Assessing Financial Risk Tolerance Capacity of Management Students

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Abstract

Financial risk tolerance refers to maximum risk an individual can undertake. Assessing risk tolerance measures a person’s appetite for risk. Assessment of risk tolerance is very important for determining the risk return trade off for an individual. It helps in developing a portfolio for the individual. A number of studies have been carried out in developed nations which describe the factors that are considered to be important while predicting financial risk tolerance of an individual. It has been observed that both practitioners and academicians have paid very less attention in this field in India. This study makes an attempt to identify the factors that contribute towards financial risk tolerance capacity of management students.

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Introduction

Risk has always been around us in different forms. The prime concern of human beings has always been avoidance of the risks that threatened his existence and look forward for security. Today we face risks that are different from the one which our ancestors faced. There are new types of risks to which we are exposed to. Financial risk is one risk which our ancestors also faced but the type of financial risks, their effect on us and our way of reacting towards them is totally different from our ancestors. Risk tolerance is a measure of an individual’s ability to take risk. Some people try to avoid risk whereas some are always ready to take risk. Risk tolerance can be measured with the help of a scale. Risk tolerance levels are indicators of an individual’s outlook towards life and his investment behaviour. Risk averters like certainty and low variability, whereas risk seekers prefer ambiguity, uncertainty and high variability. Studies have shown that an individual’s propensity to take risk depends upon demographic, socioeconomic and attitudinal factors. Identifying risk tolerance level is an important factor that should be taken into consideration while constructing an individual’s portfolio. An individual’s risk tolerance level is just not a number that would entail him for a particular investment. Proper assessment and interpretation of risk tolerance is very essential.

In today’s world financial markets play a very important role in the economy. Management graduates are one of the key players in this market. Their financial risk tolerance capacity will to a great extent decide upon the movement of markets in future. Hence it is essential to make an assessment of their financial risk tolerance. In this paper an attempt has been made to determine factors that contribute towards financial risk tolerance capacity of management students.

Review of Literature

Risk tolerance evaluation is a key factor for the purpose of developing portfolios for individuals. It has been observed that practitioners have not paid much attention in this field and it has largely remained an area of interest of academicians only. Very few research papers have appeared from practitioners in practitioner oriented publications. Lack of understanding about the determinants of risk aversion may be the primary reason for this deficiency. A large number of studies have been conducted in recent years by academicians to understand about decision making by investors under conditions of risk. Both self report questionnaires and asset allocation methods have been used by investors to measure investors risk preference.
Snelbecker, Roszkowski and Cutler (1990) observed that both financial advisors and their clients do not realize the importance and complexity of risk tolerance evaluation. Moreover a complete understanding of human behaviour relating to the nature of risk aversion cannot be captured just by conventional methods of research used in the area of finance. It requires joint efforts by both scholars from the field of finance and psychology.

The results of research conducted by investigators such as Carducci and Wong (1998) and Grable and Joo (1997) suggests that the investigation of factors that determine financial risk taking and risk tolerance can be expanded beyond the testing of purely psychological factors. Specifically, demographic, socioeconomic, and attitudinal characteristics need to be examined to determine how these factors influence a person’s willingness to take financial risks in “everyday money matters”. Carducci and Wong concluded that persons fitting the type A personality trait tended to take greater risks than those more closely aligned with the type B personality profile. They suggested that socioeconomic factors, such as income, might have played a part in explaining their findings. Specifically it was determined that persons identified as type A personalities were likely to maximize their achievements through additional risk taking in the attainment of increased incomes, higher status occupations and increased educational attainment.


Mac Crimmon and Wehrung (1986) gave a detailed description of studies relating to risk tolerance from the period 1928 to early 1980’s and found that majority of studies that were conducted during this period used students rather than earning individuals as samples. Much of the work concentrated on how people perceive risks as well as rules for choice in risky situations. Very few work concentrated with people who must make risky decisions. Moreover they concluded that imperial findings relating to risk tolerance and gender, age, marital status, occupation, education, income and attitudinal factors were contradictory over
the multi-decade span of review. They also observed that the researchers failed to take into account the wide variety of risks and subjectivity of risk tolerance.

Wallach and Kogan (1961); concentrated their study on determining the relationship between risk tolerance and age. In their research they found that individuals of higher age have less appetite for risk as compared to individuals of less age. Their findings got support from both other researchers (Bajtelsmit & Van Derhei, 1997; Bakshi & Chen, 1994; Brown, 1990; Dahlback, 1991; Hawley & Fuji, 1993-94; Mclnish, 1982; Morin & Suarez, 1983; Palsson, 1996; Sung & Hanna, 1996a) and practitioners. However there were some researchers (Grable & Joo, 1997; Grable & Lytton, 1998; Wang & Hanna, 1997), who suggested that it is reasonable to assume that a negative relationship exists between age and risk tolerance.

