## Original Article

# Impact of Financial Planning on Risk Appetite: A Mediation Effect of Financial Literacy

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Abstract - Financial behavior plays a crucial role in shaping individuals' decisions regarding money management and their willingness to accept risk. This research examined how financial planning and financial literacy influence risk tolerance among young adults. Using a structured questionnaire approach, the primary data was gathered from 76 participants in India, primarily young people between 18 and 35. The analysis employed Pearson correlation analysis, regression modeling, and mediation testing techniques. Results demonstrated strong positive correlations between financial planning, financial literacy, and risk tolerance. However, financial literacy showed no meaningful relationship with risk tolerance. Regression findings confirmed that financial planning directly and significantly affects individual risk appetite, while financial literacy demonstrates neither direct nor indirect influence on risk tolerance. Consequently, financial literacy fails to act as a meaningful mediator in the financial planning risk tolerance relationship. Literature suggests that demographic characteristics and behavioral heuristics work alongside financial literacy when assessing risk appetite. These findings offer valuable insights for financial service providers and policymakers seeking to develop educational programs and investment guidance for young adults, emphasizing practical financial planning skills and portfolio diversification strategies aligned with individual risk preferences.

Keywords - Financial economics, Financial behavior, Financial knowledge, Money management, Risk tolerance, Youth.

## 1. Introduction

# 1.1. General Background

Today's complex financial environment requires individuals to approach wealth management systematically through diverse investment vehicles. Financial planning encompasses more than mere investment activities; it involves a comprehensive evaluation of personal financial objectives [1]. Several elements influence financial planning effectiveness, including knowledge of financial markets, individual perspectives on money, and personal control beliefs [2]. Comprehensive financial planning addresses multiple areas: daily expense management, long-range investment strategies, insurance coverage, and retirement preparation [1]. Contemporary society shows increasing interest in structured financial planning, particularly investment strategies. Personal regarding finance management and investing have become fundamental life skills in our money-driven economy. People distribute investments across various instruments to reduce exposure while maximizing returns [3].

The proliferation of sophisticated financial products and services creates challenges for young people in developing effective financial strategies, highlighting the critical importance of financial education. As defined by [4], financial literacy represents "the capacity to assess novel and complex financial products and make well-informed decisions regarding both instrument selection and usage levels that serve their long-term best interests." Financial institutions and educational organizations worldwide recognize financial education as fundamentally important. Following the 2007 global financial crisis, numerous experts identified inadequate financial knowledge across various demographic segments [5]. Research consistently shows that individuals with stronger financial knowledge tend to make superior financial and investment decisions compared to those with limited understanding [6].

Additionally, financial decision-making patterns are influenced by various demographic characteristics such as gender, age, investment experience, educational background, and income levels [6]. Risk tolerance represents another crucial factor affecting financial behavior. Financial risk tolerance (FRT) describes "the level of risk an individual willingly accepts when making financial decisions" [7]. Individual risk preferences correlate with financial literacy levels; higher financial knowledge often leads to decreased patience and increased confidence, potentially resulting in more conservative behavior [8]. Beyond financial knowledge, factors including demographic characteristics, psychological traits, social influences, economic stability, and geographic differences shape financial risk appetite [9]. Research by [10] found that male investors typically demonstrate higher risk tolerance than female investors when making investment choices. A Chinese study by [11] revealed that self-confidence and personality characteristics significantly impact retail investor risk preferences.

#### 1.2. Literature Review

The existing literature extensively explores the relationships between financial planning, financial literacy, and risk tolerance across various geographic regions, countries, and periods. Research by [12] examined how socio-demographic characteristics and financial literacy relate to personal financial planning. Using survey data from 400 Malaysian participants, findings indicated that age, education level, income, and financial literacy significantly influence financial planning behaviors. Older individuals tend to demonstrate greater financial responsibility. More educated and financially knowledgeable people better understand personal financial planning concepts. Income levels correlate with savings capacity for investments and asset acquisition. Interestingly, gender showed no significant impact on financial planning behaviors.

Young people increasingly pursue financial investments as essential components of modern earning strategies. Without adequate financial knowledge, youth often prioritize asset acquisition over comprehensive financial planning. Research by [13] investigated financial literacy challenges facing young people. Survey data from 200 participants assessed financial literacy levels and money management capabilities. Results showed no significant gender-based differences in financial literacy within the sample. Additionally, minimal differences appeared in financial instrument preferences between recently employed men and women. The study concluded that difficulty in practically creating diversified portfolios using advanced financial instruments represents the primary constraint in applying financial knowledge.

Additional research evaluated the need for enhanced financial literacy through educational policies [14]. This work emphasized young people's critical role in national economic development and their need for financial knowledge. The study assessed financial literacy levels among youth in Daugavpils through survey methods. Findings indicated that young people in this region require improved financial knowledge and lack adequate decision-making skills. Recommendations suggested that educational policymakers should incorporate financial literacy curricula in higher education institutions to support student development in finance.

