fraction of asset in stocks and bonds, indicating moderate level of risk.

As people get older, they prefer fixed income securities rather than more return at higher risk (Bodie & Crane, 1997, Strong & Taylor, 2001). It shows that they prefer safety of their investment and remaining life fulfills happiness. They focus on the regular daily consumption ignore taking risk for creating more wealth. Thus, young investors are more risk seeker than elder investor in the similar investment environment. The reason may be young investors can compensate their losses and they have alternative sources of income as well. Summers, Duxbury, Hudson, and Keasey (2006), and Al-Ajmi (2008) found that investors become more risk seeking with age. Poterba and Samwick (2001), found no significant relationship between investor's age and the percentage of equities in investors' portfolios.

Investors are unable to invest if they have not enough sources of earnings. They consume all of earnings on daily consumption and they do not have saving to make investment anywhere. A positive relation between wealth and risk tolerance is exist. Al-Ajmi (2008) found that wealthy investors were more risk tolerant than the lee-wealthy investors.

In Pakistan, Rahmawati et al. (2015) concluded that men are less risk averse than women, educated investors are more likely to take risk, and lesser wealthy investors are less risk tolerant than wealthy investors. They also found that there is no such strong relation between age and the level of individual risk tolerance although the risk tolerance of each age group is significantly different. They further explained that education and wealth are highly correlated with risk tolerance. It indicates that by improving the level of education to make investors more risk tolerant towards risky investments of higher gains.

The conceptual framework of this study is based on Al-ajmi (2008), which is presented in Figure 1. It helps to analyze the risk factor that affects an individual to make investment and this can easily be achieved by taking into consideration the risk tolerance of how much risk an individual can bear against a particular factor.

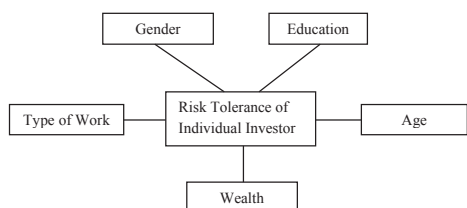


Figure 1: Risk Tolerance Influencing Factors

METHODS

The study is based on primary data, i.e., questionnaire. The survey instrument was used to investigate the determinants of risk tolerance that was based on a questionnaire developed by Dow Jones and Company in 1998 that is in Bodie et al. (2007).

The questionnaire was divided into two parts. The education level, age, gender, and monthly income of the respondents were contained in the first section of the questionnaire. The second section describes questions or cases in which respondents have to select one of three possible answers. Alternatives are weighted between 1 and 3.

The questionnaires were distributed to 390 individual investors in the broker offices of Kathmandu valley during June and July 2017. The questionnaires were distributed and, if need, clarify the meaning of the statement to the investors. The filled up questionnaires were collected immediately. So the response rate was 100 per cent. The degree of a respondent’s risk aversion is calculated by adding the weights of the answers. Those who scored a total of between 9 and 14 are considered as conservative investors. Those who scored between 15 and 21 are classified as moderate investors, and those who scored between 22 and 27 points are classified as high risk tolerance. The methodology used to reach at the desired findings is descriptive statistics i.e., frequency, mean, standard deviation while univariate analysis is used to calculate the significance of the results.

The following are the null hypothesis statements:

H₁: There is no significant difference between the risk tolerance of men and women investors.

H₂: Education does not affect significantly in determining the risk

tolerance of individual investors.

H₃: There is no significant difference between risk tolerance of investors and their age groups.

H₄: Investors wealth does not play significant role in determining the risk tolerance of individual investor.

RESULTS AND DISCUSSION

Table 1 shows the descriptive statistics and univariate analysis of the risk tolerance of individual investors with different demographic factors such as gender, education, age and wealth.

Male's mean risk tolerance score is 1.76 points, whereas the female's mean risk tolerance score is 1.37 points. It indicates that the male have moderate risk tolerance and female have low risk. Their risk tolerance shows statistically significantly different. The result depicts that the male investors are more risk taker than the female counter part. Hence, it supports that the Nepalese female investors are less likely to hold risky assets in their portfolio. This may happen due to their risk preferences. The risk preference of the investors may influence by their income level and education. One more reason may be the participation of financial decision mostly by the male rather than female. The result is consistent with Bruce and Johnson (1994), Schubert (2006), Jianakoplos and Barnesek (1998), Al-Ajmi (2008) and Rahmawati et al. (2015), who found that women take less investment risk as compared to men.

Regarding education as a factor of risk tolerance, undergraduate (1.29 points), graduate (1.43 points) and post-graduate/ professional degree (2.06 points) shows that the education level and risk tolerance are significantly correlated. Lower educated investors with lower level of education have lesser tolerance of risk then the investors with higher level of education. It indicates that investors with higher level of education have a good knowledge of investment as well as a better confidence on their investment than lower educated investors. The result is supported to the previous studies such as Joensen and Rangvid (2006), Al-Ajmi (2008) and Rahmawati et al. (2015).

