

WHAT FACTORS INFLUENCE THE FINANCIAL RISK TOLERANCE? A FURTHER EXAMINATION ON THE NEXUS BETWEEN FINANCIAL RISK TOLERANCE AND FINANCIAL ENVIRONMENTAL FACTORS

Vyshak P. K.*, Jayarajan T. K.**

Abstract *The consideration of risk tolerance plays a crucial role in the process of making optimal portfolio selections. In particular, the level of financial risk that an investor is willing to take, known as their financial risk tolerance (FRT), is sometimes regarded as the single most essential characteristic for the prediction of investor behaviour. In spite of this, it is a challenging endeavour since it is dependent on a wide variety of financial environment elements. For this reason, evaluating financial risk tolerance and identifying the elements that influence individual investors' views of the financial risks they face have been interest of research and investigations for significant years. This study investigates the relationship between the financial risk tolerance of individual equity investors and financial environmental factors. For this purpose, four indicators namely "financial anxiety, money ethics, financial stress, and financial satisfaction" were used to check the impact of financial environmental determinants on FRT. The present study was executed in the state of Kerala, and the information was collected from individual retail investors through the use of a predesigned questionnaire. The Structural Equation Modelling (SEM) technique was utilised to evaluate the model. The results indicate that financial anxiety, money ethics, financial stress, and financial satisfaction exert significant positive effects on FRT. The findings of the current study may offer important assistance to state and national policymakers in the process of creating investment policies.*

Keywords: *Financial Risk Tolerance, Risk Attitude, Investment, Individual Investors, Financial Environmental Factors*

INTRODUCTION

The study of investor behaviour has gained relevance in recent years as a result of the expanding presence of investment organisations together with the development in the pathways of investments such as mutual funds, debentures, shares, real estates, gold, and so on (Kannadhasan et al., 2016). This combination of factors has caused an increase in the number of investment opportunities. Planning for one's financial future and economy as a whole requires an understanding of one's level of tolerance with financial risk, as well as an evaluation of one's desire and ability to engage in risk-taking. In the modern period, the process of

making decisions on investments heavily incorporates behavioural finance. When deciding how to allocate their capital, investors in this market have access to a number of opportunities or alternatives from which to choose. The term "decision making" refers to the process of ultimately selecting the most advantageous option that is available to investors on the market. There are certain financial choices that are straightforward, while others are more challenging and need for a variety of different strategies to be taken. Over the course of the past few years, equities markets have become increasingly volatile and unpredictable (Thanki et al., 2020). Nanda et al. (2023) discovered a significant association between stock market decisions and macroeconomic conditions. The financial

* Research Scholar, Department of Commerce, Sree Narayana College, Kannur, Kannur University, Kerala, India.
Email: vyshakvijaypk@gmail.com

** Associate Professor, Department of Commerce, Payyanur College, Payyanur, Kannur University, Kerala, India.
Email: jayarajtkj@gmail.com

markets are becoming increasingly susceptible to the large-scale macroeconomic shocks that have the potential to disrupt markets on a global scale. When looking at the market from the point of view of an investor, the effect of market vulnerability is greater uncertainty and unpredictability. The notion of efficient markets, often known as rational investor conduct, has long been relied upon by market participants as a foundation for making judgements regarding financial matters.

In human life, risk is unavoidable. Within his or her comfort zone, every investor accepts a significant level of risk. When making a financial or investment decision, financial risk tolerance (FRT) is the degree to which they are comfortable with uncertainty or volatility in their investment returns (Kannadhasan et al., 2016; Faff et al., 2008; Grable, 2000; Grable & Lytton, 1999; Hallahan et al., 2003). Individual risk-taking ability varies from individual to individual and from period to period, depending on various circumstances. In terms of income, spending, savings, and investments, India's fast-growing economy has provided us with vast growth potential. Investors nowadays are more educated, have a broad understanding of investments, and have easy access to financial data. The most important aspect of investment planning is to keep one's risk profile in mind. Examining one's risk tolerance is essential since it affects the value of every investment option, and the ultimate aim of any financial activity is to maximise predicted revenue (Sulainman, 2012).

The level of risk that an investor is willing to take might also have an effect on the investments that they choose. Investors were able to display their risk tolerance through the process of risk evaluation. As a result, in this situation, the risks are linked to the uncertainties around investment returns. Investments in higher-risk assets are more likely to be made by investors who are actually willing to tolerate or accept risk, and vice versa (Corter & Chen, 2005). The FRT can be comprehended with the assistance of two different elements. The first aspect is that financial risk tolerance is determined by external aspects such as education and income (Roszkowski & Grable, 2010; Gibson et al., 2013). The second aspect is that it is dependent on the personal characteristics of investors such as their attitude, perception, and confidence, all of which are subject to change over time. Financial literacy is another major issue since it influences investors' ability to take on risk by discouraging and altering their investing behaviour (Syal, 2018). The level of financial risk that an individual investor is willing to take is unique to them, and this factor plays a role in their investing decision-making. Behavioural finance examined how psychological and psychographic variables affect investment choices (Antony, 2022). According to Snelbecker et al.

(1990), investors' willingness to take risks influences the opportunities they choose to pursue as investment prospects. People who have a high-risk tolerance are more likely to be interested in investing in high-risk assets, whilst those who have a low-risk tolerance would rather stay away from investments in these types of assets (Corter & Chen, 2005; Pompian, 2012; Nguyen et al., 2016).

