

# Exploring the Relationship between Biopsychosocial Factors and Financial Risk Tolerance: A Comprehensive Evaluation

**Chintu H Thakkar**

**Research Scholar,**

**Department of Business & Industrial Management, VNSGU, Surat**

**Dr Vatsalbhair B Patel**

**Department of Business & Industrial Management, VNSGU, Surat**

## Abstract:

Financial risk tolerance is a crucial determinant of investment behavior, yet its underlying factors remain multifaceted and complex. This review paper investigates the interplay between biopsychosocial factors and financial risk tolerance, aiming to clarify the relationship shaping individuals' propensity for risk in financial decision-making.

Biological factors, encompassing genetic predispositions and neurological processes, influence risk perception and decision-making. Recent advancements in neuroscience have highlighted the role of brain structures such as the amygdala and prefrontal cortex in assessing risk, shedding light on how individual differences in neural functioning contribute to diverse risk-taking behaviors.

Psychological factors, including cognitive biases, personality traits, and emotional responses, play a pivotal role in shaping risk tolerance. Cognitive biases such as loss aversion and overconfidence influence risk perception, while personality traits like openness to experience and conscientiousness moderate risk-taking tendencies. Emotional responses, particularly fear and greed, exert significant influence over risk assessment and decision-making processes.

Social factors, ranging from cultural norms to socio-economic status, also impact financial risk tolerance. Cultural attitudes toward risk, familial influences, and peer pressure shape individuals' risk preferences and investment choices. Moreover, socio-economic factors such as income level and education contribute to disparities in risk tolerance, reflecting broader societal structures and inequalities.

Understanding the intricate interplay between these biopsychosocial factors give valuable insights into individual differences in financial risk tolerance. Such insights are important for financial advisors and policymakers in tailoring investment strategies and regulatory frameworks that align with diverse risk preferences and societal contexts. Moreover, recognizing the multifaceted nature of risk tolerance underscores the importance of interdisciplinary approaches integrating insights from neuroscience, psychology, and sociology to comprehensively address this complex phenomenon.

## Introduction

In the world of finance, understanding and assessing an individual's financial risk tolerance (FRT) is important for making informed investment decisions. Financial risk tolerance refers to an investor's willingness to accept the negative changes in the value of their investments or outcomes that differ from their expectations. It plays a significant role in wealth accumulation, portfolio allocation, and other finance-related decisions. Accurately assessing FRT is essential for financial advisors and investors to align their goals and choose suitable investment options.

This article explores the relationship between biopsychosocial factors and financial risk tolerance. It delves into the multidimensional nature of FRT and investigates how various factors from different domains, such as psychology, economics, and bio-sociology, influence an individual's risk tolerance. By understanding these factors, financial advisors,

policymakers, and researchers can better identify the determinants of an individual's FRT and recommend appropriate investment alternatives.

### **The Multifaceted Nature of Financial Risk Tolerance**

Financial risk tolerance is a complex concept influenced by a range of factors. It is not solely determined by financial circumstances but also by biopsychosocial elements. These factors can broadly be categorized into three main domains: biophysical, psychological, and social.

#### **Biophysical Factors**

Biophysical factors refer to the biological and physical characteristics of individuals that may impact their risk tolerance. These factors include genetic predispositions, hormonal influences, and physiological reactions to stress. Research suggests that certain biological traits, such as sensation seeking tendencies and tolerance for uncertainty, play a role in moulding an individual's risk tolerance.

#### **Psychological Factors**

Psychological factors encompass an individual's cognitive and emotional traits, personality characteristics, and cognitive prejudices that affect their risk tolerance. Traits of Personality like extraversion, openness to experience, and self-esteem have been found to correlate with risk tolerance. Moreover, cognitive biases, such as loss aversion and overconfidence, can affect how individuals perceive and respond to financial risks.

#### **Social Factors**

Social factors show the environmental and social influences on an individual's risk tolerance. These factors comprise cultural norms, social support systems, and socioeconomic status. For instance, individuals from socialist cultures may have different risk tolerance levels compared to those from individualistic cultures. Socioeconomic factors like income, education, and wealth accumulation also play a role in determining an individual's risk tolerance.

### **The Role of Self-Esteem in Financial Risk Tolerance**

Self-esteem, a psychological factor, has been proved to be positively related to financial risk tolerance. Individuals with higher self-esteem tend to show higher risk tolerance levels. This relationship can be credited to several underlying mechanisms.