Slovic (1966); Aigbee & Lafferty (1972); Blume (1978); Coet & Mc Dermott (1979); Rubin & Paul, (1979); Hawley & Fugii (1993-94); Xiao & Noring (1994); Sung & Hanna (1996b); Bajtelsmit & Bernasek (1996); Grable & Lytton (1998); in their researches they found that women tend to be less risk tolerant than men. Lazzarone (1996); marital status is also one of very important factor that significantly influences risk and return preferences. Majority of researchers in their research came up with the conclusion that single rather than married individuals tend to be more risk tolerant (Roszkowski, 1998; Roszkowski, Snelbecker & Lemberg, 1993; Sung & Hann, 1996a)

Leonard (1995); self employed individuals, salespersons and people employed in private firms rather than public employers tend to be more risk tolerant. Some researchers have also concluded that individuals employed professionally are more likely to have higher levels of risk tolerance than those employed in non professional occupations. (Grey & Gordon (1978); Haliasson & Bertaut (1995); Masters (1989); Quattlebaum (1998). Studies have shown a positive pattern between income and financial risk tolerance. Cohn, Lewellen, Lease and Schlarbaum (1975) concluded that relative financial risk tolerance increases with wealth and income. Similar findings have been reported by Cicchetti and Dubin (1994), Friedman (1974), Schooley and Worden (1996), and Shaw (1996).

Education and financial risk have a positive relationship (Sung & Hanna, 1996a; Zhong & Xiao, 1995). It has been observed that formal education influences risk tolerance. Numerous
Researchers have concluded that greater level of education leads an individual towards higher risk tolerance. (Baker & Haslem, 1974; Grable & Lytton, 1998; Shaw, 1996) Garble and Joo (1997) suggested that individual’s knowledge of personal finance and economic expectations play a major role in determining his risk tolerance levels. Individuals who have more knowledge of risk and risky situations and those who expect economic events to be positive in future, tend to have a common psychological profile that allows them to undertake greater financial risks (De Vaney & Su, 1997; Grable & Joo, 1997; Sung & Hanna, 1996b; Weagley & Moore, 1997; Yuh & Devaney,1996; Yuh & Olson 1997)

**Objectives**

1. To identify factors that determines financial risk tolerance capacity of management students.
2. To study relationship if any between the demographic factors and financial risk tolerance capacity of management students.

**Research Methodology**

**Questionnaire Development**

For the purpose of collection of data. A self prepare questionnaire was used. The questionnaire initially had 36 questions. The scale labels were designed as “strongly agree (5)”, “agree (4)”, “slightly disagree (3)”, “disagree (2)”, “neutral (1)” so as to suggest roughly equal intervals between scale pointers. Content validity of the scale was evaluated by the panel of judges who found it to be a good scale measuring financial risk tolerance of management students. Pre testing of the questionnaire was done by administering it to 25 people who had idea about financial markets and investment in it. These included senior faculty members in the area of finance, financial analyst with a minimum experience of more than ten years, and also some students also. The pretesting resulted into reduction of number of questions to 28 from 36. Reliability was computed using Cronbach’s coefficient alpha for the entire set of 28 questions and was found to be 0.67 it shows that the internal consistency is high.

**Data Collection**

The questionnaire was circulated in Indore and Bhopal cities of Madhya Pradesh to management students. The respondents were from both government and private management
institutes. The exercise of giving the questionnaire was done with 600 students (300 from each city). The total response rate of the survey was 89% with 538 questionnaires filled and returned back. Out of these 538 questionnaires 32 were unusable due to missing responses. This resulted in a final number of 503 respondents for the analysis or a usable rate of 84.30 %.

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<th>Table-1: Demographic Characteristics of the Sample</th>
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<td><strong>Number</strong></td>
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<td>Total number of Respondents (Sample Size)</td>
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<td>Number of Males</td>
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<td>Number of Females</td>
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<td>Number of respondents in the age group of 22 to 24 years</td>
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<td>Number of respondents in the age group of 24 to 26 years</td>
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<td>Number of respondents in the age group of 26 to 28 years</td>
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<td>Work Experience between 3-4 years</td>
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**Defining Variables**

Independent Variable:--The questionnaire included questions about respondent’s age, gender specialization field in MBA, family background (service class, business class, farmer, other) and work experience. Practitioners and researchers have considered these variables as very effective in differentiating between different levels of financial risk tolerance and hence these variables were used as predictor variables.