Given the relevance of FRT in investment decisions, past research has looked at a variety of factors, including demographic, social, environmental, and psychological aspects throughout time in different nations. A factor that inspires this study is the lack of research on the significance of financial environmental characteristics in varying the degree of FRT among retail investors. When making personal investment and financial decisions, understanding and evaluating FRT is essential. In this regard, the study looks at the dynamics of financial environmental factors as a differentiating and classifying factor in retail investors' risk-taking behaviour.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The amount of financial risk an individual is willing to take is an important factor to consider while making investment choices and working towards accomplishing financial objectives. Therefore, a primary variable that influences a person's decision-making behaviour in relation to investments is their level of comfort with the associated financial risks (Anbar & Eker, 2010). The individual ability to take on risk is a multifaceted topic, making it extremely complex and challenging to determine their level of risk tolerance (Kumar & Kumar, 2021). Investors and researchers have been interested in risk for hundreds of years, but efforts to investigate financial risk tolerance have just recently begun. The part that mental processes play in behavioural finance is not yet well-theorised. Therefore, some of the most significant characteristics associated with risk tolerance are discussed in this part, including those that come from fields other than finance, such as psychology, economics, and bio-sociology.

Several investigations on the impact of characteristics including financial anxiety, money ethics, financial stress, and financial satisfaction on financial risk tolerance have been conducted. According to Burchell (2003), "financial anxiety" is a psychiatric condition that describes a person's inability to properly cope with his or her own personal affairs. According to Archuleta et al. (2013), the definition of financial anxiety is "feeling anxious or worried about one's financial situation". Hayhoe et al. (2012) argued that a higher

level of wealth leads to a lower degree of financial concern among young investors. As a result, their risk tolerance is also low because of this. According to Andrews and Wilding (2004), financial stresses have an effect on financial anxiety, which in turn has an effect on one's tolerance for financial risk. Thanki et al. (2020) also discovered that financial worry has a favourable correlation with FRT. Therefore, it is reasonable to predict the following:

H1: Financial Anxiety is Significantly Related to FRT

A person who suffers from money worship, also known as an obsession with money, has a sort of money problem in which they feel that the only way to succeed in life is to amass a great deal of financial wealth. According to Grable and Joo (2004), an individual's money attitude is the primary element that determines their level of financial contentment. Lim (2003) claimed that people who have experienced adversity have a greater preoccupation with money, which in turn influences the way they handle their finances. Furnham and Argyle (1998) argued that an obsession with money is an indication of one's level of success, and this level of fixation has a direct bearing on an individual's risk tolerance. Thanki et al. (2020) also discovered that an obsession with money has a favourable correlation with FRT. Money ethics, as defined by Engelberg and Sjoberg (2007), was found to have a positive correlation with economic or financial risk. As a result, the following is to be anticipated:

H2: Money Ethics is Significantly Related to FRT

When money is limited, it can be difficult to satisfy even the most fundamental of one's financial obligations, which can lead to stress. Increasing one's wealth requires one to engage in the activities of saving, and investing. It is possible that the stress brought on by a lack of financial stability will influence these judgements. The way an individual reacts to stress emotionally, behaviourally, and cognitively could, in turn, have an effect on the decisions they make about their finances. According to Hilton and Devall (1997), financial stress may be defined as the subjective experience of worries and anxiety over one's financial situation, as well as a worsening of one's financial situation and difficulty in meeting family obligations. Weller and Helburn (2010) claimed that the connection between stress and financial decisions may be asymmetric, meaning that lower levels of financial stress may result in greater absolute financial decisions than higher levels of stress. Tran et al. (2018) also found that seventy-two percent of people indicate that concerns regarding their financial situation cause them stress. These concerns might

include things like being concerned about being able to pay their rent or being in debt. This is of the utmost importance given that worry about money has been linked to a wide range of health issues as well as mental choices. Based on the aforementioned arguments, it is proposed that:

H3: Financial Stress is Significantly Related to FRT

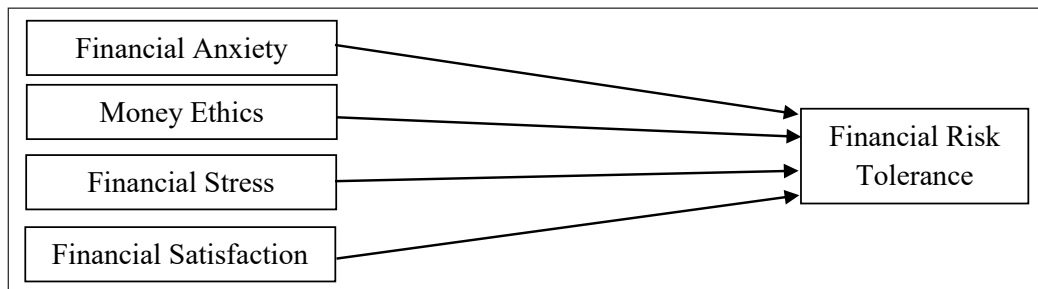
Financial satisfaction may be measured by how well their present and future financial commitments are covered by their available resources, whether those resources are adequate or insufficient. According to Archuleta et al. (2013), the term "financial satisfaction" relates to a person's contentment with their current financial condition. Xiao et al. (2009) identified that an individual's propensity to take financial risks is reduced, and their capacity to recover from financial setbacks is enhanced when they are financially secure. Grable and Joo provided their backing for this contention. According to Grable and Joo (2004), a higher risk tolerance also results in lower financial satisfaction. They found this to be the case. Asebedo and Payne (2019) claimed that if there is any incongruity between an individual's existing and targeted financial position, then the individual would likely experience lower financial pleasure despite having a high-risk tolerance. Rahman (2019) used happiness as a proxy for financial satisfaction and concluded that the former has a detrimental effect on the FRT. In accordance with these findings, Rahman et al. (2019) have demonstrated that one of the most important elements determining FRT is a person's level of financial satisfaction. In addition, Thanki et al. (2020) also discovered that a negative correlation exists between financial contentment and FRT. Therefore, it is proposed that:

H4: Financial Satisfaction is Significantly Related to FRT

Based on the findings of the previous research, FRT is conceptualised as the extent to which it may enhance or diminish the association between financial environmental factors and FRT. In regard to this, the current study tries to evaluate the effect of financial environmental variables on the level of risk tolerance exhibited by individual investors.