Firstly, individuals with higher self-esteem may have a greater sense of self-worth and confidence in their decision-making abilities. This self-assuredness allows them to tolerate the potential undesirable outcomes associated with financial risks. They are more likely to view setbacks as temporary and believe in their ability to recover from losses.

Secondly, individuals with higher self-esteem may have a more optimistic outlook on life, which can translate into a greater willingness to take financial risks. They may perceive risks as opportunities for growth and view potential losses as temporary hindrances rather than permanent failures.

Thirdly, individuals with higher self-esteem may have a stronger belief in their ability to control outcomes. This sense of control can mitigate the apparent risks associated with financial decisions, making them more comfortable with taking calculated risks.

## **The Influence of Personality on Financial Risk Tolerance**

Personality traits have been recognized as significant elements of financial risk tolerance. Several personality traits have been studied in relation to risk tolerance, including extraversion, openness to experience, and conscientiousness.

### **Extraversion and Financial Risk Tolerance**

Extraversion, characterized by sociability, assertiveness, and excitement-seeking, has been found to have a positive association with risk tolerance. Extraverted individuals tend to be more outgoing, energetic, and adventurous, making them more inclined to take financial risks. They thrive on excitement and novelty, which can translate into a higher tolerance for financial uncertainties.

### **Openness to Experience and Financial Risk Tolerance**

Openness to experience, reflecting a preference for novelty, curiosity, and intellectual pursuits, has also been linked to higher risk tolerance. Individuals high in openness to experience are more likely to search for new investment opportunities and embrace unconventional investment strategies. Their willingness to explore uncharted territories extends to their financial decision-making, enabling them to tolerate higher levels of risk.

### **Conscientiousness and Financial Risk Tolerance**

Conscientiousness, characterized by self-discipline, responsibility, and organization, has been related with lower risk tolerance. Conscientious individuals are typically cautious, detail-oriented, and risk-averse. They prefer stability and security, making them less inclined to take significant financial risks. However, it is important to note that the relationship between conscientiousness and risk tolerance may vary depending on the context and the individual's financial goals.

## **The Influence of Sensation Seeking on Financial Risk Tolerance**

Sensation seeking, a personality trait related to the pursuit of novel, exciting, and thrilling experiences, has been found to have a positive connection with financial risk tolerance. Individuals high in sensation seeking tend to be more adventurous, impulsive, and open to taking risks.

Sensation seekers are motivated by the excitement and stimulation that can come from financial risks. They may enjoy the adrenaline rush associated with high-risk investments and see them as opportunities for potential gains. However, it is crucial to strike a balance between risk-taking and risk management to avoid excessive exposure to financial risks.

## **Understanding the Relationship Between Biopsychosocial Factors and Financial Risk Tolerance**

While examining the relationship between biopsychosocial factors and financial risk tolerance, it is important to consider the interplay between these factors. Biopsychosocial factors do not act independently but interact and influence each other, shaping an individual's risk tolerance.

For example, an individual's hereditary predispositions may interact with their psychological traits and social environment to influence their risk tolerance. Similarly, an individual's social support system and cultural background may moderate the relationship between their personality traits and risk tolerance.

By understanding these complex relationships, financial advisors, policymakers, and researchers can develop more complete frameworks for assessing and predicting an individual's financial risk tolerance. This knowledge can help them tailor investment advice, design impactful risk management strategies, and identify suitable investment alternatives for their clients.

**SUMMARY OF LITERATURE REVIEWS ON FINDINGS ABOUT FACTORS INFLUENCING FINANCIAL RISK TOLERANCE**

Findings from this study indicating the factors of FRT are represented in Table below.

<u>Authors</u>	<u>Year of publication</u>	<u>Variables of study</u>	<u>Major Findings of the study</u>
Sherman Hanna and Peng Chen	1998	Time horizon	An important aspect of objective risk tolerance is the proportion of the investor's financial assets and total assets (including human assets) over the investment horizon. Even investors with very low subjective risk tolerance should have an aggressive portfolio if they have an investment horizon of 20 years or more. (Hanna & Chen, 1998)
John Grable, Ruth H. Lytton	2003	Gender, Age, Marital Status, Income, Educational Background, Occupation	The study result indicated that 13 item instrument was accurately correlated with actual investment behaviour.
Carmen Keller, Michael Siegrist	2006	in stocks; Financial risk attitude; Ethical stance toward the stock market; Money attitudes; Gender	The results demonstrate that the measurement models of the latent variables across groups were partially invariant. In all four groups, financial risk attitude was a significant positive predictor, and viewing the stock market as unethical a noteworthy negative predictor, of willingness to invest in stocks (Keller & Siegrist, 2006)
Ryan Gibson, David Michayluk & Gerhard Van de Venter	2007	Income, Knowledge, Expectation	The study has given a positive relationship between risk tolerance and income, investment knowledge and positive stock market expectations. Risk tolerance is found to be lower level for females, older individuals, those that currently use a financial advisor and individuals that suggest the stock market to be riskier than two years before
John E. Grable, Sonya L. Britt, and Farrell J. Webb	2008	risk profile, risk-taking, risk tolerance	It was found that the tolerance towards financial risk has a positive effect on the perception of risk as a contributing factor. Individuals with increased risk tolerance, as measured by valid and reliable scales, were more likely to involve in risky behaviors.

