IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 11, Issue 6 Ser. II (Nov. – Dec. 2020), PP 01-06
www.iosrjournals.org

Gender-Based Risk Tolerance Behavior of Investors in Nepalese Capital Market

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Abstract:
The purpose of this study is to investigate the gender-based risk tolerance behavior of capital market investors in Nepal. This analysis uses qualitative approaches and uses descriptive methods focused on both technical and logical aspects. A survey was conducted on sampled investors of capital market. 76.80 percent of investors participated in this study out of the total sample. The finding shows that male investors are more risk-takers than women investors. It also supports the less likely Nepalese female investors to retain their portfolio of volatile assets. This may occur due to variations between males and females in risk preferences. In Nepal, the reason behind this consequence could be the income disparity between males and females investors. These investors' mentality, decision-making capacity, problem-solving skills, and bias may also cause differences in risk perceptions. Nepalese financial institutions and investment firms should recognize these realities to achieve their organizational goals by attracting both males and females in the capital market.

***Keywords**: Behavior, Capital market, Female, Male, Risk, Tolerance*

Date of Submission: 28-10-2020 Date of Acceptance: 08-11-2020

I. Introduction

One of the most important means of raising capital for businesses is the stock market. This encourages individuals to invest their money in various forms of financial assets. The sole capital market of Nepal (http:/www.nepalstock.com/about-us/) is the Nepal Stock Exchange (NEPSE). Many players are interested in this industry, such as institutional investors, individual investors, traders, security dealers, firms, market makers, problem managers, investment bankers, subscribers, etc. Among these, individual investors play an important role in the provision of market capital flow. Many Nepalese investors dream of investing and making big profits in the share market. This rarely happens, however, since investors lack basic investment skills and are poor at financial and technical analysis of the financial statements of the share issue firm, as well as poor at collecting true data and details. The majority of investors rely on whims and rumors. Nepalese investors are at risk because of these factors.

Risk is the natural element of any investment. It is the ultimate truth in the lives of investors. The term financial risk is often defined as the unpredictable uncertainty or volatility of returns and therefore includes both possible returns, which are worse than expected and better than expected (Chandra, 1993). The risk is the possibility that could lead to a loss (an undesirable outcome) by a chosen action or operation (including the option of inaction). Potential losses may be considered "risks" as well. The level of risk tolerance of investors can be different, such as risk averter, risk taker and risk-neutral (https:/nicoletcollege.pressbooks.pub....).

Gathering background information entails obtaining information such as records of income and expenditures as well as a descriptive assessment of an individual's or family's financial position. This step in the management of investment decisions is important because prior to setting objectives investment managers must obtain and understand the objective and subjective information regarding demographic inputs. Investment managers who are aware of their investors' risk tolerance are best able to establish realistic and acceptable objectives. Therefore, the role of an investment manager is vital, and the study of the differentiating and classifying factors of risk tolerance of investors of the Nepalese stock market is essential in today's context. Felton, Gibson, and Sanbonmatsu (2003) found that females are less risk-tolerant than males; decreasing risk-tolerance is associated with increasing age; unmarried individuals are more risk-tolerant than are married individuals; individuals employed in professional occupations, rather than non-professional occupations, tend to be more risk-tolerant; full-time employment status holder are more risk tolerant than part-time and retired employment status holder; risk tolerance increases with income; risk tolerance increases with education. Hence, the risk tolerance of investors different base on their demographic characteristics. Therefore, this study aims to examine the relationship between demographic variables and investor risk tolerance in the context of the Nepalese capital market.

II. Literature Review

Investor Risk Tolerance

Capital market risk is the probability that an investment's actual outcome will vary from its anticipated outcome. Humans vary in the way they view risk, their appetite for risk, and the selection of the real level of risk to which they are exposed. Investors often vary in how they see different risks, their particular investment targets (with different preferences in mind), and the actual investment choices they make. The ability of some person or organization to tolerate or avoid risk is risk tolerance (RIMS, 2012). There are gamblers or risk-takers in any category of individuals, and there are non-gamblers or risk-avoiders. Risk avoiders are named individuals who have a poor ability to consider threats and the effects of threats. Those individuals willing to take chances are referred to as risk-takers.

Tolerance for investment risk is known by several different names, but it is all the same thing. Investor risk tolerance, risk disposition, risk profile, investment profile, investor profile, investment profiler, investor profiler, risk behaviors, and risk tolerance for investments are some of the other names. However, the four most widely used types of investment risk tolerance include not willing to take any risk, taking an average risk, taking an above-average risk, and taking a large risk (Gilliam et al., 2010).