RESEARCH MODEL

The current study derived its model from a multitude of studies and theoretical foundations. This study has conceptualised the research model using existing literature. Fig. 1 depicts the proposed research model for the study. The proposed relationships were examined using structural equation modelling.



Source: Author’s compilation.

Fig. 1: Proposed Research Model

STATEMENT OF THE PROBLEM

Investing choices are impacted by a myriad of factors, including psychology, physiology, economics, finance, and interpersonal relationships, throughout the normal course of life. The validity of traditional concepts in finance, such as efficient markets, portfolio theory, and the risk-return trade-off, has been called into serious doubt as a result of research conducted in the field of behavioural finance. The financial market in India has been subjected to a number of fundamental shifts over the course of the previous three decades. The community of investors now has access to a large number and varied selection of investment opportunities. The number of people who engage in retail investing has dramatically increased over the past several years due to the expansion of the range of investment opportunities. The retail investors have access to a variety of investment opportunities, each of which corresponds to a certain degree of FRT. This interest is driven by the desire to provide clients with optimal investment options. According to Grable and Joo (1999), it is possible to determine an investor’s level of familiarity with financial risk by doing a comprehensive investigation of the investor’s socio-demographic data, as well as their financial and economic environmental factors.

When seen from the perspective of investment advisors and consultants, the evaluation of financial risk tolerance of investors should be the first and most significant step in the process of constructing an investment portfolio for a customer. An investment consultant will make decisions on the asset allocation and diversification of a client’s portfolio after conducting an analysis of the client’s capacity for risk mentality (Nugyen, 2016). In the context of providing financial advisory services, an assessment of customers’ risk-taking ability should be conducted in accordance with their psychological mindset and environmental elements. The primary purpose of this type of evaluation is to gain an

understanding of how investors perceive the risks associated with the market and to give them with practical financial advice that is tailored to their needs (Gibson et al., 2013).

A review of previous research reveals that the evaluation of FRT is influenced by a great number of financial environmental variables. The emphasis of this study is limited to four financial environmental aspects that appear to be prevalent in the process of making financial decisions. The findings of previous studies provide credence to the hypothesis that financial environmental elements have only a significant bearing on investment choices. Fundamentally, each investor is impacted by various financial environmental factors. As a direct consequence of this, many investors make a variety of distinct investment choices. The purpose of this study was to provide new knowledge to the body of existing research by examining the effect of four financial environmental factors on the level of individual investors’ tolerance for financial risk. A number of research questions were developed on the basis of the research gaps. These questions provide guidance to researchers so that they may carry out their study in the appropriate manner and reduce the likelihood of deviating from their intended objectives. More specifically, the following research questions may address:

- To what extent the individual investors have risk tolerance while making investment decisions?
- What are the important financial environmental factors affecting the risk tolerance of individual investors?
- Do financial environmental factors have any effect on the amount of risk tolerance?

OBJECTIVES OF THE STUDY

This research focusses on analysing the impact of financial environmental factors on financial risk tolerance. Based on the information identified from the existing literature, the following objectives are identified:

- To measure the level of financial risk tolerance that an investor is willing to accept while making financial

decisions.

- To identify the various financial environmental factors which affecting financial risk tolerance.
- To examine the relationship between identified financial environmental factors and financial risk tolerance.

RESEARCH METHODOLOGY

The primary objective of this research was to evaluate the linkage that exists between financial risk acceptance and several aspects of their financial environment, including financial anxiety, money ethics, financial stress, and financial satisfaction. A single cross-sectional survey design was used in this investigation. A predesigned questionnaire was used to obtain data from retail investors in Kerala, India. The study was performed online in April and May of 2023. To guarantee that the target population was representative, the convenience sampling approach was used. The survey was sent to 400 individual investors; 362 questionnaires were evaluated, and 38 questionnaires were discarded because they were incomplete.

This study looks at four independent variables, such financial anxiety, money ethics, financial stress, and financial satisfaction as well as one dependent variable, the level of financial risk tolerance of individual investors. There were two parts to the survey form, which was designed to collect research data. In the first section, financial risk tolerance was measured by using a 5-item scale developed by Grable and Joo (2004) which as was adapted from Maccrimmon and Wehrung (1986). Respondents were asked to pick the options that best described their risk tolerance level on a 5-point scale. Cronbach’s alpha coefficient was employed in this study to measure the reliability of the FRT scale. The FRT scale has an alpha value of 0.751. In the second section, financial environmental factors were measured. The researcher identified and utilised the Likert Scale which is also known as summated scale for measuring the collected data. The scale used for measuring variables are given in following Table 1.