The risk tolerance score between 31 and 50 years old is 1.84 points, which is higher than age between 18 and 30 years old (1.37 points), and more than 50 years old (1.39 points). The risk tolerance of each age group is significantly different. It may happen due to the more active in the financial decision for wealth creation process, confidence and alternative earning sources in age between 31 and 50 years old. Results show that investors between 18 years and 30-year-old are lesser risk tolerant then others age group, mainly, the reason behind is weak confidence, just completion of university degree and lower income or just start to earn. And when investors approach to retirement age (more than 50 years) their level of risk tolerance starts to decline from the risk tolerance of age level of 31 years and 50 years. Bodie and Crane (1997), Strong and Taylor (2001), and Al-Ajmi (2008)

were also found the similar results. On the contrary, Rahmawati (2015) found that age does not affect risk tolerance significantly.

Another factor considered in this study is wealth and income of investors. Results show that high income earning individuals are significantly more risk tolerant than lower income earning individuals. Rahmawati et al. (2015) argued that education and wealth are highly correlated with risk tolerance. First, higher level of education and income group of investors are more risk appetite than less educated and wealthy individuals because the educated individuals have more chances of getting more income by utilizing their knowledge and abilities. Second, higher educated and wealthier investors do not distress from Losses in their investment because they would not affect their standard of living. Al- Ajmi (2008) and Rahmawati et al. (2015) also found the similar result that the risk tolerance tends to increase with an increase in income.

The risk tolerance of self employed (1.81 points) and private employees (1.94 points) are significantly higher than public employees (1.35 points) and retired investors (1.20 points). The reason may be self employed and

private employees are more aggressive to create wealth in their life time, so they prefer risk for higher returns. Whereas, older/retired investors with lower risk tolerance can be attributed to the shorter life period they are expecting to live. They might not be willing to risk assets for they also don't expect to make up for possible losses through long-term future earnings. They also expect to have a shorter investment horizon insight so they might believe in short-term fixed returns rather than long term returns which are risky in nature. The results are similar to Al-Ajmi (2008) and Rahmawati et al. (2015) who found that the higher risk tolerance was preferred by private and self-employed investors than other investors.

The pre-stated all four null hypotheses are not supported to four factors determining risk tolerance of individual investors. The results show that, first, there is significant difference between the risk tolerance of men and women investors. Second, Education affects significantly in determining the risk tolerance of individual investors. Third, there is significant difference between risk tolerance of investors of different age group and finally, investors' wealth play significant role in determining the risk tolerance of individual investor.

Table 1 Descriptive statistics

Descriptive statistics							
Variables	Freq.	Per Cent	Mean	Std. Deviation	Risk tolerance	F - Statistics	Significant
Gender							
Female	130	33.3	0.67	0.472	1.37	59.416	0.000
Male	260	66.7			1.76		
Education							
Undergraduate	91	23.3	2.13	0.764	1.29	154.332	0.000
Graduate	156	40.0			1.43		
Post-graduate/ Professional degree	143	36.7			2.06		
Age (Years)							
18 – 30	78	20.0	2.07	0.681	1.37	50.709	0.000
31 – 50	208	53.3			1.84		
> 50	104	26.7			1.39		
Monthly Income							
< Rs. 20,000	169	43.3	2.50	1.630	1.30	105.869	0.000
Rs. 20,000 - Rs. 35,000	65	16.7			1.49		
Rs. 35,001 - Rs. 45,000	39	10.0			1.70		
Rs. 45001 - Rs. 55,000	26	6.7			2.06		
> Rs. 55,000	91	23.3			2.17		
Types of work							
Public	91	23.3	2.50	1.026	1.35	60.898	0.000
Private	78	20.0			1.94		
Self-employed	156	40.0			1.81		
Retired	65	16.7			1.20		
Risk Tolerance							
Low (Conservative investor)	221	56.7	1.53	0.670			
Moderate (Moderate investor)	130	33.3					
High (Aggressive investor)	39	10.0					

CONCLUSION

The objective of this paper is to examine relationship between the risk tolerance and demographic characteristics such as, gender, education, age, income and type of work. The results show that men are more risk-seeker than women, educated investors are more risk-taker, age affects risk tolerance significantly, and less wealthy investors are less risk tolerant than wealthy investors.

This study result will be fruitful for government officials, economist, financial institutions and portfolio managers. Government officials and economics should take initiation to enhance higher education, since educated people take part aggressively in the process of country's economic growth. Investment companies, financial institutions and portfolio managers should need to design and develop their financial products with the segmentation of gender, age, education, income and type of work as employees. In the context of Nepal, merchant bankers are operating mutual fund in very few numbers. In future, they should launch new mutual fund schemes which may be suitable to risk averse and risk seeker investors based on the gender, age, education, income level and type of employees.

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