

A Study of Impact of Bio-psychosocial Characteristics of an Investor on Financial Risk Tolerance with Special Reference to Investors in Anand City

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Abstract: *Financial risk tolerance (FRT) alludes to the retail speculators' eagerness to acknowledge the negative changes in the estimation of venture or a result that is unfavourably not quite the same as the normal one. Understanding and evaluating FRT assumes a critical part in singular decisions about riches amassing, portfolio assignment, and all other speculation and fund related choices, and in accomplishing money related objectives. It bargains most particularly with the connection between bio-psychosocial components and FRT. The individuals who are keen on evaluating and anticipating FRT can draw nearer to a hypothetical record that mixes mental and financial bits of knowledge and supplements the comprehension of hazard taking states of mind and conduct of retail speculators. Such an understanding will help financial guides, policy makers, and research scientists in recognizing the determinants of a person's FRT to propose the reasonable speculation other options to their customers. A single cross-sectional study was directed among 951 retail investor with different levels of speculation encounter through an organized poll covering an assortment of statistical factors. An examination of the information gathered through the survey demonstrates that all the three factors—self-esteem, personality type, and sensation seeking—are positively related to FRT.*

Keywords: *Financial Risk Tolerance, FRT, Personality, Sensation Seeking, Self-esteem*

1. INTRODUCTION

Any financial and investment decision-making process requires four fundamental inputs, namely goals, time horizon, financial stability, and financial risk tolerance (Garman & Fogue, 2011). While the first three inputs are relatively more objective in nature, financial risk tolerance (FRT) is highly subjective (Larkin, Lucey, & Mulholland, 2013). FRT refers to the retail investors' willingness to accept the negative changes in the value of investment or an outcome that is adversely different from the expected one (Grable & Lytton, 1999).

As FRT is dynamic in nature, it changes over time. In addition, FRT is influenced by life experiences (Van de Venter, 2006). In the recent past, experiences of retail investors were severely affected by various financial crises. For instance, the recent Greek crisis followed by global meltdown has increased the financial vulnerability of institutions as well as individuals. Individuals rather than institutions have mostly experienced the adverse impact of financial vulnerability by losing their investments and jobs and facing salary cuts (Bricker, Bucks, Kennickell, Mach, & Moore, 2011). Such scenario changes may or may not pull down the risk appetite of the financial advisors and investors. This emphasizes the need for continuous assessment and accurate measurement of FRT to achieve the desired results (Yao, Sharpe, & Wang, 2011).

There is no particular hypothesis on the part of bio-psychosocial factors in the money related administrations area. This investigation expects to recognize the components that are identified with hazard resilience from outside the monetary administrations area, for example, brain research, financial aspects, and bio-human science. It bargains most particularly with the connection between bio-psychosocial variables and FRT. This examination is relied upon to increase the value of the current writing genuinely. Additionally, the individuals who are keen on surveying and

anticipating FRT can draw nearer to a hypothetical record that mixes mental and financial bits of knowledge and supplements the comprehension of hazard taking states of mind and conduct of retail speculators. Such an understanding will help money related guides, approach creators, and specialists in distinguishing the determinants of a person's FRT to recommend the reasonable speculation other options to their customers.

2. LITERATURE REVIEW

Over the past three decades, capital market in India has undergone various structural changes. A wide variety of investment options has been thrown open to the investors' community. With the proliferation of investment options, the retail investors' community has grown significantly in the recent years. The retail investors may choose from a number of investment options according to the level of FRT. Since then, financial advisors, policy makers, and researchers have shown their keen interest in identifying the determinants of an individual's FRT to suggest the suitable investment alternatives to their clients. A number of studies have investigated the role of demographic factors as a determinant of FRT (Grable & Joo, 1999; Grable & Lytton, 1999; Grable, 1997; Grable, McGill, & Britt, 2011; Kannadhasan, 2006, 2015; Larkin et al., 2013; Moreschi, 2011; Ryack, 2011; Sung & Hanna, 1996; Wang & Hanna, 1998; Yao & Hanna, 2005). However, there are other determinants such as financial considerations, that is, the need for financial liquidity and income security and personal considerations (Boone & Kurtz, 1989; Widicus & Stitzel, 1989). There is no specific theory on the role of bio-psychosocial factors in the financial services domain. Therefore, this section discusses some of the most important factors that are related to risk tolerance from outside the financial services domain such as psychology, economics, and bio-sociology.