Table 1: Variables and Scales

Variable	Scale
Financial risk tolerance	FRT scale developed by Maccrimmon and Wehrung (1986)
Financial anxiety	Financial anxiety scale developed by Archuleta et al. (2013)
Money ethics	Money ethics scale developed by Tang (1995)
Financial stress	APR financial stress scale developed by Heo et al. (2020)

Financial satisfaction	Financial satisfaction scale developed by Hira and Mugenda (1998)
------------------------	---

Source: Author’s compilation.

ANALYSIS AND DISCUSSION

The purpose of this study was to investigate the relationship between financial environmental factors and the risk tolerance level of individual investors. This research is intended to contribute to the existing literature on behavioural finance. The effect of financial environmental variables on the FRT is an issue of the study that is now being conducted. In order to do this, the information gathered from the 362 retail investors who participated in the survey was analysed so that the hypotheses of the present investigation could be evaluated. Structural Equation Modelling was carried out to find the influence of financial environmental factors on financial risk tolerance.

Table 2: Financial Risk Tolerance

Items	Mean	SD
“Investing is too difficult to understand”	2.56	0.98
“I am more comfortable putting my money in a bank account than in the stock market”	2.88	0.94
“When I think of the word ‘risk’ the term ‘loss’ come to mind immediately”	3.08	0.91
“Making money in stocks and bonds is based on luck”	3.24	0.87
“In terms of investing, safety is more important than returns”	3.46	0.86
Average summated score	3.04	0.91

Source: Primary data.

The descriptive statistics are displayed in Table 2, which also provides the average summated score of the FRT as well as the score summed up for each individual item. The standard deviation of the total summated score on the FRT is 0.91, with the average score being 3.04. The score gives an indication of the level of the FRT. Scores that are higher reflect a more rapid FRT.

Table 3: Financial Anxiety

Items	Mean	SD
“I feel anxious about my financial situation”	3.12	0.89
“I have difficulty sleeping because of my financial situation”	2.97	0.95
“I have difficulty concentrating on my work because of my financial situation”	2.61	0.92
“I am irritable because of my financial situation”	3.21	0.85
“I have difficulty controlling worrying about my financial situation”	3.11	0.87
“My muscles feel tense because of worries about my financial situation”	2.45	0.98

“I feel fatigued because I worry about my financial situation”	2.33	0.99
Average summated score	2.82	0.92

Source: Primary data.

Table 3 also displays the average summated financial anxiety score as well as the summated scores for each individual item. Financial anxiety averages 2.82 out of a possible 5, with an SD of 0.92. The higher the score indicates higher anxiety about the financial situation.

Table 4: Money Ethics

Items	Mean	SD
“Money is a symbol of success”	3.47	0.81
“Money will help you express your competence and abilities”	3.62	0.79
“Money represents one’s achievement”	3.56	0.81
“I value money very highly”	3.95	0.74
“Money makes people respect you in the community”	3.44	0.79
“Money can give you the opportunity to be what you want to be”	3.52	0.78
“Money gives you autonomy and freedom”	3.88	0.76
“Money is important”	3.21	0.84
“I budget my money very well”	3.46	0.79
“I use my money very carefully”	3.51	0.81
“Money is the root of all evil”	2.91	0.98
“Money is evil”	2.91	0.98
Average summated score	3.45	0.82

Source: Primary data.

Table 4 includes the average summated score for money ethics as well as the summated scores for each item. Money ethics has an average total score of 3.45 and a standard deviation of 0.82. The score reflects the intensity of the money ethics. The higher the score indicates the Individual have higher morality on money matters.

Table 5: Financial Stress

Items	Mean	SD
Affective Reaction (AR)		
“I feel depressed because of my financial situation”	2.89	0.95
“I feel sad because of my financial situation”	2.78	0.98
“I am fearful because of my financial situation”	2.99	0.91

“I feel anxious because of my financial situation”	3.01	0.84
“I worry a lot because of my financial situation.”	3.25	0.82
Relational/ Interpersonal Behaviour (RB)		
“My financial situation interferes with my daily job performance”	2.77	0.96
Items	Mean	SD
“I frequently pass on social events at work due to my financial situation”	3.11	0.84
“I often get into trouble at work because of my financial situation”	2.99	0.91
“My financial situation frequently interferes with my relationship with co-workers/colleagues”	3.42	0.79
“I often argue with my spouse/significant other because of financial matters”	3.47	0.81
Physiological Responses (PR)		
“I have stomach aches frequently because of my financial situation”	2.66	0.89
“My heartbeat increases because of my financial situation”	2.98	0.92
“I feel cold because of my financial situation”	2.14	0.99
“I have more sweat because of my financial situation”	2.52	0.96
“I am sensitive to noise because of my financial situation”	2.89	0.95
Average summated score	2.92	0.90

Source: Primary data.

Table 5 displays both the average summated score of financial stress as well as the scores compiled for each individual question in the test of financial stress. The standard deviation of a person’s financial stress score is 0.90, with the mean total score of financial stress coming in at 2.92. The score represents the respondent’s level of financial stress. The higher score indicates a higher level of financial stress.

Table 6: Financial Satisfaction

Items	Mean	SD
“I am satisfied with regular monetary savings”	3.24	0.87
“I am satisfied with current debt level”	3.32	0.85
“I am satisfied with family’s current financial situation”	3.42	0.89
“I am satisfied with ability to meet long-term financial goals”	2.98	0.92
“I am satisfied with ability to meet financial emergencies”	2.86	0.98
“I am satisfied with money management skills”	3.01	0.91
Average summated score	3.13	0.90

Source: Primary data.