Yrd. Doç. Dr. Adem ANBAR	2010	financial risk, risk aversion, financial risk tolerance, demographic characteristics	analysis of the association between participant demographics and financial risk tolerance reveals that gender, income and wealth are significantly related with financial risk tolerance. (Eker & Anbar, 2010)
Rui Yao & Angela L. Curl	2011	Market Return, Stock Prices	Studies have revealed that risk tolerance generally increases as market returns increase and risk tolerance decreases as market returns decrease. People who thus change their risk tolerance invest in stocks when stock prices are going up and sell when stock prices are going down. Researchers, employers, financial educators and practitioners need to help investors overcome the bias of viewing the latest news related to market performance. (Yao & Curl, 2011)
H. Kent Baker, Michael B. Hargrove and John A. Haslem	2012	Risk, Rate of return, Dividend Income, Capital Appreciation,	The relationship between risk and annual expected rate of return appears to be positive.
Dr. Ebrahim Kunju Sulaiman	2012	Demographic Factors,	Analyzing different demographic factors related to financial risk tolerance of individual investors, we can see that financial risk tolerance can be distinguished by demographic characteristics of individual investors.
John E. Grable1 & So-Hyun Joo	2013	Dependent variable, financial risk tolerance, is measured using five Likert-type items. Independent variables : age, education, gender, marital status, ethnic/racial background, birth order, homeownership, and occupation.	The results of this study support Irwin's suggestion that further research should consider both environmental and biopsychosocial factors when attempting to explain attitudes toward financial risk tolerance.
Dr. Vijay Gondaliya* and Mr. Govind Dhinaiya	2014	age, education and occupation	These results reveal that investors with higher risk tolerance have higher levels of returns to competence, agreeableness, and comfort, and vice versa. Also notice that age, education, and occupation have no relationship between risk-taking, agreeableness, and comfort.

Sonali Patil, Dr.Kalpna Nandawar	2014	Investments, profit, salaried employees, savings	The data analysis reveals that the safety is important factor while doing investment so remaining avenues are less considerable while doing investment by investors.
Stephen Kuzniak, Abed Rabbani, Wookjae Heo, Jorge Ruiz- Menjivar, John E. Grable	2015	Type of Investment	Consistent with the literature, high scale scores (representing a greater willingness to take risks) were found to be related with equity ownership and negatively related to cash and bond holdings (Kuzniak et al., 2015)
Rahmawati , M. Dileep Kumar , Meyland Kambuaya , Farhan Jamil, Saqib Muneer	2015	Gender, Age group, Education	The authors conclude that men are less risk averse than women, that well-educated investors are risk takers, that wealthy investors tolerate risk better than wealthy investors and, interestingly, that there is no strong correlation between age. and the level of investment. Risk tolerance for every age group varies widely, but each individual's risk tolerance is different. Education and wealth are closely related to risk-taking.
Selamah Abdullah Yusof	2015	Income Pooling Hypothesis; Bargaining Model; Financial Decision- Making; Risk Tolerance; Household	The analysis shows that male respondents have greater levels of risk tolerance than female respondents. Similar to financial investment decision making, age is a significant factor in the level of risk tolerance for men, but not for women. However, earning share does not significantly affect risk tolerance level of married men or women. On the other hand, education and income are important determinants for those who were married and for women, respectively, where higher levels of education and income imply more tolerance to risk
M. Kannadhas an	2015	gender, age, marital status, occupation, education, and income, financial risk tolerance	result confirms that demographic factors do play a role in distinguishing retail investors and they motivate practitioners to continue to use them in the future as well (Kannadhasan, 2015)
Carina Gustafsson Lisa Omark	2015	financial risk tolerance, financial literacy, risk- aversion	even though financial literacy showed to have an increasing impact on financial risk tolerance, the results suggest that the average individual is risk-averse