2.1. Relationship between Self-Esteem and FRT

Self-esteem is an important personality trait and acknowledged as a multidimensional trait as it encompasses several characteristics such as goodness, skill and social competence, health, and worth (Baumeister, Campbell, Krueger, & Vohs, 2003; Liao, Hunter, & Weinman, 1995). It can be defined as 'the perception of self-worth, or the extent to which a person values, prizes, or appreciates the self' (Blascovich & Tomaka, 1991). Self-esteem could be either positive or negative and represents a favourable or unfavourable attitude towards self (Rosenberg, 1965). An individual, who possesses positive self-esteem, tends to take a higher risk than those who have negative self-esteem (Arch, 1993; Krueger, & Dickson, 1994). As the outcome of any investment decision will be known only in the future, investors have necessarily to deal with the uncertainty associated with their investment choice, which leads to some level of anxiety, thereby, affecting their level of self-esteem (Taylor, 1974).

2.2. Relationship between Personality and FRT

The internal (psychological) and external environment affects an individual's human behaviour (Endler & Edwards, 1986) and thereby his decisions. Personality type plays a significant role in determining investor behaviour (Maital, Filer, & Simon, 1986; Sadi, Asl, Rostami, Gholipour, & Gholipour, 2011). According to Myers-Briggs Type Indicator (MBTI) personality theory, every person has inborn preferences that define how he or she will behave in a certain situation (Pittenger, 1993). Pompian and Longo (2004) suggested that investment advisors must consider an investor's personality type in client profiling. Further, they can use it for suggesting suitable investment options (Pompian & Longo, 2004). For instance, retail investors can be grouped into two groups, viz., passive or active to help investment advisers to understand the nature of their clients and suggest suitable options (Barnewall, 1987). Type A individuals are more financial risk tolerant than Type B individuals as they are associated with higher levels of income (Thoresen & Low, 1990) and higher level of education, financial knowledge, and occupational status (Carducci & Wong, 1998; Grable, 2000). For instance, a higher level of income gives a kind of financial security and makes it possible for Type A individuals to take greater financial risks than Type B individuals (Carducci & Wong, 1998).

2.3. Relationship between Sensation Seeking (SS) and FRT

Sensation seeking is yet another important trait which is consistently related with FRT (Wong & Carducci, 1991). Sensation seeking is defined as 'the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical risks for the sake of such experiences' (Zuckerman, 1994). In simple words, this type of behaviour is 'due to the biochemical reactions in the brain' (Larsen & Buss, 2008). Typically, an individual

who has higher sensation seeking accepts risk as a possible outcome for attaining the desired level of excitement and stimulation (Zuckerman & Kuhlman, 1978). Such an individual tends to bet high and at higher odds in gambling for increasing the level of arousal (Anderson & Brown, 1984). This trait relates to the behavioural expressions that are generally described as risky such as high-risk sports, gambling, substance usage, risky sexual experiences, alcohol use, holiday preferences (Roberti, 2004; Zuckerman, 1979; Zumnick, 2007).

3. RESEARCH MODEL

This article has conceptualized the research model with the assistance of surviving literature (Figure 1).

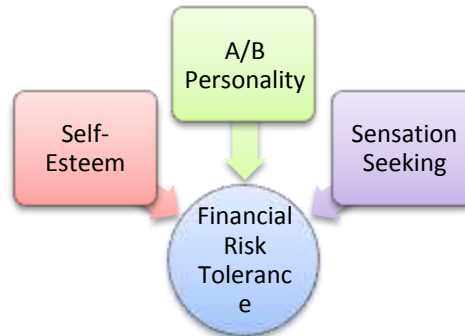


Figure 1: Proposed Research Model

4. RESEARCH METHODOLOGY

Table 1: Research Methodology

| | |
|---------------------------|---|
| Type: | Cross-sectional Survey Research |
| Sample Size: | 951* |
| Sample Unit: | Retail investors, who had experience in investing in the capital market |
| Sample Frame: | Retail investors from Anand City |
| Sampling Method: | Purposive Sampling. |
| Data Collection: | Structured Questionnaire with Different Constructs |
| Data Analysis Techniques: | Various statistical analyses like Cronbach’s alpha, Mean, Standard Deviation, and Structured Equation Modelling etc. have been used for the purpose of data analysis. |
| Data Analysis Tools: | Microsoft Excel 2013, SPSS 23.0 and SPSS AMOS 23.0 were used to perform statistical analysis. |

* Out of 985 responses, 34 responses were incomplete and hence were discarded.