Table 6 presents the summated score of each item, along with the average summated score of financial satisfaction. The mean summated score of financial satisfaction is 3.13, accompanied by a standard deviation of 0.90. The score serves as an indicator of the degree of financial satisfaction. A higher score is indicative of a greater degree of financial satisfaction.

The indication of composite reliability as well as Cronbach’s alpha were utilised so that the dependability of the present data could be evaluated together with its internal consistency. According to Saunders et al. (2007), reliability may be defined as an estimation of how consistent the outcomes are dependent on that data collection and processing approach. It is recommended that the values of composite reliability be more than 0.70 for each and every one of a measurement model construct (Nunnally, 1978). As a consequence of this, the number that was arrived at for the composite reliability of the study constructs falls somewhere in the range of 0.792 and 0.854 (Table 7).

Although the range of the Cronbach’s alpha coefficient is

from 0 to 1, and a value of at least 0.70 is considered to be indicative of strong internal reliability (Nunnally, 1978). As a result, the value of Cronbach’s alpha that was found in the research falls somewhere between 0.751 and 0.825 (Table 7). The reliability score of variables exceeds 0.751, which exceeds the minimum standard value for a variable. Therefore, all constructs have a high degree of reliability which is presented in Table 7. Likewise, calculating the Average Variance Extracted (AVE) value confirmed that all variables possess convergent validity. In general, constructs with an AVE greater than 0.50 (Hair & Black, 2006) are regarded to have acceptable convergent validity. The AVE of all variables is greater than 0.5, indicating that these variables explain more than 50% of the variation.

The components of the model have each been scrutinised to see the extent to which they may be said to reflect the same factor. In order to construct validity, it is necessary to evaluate dimensionality, dependability, and both convergent and discriminant validity. It can be also found from Table 7, all the constructs have good discriminant validity, which was tested by measuring the square root of the AVE that exceeds the inter-correlation of the construct with the other constructs or the squared correlation between the constructs,

which should be less than the AVE (Hair & Black, 2006). As a result, the measurement model was found to be sufficient with the support of adequate construct reliability and validity.

Table 7: Reliability and Validity

Variable	No. of Items	Alpha Value	Composite Reliability	AVE	√AVE
Financial risk tolerance (FRT)	5	0.751	0.792	0.571	0.755
Financial anxiety (FEFFA)	7	0.762	0.812	0.574	0.757
Money ethics (FEFME)	12	0.825	0.854	0.596	0.772

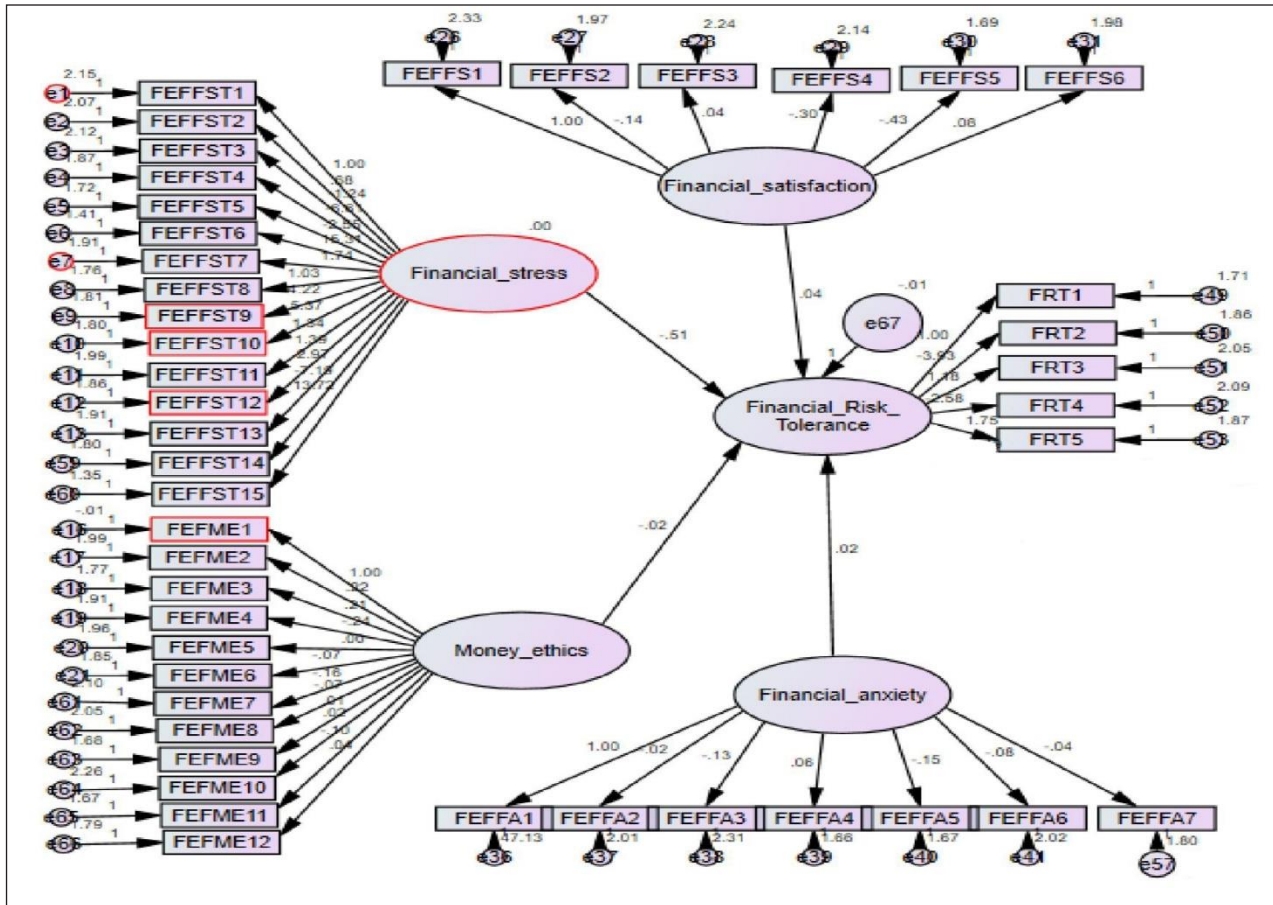
ST)	15	0.798	0.822
(FEFFS)	6	0.801	0.834