Risk appetite significantly influences individual financial behavior. To examine investor risk appetite and demographic characteristics, [15] surveyed 260 participants from Haryana, India. Results revealed that age, investment experience, marital status, and employment status significantly correlate with risk appetite, while gender and education do not. Findings indicated that risk appetite decreases with age, and unmarried individuals show greater risk tolerance than married people. Higher formal education levels do not necessarily improve risk assessment capabilities and do not lead to increased financial risk appetite.

Swedish research used retail bank data and customer questionnaires to examine the interconnection between financial literacy, financial interest, and individual risk appetite [16]. Researchers discovered positive and significant relationships between financial literacy, interest, and risk tolerance. Results suggested that higher financial literacy and interest levels correspond to greater risk tolerance. The study also showed that financial interest has a stronger impact on risk appetite than financial literacy alone.

### 1.3. Literature Gap and Rationale of the Study

After a comprehensive literature review, several research gaps became apparent. First, financial planning, literacy, and investment topics remain underexplored within Indian demographic contexts. Second, most existing studies do not specifically target youth populations, representing a growing demographic in countries like India. While some studies analyze direct relationships between financial literacy and risk appetite, limited analysis of financial literacy's mediating role exists in financial planning risk tolerance relationships. global evolution accelerates scientifically and economically, financial knowledge becomes essential for survival. Employment opportunities decrease as businesses favour capital over labour, creating the need for youth to understand alternative income generation and gain deeper knowledge about financial systems. Evidence suggests increased stock market volatility over recent years and economic uncertainty, making risk tolerance and appetite crucial for growth during uncertain periods. Everyone maintains financial goals, business objectives, and retirement plans. Achieving these goals requires effective financial planning.

Therefore, this study analyzes Indian youth behavior regarding financial planning, financial literacy, and risk appetite, specifically exploring how financial planning and literacy impact risk appetite.

## 2. Methodology

## 2.1. Research Aim and Objectives

This investigation focused on examining youth financial behavior patterns. To accomplish this assessment, the research analyzes relationships between financial planning, financial literacy, and risk tolerance among young adults. The study pursues the following specific objectives:

- 1. Evaluate correlations between financial planning, financial literacy, and risk tolerance
- 2. Determine the direct effects of financial planning and financial literacy on risk tolerance
- 3. Examine financial literacy's mediating role in explaining financial planning-risk tolerance relationships

## 2.2. Research Hypotheses

The following null hypotheses address objectives 1, 2, and 3, respectively:

Objective 1: Correlation analysis hypotheses:

- Null Hypothesis 1: No correlation exists between financial planning and risk tolerance
- Null Hypothesis 2: No correlation exists between financial literacy and risk tolerance
- Null Hypothesis 3: No correlation exists between financial planning and financial literacy

Objective 2: Direct relationship hypotheses:

- Null Hypothesis 4: No significant direct impact exists from financial planning on risk tolerance
- Null Hypothesis 5: No significant direct impact exists from financial literacy on risk tolerance

Objective 3: Indirect effect hypothesis:

• Null Hypothesis 6: No significant mediating effect exists from financial literacy when analyzing financial planning's impact on risk tolerance

## 2.3. Tools and Scales Used

This study employed a quantitative survey using established scales for data collection. The questionnaire contained two main sections: demographic information and financial behavior assessment. The financial behavior section included three subsections: financial literacy, financial planning, and risk appetite. All subsections utilized validated standard scales from previous research studies.

Financial literacy assessment used three multiple-choice questions covering inflation, interest rates, and investment choices, adapted from [17]. Original questions used dollar currency, which was converted to Indian Rupees (INR) to match the target Indian audience. The financial planning evaluation included 15 statements: 4 addressing money management, 6 covering insurance planning, and 5 focusing on investment planning. The financial planning scale was adapted from [18]; however, retirement planning and estate planning components were excluded, given the youth target audience. Risk appetite assessment incorporated 5 standard statements from [19].

Financial planning and risk appetite statements used 5-point Likert scales ranging from 1 (strongly disagree) to 5

(strongly agree). Questions were implemented through Google Forms using multiple-choice and grid formats. A filter question, "What is your current age?" excluded respondents outside the 18-35 year range. Since the study specifically examined youth, all responses from individuals below 18 or above 35 were excluded.

