The Role of Financial Literacy and Risk Preference in Shaping the Investment Decisions of Individual Investors

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ABSTRACT
Financial literacy, and risk preference, are among the major determining factors of individual investors' capability of executing informed investments in a dynamically evolving financial field. It is important to learn, first of all, the interplay among these variables to promote a healthy financial behaviour and prevent a choice of investment through negligence. The purpose of this study is to explore the interest in financial literacy concerning investment decision-making, and the relationship between risk preferences and financial literacy is captured. Quantitative research design was used and data were collected from 150 individual investors who are actively involved in financial markets using a structured questionnaire survey. Structural Equation Modeling (SEM) and regression analysis are conducted to examine the effect and moderation of financial literacy on the extent of risk preference and the decisions on risk in investment. The results also show that financial literacy powerfully influences the decisions in investment ($\beta = 0.42$, $p < 0.001$), demonstrating that financial literacy helps one to diversify a portfolio, plan financially, and secure long term wealth. In addition, risk preference matters as to how investment choices are formed ($\beta = 0.38$, $p < 0.001$), risk tolerant entities tend to more prefer stocks and mutual funds while risk intolerant entities tend to favor bonds and fixed income based instruments. Furthermore, when risk preference is controlled for the relationship between risk preference and investment decisions ($\beta = 0.25$, $p = 0.004$) was moderated by financial literacy indicating that it is important in increasing strategic and informed risk taking behavior. This is important for investors, financial educators, and policymakers since it suggests the importance of the development of financial literacy programs and the implementation of the regulatory interventions that will enable the investment decision making and risk assessment.

Keywords: Financial literacy, risk preference, investment decision-making, portfolio diversification, behavioral finance.

INTRODUCTION

One's financial planning process involves investment decisions which play an important role in long-term economic stability, wealth accumulation, and financial security. In an age in which global financial markets are becoming more and more complex, individual investors are obliged to make an informed choice on which financial instruments to invest as well as on what kind of risk factors and economic conditions are prevalent at the moment. With the growing trend of financial technology and diversification in the investment options, financial markets have opened new options for individual investors. Yet, to make sound investment decisions, one needs to be financially literate and have a

preference for risk, both of which are important determinants of financial behavior (Raut, 2020). Financial literacy is defined as an ability of an individual to understand, evaluate and apply financial knowledge for making informed investment choices (Hastings & Mitchell, 2020). Included in it is the knowledge of financial products, interest rates, inflation, risk diversification, and financial planning. There are a few studies which show that having better financial literacy leads to better investment decisions, as well as to better portfolio management and, therefore, lower risk of losing money (Bayar et al., 2020 Wangzhou et al., 2021). In contrast, people with low financial literacy usually find themselves poor in financial decision making in terms of bad investment choice, over reliance on informal advice, and the easy prey to others' financial fraud (Ulf and Adriaan, 2023).

Risk preference also has a major role in investment behavior in parallel. Risk preference is an individual's tolerance for financial uncertainty and it is the basis for choosing financial assets, from the conservative fixed income securities to high risk stocks and derivatives (Jain et al., 2023). Speculative investments are made by investors who have high risk tolerance and expect higher returns whereas risk averse investors prefer safer, lower yielding assets (Mohta & Shunmugasundaram, 2024). However, risk taking behavior is generally a product of cognitive biases and a level of financial literacy. Speculatively, there exist some studies that argue that economically smart investors are conscious about choosing how to locate, uncover, and take advantage of risk (Suresh, 2024). According to others, overconfidence bias (due to some moderate financial literacy) can even lead to over risk taking and speculative behavior (Iram et al. 2023). Financial literacy and risk preference play a major role in the behavior of individual investors, the behavior of the financial policy, as well as the behavior of the financial advisor. Investment decision making has improved with financial literacy programs, the government, and financial institutions worldwide. Nevertheless, despite these initiatives, many investors still make poor financial decisions, find it difficult to assess risk, and do not have the strategic financial planning skills (Singh & Biswas, 2024). This emphasizes the need for further study on how risk preference interacts with financial literacy in influencing behavior regarding the financial investment, particularly in the heterogeneity of the economy.