links between observable and latent variables may be accomplished through the use of a statistical method called structural equation modelling (SEM). Structural equation modelling, often known as SEM, is a powerful multivariate analytic technique that is finding growing application in the scientific community for examining potential associations between multiple variables (Fan et al., 2016). It is comparable to, but substantially more powerful than, regression analysis since it analyses linear

Source: Primary data.

The present investigation focused on examining the influence of financial environmental variables on financial risk tolerance (FRT). In order to test the hypotheses of the present study, a structural equation modelling (SEM) analysis was conducted. Discovering and assessing the

causal links between variables while also taking into account measurement error (Beran & Violato, 2010). Fig. 2 depicts a picture of a structural equation model (SEM) captured from the AMOS software.



Source: Primary data.

Fig. 2: Result of Structural Model

The importance of the study is to assess and define the impact of financial environmental factors such as financial anxiety,

money ethics, financial stress, and financial satisfaction on financial risk tolerance in a different context than previous studies. According to the present research findings, the four hypotheses in the study model are accepted.

Table 8: Structural Model Assessment

Hypothesis	Relationship	T-Value	P-Value	Decision
H1	FEFFA FRT	6.214	0.001*	Accepted
H2	FEFME FRT	4.474	0.000*	Accepted
H3	FEFFST FRT	3.237	0.001*	Accepted
H4	FEFFS FRT	3.481	0.000*	Accepted

Source: Primary data, *Significant at 0.01 level.

The findings obtained from the structural equation modelling (SEM) analysis indicate that financial environmental factors exert a statistically significant influence on FRT. The p-value of less than 0.01 shows that the results are significant and that these four factors can explain a large percentage of the variance in financial risk tolerance (Table 8). Regarding the initial hypothesis of the present study (i.e., financial anxiety is significantly related to FRT), the data obtained from retail investors in Kerala demonstrated a statistically significant association between financial anxiety and FRT. It has been found that the financial anxiety determines the FRT of investors, specifically investors with lower levels of financial anxiety tend to exhibit a higher FRT, whereas investors with higher levels of financial anxiety are more inclined to have a lower FRT. The second hypothesis proposed in the present study was “money ethics is significantly related to financial risk tolerance”. This hypothesis has been

supported by the findings, which indicate that investors with higher money ethics tend to engage in risky situations and financial decisions, resulting in higher levels of financial risk tolerance compared to investors without such behaviour. The third hypothesis of the present study was “financial stress is significantly related to financial risk tolerance”. Based on the present findings, the researcher has accepted the hypothesis due to the revealed results indicating association between financial stress and investor engagement in high-risk financial situations which means lower financial stress to leads higher financial risk-taking attitude. The fourth hypothesis of the current study as “financial satisfaction is significantly related to financial risk tolerance”. The results empirically observed that financial satisfaction is positively related to financial risk tolerance. More specifically, it revealed that a person with high financial satisfaction is more likely to take risky financial decisions.

Table 9: Measurement Model Fit

Indicators	Observed Value	Standard Value	Model Fit
CMIN/DF	3.637	> 5 (Wheaton et al., 1977)	Acceptable
GFI	0.847	> 0.80 (Byrne, 2010)	Acceptable
CFI	0.919	> 0.90 (Byrne, 2010)	Acceptable
IFI	0.932	> 0.90 (Bollen, 1989)	Acceptable
RMSEA	0.074	< 0.08 (Hair et al., 2006)	Acceptable

Source: Primary data.

To check the model fitness of the current model containing financial anxiety, money ethics, financial stress, and financial satisfaction, the Confirmatory Factor Analysis (CFA) was carried out on the data collected through which the results given in Table 9 were found. Several research papers have also emphasised the most generally reported fit indices, which are the CMIN-DF, GFI, CFI, IFI, and RMSEA (Naqvi et al., 2020; Marsh et al., 2014). These are the indices that are typically employed for reporting the model fitness. As an outcome of this, it was decided to provide the following goodness of fit indices: CMIN-DF, GFI, CFI, IFI, and RMSEA for the purpose of evaluating the research model using CFA and SEM. The results of model fitness indicate that value of CMIN/DF is 3.637 (i.e., <5), Goodness of Fit Index (GFI) is 0.847 (i.e., >0.80), Comparative Fit Index (CFI) is 0.919 (i.e., >0.90), Incremental Fit Index (IFI) is 0.932 (i.e., >0.90), and the Root Mean Square Error of Approximation (RMSEA) is less than 0.08. It means that resulting values of all indicators are falling within the threshold range so, the current model is a good fit.

CONCLUSION

The primary objective of this study was to examine the influence of financial environmental indicators on financial

risk tolerance. The present study was carried out in the state of Kerala, India, wherein data were gathered from retail investors through a questionnaire. The study contributes to the field in three different ways. First, it determines how much one is willing to take on in terms of financial risk. Second, it assesses the degree to which financial environmental variables influence financial risk tolerance, and third, it evaluates the impact that financial environmental factors have on financial risk tolerance. This research added to our knowledge of risk tolerance by providing academics, researchers, and financial planners with a new viewpoint on how to use financial environmental variables that are vital in financial markets.

