Determinants of Small Equity Investor's Risk Assumption Attitude

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Abstract — This study explores the personality traits, perceived personal control, behavioral biases, culture, and socio-demographics in determining individual equity investor’s risk assumption attitude. The study uses a survey approach to collect responses from small equity investors. A conceptual model is developed and hypotheses are tested through structure equation model (SEM). The result identifies personality traits, perceived personal control, behavioral biases, cultural factor and socio-demographic variables as strong determinants of small equity investor’s risk assumption attitude.

Keywords—Personality traits, perceived personal control, herding behavior, culture, and investor risk assumption attitude.

I. INTRODUCTION

Risk is a difficult construct to define. The outcomes of risk depend on the situation and the decision maker. Risk assumption attitude involves participation in certain activities that might result in harm, loss or undesired outcomes [24]. A risk assumption attitude often referred as risk appetite, risk tolerance, risk acceptance and risk propensity is a decision maker’s general disposition to a particular risk in a consistent way [25]. According [17] an individual investor tends to seek risk in loss realm and avoid risk in profit realm. Risk assumption behavior varies among different people depending their personality traits, personal control, behavioral factors, cultural factors and other socio-demographics including; age, gender, income level, financial needs, investment objectives, investment strategies. [29] holds that the construct of risk means somewhat different among different people.

Identifying determinants of small investor’s risk attitude are an important part of research in behavioral finance. It provides a better understanding of various factors that influence risk assumption attitude of individual equity investors. It enables investment professionals to offer customized financial services and investment instruments that best match the risk assumption attitude of individual equity investors. It also facilitates regulatory authorities to improve legislations while having a better understanding of investors’ risk attitude.

The current study provides a significant contribution by identifying the determinants of investor’s risky attitude in a developing country’s context.

II. LITERATURE REVIEW

A. Personality Factors

Researches in behavioral finance provide ample evidence regarding the influence of personality traits on investor’s behavior, for instance [14], and [20] examined the role of personality trait on investor behavior. This study has used big five personality traits including, openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism proposed by [8]. The first personality trait considered in this study is openness to experience. Openness to experience personality trait allows investors to come up with new ideas, and use active imagination in investment decision making. The investors who are open to experience are overconfident and tend to assume higher risk in their investment decision making [1]. [22] also noted the relationship between openness to experience personality trait and investor’s risk behavior. [15]; and [7] also examined the role of openness to experience personality trait in understanding investor’s risk propensity. The study also assumes significant association between openness to experience and investor’s risk assumption attitude.

Conscientiousness investors believe more in themselves. They feel confident to perform job thorough and believe to produce results better than other investors. Conscientiousness investors exhibit overconfidence bias in investment decision making. Conscientiousness is considered as striving force for achieving excellence and competence [8]. Conscientiousness personality trait aspires investors to use money as a tool to impress and inspire others [19]. [23] believes conscientiousness as a force that influence investor’s risk investment behavior. [20] also describes the significance of conscientiousness on Taiwanese investors’ behavior. The study also examines the role of conscientiousness in determining risk assumption attitude of individual equity investor.

Investors with extraversion personality traits are communicative talkative, more outgoing and social in nature. Such types of investors feel more confident and enjoy the risk taking in their investment decision making. Extraversion personality trait, allows investors to think more optimistically and feel energetic while investing. [23] also asserted that extraversion personality motivates investors to resume higher
risk. [11] also investigated the effect of extraversion personality trait on investor’s risk propensity. [20] also associated extraversion personality trait with individual investor behavior. However the nature of the influence of extraversion on investor’s risk assumption attitude is not conclusive for instance [11] found the negative influence of extraversion on investor’s risk behavior whereas This study also proposes the role of extraversion personality trait in determining individual equity investor’s risk assumption attitude.

Investors with the agreeableness personality trait are forgiving in nature, considerate and kind to others. Such type of investors are modest, tolerant and friendly, they often make their decision on information easily available in the market which lead them to herd behavior [20]. In stock markets where the majority of investors is inclined towards the risky investment behavior, the other investors with agreeableness personality traits would follow them due to their considerate nature. [23] also examined the influence of agreeableness personality trait on investor’s risk behavior.