Demographic Variables and Risk Tolerance

The association between demographic features and risk tolerance behavior of investors was highlighted in several previous studies. Al-Ajmi (2008) observed that men are more likely than women to be risk-tolerant, investors with a better level of education and wealth are more likely than less educated and less wealthy to seek risk. Johnson and Powell (1994) indicated that they were substantially more likely to be rated as high risk-tolerant by professionals and people who were self-employed. It was more likely to be listed as having no risk tolerance by non-professionals and those who were not self-employed. Schubert (2006) reveals that women are less susceptible to probabilities and are more pessimistic about earnings than men are. Concerning diversification and partnership practices, women tend to have a competitive advantage in risk management. Males are less risk-averse than females, as a stereotype that leads to discrimination against women in the job market and prevents women from taking management positions. Feng and Seasholes (2007) said that men and women exhibit similar investment behavior. The important role of gender as a risk tolerance factor has also been illustrated by several earlier studies (e.g., Higbee & Lafferty, 1972; Blume, 1978; Coet & McDermott, 1979; Rubin & Paul, 1979; Yip, 2000; Dickason & Ferreira, 2018). Oztop and Kuyu (2020) had reported a positive and significant relationship between both positive emotional state and age and financial risk tolerance.

Summers et al. (2006) discovered that with age, investors became more risk-seeking. Poterba (2001), Poterba and Samwick (2001), and Feng and Seasholes (2007) do not, however, find any important association between the age of the investor and the percentage of equity in the portfolios of investors. Sung and Hanna (1996) concluded that single females were less likely than single males and married people to take financial risks. Watson and McNaughton (2007) discovered a positive relationship between stock ownership, wealth levels, and becoming a married couple. Similarly, the educational level of investors as a predictor of individual earning power is hypothesized as one of the risk tolerance determinants. In fact, a strong person has a different level of tolerance for risk than people with little to no resources (Samsuria, Ismiyantib, Narsac, 2019).

Thus, education, marital status, age, and gender are key demographic variables that have an impact on the risk tolerance of investors. However, in this study, only gender is considered as a key factor to analyze investor risk tolerance behavior in the capital market of Nepal.

III. Research Methodology

Research Design

To a larger degree, this analysis uses qualitative approaches and uses descriptive methods focused on both technical and logical aspects. The research was focused on qualitative data measurements; however, these qualitative data were quantitatively coded. As per the nature of this report, the emphasis was entirely on primary data obtained in the form of a questionnaire that was used to achieve the objective of the analysis.

Survey Instrument

The questionnaires were distributed to the respondents (investors) by email, placed on the internet, and handed over personally.

Sample

A total of 500 investors from the capital market were conveniently taken as a sample for this analysis and 76.80 percent of responses were obtained. Table (1) presents the profiles of the respondents.

Table 1: The Profile of the Respondents (N = 384)

Gender	Frequency	Percent
Female	143	37.24
Male	241	62.76

Table 1 reveals that more than half of the participants were males (62.76 percent), while the remaining percentage (37.24 percent) represented male participants.

Data Analysis Tools

Data collected from primary sources are categorized and tabulated systematically and then analyzed using frequency and validity percentages. Cross tabulation was mainly used for data processing purposes.

IV. Results and Findings

This section presents investors' risk tolerance behavior based on gender (i.e. female and male).

Investors' behavior toward the 'meaning of risk'

The table presented below shows the overall responses highlighting the investors' perception toward the 'meaning of risk'.

Table 2: Gender and 'meaning of risk'

	When you think of the word "risk" which of the following words comes to mind first?			
Gender	**Loss**	**Uncertainty**	**Opportunity**	**Total**
Female	18.2%	15.4%	66.4%	100%
Male	6.6%	15.4%	78.0%	100%

The results show that 66.4 percent of the total female investors considered a risk as an opportunity, 15.4 percent considered a risk as uncertainty and 18.2 percent of the total female investors considered a risk as to loss. This shows that most of the female investors were optimistic and risk-takers. On the other hand, 78.0 percent of total male investors consider risk as an opportunity, 15.4 percent consider risk as uncertainty, and 6.6 percent of the male investors take the risk as a loss. The results show that a majority of male investors had considered a risk as an opportunity than female investors.

Investors' behavior toward 'chance of getting higher return with 30% probability'

The table presented below shows the overall responses highlighting the investors' behavior toward 'chance of getting a higher return with 30% probability'.