The utilisation of Structural Equation Modelling (SEM) on the dataset has demonstrated that all of the hypotheses proposed in this research have been confirmed. Research has revealed that financial anxiety, money ethics, financial stress, and financial satisfaction exert notable influences on FRT. Investors that have a high-risk tolerance are ready to take the chance of losing money on an investment if they believe the opportunity for a larger reward would more than make up for the loss. If investors have a fear of taking risks, they may strive to limit their exposure to such risks as much as possible by investing their money in assets with a very low chance of loss. The level of risk that an investor is

willing to take should determine the type of investment that they select.

The inaccurate assessment of the Financial Risk Tolerance (FRT) has the potential to result in the selection of inappropriate investment alternatives. Consequently, this may lead to a decrease in the financial resources and overall well-being of investors. Financial service providers may face negative consequences when clients make poor investment decisions, such as selling a profitable investment or allocating funds to an inappropriate portfolio. The present study is anticipated to make a significant scholarly and practical contribution as it will introduce novel avenues for discourse and examination among researchers specialising in FRT, financial decision-making, and financial satisfaction. The theory pertaining to financial decision-making and financial risk tolerance will be further developed. The present study aims to provide practical insights for retail investors by examining the relationship between financial anxiety, money ethics, financial stress, financial satisfaction, and financial risk tolerance. The findings of this study will assist retail investors in understanding how these financial environmental factors can influence their FRT. The results provided by the present study may provide significant support to state and national policy makers in formulating investment policies.

REFERENCES

- Anbar, A., & Eker, M. (2010). An empirical investigation for determining of the relation between personal financial risk tolerance and demographic characteristic. *Ege Academic Review*, 10(2), 503-523. doi:https://doi.org/10.21121/eab.2010219633
- Andrews, B., & Wilding, J. M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *British Journal of Psychology*, 95(4), 509-521.
- Antony, A. (2022). Investor biases and their discriminating power among the risk takers - A case study from Kerala. *Journal of Commerce and Accounting Research*, 11(3), 26-33.
- Archuleta, K. L., Dale, A., & Spann, S. M. (2013). College students and financial distress: Exploring debt, financial satisfaction, and financial anxiety. *Journal of Financial Counseling and Planning*, 24(2), 50-62.
- Asebedo, S., & Payne, P. (2019). Market volatility and financial satisfaction: The role of financial self-efficacy. *Journal of Behavioral Finance*, 20(1), 42-52.
- Beran, T. N., & Violato, C. (2010). Structural equation modeling in medical research: A primer. *BMC Research Notes*, 3(1). doi:https://doi.org/10.1186/1756-0500-3-267
- Bollen, K. A. (1989). *Structural equations with latent variables*. John Wiley & Sons, Inc.
- Burchell, B. J. (2003). *Identifying, describing and understanding financial aversion: Financial phobes*. University of Cambridge.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS*. Routledge.
- Corter, J. E., & Chen, Y. (2005). Do investment risk tolerance attitudes predict portfolio risk? *Journal of Business and Psychology*, 20(3), 369-381. doi:https://doi.org/10.1007/s10869-005-9010-5
- Engelberg, E., & Sjöberg, L. (2007). Money obsession, social adjustment, and economic risk perception. *Journal of Socio-Economics*, 36(5), 686-697. doi:https://doi.org/10.1016/j.socec.2007.01.005
- Faff, R., Mulino, D., & Chai, D. (2008). On the linkage between financial risk tolerance and risk aversion. *Journal of Financial Research*, 31(1), 1-23.
- Fan, Y., Chen, J., Shirkey, G., John, R., Shao, C., & Park, H. (2016). Applications of structural equation modeling (SEM) in ecological studies: An updated review. *Ecological Processes*, 5(1). doi:https://doi.org/10.1186/s13717-016-0063-3
- Furnham, A., & Argyle, M. (1998). *The psychology of money*. Psychology Press.
- Gibson, R., Michayluk, D., & Van de Venter, G. (2013). Financial risk tolerance: An analysis of unexplored factors. *Financial Services Review*, 22(1), 23-50.
- Grable, J. E. & Joo, S. (1999). Financial help-seeking behavior: Theory and implications. *Financial Counseling and Planning*, 10(1), 13-24.
- Grable, J. E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology*, 14(4), 625-630.
- Grable, J. E., & Joo, S. H. (2004). Environmental and biopsychosocial factors associated with financial risk tolerance. *Journal of Financial Counselling and Planning*, 15(1), 73-82
- Grable, J. E., & Lytton, R. H. (1999). Financial risk tolerance revisited: The development of a risk assessment instrument. *Financial Services Review*, 8(3), 163-181.
- Hair, J. F., Anderson, R. E., Tatham, R. L., Black, W. C., & Babin, B. J. (2006). *Multivariate data analysis*. Pearson Education.
- Hair, J., & Black, B. B. (2006). *Multivariate data analysis*. Prentice-Hall.
- Hallahan, T., Faff, R., & McKenzie, M. (2003). An exploratory investigation of the relation between risk