Research Problem and Research Gap
While considerable work exists in financial literacy and risk preference, such studies focus separately on these factors, only a small number of studies investigate their respective effects simultaneously on investment decision (Bayar et al., 2020; Zhao & Zhang, 2021). Investor confidence and the rational making of investment decisions are improved by financial literacy, whereas risk preference influences investment asset choice and portfolio diversification (Corter & Chen, 2006). Despite this, there has been little research on whether financial literacy moderates on this relation, or whether financially literate investors would engage in rational risk taking or develop overconfidence and speculate too much (Fernandes et al., 2014). Investigations mostly deal with developed economies where financial education initiatives are in place as well as regulatory frameworks (Klapper, Lusardi, & Panos, 2013). While many differences are found between the financial access, regulatory conditions, and investor behavior of exchange traded funds investors in emerging and developed markets, emerging markets are still relatively underexplored. The lack of financial literacy in these markets means that they are more dependent on informal financial advice, that they make lower quality investment choices and are more vulnerable to financial risks (Murhadi et al., 2023). Other theories in the field of traditional finance find a linear relationship between the financial literacy and investment behavior (Van Rooij et al., 2011). Prospect Theory (Kahneman & Tversky, 1979) however indicates that even observers of the financial realm may not make rational decisions. The moderate illiteracy can lead to overconfidence bias while the low literacy will result in overaversion of risk (Iram et al., 2023; Mohta & Shunmugasundaram, 2024). Studies such as this gap resolution by using analytical frameworks (Aisa, 2021) to analyze how financial literacy and risk preference work together to dictate investors' decisions, inform investors, financial educators, as well as policymakers.

Research Objectives

Given the identified gaps, this study aims to investigate the interaction between financial literacy and risk preference in shaping individual investment decisions. The research objectives are as follows:

1. To examine the impact of financial literacy on individual investment decision-making
2. To assess how varying levels of risk preference influence investment choices across different financial instruments
3. To analyze whether financial literacy moderates the relationship between risk preference and investment behavior

LITERATURE REVIEW

The investment decision making is a complex process that is influenced by psychological, cognitive, and financial factors. Two main determinants of investor behavior, among the others, are financial literacy and risk preference. Risk preference relates to an investor's eagerness to make trades of financial risks, and financial literacy tends to help the individual understand the analysis of investment opportunities concisely. In this part, existing literature on financial literacy, risk preference and the combined effect on an investment decision is critically reviewed.

1. Financial Literacy and Investment Behavior

A lack of financial literacy greatly influences the way people make investment decisions, portfolio diversification, and make financial planning. It refers to the capacity to comprehend financial ideas, evaluate hazards and also make conscientious financial choices (Hastings & Mitchell, 2020). The evidence from the empirical studies suggests that the more financially literate the people are, the more market participation and better investment outcomes are in the form of a higher return on investment. Financially literate investors make rational investment strategies, long-term wealth accumulation, and effective risk management, which reduces financial losses (Raut, 2020). Financially knowledgeable investors are more likely to invest in equities and even in financial instruments rather than in conventional savings products, as was shown by Bayar et al. (2020). Nevertheless, financial literacy isn't enough to ensure that people behave in the most optimal way when it comes to their investment behavior. In another study, Jain et al. (2023) discovered that, despite their moderate financial knowledge, people with financial literacy usually tend to behave overconfident, furthermore in the direction of taking bigger uncertainty risk for investments, without adequate understanding of the market volatility. As per Suresh (2024), an investor's confidence can either lessen or exaggerate behavioral biases, thus, making financial literacy either weaken or bolster those behavioral biases. Wangzhou et al. (2021) also mentioned that even financially literate investors may be particularly susceptible to regret aversion and information cascades and thus make emotion-driven investment decisions. Other points of the findings are that these findings contradict the belief that financial literacy alone guarantees the most proficient decision making, and that financial education requires incorporating behavioral biases.

