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Retail investors' financial risk tolerance and their risk-taking behaviour: The role of demographics as differentiating and classifying factors

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Abstract This paper empirically examines whether demographic factors namely gender, age, marital status, income, occupation, and education could be used individually or in combination to differentiate among retail investors in terms of financial risk tolerance (FRT) and risk taking behaviour (FRB), and classify retail investors into FRT and FRB categories. A single cross sectional survey was conducted among 778 retail investors with various levels of investment experience, through a structured questionnaire covering a variety of demographic factors. Four of the six demographic factors were found to be useful in differentiating between levels of investors' FRT and FRB as well as classifying individuals into different FRT and FRB categories.

Introduction

One of the most debated questions in the field of personal finance literature is whether there is any set of factors that differentiates among retail investors and classifies them into different categories in terms of financial risk tolerance (FRT) and financial risk behaviour (FRB). There is no consensus within extant literature and among practitioners on an answer to this. In addition, most financial advisors and/or individuals often mistakenly equate financial risk tolerance (FRT) with risk behaviour of an individual (Davey, 2006). Behaviour has been described as any denotable overt action that an individual performs (Jaccard & Blanton, 2005). Jaccard and Blanton (2005) also opined that every action has a denotable beginning and ending, which is usually performed in an environmental context. As human behaviour varies, actions lead to positive as well as negative outcomes. Within the personal finance domain (i.e. financial management in general and money management in particular), behaviour could be defined as goal oriented or volitional (Grable et al., 2008). The way in which an individual handles his/her financial situation provides a

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mechanism for achieving a stated goal with goal influencing actions. Such behaviour is called goal oriented behaviour. On the other hand, money management behaviour is the result of an individual's behavioural intentions. Further, this behaviour could be influenced by external factors, which are beyond their control. For example, financial emergency or loss of job could lead to behaviour that may result in negative outcomes (Jaccard & Blanton, 2005).

Behaviour could be approached from the determinant perspective or the consequences/outcome perspective. For example, a person's weight loss is not overt behaviour; rather it is a result of previous action taken by that person such as diet or exercise (Jaccard & Blanton, 2005). Similarly, it is always important to understand the consequences of money management rather than the overt behaviour of money management. It is because the overt behaviour of money management is to be reasoned, deliberate, and conscious or non-conscious, unplanned and impulsive (Fazio & Towles-Schwen, 1999). An individual's behaviour i.e. the way in which he/she handles his/her financial situation affects his/her social, and personal, significance (Jaccard & Blanton, 2005). Further, mismanagement of money increases the probability of experiencing financial stress. Understanding the consequences of financial stress plays an important role in shaping policy and in the development of tools and techniques that can be used to cater to the investors more effectively (Grable et al., 2008). This study focusses on the outcome of money management behaviour.

The objective of managing money is to make profits and to increase wealth. The saying that there is no reward without risk is well known; further, risk is inherently associated with every economic decision. Risk is defined as "the unexpected variability (negative) of returns than those expected from investments" (Kannadhasan, 2006; Kannadhasan & Nandagopal, 2010). Financial risk tolerance refers to an individual's willingness to accept the negative changes in the value of investment or an adverse outcome that is different from the expected one (Grable & Lytton, 1999a, 1999b). It is believed that a willingness to take risks i.e. higher FRT, is a prerequisite for accumulating wealth (Yao et al., 2005). However, there is a possibility that wealth may decrease if an individual mismanages her/his financial environment (Grable et al., 2008). Shrinkage of wealth may lead to an individual receiving overdue notices from creditors, and or filing for bankruptcy, which is an outcome of mismanagement or financial risk behaviour. Therefore, understanding and assessing FRT and FRB is significant among the various steps essential in making optimal decisions in terms of risk–reward trade-offs (Moreschi, 2004). Financial risk tolerance plays a crucial part in individual choices about wealth accumulation, retirement, portfolio allocation, insurance, and all other investment and finance related decisions that are dependent on this behaviour (Hanna et al., 2001). Understanding and assessing FRT would help the financial advisor develop a single optimal portfolio that maximises the return at the given level of risk by pooling together investors with different levels of FRT (Schirripa & Tecotzky, 2000). An inability to accurately assess risk tolerance may lead to sub-optimal investment decisions. For example, by overestimating individual risk tolerance an investor/financial advisor may select a portfolio that turns out to be too aggressive, by keeping all other factors such as gender, income, and education constant. Choosing a portfolio which is inconsistent with one's financial risk tolerance may result in investor disappointment (Droms, 1987) and may increase the financial stress of an individual, which in turn, affects his/her financial risk behaviour.

Considering the importance of FRT and FRB in investment decisions, previous studies (Grable, 1997; Grable & Lytton, 1999a, 1999b; Coleman, 2003; Grable & Joo, 2004; Hallahan et al., 2004; and others) have investigated a number of factors namely, demographic, social, environmental, and psychological factors across countries over a period of time. Findings of these studies would help to place the investors into a specific risk tolerance category. However, it is imperative to assess the impact of these factors periodically as FRT varies from one person to another, from one period to another, and one country to another. Further, the risk tolerance of an individual changes over time as it is influenced by life experiences (Van de Venter et al., 2012). Furthermore, FRT is a multidimensional attitude. It is an elusive concept that appears to be influenced by a number of predisposing factors such as environmental and psychosocial factors (Trone et al., 1996). Secondly, owing to the sub-prime mortgage crisis in 2008 and Greece crisis in 2010, the value of assets (equity, for example) decreased, and inflation increased, weakening the currency value (of India more than other countries), and increasing unemployment or salary cuts. This increased the financial vulnerability of investors (Bricker et al., 2011; Yao et al., 2011). Such a scenario changes the level of FRT and emphasises the importance of a periodic assessment of FRT (Yao et al., 2011). Moreover these crises have emphasised the need for a periodic review of the risk tolerance that helps in choosing/changing the investors' investment options in accordance with market conditions and thereby their risk behaviour. No study has so far been conducted to understand the role of demographic factors in differentiating the level of FRT among retail investors as well as classifying them into different FRT categories, a factor that motivates this study. This study also intends to examine the role of demographics as a differentiating and classifying factor of retail investors' FRB as FRT is positively associated with risk taking behaviour (Bailey & Kinerson, 2005; Coleman, 2003).

Review of literature and hypothesis development

Financial risk tolerance and FRB are among the important phenomena in the field of economics, psychology, finance and management science (Roszkowski et al., 1993). Understanding the financial risk behaviour of an individual would be useful for service providers and policy makers who are interested in bringing out new financial products. Financial risk tolerance is one among the factors that determine the risky behaviours of an individual. Financial risk tolerance increases the investors' vulnerability to choosing a risky investment (Irwin, 1993). The choice of a risky investment is likely to increase the investor's wealth, while the opposite is also true (Hanna & Chen, 1998; Yao et al., 2005). An individual who is willing to take risks tends to exhibit high risk taking behaviour i.e. FRB is positively associated with FRT (Bailey & Kinerson, 2005; Chang et al., 2004; Coleman, 2003; Grable et al., 2008). Therefore, understanding FRT is becoming increasingly important for investors and financial industry service providers. From the retail investor's perspective, it helps to make better financial decisions and