The last personality trait considered in this study is neuroticism. Investors with neuroticism personality traits tend to get worried a lot and get nervous easily. They find it hard to handle stress efficiently when faced with complex situations. Neuroticism personality trait also influences investor’s risk assumption attitude, [20] identified that such investor are inclined to sell their stock holdings in advance due to fear of loss. On the basis of this theoretical discussion, the study proposes the following hypothesis.

**Hypothesis 1:** There is a significant relationship between personality traits and investor’s risk assumption attitude.

**B. Perceived Personal Control**

Internal locus of control refers to individual beliefs about the outcomes of one’s actions depends on his/her decision skills or some external factors that are beyond control. Locus of control is an important dimension of perceived personal control [13]. Researches in behavioral finance have associated internal locus of control with investor’s risk assumption attitude [22] and [28]. [9] also considered an internal locus of control as determinants of individual investor’s risky behavior. [10] also considered an internal locus of control as a determinant of investor’s risk assumption behavior.

Self-efficacy is personal belief that one can achieve and succeed a given task and related to self-confidence, motivation, optimism and belief that one can achieve various challenges in life [3]; and [4]. According to [7] investors with a high level of knowledge regarding financial market find it easier to process market information and make accurate decisions. [32] holds that investors with higher knowledge of investment principles are more prone to higher financial risks because of their confidence in the financial market. The following hypothesis can be extracted from the above discussion.

**Hypothesis 2:** There is a significant relationship between perceived personal control and investor’s risk assumption attitude.

**C. Behavioral Factors**

Small investors tend to be overconfident about their risky decision making skills. There are two types of over confident; miscalibration and better than average effect. Miscalibration refers to state of mind when investors are too confident about their knowledge and skills to investment decision making. Better than average means that the investor believes that he/she is having more knowledge and expertise regarding investment decision making than other investors [31]. [33] identify that investor’s overconfidence behavior determines the success or failure of investment decisions. The above mentioned studies postulate that investor overconfidence behavior influence investor’s risk assumption attitude.

[5] also investigated herd behavior among individual equity investors, and identified that investors display herd behavior to conform the expectation of other investors. Investor exhibit herding behavior due to lack of confidence in their trading skills and assessment of risk involved in investing. The following hypothesis can be framed from this discussion.

**Hypothesis 3:** There is a significant relationship between behavioral biases and investor’s risk assumption attitude.

**D. Cultural Factor**

Investor’s risk assumption attitude is also influenced by cultural factors. Different definitions and dimensions of culture have been identified by various scholars. The study used [16] model of national culture. [16] proposed four dimensions of national culture including; individualism versus collectivism, power distance, uncertainty avoidance, and masculinity versus femininity. This study considers only one dimension of national culture i.e. uncertainty avoidance due to its higher relevancy with investor’s risk assumption attitude.

**Hypothesis 4:** There is a significant relationship between uncertainty avoidance and investor risk assumption attitude.

**III. RESEARCH METHODS**

**A. Sample and Data Collection**

The study examines the determinants of small equity investor’s risk assumption attitude. The unit of analysis is a small individual investor engaged in trading shares in the stock exchange. The individual equity investors are selected for Lahore Stock Exchange of Pakistan. The data are collected through self-administered structured survey questionnaire technique. A total of 500 questionnaires were distributed to individual equity traders registered with various member/brokers on the Lahore Stock Exchange. Amongst the distributed questionnaires, only 287 completed questionnaires were received back with a response rate of 57% response rate.

**B. Measures**

The instrument to measure big five personality traits including, openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism is adopted from [8] used by [20]. The instrument consists of 15 items measured in 5 point Likert scale (1 does not apply to me at all to 5 strongly apply to me). The instrument to measure internal locus of control is adopted from previous studies and measuring levels of knowledge towards stock investment is taken from Vanguard Funds Group [30]. The measure of
financial self-efficacy from is derived from as used by[27]; [21], the scale consists of six items (1 for strongly disagree to 5 for strongly agree). The study includes two behavioral biases; over confidence and herding behavior. The instrument to measure these variables is based on the work of [26]. Cultural factor includes the uncertainty avoidance dimension of culture only. The instrument to measure uncertainty is taken from [16]. The instrument consists of 4 items measured at 5 points Likers scale.