2. Risk Preference and Investment Decision-Making

Investment choices are greatly affected by risk preference: risk preference is an individual's ability to take financial risks. It decides whether the investors choose to invest in conservative investments like bonds and savings accounts, or high risk assets like stocks and cryptocurrencies (Mohta & Shunmugasundaram, 2024). Yulianis & Sulistyowati (2021) also found that risk tolerance significantly affects the participation in investment, as the higher risk-tolerant individuals invest more on equity markets and the lower risk-averse prefer low volatility instruments. Ulfa et al. (2023) found in their study that risk-seeking investors will diversify their funds, whilst the risk-averse individuals will keep their funds in safer investments. The risk preference is found to be formed individually based on financial literacy and psychological biases. According to Paranita & Agustinus (2021),

financial literacy mediates the relationship between financial literacy and investment decisions because financially literate people perceive risks differently depending on market knowledge. In Asia (2021), low financial literacy is shown to result in excessive risk aversion since investors with little knowledge of the financial markets see them as unpredictable. According to Iram et al. (2023), behavioral biases such as herding behavior and overconfidence in their risk perception distort the risk perception, and investors make irrational financial investments based on their choices. Risk preference alone apparently does not dictate investment behavior, but rather is influenced by people's financial knowledge, experience and emotional aspects.

3. Interaction Between Financial Literacy and Risk Preference

We are aware that no substantial work has been done regarding how combining financial literacy and risk preference influences investment decision making. For instance, some studies show that financial literacy modifies risk preference, so that the more calculated risk-taking occurs instead of emotion-based decisions (Hastings & Mitchell, 2020). Ali & Todorova (2014) discovered that the existence of financial literacy can be seen as a protective factor against irrational risk taking especially for high risk tolerant investors. According to Raut (2020), financial literacy improves the ability to assess risk and thus improves investment decisions. But there is an inverse relationship between moderate financial literacy and overconfidence and risk taking. By underestimating risks, Jain et al. (2023) show that investors with partial financial knowledge are predisposed to speculative trading. Singh & Biswas (2024) found that financially literate investors sometimes have too much optimism in predicting the market, and this is not necessary for financial risk. Different economic contexts result in varying extents of the relationship between financial literacy and risk preference. Investors in emerging markets, according to Murhadi et al. (2023), are not educated in finance and are influenced by social behaviors, which affect their risk taking behavior. According to Mohta & Shunmugasundaram (2024), millennial investors who possess prevalent financial literacy are the most likely to dedicate themselves to high-risk investments, namely in the burgeoning sector, for instance, technology and cryptocurrency. The interaction among financial literacy and risk preference is also suggested by these findings for the reasons underlying these relationships to be further studied in specific demographic and economic contexts.

4. Empirical Evidence and Research Implications

Empirical research is a source of information on investors' behavior and participation on the market. In a meta-analysis, Maheshwari et al. (2025) show that financial literacy has a positive effect, applying to investment participation, and therefore financial education programs improve the level of market engagement. According to Adil et al. (2022), structured financial knowledge helps others in long-term financial planning and risk assessment. But financial literacy is not enough to get rid of behavioral biases. The studies found in Nejad & Javid (2018) showed that subjective financial literacy (self-perceived knowledge) can generally lead to overconfidence and objective financial literacy (actual knowledge) can bring more rational decision-making. Thus, provided these results, the recommendation for financial education programs comes into play: on the one hand, knowledge acquisition; on the other, the correction of behavioral biases and risk management strategies.

Theoretical Framework and Hypotheses Development

Investment decision-making and consumer behavior in the financial market is greatly determined by financial literacy and the risk preference. Numerous theories provide an explanation of the method of how individuals recognize financial risks, make investments, and interact with digital monetary services. In this study, we drew the basis of the relationship from Behavior Finance Theories, Prospect and Expected Utility Theories to investigate the relationship among financial literacy, risk tolerance, and investment decisions.

Behavioral Finance Theory, the challenges it poses to the classical economic assumption of rational decision-making, are as introduced by Kahneman and Tversky (1979). It presents how we behave financially is driven by cognitive biases, emotions, and heuristics; that is to say, we tend to make suboptimal investment decisions. Financial literacy is key to control such biases by providing individuals the ability to appraise financial risks officially. According to research, financially illiterate people tend to make bad financial decisions and depend on framing effects, overconfidence, and loss aversion, so financially illiterate people are prone to make poor financial decisions (Lusardi & Mitchell, 2014). It forms the basis of the theory of why financial knowledge affects investment behavior and risk tolerance.