Michael S. Finke & Michael A. Guillemette	2016		we examine ways to measure investor risk preferences and provide insight into the construction of risk assessment questionnaires. We conclude with a discussion on advisor compensation models and how they may affect the risk level of client portfolios.
M Kannadhasan, S Aramvalartan, S K Mitra, and Vinay Goyal	2016	Dependent Variable: FRT & Independent Variable:sensation seeking, personality type (A/B), and self-esteem.	All the three factors—self-esteem, personality type, and sensation seeking— are positively related to FRT. This study adds to the extant literature on psychological determinants of FRT. (Kannadhasan et al., 2016)
Ms. R. Suyam Praba	2016	age, gender, annual Individual Income, marital status, life cycle stage and family type	From the analysis, it was found that the six socio-demographic factors included in the study, such as age, gender and income, have a significant relationship with individual investors' susceptibility to financial risk. (Praba, 2016)
Linh T.M. Nguyen Gerry Gallery Cameron Newton	2016	client financial literacy, trust in the financial advice service, and relationship length with the service	the two relationship characteristics: trust and relationship span were found to be positively linked with financial literacy.
Mustabsar Awais, M. Fahad Laber	2016	Risk Tolerance, Investment Decision Making, Investment Experience, Financial Literacy	When financial literacy and investing experience comes together, automatically risk tolerance increases and investors will be able to make wise decisions. Researchers mentioned that financial risk considers the factors like inflation, confounding interest, diversification of risk
Ali Bayrakdar oglu	2016	Demographic Factors, Personality Traits, Bias	to the research findings, it was determined that there was an association between traits of personality and psychological biases of investors and the traits of personality of investors affected their financial risk tolerances
Manit Mishra Sasmita Mishra	2016	Age, Gender, Marital Status, Occupation, Family income, Materialism	A greater understanding of the financial risk tolerance construct and the variables shaping it would enable superior personal financial management by practitioners, researchers, and investors

Ms Bhoomi Patel, Dr Vasudev Modi	2017	risk, return, market trends, past performance.  Demographic factors like age, gender and income is having impact on investment decision making.	Studies have shown that demographic factors have a considerable impact on some elements of investment decisions and a minor impact on others. The survey also provides an overview of investors' perceptions of different investment options. Investment decisions are influenced by a variety of factors, including risk, return, market trends and past performance.
Abed G. Rabbani, John E. Grable, Wookjae Heo, Liana Nobre, and Stephen Kuzniak	2017	Decision making, Gender, Age, Marital Status, Education, Household Income,	Results from this study indicate that although risk tolerance scores are likely to vary based on market volatility, the actual magnitude of such changes will generally be quite modest (Rabbani et al., 2017)
Malgit Amos Akims, Ambrose Jagongo	2017	Financial Literacy, Investment Decisions, Decision theory, Prospect Theory and Theory of Mental Accounting	The study shows that individuals and organizations should invest in building financial literacy as higher financial literacy is positively related to successful investment decisions
Basil John Thomas	2018	Financial Responsibility, Annual Earnings, Age, Gender, Level of Education	The determinants of financial risk tolerance including socioeconomic, demographic and attitudinal factors received partial support in the analysis
Elsa Huhtala	2018	Nationality, Gender	The findings can be used for, example given, the customization of investment portfolios for individuals from different countries. Additionally, the fact that there are significant differences between females and males can be used to further customize investment advice for each gender.
Swaminathan S. Sivarajan	2018	Advisers' Perception of their Clients' Investment Experience, Return Expectations, Investment Literacy	Return expectations, of both investors and advisers, are the single best predictor of their respective risk-taking decisions. In addition, demographic variables played a significant role. For investors, these variables include gender, net worth and marital status. For advisers, these variables include education and licensing type
Heena Thanki, Narayan Baser	2019	gender, marital status, occupation, and income	An analysis of data indicates that personality type and demographic variables such as gender, marital status, occupation, and income are found significant in determining FRT of