5. OBJECTIVES

- To identify the factors affecting the Financial Risk Tolerance
- To identify the relationship between Bio-psychosocial Factors and Financial Risk Tolerance

Hypotheses

- H1: Self-esteem is positively related to FRT
 H2: Type A investors have more Financial Risk Tolerance than Type B investors.
 H3: Sensation Seeking is positively related to FRT

Data Analysis

Table 2: Demographic Summary

| Variables | Classification | Frequency | % or Mean |
|----------------|------------------|-----------|-----------|
| Gender | Male | 674 | 70.90 |
| | Female | 277 | 29.10 |
| Marital Status | Married | 368 | 38.70 |
| | Single | 583 | 61.30 |
| Education | Professional | 206 | 21.70 |
| | Non-Professional | 745 | 78.50 |
| Occupation | Salaried | 727 | 76.50 |
| | Self-Employed | 224 | 23.50 |
| Income | NA | 951 | 4.36 Lacs |

Finally, the study used 951 responses to achieve the objective of the study. The average income of the respondents was INR 4.36 lacs per annum y. Out of 951, 674 respondents were male and the rest were female; 61.30 per cent of the respondents were single and 38.70 per cent were married. With regard to education, 206 respondents were professionals (MBA, CA, etc.) and 745 were non-professionals (B.Sc, B.Com, M.Sc, M.Com, etc.); 67.50 per cent of the respondents were salaried individuals. The summary of demographic characteristics is given in Table 2.

Table 3: Quality Review of the Latent Variable

| Variable | Alpha |
|--------------------------------|-------|
| Financial Risk Tolerance (FRT) | 0.772 |
| Self-Esteem (SE) | 0.846 |
| Type A/B Personality (PA) | 0.681 |
| Sensation Seeking (SS) | 0.718 |

Normally, the constructs which have Alpha value greater than 0.50 (Hair & Black, 2006) or are considered to have a good convergent validity (Cohen, 2001). In the current context as shown in Table 3, all four latent variable / constructs are having good convergent validity.

Descriptive statistics for FRT is shown in Table 4. The average summated score of FRT is 11.44, with a Standard Deviation (SD) of 2.57. The score indicates the level of FRT. Higher scores indicate higher.

Table 5 shows the summated score of each item as well as the total summated score of self-esteem. The average summated score of self-esteem is 25.75, with an SD of 5.68. The higher score indicates positive self-esteem.

Table 4: Financial Risk Tolerance (FRT) Descriptive Statistics

| Item | Mean | SD |
|---|-------|-------|
| Investing is too difficult to understand | 2.91 | 0.927 |
| I am more comfortable putting my money in a bank account than in the stock market | 3.01 | 0.900 |
| When I think of the word 'risk' the term 'loss' comes to mind immediately | 3.10 | 0.891 |
| Making money in stocks and bonds is based on luck | 3.38 | 0.820 |
| In terms of investing, safety is more important than returns | 3.19 | 0.889 |
| Total Summated Score | 11.44 | 2.57 |

Table 5: Self-Esteem (SE) Descriptive Statistics

| Item | Mean | SD |
|--|--------|-------|
| On the whole, I am satisfied with myself | 1.94 | 0.893 |
| At times, I think I am no good at all* | 3.06 | 0.986 |
| I feel that I have a number of good qualities | 2.21 | 0.792 |
| I am able to do things as well as most other people | 2.33 | 0.810 |
| I feel I do not have much to be proud of* | 2.78 | 1.002 |
| I certainly feel useless at times | 3.11 | 0.872 |
| I feel that I am a person of worth, at least on an equal plane with others | 2.31 | 0.741 |
| I wish I could have more respect for myself* | 2.58 | 0.999 |
| All in all, I am inclined to feel that I am a failure* | 3.26 | 0.874 |
| I take a positive attitude toward myself | 2.16 | 0.758 |
| Total Summated Score | 25.749 | 5.684 |

*Items are reverse coded

Table 6: Type A/B Personality Assessment (PA) Descriptive Statistics

| Item | Mean | SD |
|--|-------|-------|
| Being bossy or dominating | 2.20 | 0.638 |
| Having a strong need to excel (be best) in most things | 2.66 | 0.662 |
| Usually feeling pressed for time | 2.53 | 0.746 |
| Being hard driving and competitive | 2.64 | 0.747 |
| Eating too quickly | 2.55 | 0.723 |
| Upset when have to wait for anything | 2.63 | 0.765 |
| Total Summated Score | 15.22 | 2.815 |

Table 6 shows the summated score of each item as well as the total summated score of Personality type. The average summated score of personality type is 15.22, with an SD of 2.82. A higher score indicates a greater likelihood of exhibiting Type A personality traits.

Table 7 shows the summated score of each item as well as the total summated score of sensation seeking. The average summated score of sensation seeking is 12.62, with an SD of 3.26. A higher score indicates investors' willingness to engage in risky actions.