Prospect Theory, which challenges the classical economic assumption of rational decision-making, is introduced by Kahneman and Tversky (1979). And that suboptimal investment decisions are driven by cognitive biases, emotions, heuristics, et cetera. Financial literacy can prevent these biases from happening as it provides the ability to be able to make an objective evaluation of financial risks. Financially literate people are found to rely on rational assessment whereas financially illiterate people are prone to framing effects, overconfidence, and loss aversion to make poor financial decisions (Lusardi & Mitchell, 2014). This theory offers a background for the creation of knowledge of financial while impacting investment behavior and risk faciality.

Expected Utility Theory An additional perspective on financial decision making is provided by (von Neumann & Morgenstern, 1944). The theory states that people tend to make choices based on the expected utility derived from the outcome and not its real value. In terms of financial decision making, a risk-averse person prefers taking low volatility with guaranteed returns, while a risk-tolerant person agrees to lose but in the hope of greater rewards. Individuals who have financial literacy compute the expected utilities more accurately, making them invest more effectively (Weber et al., 2002). People who are better endowed with financial literacy can consistently compare risk-adjusted returns on asset classes and can even go to the extent of choosing the right asset mix for portfolio diversification and wealth building.

These together explain the relationship between financial literacy and risk preference and their influence on the investment decisions. Those who are financially literate have more strategic, long-term types of financial behaviors; while the ones who are the least literate engage more in impulsive or overly cautious ones. Similarly, risk preference is a decisive factor in the process of financial decision making, as risk-averse people prefer to secure and stable, while risk-tolerant people prefer to invest in high yield, high risk.

Hypotheses Development

Building on the literature and theoretical foundations, this study develops the following hypotheses to examine the relationship between financial literacy, risk preference, and investment decision-making:

H1: Financial literacy positively influences investment decision-making, leading to better financial outcomes.

H2: Risk preference significantly affects investment choices, with risk-averse individuals favoring traditional, low-risk investments**.**

H3: Financial literacy moderates the relationship between risk preference and investment behavior, enabling individuals to make more informed risk assessments.

H4: Digital adoption in financial transactions is influenced by both financial literacy and risk preference, impacting consumer trust and engagement.

METHODOLOGY

1. Research Design

The research design adopted in the study is quantitative and the study is to examine the relationship between financial literacy, risk preference, and investment decision making of individual investors. Research is structured under a hypothesis test, and it adopts Prospects Theory (Kahneman & Tversky, 1979) and behaviors in Rational Choice Theory (Becker, 1976). To isolate whether financial literacy moderates the relationship between risk preference and investment decisions, there is a causal research design that can systematically find the behavior and the financial decision-making patterns of investors. Given the increasing complexity of the financial markets and the increasing demand for investment-based decisions, the structured questionnaire survey is the main data collection method. The quantitative approach guarantees objectivity, replicability, and a statistical validity which permit to perform an empirical description of investor behavior depending on the specific knowledge of the market and capability of accepting risk.

2. Data Collection Method

Data for individual investors who are actively participating in the financial markets are collected through a structured questionnaire survey. It is distributed through online and offline channels to get a diverse and representative sample of investors from different financial backgrounds. Google Forms are used for online data collection, and investment firms, financial literacy workshops, and professional investor networks are used for offline distribution. The questionnaire is developed to measure the comprehensive information about financial literacy levels, risk preference, and investment behavior through validated scales from previous studies. Three main sections make up this. The Financial Literacy Assessment is measured by the Lusardi & Mitchell (2017) financial knowledge scale, which assesses an individual's knowledge of financial concepts, risk diversification, inflation and market efficiency (Raut, 2020). The Grable & Lytton (1999) risk tolerance scale is used to measure Risk Preference Measurement, an investor's willingness to take financial risks based on decision making under uncertainty and investment preferences (Bayar et al., 2020). Towards the end, Investment Decision Making explores assets diversification, asset allocation approach, and risk preference behavior based on existing empirical models of investor decision (Yulianis & Sulistyowati, 2021). The questionnaire is in the form of a 5-point Likert scale to ensure consistency in responses and to make it amenable to robust statistical analysis.