C. Procedure

The data analysis techniques used in this study includes, reliability and validity testing, correlation analysis and regression analysis. The statistical techniques are applied through SPSS and AMOS software. Structural equation model (SEM) technique is also performed to analyze data and test hypotheses proposed in this research.

IV. RESULTS AND DISCUSSIONS

A. Hypotheses Testing

Figure 1 provides the results of hypotheses tested in this study. The SEM model obtained good model fitness with CMIN (Chi-Square) = 1431.342, Degree of Freedom (DF) = 371, probability level (p-value) = 0.000, CMIN/DF 3.858. Various statisticians, for instance [22] argued value of CMIN/DF as the standard measure for model fitting should be less than 5 and between 5 and 2 for good model fitness. The model fitness of SEM is also within 5 to 2; hence this study also achieved good model fitness. [11] used another measure for model fitness and proposed that the model fitness ratios including GFI, CFI and NFI should be closer to 0.90 and the value of RMSEA should be less than one. The model fitness ratios are also satisfactory according to these criteria’s as well as therefore, data can be used for further analysis.

B. Personality Traits and Investor’s Risk Assumption Attitude

The standardized coefficients of path analysis between determinants of investor’s risk assumption attitude are presented in Figure 1. The determinants included in this model are; personality traits, perceived personal control, behavioral biases and cultural factor. The role of investor’s socio-demographics in determining risk assumption attitude are presented in Figure 1. The study found a positive and significant relationship between personality trait openness to experience and individual investor’s risk assumption attitude (β = 0.60 and p-value = 0.000). This finding supports our H1 and establishes that personality traits determine the risk assumption attitude of individual equity investors’. [20] also noted significant influence of personality traits on individual equity investor’s decision making in the cases of Taiwan.

C. Perceived Personal Control and Investor’s Risk Assumption Attitude

The next hypothesis proposed in this study consider perceived personal control as a determinant of investor’s risk assumption attitude. Perceived personal control consists three dimensions including; internal locus of control, financial self-efficacy and knowledge of investment principles. The study found a significant relationship between perceived personal control and investor’s risk assumption attitude (β = 0.24 and p-value = 0.040), we therefore accept our H2. [9] also identified perceived personal control as a determinant of investor’s risk propensity.

Behavioral Biases and Investor’s Risk Assumption Attitude

The study also proposed behavioral biases including; herding behavior and overconfidence as determinants of small equity investor’s risk assumption behavior. The empirical evidence found significant influence of behavioral biases on investor’s risk assumption attitude (β = 0.51 and p-value = 0.000), supporting our H3.

D. Cultural Factor and Investor’s Risk Assumption Attitude

Cultural factor also influences investor’s risk assumption attitude. The investors tend to avoid uncertainty do not resume higher risk in their investment decision making. Whereas the investors having lower level of uncertainty avoidance seeks more risky investment alternates to yield higher returns. The study found a significant influence of uncertainty avoidance on individual equity investor’s risk assumption attitude (β = 0.95 and p-value = 0.000), which supports our H4. [18] noted that investor’s risk assumption attitude varies in different countries having diversified national cultures. [31] hold that people belonging to countries with higher uncertainty avoidance, tend to avoid risky behavior in financial investment decision making.

V. CONCLUSION

Risk is ubiquitous in behavioral finance and much attention has been given in the literature to measure risk. This study also attempts to identify the factors that determine the risk assumption attitude of individual equity investors. The study found personality traits including openness to experience, extraversion, agreeableness, conscientiousness and neuroticism having a significant relationship with investor’s risk assumption attitude. Perceived personal control is also having significant influence on investor’s risk assumption attitude. Behavioral biases, including herding and overconfidence have also significantly influenced investor risk attending.
attitude. Culture is also observed as a determinant of investor’s risky attitude.

REFERENCES