Table 3: Gender and chance of getting higher return with 30% probability

	If taking more risk would increase your chances of getting higher return with 30% probability, would you:				
Gender	Assume no more risk in your portfolio	Assume some additional risk with part of your portfolio	Assume some additional risk with all of your portfolio	Assume a lot more risk with all of your portfolio	Total
Female	24.61%	13.9%	59.4%	2.09%	100%
Male	15.85%	20.7%	56.4%	7.05%	100%

The result shows that 59.4 percent of investors of female investors were ready to assume some additional risk with their entire portfolio if taking more risk would increase the chance of getting a higher return with 30 percent probability, 24.61 percent of female investors were not ready to assume any risk in their portfolio. Similarly out of 56.4 percent of male investors were ready to assume some additional risk with their entire portfolio. 7.05 percent of male investors were ready to assume a lot more risk with their entire portfolio.
The results show that the male investors were more risk-tolerant since 7.05 percent male and 2.09 percent female investors were ready to assume some additional risk with their entire portfolio maximum (78.0 percent) had considered a risk as an opportunity than the female investors as presented in Table 2.

Investors' behavior toward 'loss tolerance capacity'

The table presented below shows the overall responses highlighting the investors' behavior toward 'loss tolerance capacity'.

Table 4: Gender and Loss Tolerance capacity

Gender	***Suppose the market is going through a bad phase and there is a steady decline in NEPSE for the last 12 months, how much percentage of loss would you be able to tolerate?***				
	5%	10%	20%	More than 20%	Total
Female	46.1%	36.4%	9.8%	7.7%	100%
Male	36.6%	28.6%	14.9%	19.9%	100%

The results reveal that 46.1 percent of female investors were only able to tolerate five percent loss and only 7.7 percent were able to tolerate more than twenty percent loss. On the other hand, 36.6 percent of male investors were able to tolerate only five percent loss, and 19.9 percent of investors were able to tolerate more than twenty percent. The results show that more percentage of male investors were able to tolerate more than 20 percent than female investors. Therefore, we can conclude males are more risk-tolerant.

Investors' behavior toward 'investment opportunity of unexpectedly received income'

The table presented below shows the overall responses highlighting the investors' behavior toward 'investment opportunity of unexpectedly received income'.

Table 5: Gender and unexpectedly received income to invest

Gender	***If you unexpectedly received USD 5,000 to invest, what would you do?***				
	Deposit it in a bank account	Invest it in stock of financial institutions	Invest it in speculative stock (say of manufacturing company)	Invest it in highly volatile commodities like gold	Total
Female	49.6%	50.4%	0.0%	0.0%	100%
Male	12.9%	81.74%	2.49%	2.87%	100%

The results reveal 50.4 percent of total female investors would invest in the stock of financial institutions and 49.6 percent would deposit in a bank account. Neither of any female investors would take a risk and invest in speculative stock or commodities. However, few male investors were risk-taker, 2.49 percent of the total male investors would invest in a speculative stock, and 2.87 percent would invest in a highly volatile commodities market. This shows that male investors were more risk-takers than female investors.

Investors' behavior toward 'an overnight drop in total portfolio'

The table presented below shows the overall responses highlighting the investors' behavior toward 'an overnight drop in total portfolio (e.g. 25%)'.

Table 6: Gender and reaction on an overnight drop in total portfolio

Gender	***What would be your first reaction be if, overnight, there was a 25% drop in your total portfolio?***				
	I would be extremely upset	I would have some problems getting to sleep that night	I would hope that it would recover soon, but would not be too worried	I would look at this as an excellent buying opportunity and invest more money	Total
Female	5.6%	33.6%	38.5%	22.0%	100%
Male	2.5%	33.6%	40.6%	23.3%	100%

The above table shows 38.5 percent of total female investors were optimistic and would hope that the 25 percent overnight drop in their portfolio would recover soon however, 40.6 percent of total male investors would do the same. This shows that male investors were more optimistic and had a high-risk tolerant capacity than female investors.

Investors' behavior toward 'investment options'

The table presented below shows the overall responses highlighting the investors' behavior toward 'investment options'.

Table 7: Gender and Investment Options

Gender	***Suppose a relative left you an inheritance of USD 25,00, stipulating in the will that you invest all the money in one of the following choices. Which one would you select?***				
	A savings account	A fund that owns stocks and bonds in equal proportion	An equity portfolio of 18% common stocks	Commodities like gold, silver, and oil	Total

Female	49.6%	50.4%	0.0%	0.0%	100%
Male	12.8%	82.2%	2.1%	2.9%	100%

The above table reveals that 50.4 percent of total female investors would invest in stock and bond in equal proportion and 49.6 percent would deposit in a bank account. Neither of any female investors would take a risk and invest in a portfolio of 18 percent common stock or commodities. However, male investors were risk-takers, 82.2 percent of the total male investors would invest in a portfolio of stocks and bonds in equal proportion, and 2.9 percent would invest in commodities. This shows that male investors were more risk-takers than female investors.