Table 7: Sensation Seeking Assessment (SS) Descriptive Statistics

| Item | Mean | SD |
|--|-------|-------|
| It is fun and exciting to perform or speak before a group | 2.15 | 0.997 |
| I would prefer to ride the roller coaster or other fast rides at an amusement park | 2.51 | 0.931 |
| I would like to travel to places that are strange and far away | 2.68 | 0.943 |
| I think it is best to order something familiar when eating in a restaurant* | 2.74 | 0.936 |
| If I have to wait in a long line, I am usually patient about it* | 2.55 | 0.946 |
| Total Summated Score | 12.62 | 3.259 |

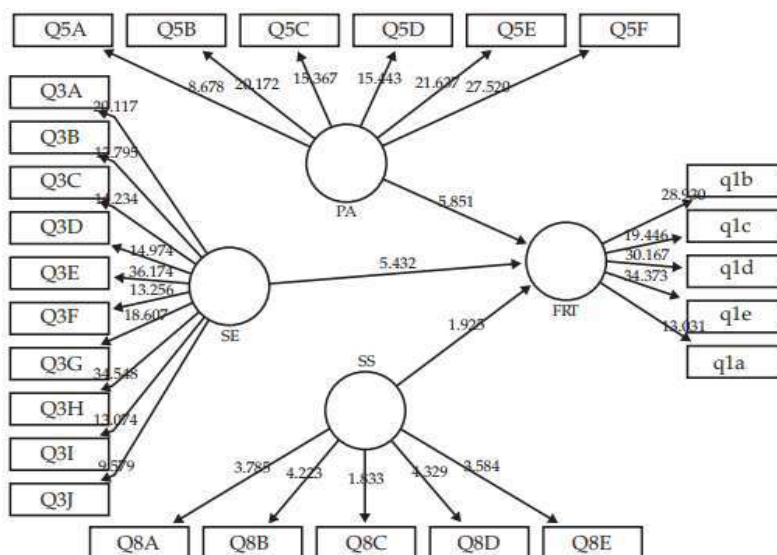
*Items are reverse coded

Table 8: Bootstrap Summary of Research Model and Hypotheses Results

| Hypothesis | Path | Path Coefficients | Standard Error | T-Statistics | Results |
|------------|-----------------------|-------------------|----------------|--------------|-------------|
| 1 | Personality FRT | 0.158 | 0.033 | 4.785 | Significant |
| 2 | Self-Esteem FRT | 0.171 | 0.030 | 5.711 | Significant |
| 3 | Sensation-Seeking FRT | 0.091 | 0.038 | 2.418 | Significant |

In order to assess whether path coefficients are statistically significant or not, bootstrap procedures are used to estimate standard errors for calculating t-values (Fornell & Barclay, 1983). The results are examined at 5 per cent significance level and the t-statistic value at the 0.05 level is 1.96. If the t-statistic value is greater than 1.96, the path is significant (Efron, 1979; Efron & Gong, 1983). Results from PLS-PM are given in Table 8 and Figure 2. Three variables namely self-esteem, personality type, and sensation seeking are positively related with FRT. In addition, these relationships are statistically significant at 5 per cent level.

Figure 2: Result of Structural Equation Modelling



6. FINDING

- Self-Esteem is positively and significantly related to FRT.
- Type of Personality (Type A / Type B) is positively and significantly related to FRT.
- Sensation Seeking is and significantly related to FRT.

- Ultimately, Bio-psychological factors have positive impact on FRT.
- It indicates that an investor who has a higher level of sensation seeking and self-esteem and has Type A personality tends to be more risk-tolerant.

7. CONCLUSION

In recent years, financial planners have often preferred to use psychometric assessment of FRT to provide better services to the clients. This motivates the researchers to explore the relationship between bio-psychosocial factors and FRT to identify the factors that determine FRT. To achieve this objective, this study used three bio-psychosocial factors namely self-esteem, personality type, and sensation seeking. Findings of the study suggest that bio-psychosocial factors are related to FRT. This study suggests to the practitioners, financial planners, and policy makers that consideration of these three factors would enhance the understanding of the client in a better manner rather than relying on only demographic factors. However, use of demographic variables and contextual variables along with bio-psychosocial variables is suggested. It is because a small variation in any factor would be useful in preventing the wrong asset allocation decisions.

8. FUTURE SCOPE

A further research could consider other variables such as racial background, financial satisfaction, net-worth, home ownership, birth order, age, gender, education, marital status, family relationship, the number of dependents, and income along with the bio psychosocial factors. Future research could also consider financial knowledge, financial satisfaction, and income level because knowledgeable individuals who possess a higher level of income and education have a greater FRT.

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