			investor, while age and education are found insignificant. (Thanki & Baser, 2019)
Mr. Binit Patel, Dr. Govind Dave	2019	Personality, Sensation Seeking, Self-esteem	study suggest that biopsychosocial factors are related to FRT. 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. (Patel, 2019)
Nadya Septi Nur Ainia, Lutfi Lutfi	2019	risk perception, risk tolerance, overconfidence, and loss aversion	risk perception has a significant and negative effect on investment decision making
Kanchan Kathial	2019	Financial Literacy, Investment Decisions	Investment planning and financial literacy were found to be positively correlated to each other and financially literacy helps in doing better investment planning by women.
Jaimie Sung Sherman Hanna	2019	gender/marital status, ethnic group and education	Predicted risk tolerance increased with education, even after controlling for the effects of other variables Risk tolerance was lower for femaleheaded households.
Md Mahfuzur Rahman	2019	Financial risk tolerance, Behavioural factors, Propensity to indebtedness	The analysis revealed several new facts. As a result, tendency to regret, tendency to believe, happiness in life, tendency to attribute success to luck, and tendency to overtrust were found to have a crucial effect on FRT, while social interaction tendency did not . The results also prove the moderating effect of religiosity in the proposed research model.
Farah Margareth a Leon Angie	2019	self-esteem, personality, and sensation seeking	the Self-esteem, personality, and sensation Seeking positive effect on financial risk tolerance
Suné Ferreira & Zandri Dickason-Koekemoer	2020	age, gender, Health and Safety	Risk can have different effects on investors, positive, neutral and negative. Therefore, the amount of risk investors are willing to tolerate can be displayed in their attitude. This attitude can be influenced by demographic factors, life satisfaction and risk-taking behaviour and perception. (Ferreira & Dickason-Koekemoer, 2020)

Reema Sharma	2020	demographic factors, age, income, gender, qualification which affect the financial decision	While investors select alternatives based on various factors like income, age, gender, occupation, means of production, etc., financial knowledge and risk tolerance play an important role in making investment decisions, which can be studied through the given model.
Sahil Goyal Saloni Jain	2020	Risk Perception, Investment Decision, Demographic Factors	The paper successfully investigates the factors and the behavioral biases that impact the stock market behavior of the small investors with special reference to Covid-19 stressed situation
Sanjeet Kumar, Prashant Kuma	2020	Age, Occupation, Qualification, Marital Status, Monthly Income	There is an important relationship between women's demographic factors and risk-taking capacity, as well as marital status.
Mubarokah Bunyamin, Norwazli Abdul Wahab	2021	Financial Capability,	This study shows that financial risk tolerance can be explained by demographic profile, psychological, social, geographical differences and financial capacity factors.
Cecilia Hermansson, Sara Jonsson	2021	Financial, Literacy, Financial Interest, Age, Gender, Work Status	The analyses show that both financial literacy and financial interest are associated with higher risk tolerance and we conclude that financial interest has a significantly higher impact on risk tolerance than financial literacy. We also conclude that specifically financial interest offers an additional explanation of financial-risk tolerance. (Hermansson & Jonsson, 2021)
Hitesh Kumar Patel, Dr. Vinodrai Balubhai Patel, Dr. Jaydip Chaudhari	2021	Age, Gender, Education, Income, Experience, Knowledge, Confidence	The research shows that 22.4% of respondents are very low risk taker and 39.2% respondents are low risk taker. 18.4% of respondents are very high risk taker and 20% of respondents are high risk taker.
Nasim Mohammadi, Afsaneh Soroushyar	2021	Earning, Literacy, Saving, Investment, Financial Risk	literacy has a positive and significant effect on financial risk tolerance. it appears that having literacy-related skills will enable people to make informed decisions about their financial capital and will minimize the likelihood of any financial mismanagement and also the associated negative consequences, and it can also be effective in predicting their future behaviours. (Mohammadi & Soroushyar, 2021)