Investors' behavior toward 'appealing investment choice'

The table presented below shows the overall responses highlighting the investors' behavior toward 'appealing investment choice'.

Table 8: Gender and appealing investment choice

	If you had to invest USD 3,000, which of the following investment choices would you find most appealing?				
Gender	60% in low-risk investments, 30% in medium-risk investments, 10% in high-risk investments	30% in low-risk investments, 40% in medium-risk investments, 30% in high-risk investments	10% in low-risk investments 40% in medium-risk investments 50% in high-risk investments	5% in low-risk investments, 30% in medium-risk investments, 65% in high-risk investments	Total
Female	18.9%	71.3%	1.4%	8.4%	100%
Male	6.6%	78.8%	1.3%	13.3%	100%

The above table reveals that 8.4 percent of total female investors were risk-takers hence would like to invest their money in 65 percent high-risk investment. Likewise, out of total male investors, 13.3 percent were risk-takers hence would like to invest their money in 65 percent high-risk investment. The percent of the high-risk taker of the male is more than that of female investors hence it can be concluded that male investors were more risk-taker than female investors.

Investors' behavior toward 'after dropping portfolio'

The table presented below shows the overall responses highlighting the investors' reaction 'after dropping portfolio (e.g. by 12 percent)'.

Table 9: Gender and reaction after portfolio dropped

	If your portfolio dropped by 12% after investing for six months, how might you react?				
Gender	Immediately sell all my investments and transfer money to another financial management company	Redefine investment strategy, sell all investments and restructure to a more conservative portfolio	Wait until market recovers, sell some of my investments, and establish lower risk investment strategy	Hold current portfolio and possibly take action to buy more at lower price to lower my average cost.	Total
Female	6.3%	33.5%	37.8	22.4%	100%
Male	2.5%	33.6%	40.7%	23.2%	100%

The above table shows that out of total female investors 37.8 percent were optimistic and risk-taker as they would wait until the recovery of the market if their portfolio dropped by 12 percent after investing for six months. Likewise, out of total male investors, 40.7 percent were optimistic and risk-taker as they would wait until the recovery of the market if their portfolio dropped by 12 percent after investing for six months. This shows that male investors were more risk-taker than female investors.

Descriptive Statistics and Univariate Analysis

The descriptive statistics and univariate analysis were applied to find out the results and significance of the study (Table 10).

Table 10: The descriptive statistics and univariate analysis

Gender	Frequency	Percent	Mean	Std. Deviation	Risk tolerance	F-statistics	Significant
Female Male	143 241	37.24 62.76	1.42	0.589	1.63 1.83	22.546	0.000**
*Note: ** Significant at 1% level, * Significant at 5% level.*							

The mean risk tolerance of male investors is 1.83 points, while the mean risk tolerance of female investors is 1.63. These statistics show that there is moderate risk tolerance for both males and females, while female investors are less risk-tolerant than male investors. There is a substantial statistical difference between the risk tolerance level of males and females at 1 percent level of significant.

V. Discussion and Conclusion

The purpose of this study is to investigate the gender-based risk tolerance behavior of capital market investors in Nepal. The finding shows that male investors are more risk-takers than women investors. It also supports the less likely Nepalese female investors to retain their portfolio of volatile assets. This may occur due to variations between males and females in risk preferences. In Nepal, the reason behind this consequence could be the income disparity between males and females investors. These investors' mentality, decision-making capacity, problem-solving skills, and bias may also cause differences in risk perceptions. Bruce and Johnson (1994), Jianakoplos and Barnesek (1998), Schubert (2006), Al-Ajmi (2008), Rahmawati et al. (2015), and the finding is consistent with Sharma, Chalise, and Dangol (2017). All of these studies have also shown that female investors take lower investment risks compared to male investors.

VI. Research Implications

This research would be useful for financial institutions, and investment companies. These organizations would better design their products/services and be able to target the market more effectively. They should not regard investors as a homogeneous group based on the findings of this study. They should recognize male and female investors as different market segments, as each segment has its criteria as strategies. Nepalese financial institutions and investment firms should recognize these realities to achieve their organizational goals by attracting both males and females in the capital market.

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