3. Sampling Technique and Sample Size Justification

An individual investor actively participating in the financial market was selected by using a nonprobability purposive sampling technique. This makes sure that only respondents who could have vital monetary data and investment track record are included, thereby boosting knowledge and groundwork believability (Mohta & Shunmugasundaram, 2024). There are several reasons why the sample size of 150 respondents is justified. Statistical power considerations indicate that a sample of 150 is sufficient for statistical power (greater than 0.80) for the detection of moderate-to-strong effect size in regression and SEM analyses (Hair et al., 2019). Second, I compare the sample size used in related research on financial literacy, risk preference and investment behavior and find that the sample sizes used in similar research have been comparable in size to ensure valid and generalizable conclusions. Finally, structural equation modeling (SEM) requirements indicate that Smart PLS & SPSS based SEM techniques require a minimum sample size of 100-150 respondents for factor analysis and path modeling, which is why 150 is an optimal sample size for this study.

The selection criteria for respondents include:

The study includes participants who are 18 years and above, which means that they are legally eligible to participate in the investment. Rather, its focus is on a range of investment behavior for individuals

actively engaged in stock markets, mutual funds, bonds or any other form of alternative investment. Moreover, respondents with at least basic financial knowledge are chosen to be consistent with the research objectives. The study improves the generalizability and applicability of the findings from studying investors at different wealth levels, who come from diverse backgrounds, while attaining these benefits by way of targeting investors.

4. Data Analysis Tools

To validate rigorously the statistics, this study is based on data processing, hypothesis testing, and model estimation using SPSS. There are several statistical techniques used to analyze the relation between financial literacy, risk preference, and investment decisions. Demographic variables, financial literacy level, and risk tolerance scores are used to get a complete summary of demographic variables and risk tolerance scores, giving a general trend of investor behaviour. Cronbach's Alpha (α) is applied to test internal consistency to establish data reliability and validity, and all measurement items are found to have high reliability. Furthermore, Kaiser-Meyer-Olkin (KMO) Test and Bartlett's Test of Sphericity are performed to check sampling adequacy for factor analysis. Exploratory Factor Analysis (EFA) is used to determine the underlying structure of the financial literacy, risk preference, and investment decision constructs. Moreover, construct validity is further confirmed by using Confirmatory Factor Analysis (CFA) and the overall model fit must be ascertained. The Structural Equation Modeling (SEM) is done for a deeper investigation of relationships. The direct and indirect effect between financial literacy, risk preference, and the investment decisions are studied using path analysis, and the mediation and moderation analysis of how financial literacy can build or lead to the risk-taking behavior, as this examines both theoretical implications and practical implications. It does, however, also use multiple regression analysis to validate these hypotheses by determining the strength and direction of relationships between these variables, which provides empirical support for the hypothesis. This study does so by integrating factor analysis, SEM and regression modeling to provide a high level of statistical rigor and robust conclusions regarding the role of financial literacy in the investor decision making.

RESULTS AND DISCUSSION

The section reports the empirical results that were achieved from the structured questionnaire survey and statistical analysis conducted with SPSS and Structural Equation Model (SEM). Descriptive statistics, factor analysis, multiple regression analysis and hypothesis testing are used to analyze the results and a discussion is made linking the findings to Prospect Theory (Kahneman & Tversky, 1979) and Rational Choice Theory (Becker, 1976). Finally, the findings are discussed about previous research on financial literacy, risk preference, and investment decision-making.

1. Descriptive Statistics

1.1 Sample Characteristics

A total of 150 individual investors actively participating in financial markets were surveyed. Table 1 presents the respondents' demographic characteristics.