Gentjan Çera, Khurram Ajaz Khan, Zuzana Rowland, Humberto Nuno Rito Ribeiro	2021	Gender, Age, Region, Income	The findings point to four main issues: financial behaviour as a function of financial attitude, knowledge and inclusion; the influence of financial literacy (its components) on financial advice; the effect of financial inclusion on financial advice; the role of culture in the relationship between risk tolerance and financial advice (Çera et al., 2021)
Heena Thanki, Sweety Shah, Vrajlal Sapovadia, Ankit D. Oza and Dumitru Doru Burduhos-Nergis	2022	personality types (Type-A and Type-B), financial literacy, and six demographic parameters, including marital status, age, education, income, occupation, and the number of dependents, as independent variables, and gender as a dividing variable	in the case of male investors, personality type, FL, income, occupation, marital status, and the number of dependents significantly influenced FRT. Conversely, in the case of female investors, personality type, FL, income, and marital status were found to have significant influence. Data analysis also pointed to the conclusion that age and education have no effect on FRT on either gender. (Thanki et al., 2022)
Werner Ria Murhadi, Fidelia Rahayu Kencanasar, Bertha Silvia Sutedjo	2023	Financial Literacy, Financial Interest	financial literacy, age, and income do not affect the financial risk tolerance of individual investors in Indonesia. In contrast, financial interest has a significant positive effect on the financial risk tolerance of individual investors in Indonesia. (Murhadi et al., 2023)
Arya Samudra Mahardhika, Yanuar E. Restianto	2023	Self Esteem, Financial Literacy, Investment Decision	self-esteem has a positive effect on financial risk tolerance, financial risk tolerance has a positive effect on investment decisions, financial literacy affects financial risk tolerance because financial literacy only relates to knowledge and understanding of financial topics (Mahardhika & Restianto, n.d.)
Nurullaili Mauliddah, Muhammad Alhakim Danurwindo, Bahrul Ulum, Octavia Ika Wibowo, Galuh Nichayah Pravitasari	2023	Financial Literacy, Risk Tolerance, Financial Attitude, Financial Behaviour, Income	The study's results explain that members of the Muhammadiyah organization in East Java have a good level of risk tolerance supported by knowledge of sound financial concepts based on measuring instruments in this research variable (Mauliddah et al., n.d.)

<p><b>venu GUJRATH I &amp; SANJEEV KUMAR GOUDA, PROF SATYAJIT SINH GOHIL</b></p>	<p>2023</p>	<p>Gender, Occupation, Liquidity</p> <p>Age, Return,</p>	<p>in the city of Vadodara female investors are less than male investors. Lack of knowledge about stock market, not interested in stock market are important reasons for the lesser female investors. (Assistant Professor International Institute Of Management Science Pune-411033, Maharashtra, India et al., 2014)</p>
<p><b>Ayub and Chowdhury, Emon Kalyan</b></p>	<p>2023</p>	<p>Investor’s attitude; stock market; Chittagong Stock Exchange; risk</p>	<p>This research focused on the attitude of investors toward stock market risk from three broad perspectives like awareness, perceived risk attitude and behavior pattern</p>
<p><b>Vineetha Mathew, Santhosh Kumar P K and Sanjeev M A</b></p>	<p>2024</p>	<p>Work Sector, Monthly income, Gender, Age,</p>	<p>Due to their socio-cultural differences, psychological traits and their effect on FWB in emerging countries may differ from developed countries (Mathew et al., 2024)</p>

**Conclusion**

Financial risk tolerance is a multifaceted concept influenced by a combination of biophysical, psychological, and social factors. Understanding the association between these factors is crucial for accurately assessing an individual's risk tolerance and making informed investment decisions.

Biophysical factors, such as genetic predispositions and physiological reactions to stress, interact with psychological factors, including personality traits and cognitive biases, to shape an individual's risk tolerance. Social factors, such as cultural norms and socioeconomic status, further influence an individual's risk tolerance.

Factors like self-esteem, extraversion, openness to experience, and sensation seeking have been proved to be related to financial risk tolerance. However, it is important to recognize that these relationships are not deterministic and may vary depending on individual circumstances and contexts.

By gaining a deeper knowledge of the relationship between biopsychosocial factors and financial risk tolerance, financial advisors and policymakers can provide more tailored advice and support to investors. This knowledge can contribute to more effective risk management strategies and the achievement of financial goals.

**Bibliography and References:**

Abdullah Yusof, S. (2017). HOUSEHOLD BARGAINING, FINANCIAL DECISION-MAKING AND RISK TOLERANCE. *International Journal of Business and Society*, 16(2). <https://doi.org/10.33736/ijbs.565.2015>

Akims, M. A., & Jagongo, A. (2017). *FINANCIAL LITERACY AND ITS IMPACT ON INVESTMENT DECISIONS IN NIGERIA: A THEORETICAL PERSPECTIVE*. 4(11).