- tolerance scores and demographic characteristics. *Journal of Multinational Financial Management*, 13(4-5), 483-502.
- Hayhoe, M. M., McKinney, T., Chajka, K., & Pelz, J. B. (2012). Predictive eye movements in natural vision. *Experimental Brain Research*, 217(1), 125-136.
- Heo, W., Cho, S., & Lee, P. (2020). APR financial stress scale: Development and validation of a multidimensional measurement. *Journal of Financial Therapy*, 11(1) 2. doi:https://doi.org/10.4148/1944-9771.1216
- Hilton, J. M., & Devall, E. L. (1997). The family economic strain scale: Development and evaluation of the instrument with single- and two-parent families. *Journal of Family and Economic Issues*, 18(3), 247-271. doi:https://doi.org/10.1023/a:1024974829218
- Hira, K. T., & Mugenda, O. M. (1998). Predictors of financial satisfaction: differences between retirees and non-retirees. *Financial Counseling and Planning*, 9 (2), 75-84.
- Kannadhasan, M., Aramvalarthan, S., Mitra, S. K., & Goyal, V. (2016). Relationship between biopsychosocial factors and financial risk tolerance: An empirical study. *Vikalpa: The Journal for Decision Makers*, 41(2), 117-131. doi:https://doi.org/10.1177/0256090916642685
- Kumar, P., & Kumar, S. (2021). Determinants of risk appetite of women investors: Evidence from survey. *Journal of Commerce and Accounting Research*, 10(1), 41-51.
- Lim, V. K. G. (2003). Money matters: An empirical investigation of money, face and confucian work ethic. *Personality and Individual Differences*, 35(4), 953-970.
- MacCrimmon, K., & Wehrung, D. A. (1986). *Taking risks: The management of uncertainty*. Free Press.
- Marsh, H. W., Morin, A. J. S., Parker, P. E., & Tripathi, M. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology*, 10(1), 85-110. doi:https://doi.org/10.1146/annurev-clinpsy-032813-153700
- Nanda, S. S., Sahoo, B., & Biswal, B. K. (2023). Performance of the Indian stock market in relation to macroeconomic indicators during the pre-corona pandemic period. *Journal of Commerce and Accounting Research*, 12(2), 51-60.
- Naqvi, M. H. A., Jiang, Y., Miao, M., & Naqvi, M. H. (2020). Linking biopsychosocial indicators with financial risk tolerance and satisfaction through macroeconomic literacy: A structural equation modeling approach. *Cogent Economics & Finance*, 8(1), 1-9. doi:https://doi.org/10.1080/23322039.2020.1730079
- Nguyen, L. A., Gallery, G., & Newton, C. (2016). The influence of financial risk tolerance on investment decision-making in a financial advice context. *The Australasian Accounting Business and Finance Journal*, 10(3), 3-22. doi:https://doi.org/10.14453/aabfj.v10i3.2
- Nunnally, J. (1978). *Psychometric theory*. McGraw-Hill
- Pompian, M. (2012). *Behavioral finance and wealth management*. In Wiley eBooks. doi:https://doi.org/10.1002/9781119202400
- Rahman, M. (2019). Propensity toward financial risk tolerance: an analysis using behavioural factors. *Review of Behavioral Finance*, 12(3), 259-281. doi:https://doi.org/10.1108/rbf-01-2019-0002
- Rahman, M., Albaity, M., & Isa, C. R. (2019). Behavioural propensities and financial risk tolerance: The moderating effect of ethnicity. *International Journal of Emerging Markets*, 15(4), 728-745. doi:https://doi.org/10.1108/ij OEM-01-2018-0024
- Roszkowski, M. J., & Grable, J. E. (2010). Gender differences in personal income and financial risk tolerance: How much of a connection? *The Career Development Quarterly*, 58, 270-275.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business students*. Financial Times Prentice Hall.
- Snelbecker, G. E., Roszkowski, M. J., & Cutler, N. E. (1990). Investors' risk tolerance and return aspirations, and financial advisors' interpretations: A conceptual model and exploratory data. *Journal of Behavioral Economics*, 19(4), 377-393. doi:https://doi.org/10.1016/0090-5720(90)90024-2
- Sulainman, E. K. (2012). An empirical analysis of financial risk tolerance and demographic features of individual investors. *Procedia Economics and Finance*, 2, 109-115.
- Syal, S. (2018). Awareness and risk perception about financial services: With special reference to women investors of Punjab. *Journal of Commerce and Accounting Research*, 7(3), 45-51.
- Tang, T. L. (1995). The development of a short money ethic scale: Attitudes toward money and pay satisfaction revisited. *Personality and Individual Differences*, 19(6), 809-816. doi:https://doi.org/10.1016/s0191-8869(95)00133-6
- Thanki, H., Karani, A., & Goyal, A. K. (2020). Psychological antecedents of financial risk tolerance. *The Journal of Wealth Management*, 23(2), 36-51. doi:https://doi.org/10.3905/jwm.2020.1.111

- Tran, A. G. T. T., Lam, C., & Legg, E. (2018). Financial stress, social supports, gender, and anxiety during college: A stress-buffering perspective. *The Counseling Psychologist*, 46(7), 846-869. doi:<https://doi.org/10.1177/0011000018806687>
- Weller, C. E., & Helburn, A. (2010). Financial stress and asymmetric financial decisions. *Social Science Research Network*. doi:<https://doi.org/10.2139/ssrn.2004765>
- Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. (1977). Assessing reliability and stability in panel models. *Sociological Methodology*, 8(1), 84-136.
- Xiao, J. J., Tang, C., & Shim, S. (2009). Acting for happiness: Financial behavior and life satisfaction of college students. *Social Indicators Research*, 92(1), 53-68.