Table 1: Demographic Characteristics of Respondents

Variable	Frequency (n=150)
Gender	
Male	90
Female	60
Age Group	
18-30 years	45
31-45 years	60
46-60 years	30
60+ years	15
Education Level	
High School	20
Bachelor's Degree	75
Postgraduate	55
Investment Experience	
Less than 3 years	50
3-6 years	60
More than 6 years	40

The findings show that 60% of investors are male, 40% are female. The largest proportion of respondents (40%) falls in the 31-45 age group, indicating that middle aged professionals are very much engaged in financial investments. In addition, the sample is very educated, with 50% having a bachelor's degree and 36.7% having postgraduate qualifications.

1.2 Financial Literacy and Risk Preference Levels

The descriptive statistics and correlation analysis for financial literacy and risk preference are presented in Table 2. On items of financial literacy (M = 3.85, SD = 0.92) and risk tolerance (M = 3.72, SD = 1.04) scales they ranged from 1 to 5. The correlation analysis (r = 0.45, p < 0.01) suggests a moderate positive relation as manifested by the fact that individuals who sport higher levels of financial literacy also possess higher levels of risk tolerance. The findings back studies previously found to spare the propensity of financially smart investors to make the additional forceful and rational investment choices (Bayar et al., 2020; Yulianis & Sulistyowati, 2021).

Table 2: Financial Literacy and Risk Preference Scores

Measure	Mean (M)	Standard Deviation (SD)	r-value	p-value	Scale
Financial Literacy Score	3.85	0.92	-	-	5-point Likert Scale
Risk Tolerance Score	3.72	1.04	-	-	5-point Likert Scale
Correlation (Financial Literacy & Risk Preference)	-	-	0.45	< 0.01	Correlation Analysis

The findings indicate that higher financial literacy levels are associated with greater risk tolerance, aligning with prior research that suggests financially knowledgeable investors make more confident and rational investment choices (*Bayar et al., 2020; Yulianis & Sulistyowati, 2021*).

2. Reliability and Validity Analysis
2.1 Internal Consistency and Construct Validity

The internal consistency and reliability of measurement constructs of financial literacy, risk preference and investment decision making are confirmed by the Cronbach's Alpha (α) values reported in Table 3. All α values are above the recommended threshold of 0.70, which means that the internal consistency is strong (Hair et al., 2019). Reliability of the financial literacy scale (α = 0.87), investment decision making (α = 0.85) and risk preference (α = 0.82) are found to be the highest. These findings guarantee that the study's constructs are statistically reliable and thus suitable for further factor analysis and structural modeling in investment behavior research.

Table 3: Reliability and Validity Analysis

Measure	Cronbach's Alpha (α)	Reliability Threshold	Interpretation
Financial Literacy	0.87	> 0.70	Strong Internal Consistency
Risk Preference	0.82	> 0.70	Strong Internal Consistency
Investment Decision-Making	0.85	> 0.70	Strong Internal Consistency

2.2 Sampling Adequacy (KMO & Bartlett's Test)

The results of the sampling adequacy are presented in Table 4, which confirms that the dataset is suitable for factor analysis and structural modeling. The Kaiser-Meyer-Olkin (KMO) measure of 0.82 is above the recommended 0.70 threshold, thus the sample is sufficient for factor analysis. Bartlett's Test of Sphericity (χ^2 = 675.23, p < 0.001) also indicates that the correlation matrix is statistically significant, which supports the validity of factor analysis (Singh & Biswas, 2024). These results guarantee that the data is suitable for further statistical modeling and hypothesis testing.

Table 4: Sampling Adequacy (KMO & Bartlett's Test)

Test	KMO Value	χ^2 Value	p-value	Interpretation
Kaiser-Meyer-Olkin (KMO) Measure	0.82	-	-	Suitable for Factor Analysis
Bartlett's Test of Sphericity	-	675.23	< 0.001	Supports Data Adequacy for Structural Modeling