Dependent Variable: -- Risk tolerance which was determined by each respondent’s score on the risk assessment questionnaire was used as the dependent variable. A respondent’s risk tolerance was determined by combining responses to 22 (excluding 06 demographic questions) financial risk situations into a risk tolerance index. Responses given in the
questionnaire were combined into a risk tolerance index. Answers were given a weight according to the riskiness of the response. Each choice was coded from 1 to 5. Higher point indicated higher level of risk tolerance whereas lower points indicated lower level of risk tolerance whereas lower points indicated lower level of risk tolerance. The total index score was developed by summing the points the respondent scored on each item. The reliability of the measure was calculated to be 0.63 using the Spearman-Brown formula. This level of reliability represented an acceptable level of consistency for an attitudinal measure (Pedhazur & Schmelkin, 1991). There is a basic assumption which makes the total index score work and that is – respondents held consistent risk preferences. If the consistent risk preference assumption is violated the total index scores will be confusing and difficult to interpret. Though this assumption of consistent risk preference is supported by expected utility theory, various other theories and empirical studies show that consumer risk preferences do change with different situations. Scores were allotted for each response as per the following response table. For each respondent the total scores have been calculated based on these weights by adding the individual items score.

**Data Analysis and Discussion**

Following observations were made

- Total index scores ranged from a low of 29 to a high of 68 with a mean of 41.37 and a standard deviation of 3.714.
- 59% of the sample has medium risk tolerance, 12% has low risk tolerance and 29% has high risk tolerance. The risk tolerance behaviour of the sample is normally distributed with mean $\mu = 38.84$ and $s = 4.634$
- 42% of the total respondents had risk index score below average, 58% of the total respondents had risk index score above average.
- 62% of female respondents had risk index below average and 38% had risk index score above average.
- 23% of male respondents had risk index below average and 67% had risk index score above average.
- 67% of the respondents believed that economic conditions will improve over the next five years and only 33% of them believed that it is going to remain the same or worsen. Out of those who believed improvement in economic conditions in the next five years 74% respondents had risk index above average and 26% had risk index below average.
Hypothesis Testing

Ho1= Gender does not significantly affect financial risk tolerance capacity of management students.

Analysis: The p value is 0.031 and is less than 0.05; we can conclude that gender does significantly impact financial risk tolerance. Hence null hypothesis is rejected.

Ho2= Age does not significantly affect financial risk tolerance capacity of management students.

Analysis: The p value is 0.513 and is more than 0.05; we can conclude that age does significantly impact financial risk tolerance. Hence we can accept the null hypothesis.

Ho3= Specialization does not significantly affect financial risk tolerance capacity of management students.

Analysis: The p value is 0.716 and is more than 0.05; we can conclude that specialization does significantly impact financial risk tolerance. Hence we can accept the null hypothesis.

Ho4= Family background does not significantly affect financial risk tolerance capacity of management students.

Analysis: The p value is 0.068 and is less than 0.05; we can conclude that family background does significantly impact financial risk tolerance. Hence null hypothesis is rejected.

Ho5= Work Experience does not significantly affect financial risk tolerance capacity of management students.

Analysis: The p value is 0.823 and is more than 0.05; we can conclude that work experience does significantly impact financial risk tolerance. Hence we can accept the null hypothesis.

Conclusion

The results of hypothesis testing indicate that gender plays an important role in management students risk appetite. 62% of female respondents had risk index below average whereas 67% of male respondents had risk index above average. This can lead us to an important conclusion that male students risk taking capacity is more than female students. Age does not affect the risk taking capacity of students as only 12% of the students had low risk index. It is normally believed that people with finance specialization have better knowledge as compared with people with other background. This helps them to better understand the markets, products etc and gives them a higher risk taking capacity. But in this research it has been
observed that specialization does not affect the risk taking capacity of students. Family background affects the risk taking capacity of students. Students with farming and service class background were relatively less prone towards taking risk as compared to business or other background students. Work experience too does not have any significant effect on risk appetite. People with work experience or less or no experience had similar risk appetite.

The use of demographic, factors as determinants of financial risk tolerance received a good support in this research. It can be concluded that the classes of risk tolerance (i.e. above-and below average) differed most widely on a respondent’s age, gender, specialization, work experience and family background. These variables contributed significantly in explaining differences between levels of risk tolerance. Gender and age were very use full in explaining differences in risk tolerance.

Implications

The most important implication that has emerged out of this study is the use of demographic factors as determinants of financial risk tolerance. It is important to note that these factors explain a large amount of variance in a student’s financial risk tolerance profile. Findings of this study are in line with the reported coefficients of determinants in the literature which suggest that demographics and socioeconomic characteristic explain about 30% of a person’s risk taking propensities. An increased level of education and personal financial knowledge is associated with above average risk tolerance.

References

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