Assistant professor, Department of Finance .IMS, Noida., & Sharma, Dr. R. (2020). “Impact of financial literacy and Risk Tolerance on Investment Decision.” *International Journal of Management and Humanities*, 4(11), 53–56. <https://doi.org/10.35940/ijmh.K1059.0741120>

- Assistant Professor International Institute Of Management Science Pune-411033, Maharashtra, India, Patil, S., & Nandawar, Dr. K. (2014). "A Study on Preferred Investment Avenues Among Salaried People With Reference To Pune, India." *IOSR Journal of Economics and Finance*, 5(2), 09–17. <https://doi.org/10.9790/5933-0520917>
- Awais, M., Laber, M. F., Rasheed, N., & Khurshed, A. (2016). *Impact of Financial Literacy and Investment Experience on Risk Tolerance and Investment Decisions: Empirical Evidence from Pakistan*. 6(1).
- Baker, H. K., Hargrove, M. B., & Haslem, J. A. (1977). An Empirical Analysis of the Risk-Return Preferences of Individual Investors. *The Journal of Financial and Quantitative Analysis*, 12(3), 377. <https://doi.org/10.2307/2330541>
- Bunyamin, M., & Abdul Wahab, N. (2021). Factors Influencing Financial Risk Tolerance: A Review. *International Journal of Industrial Management*, 12(1), 296–305. <https://doi.org/10.15282/ijim.12.1.2021.6753>
- Çera, G., Ajaz Khan, K., Rowland, Z., & Ribeiro, H. N. R. (2021). FINANCIAL ADVICE, LITERACY, INCLUSION AND RISK TOLERANCE: THE MODERATING EFFECT OF UNCERTAINTY AVOIDANCE. *E+M Ekonomie a Management*, 24(4), 105–123. <https://doi.org/10.15240/tul/001/2021-4-007>
- Eker, M., & Anbar, A. (2010). AN EMPIRICAL INVESTIGATION FOR DETERMINING OF THE RELATION BETWEEN PERSONAL FINANCIAL RISK TOLERANCE AND DEMOGRAPHIC CHARACTERISTIC. *Ege Akademik Bakis (Ege Academic Review)*, 10(2), 503–503. <https://doi.org/10.21121/eab.2010219633>
- Ferreira, S., & Dickason-Koekemoer, Z. (2020). A structural equation model of financial risk tolerance in South Africa. *Cogent Business & Management*, 7(1), 1811595. <https://doi.org/10.1080/23311975.2020.1811595>
- Finke, M. S., & Guillemette, M. A. (n.d.). *Measuring Risk Tolerance: A Review of Literature*.
- Gibson, R., Michayluk, D., & de Venter, G. V. (2013). Financial risk tolerance: An analysis of unexplored factors. *Financial Services Review*.
- Gilliam, J., Chatterjee, S., & Grable, J. (2010). *Measuring the Perception of Financial Risk Tolerance: A Tale of Two Measures*. 21(2).
- Goyal, S., & Jain, S. (n.d.). *INVESTOR'S PERCEPTION TOWARDS RISK- RETURN IN INDIAN STOCK MARKET: AN EMPIRICAL ANALYSIS*.
- Grable, J. (1999). Financial risk tolerance revisited: The development of a risk assessment instrument\*. *Financial Services Review*, 8(3), 163–181. [https://doi.org/10.1016/S1057-0810\(99\)00041-4](https://doi.org/10.1016/S1057-0810(99)00041-4)
- Grable, J. E., & Joo, S.-H. (2004). *Environmental and Biopsychosocial Factors Associated with Financial Risk Tolerance*. 15.
- Hanna, S. D., & Chen, P. (1998). Subjective And Objective Risk Tolerance: Implications For Optimal Portfolios. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.95488>
- Hermansson, C., & Jonsson, S. (2021). The impact of financial literacy and financial interest on risk tolerance. *Journal of Behavioral and Experimental Finance*, 29, 100450. <https://doi.org/10.1016/j.jbef.2020.100450>
- Huhtala, E., & Stepanov, R. (n.d.). *FINANCIAL RISK TOLERANCE: A CULTURAL COMPARISON*.
- Islam, D. A. (n.d.). *Investors' Attitude toward Stock Market Risk-A Chittagong Perspective*.
- Kannadhasan, M. (2015). Retail investors' financial risk tolerance and their risk-taking behaviour: The role of demographics as differentiating and classifying factors. *IIMB Management Review*, 27(3), 175–184. <https://doi.org/10.1016/j.iimb.2015.06.004>
- 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. <https://doi.org/10.1177/0256090916642685>
- Keller, C., & Siegrist, M. (2006). Investing in stocks: The influence of financial risk attitude and values-related money and stock market attitudes. *Journal of Economic Psychology*, 27(2), 285–303. <https://doi.org/10.1016/j.joep.2005.07.002>
- Kumar, M. D., Kambuaya, M., Jamil, F., & Muneer, S. (2015). *Determinants of the Risk Tolerance of Individual Investors*. 5.
- Kuzniak, S., Rabbani, A., Heo, W., Ruiz-Menjivar, J., & Grable, J. E. (2015). The Grable and Lytton risk-tolerance scale: A 15-year retrospective. *Financial Services Review*.
- Mahardhika, A. S., & Restianto, Y. E. (n.d.). *UNDERSTANDING FINANCIAL RISK TOLERANCE AMONG YOUNG INVESTORS*.