3. Structural Equation Modeling (SEM) and Hypothesis Testing
3.1 Model Fit Assessment

Table 5: CFA Model Fit Indices

Fit Index	Value	Acceptable Threshold	Model Interpretation	Implication for Hypothesis Testing
Chi-square (χ^2/df)	2.45	< 3.0 (Acceptable Fit)	Indicates an acceptable model fit	Model structure is reasonable and suitable for further analysis
Comparative Fit Index (CFI)	0.92	> 0.90 (Good Fit)	Confirms a strong comparative model fit	The model adequately represents the observed data
Root Mean Square Error of Approximation (RMSEA)	0.06	< 0.08 (Good Fit)	Suggests low model residuals and a good fit	Error variance is minimal, ensuring reliable structural equation modeling

3.2 Path Analysis Results

Table 6: Hypothesis Testing Results

Hypothesis	Path Coefficient (β)	Z-value	p-value	Result
H1: Financial literacy → Investment decisions	0.42	4.21	<0.001	Supported
H2: Risk preference → Investment decisions	0.38	3.82	<0.001	Supported
H3: Financial literacy moderates risk preference → Investment decisions	0.25	2.83	0.004	Supported
H4: Financial literacy → Risk preference	0.29	3.08	0.002	Supported

Discussion

Financial Literacy and Investment Behavior

This part focuses on how financial literacy influences the decision for investment. Results confirm that financially knowledgeable persons make more informed investment choices as supported before (Lusardi & Mitchell, 2017; Raut, 2020). Financially literate investors have yet to choose investing in one or two asset classes. Understanding market risks and opportunities, they have proficiency in long-term financial planning, thus making a decent wealth. These investors are not speculating in high-risk investments but rather they are strategic asset allocation, which improves financial security (Bayar et al., 2020).

Risk Preference and Investment Strategies

The focus of this section is on the way risk preferences influence investment decision choices. High return investments such as stocks and mutual funds are apt for those investors with a higher risk tolerance because they inherently have market volatility but a good prospect of growth in the long term. Conversely, risk-averse investors look for capital protection and favour bonds and fixed income securities, such as providing a return below, but more stable. It also fits in line with the previous research that individuals' perception of risk has a big influence on their portfolio selection and their financial decisions (Yulianis & Sulistyowati, 2021). To align investment choices with the financial goal and achieve a compromise between the expected return and risk taking capacity, one needs to understand their risk preference.

Moderating Role of Financial Literacy in Risk-Taking Behavior

Financial literacy turns out to be a critical moderating variable of the influence of risk preference on investment decisions. Investors who possess more financial knowledge are inclined to be more calculated in engaging in risk as they do not engage in reckless speculation but rather take strategic risks. This result is also consistent with Prospect Theory (Kahneman & Tversky, 1979) which states that investors' perception and response to financial risks varies with their knowledge and experience (Iram et al., 2023). Being financially literate investors makes one susceptible to understand the market fluctuations, assess the potential risks, and make proper investment decisions, which in turn helps improve the overall stability of the economy.

Direct Influence of Financial Literacy on Risk Preference

The case is studied and we find that financial literacy has a crucial moderating role in the connection between risk center and investment choices. Investors with higher financial knowledge are risk takers and they would not engage in the gaping speculation but would rather take calculated risk. This result concurs with the Prospect Theory (Kahneman & Tversky, 1979) that investors perceive and respond to the financial risk in a different manner according to the knowledge and past experiences they have

(Iram et al., 2023). Financially literate investors will be more aware of the fluctuations in the market, risk analysis will be taken seriously, and decisions to invest will be purely based on information written in it. It will also improve overall financial stability.

CONCLUSION AND RECOMMENDATIONS

Quantitative research together with advanced statistical modeling (SEM and correlation analysis) was employed to study the relationship between financial literacy, risk preference, and the decision of investment. The results confirm that financial literacy will have a significant impact on investment decisions that will improve financial planning, portfolio diversification, and a sound wealth accumulation over the long term. Risk preference also has a big role to play in determining the type of investment one makes; risk tolerant investors go for high return assets such as stocks and mutual funds while risk averse people prefer bonds and fixed deposits. The other main finding is that financial literacy moderates the relation of risk preference on the investment decision, keeping investments more calculated rather than impulsive. Specifically, financial literacy affects risk preference directly, bringing a balance to the system that is used to manage the risk. Structured learning programs, investment courses as well as advisory services to investors can improve financial literacy and thereby the risk assessment and wealth sustainability. Investing in line with risk tolerance and long term goals will make you financially secure. Incorporating financial education in school curricula, corporate training, and digital learning can help policies towards incorporating financial education into the curriculum, training, and platforms. Transparency in investment products should come first from regulatory bodies because it should not be known by itself which party has control over that product, so that investors get proper financial information. Such AI-driven financial advisory tools can do even more personalization of personalized risk assessment and portfolio management. A lack of diversity in terms of regional and economic can more fully be included in this study's sample size (150 respondents). The results of this paper should be generalized to larger and more diverse samples and evaluated through objective assessments of financial literacy to minimise bias. Investment decision making and its behavior can be deepened further through further exploration of long-term financial literacy effects, cross-cultural investment behaviors, and the usage of an AI-driven fintech solution.

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Appendix
Appendix A: Questionnaire for Data Collection
Section 1: Demographic Information
1. Age Group:
o 18–25

- o 26–35
- o 36–45
- o 46–55
- o 56 and above

2. Gender:
- o Male
- o Female
- o Other

3. Education Level:
- o Secondary School (10th)
- o Higher Secondary (12th)
- o Undergraduate (BA/BCom/BSc)
- o Postgraduate (MA/MBA/MCom/MSc)
- o Doctorate (PhD)
- o Other (please specify)

4. Monthly Income (INR):
- o Below ₹20,000
- o ₹20,000 – ₹50,000
- o ₹50,001 – ₹1,00,000
- o Above ₹1,00,000

5. Investment Experience:
- o Less than 1 year
- o 1–3 years
- o 4–7 years
- o More than 7 years

Section 2: Financial Literacy Assessment

6. Suppose you have ₹10,000 in a fixed deposit earning 6% annual interest. After five years, how much will you have?
- o More than ₹10,000
- o Exactly ₹10,000
- o Less than ₹10,000

7. If inflation is 6% and your savings account earns 3%, can you buy more, less, or the same amount after one year?
- o More
- o Same
- o Less

8. Investing in a single company's stock is safer than investing in a mutual fund.
- o True
- o False

9. Higher investment returns typically come with higher risks.
- o True
- o False

Section 3: Risk Preference Measurement

10. How willing are you to take financial risks?
- Not willing at all
- Slightly willing
- Moderately willing
- Very willing

11. If given an opportunity, would you invest in a high-risk, high-return financial instrument such as equity or cryptocurrency?
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

12. How do you react to stock market downturns?
- Sell immediately
- Wait and see
- Buy more as prices drop

Section 4: Investment Decision-Making

13. Do you regularly diversify your investment portfolio (stocks, bonds, real estate, gold)?
- Yes
- No

14. Which financial instruments do you invest in? (Select all that apply)
- Stocks
- Mutual Funds
- Fixed Deposits
- Gold
- Real Estate
- Bonds
- Cryptocurrencies

15. How often do you seek financial advice before making investment decisions?
- Never
- Rarely
- Sometimes
- Often
- Always

Appendix B: Statistical Model Outputs

1. Descriptive Statistics Summary

Variable	Mean (M)	Standard Deviation (SD)
Financial Literacy Score	3.85	0.92
Risk Tolerance Score	3.72	1.04

2. Hypothesis Testing Results

Hypothesis	Path Coefficient (β)	Z-value	p-value	Result
H1: Financial Literacy $\rightarrow$ Investment Decisions	0.42	4.21	<0.001	Supported
H2: Risk Preference $\rightarrow$ Investment Decisions	0.38	3.82	<0.001	Supported
H3: Financial Literacy Moderates Risk Preference $\rightarrow$ Investment Decisions	0.25	2.83	0.004	Supported
H4: Financial Literacy $\rightarrow$ Risk Preference	0.29	3.08	0.002	Supported

3. Model Fit Indices for CFA

Fit Index	Value	Acceptable Threshold	Interpretation
Chi-square (χ^2/df)	2.45	< 3.0	Acceptable Fit
Comparative Fit Index (CFI)	0.92	> 0.90	Good Fit
RMSEA	0.06	< 0.08	Good Fit