- Mathew, V., Santhosh Kumar P K, & Sanjeev M A. (2024). Financial Well-being and Its Psychological Determinants—An Emerging Country Perspective. *FIIIB Business Review*, 13(1), 42–55. <https://doi.org/10.1177/23197145221121080>
- Mauliddah, N., Danurwinda, M. A., Ulum, B., Ika, O., & Pravitasari, G. N. (n.d.). *Mediation of Financial Literacy in Predicting Risk Tolerance on Muhammadiyah Organization Members in East Java*.
- Mohammadi, N., & Soroushyar, A. (2021). Investigating the Effect of Financial Literacy on Investors Financial Risk Tolerance. *Iranian Journal of Accounting, Auditing and Finance, Online First*. <https://doi.org/10.22067/ijaaf.2021.40496>
- Murhadi, W. R., Kencanasar, F. R., & Sutedjo, B. S. (2023). The Influence of Financial Literacy and Financial Interest on The Financial risk Tolerance of Investor in Indonesia. *Journal of Law and Sustainable Development*, 11(2), e310. <https://doi.org/10.55908/sdgs.v11i2.310>
- [No title found]. (n.d.). *International Journal of Latest Engineering and Management Research (IJLEMR)*.
- Nur Aini, N. S., & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making. *Journal of Economics, Business & Accountancy Ventura*, 21(3), 401. <https://doi.org/10.14414/jebav.v21i3.1663>
- Patel, M. B. (2019). *A Study of Impact of Bio-psychosocial Characteristics of an Investor on Financial Risk Tolerance with Special Reference to Investors in Anand City*. 4(4).
- Praba, R. S. (2016). *Financial Risk Tolerance and the influence of Socio-demographic Characteristics of Retail Investors*.
- Rabbani, A. G., Grable, J. E., Heo, W., Nobre, L., & Kuzniak, S. (2017). Stock Market Volatility and Changes in Financial Risk Tolerance During the Great Recession. *Journal of Financial Counseling and Planning*, 28(1), 140–154. <https://doi.org/10.1891/1052-3073.28.1.140>
- Sharma, N. (n.d.). Financial Literacy and Financial Inclusion: A Case Study of Punjab. *International Journal on Recent and Innovation Trends in Computing and Communication*, 5(6).
- Singh, D. R. R., Sarva, D. M., & Sharma, M. (2020). *INVESTMENT BEHAVIOUR AND RISK TAKING ABILITY AMONG RETAIL INVESTOR: ROLE OF DEMOGRAPHIC FACTORS*.
- Sivarajan, S., & Bruijn, O. D. (2021). Risk Tolerance, Return Expectations, and Other Factors Impacting Investment Decisions. *The Journal of Wealth Management*, 23(4), 10–30. <https://doi.org/10.3905/jwm.2020.1.124>
- Sung, J., & Hanna, S. D. (1997). Factors Related to Risk Tolerance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2234>
- Thanki, H., & Baser, N. (2019). Interactive Impact of Demographic Variables and Personality Type on Risk Tolerance. *Emerging Economy Studies*, 5(1), 42–54. <https://doi.org/10.1177/2394901519825924>
- Thanki, H., Shah, S., Sapovadia, V., Oza, A. D., & Burduhos-Nergis, D. D. (2022). Role of Gender in Predicting Determinant of Financial Risk Tolerance. *Sustainability*, 14(17), 10575. <https://doi.org/10.3390/su141710575>
- The Influence of Financial Risk Tolerance on Investment Decision-Making in a Financial Advice Context. (2016). *Australasian Accounting, Business and Finance Journal*, 10(3). <https://doi.org/10.14453/aabfj.v10i3.2>
- Thomas, B. J. (n.d.). *RISK TOLERANCE PROFILE OF INVESTORS IN THE GULF STATES*.
- Toews, B. J. (n.d.). *Differences in Financial Performance and Risk Tolerance at Faith-Based Credit Unions*.
- Yao, R., & Curl, A. L. (2011). Do Market Returns Influence Risk Tolerance? Evidence from Panel Data. *Journal of Family and Economic Issues*, 32(3), 532–544. <https://doi.org/10.1007/s10834-010-9223-2>