#### 2.4. Sampling and Sample Characteristics

The data is collected using convenience and targeted sampling. The Google Forms are circulated mainly to youths aged 18 to 35 through WhatsApp and offline mediums. From the data, it was observed that more than 95 percent of the responses were based in India. Initially, there were 124 responses, which were filtered on the basis of age. Out of the remaining 76, the final sample size is 28, which lies in the group of 18-25 years, 25 belongs to the 26-30 years group, and the remaining 23 lies in the age bracket of 31-35 years. Moreover, 56.58 percent of the respondents were single, and the rest were married. The data for education qualification shows that around 87 percent of the individuals have at least completed a bachelor's degree, out of which 51 percent have completed a master's degree. Similarly, 88.16 percent of the sample were employed, while the remaining were unemployed, 90 percent of whom were students. Lastly, out of those who are employed, around 68 percent were earning less than 10 lakhs INR per annum.

#### 2.5. Ethics and Informed Consent

In the data collection process, the participants had voluntarily consented to fill out the form. The individuals were well-informed about the study in advance. Additionally, it was ensured that the confidentiality of the respondents' personal information would be maintained. The collected data was not shared with any third party and was solely used for research. It was affirmed that at any point in time, while filling out the survey, participants are allowed to terminate their participation if they wish to quit.

# 2.6. Statistical Tools and Techniques

The research paper used multiple statistical tools and techniques to evaluate the collected data. After cleaning and organizing the data, results for correlation analysis, simple regression analysis, and mediation impact were calculated using DataTab. "Correlation analysis is a statistical method that assesses the strength and direction of the relationship between two variables, which helps researchers to understand whether changes in one variable are associated with changes in another and to quantify the degree of this association [20]." For the same, the Pearson coefficient of correlation has been considered. "Simple linear regression is a statistical framework applied to model the relationship between the independent variables and the dependent variable, aiming to predict or explain the variation in the dependent variable based on the independent variable" [21]. This study examined financial planning and literacy impacts on risk tolerance as the dependent variable. Moreover, in statistics and research, a "mediation impact refers to an indirect effect where one variable (the independent variable) influences another (the dependent variable) through a third variable, called a mediator, rather than directly" [22]. Financial literacy's mediating effect was calculated to evaluate financial planning's indirect relationship with risk tolerance.

## 3. Results

Table 1 presents correlation coefficients (r) and p-values (p) for financial literacy, financial planning, and risk tolerance variables. Results show a modest, positive, and significant correlation (r = 0.25, p-value = 0.029) between financial planning and financial literacy, indicating that

increased financial planning corresponds with significantly increased financial literacy at a low magnitude and vice versa. Financial planning demonstrates a weak positive correlation (r = 0.33, p-value = 0.003) with risk tolerance, suggesting that increased financial planning leads to significantly increased risk tolerance at lower proportions and vice versa. The negative correlation (r = -0.03, p-value = 0.78) between financial literacy and risk tolerance implies that increased financial literacy corresponds with decreased risk tolerance at a very low magnitude and vice versa. However, since the p-value exceeds 0.05, this relationship lacks significance.

Table 1. Correlation Results for Financial Planning, Financial Literacy, and Risk Tolerance

Variable		Financial Literacy	Financial Planning	Risk Tolerance
Financial Literacy	r	1	0.25	-0.03
	p		0.029**	0.78
Financial Planning	r	0.25	1	0.33
	p	0.029**		0.003***
Risk Tolerance	r	-0.03	0.33	1
	p	0.78	0.003***	

Note: \*\*\* indicates p-value < 0.01, \*\* indicates p-value < 0.05

Table 2. Regression Analysis Results with Risk Tolerance as Dependent Variable

Model	Coeffic ients	Standard errors	t-statistic	p-value
X	0.16	0.05	3.23	0.002***
M	-0.65	0.59	-1.1	0.276

Note: M represents financial literacy, \*\*\* indicates p-value < 0.01

Table 3. Mediation Analysis Results - Financial Planning Effect on Risk Tolerance with Financial Literacy as Mediator

Impact of X on Y	Effect	SE	t	p
Total	0.15	0.05	3.05	0.003***
Direct	0.16	0.05	3.23	0.002***
Indirect	-0.01	0.02	-0.91	1

Note: X represents financial planning, Y represents risk tolerance, \*\*\* indicates p-value < 0.01

After incorporating financial literacy as a mediator, the relationship between financial planning and risk tolerance remains positive and significant, though lower than the direct impact. In this case, when financial planning increases by one unit, risk tolerance significantly increases by 0.15 units. However, the indirect impact of financial planning on risk

tolerance mediated by financial literacy (-0.01, p-value = 1) lacks significance.

### 4. Discussion

Findings reveal that financial planning significantly impacts individual risk tolerance. Financial planning encompasses various strategies that assist in risk management, including financial management, savings, and investments. It can build individual confidence and promote greater risk tolerance and risk-taking decisions [23]. Therefore, financial planning directly impacts financial behavior. When individuals focus primarily on money management skills, they become more likely to make riskier decisions and develop higher risk tolerance. Research shows financial planning has more tangible and direct impacts on youth [24]. When young people gain experience handling and understanding money, they tend to become more riskaccepting. Research by [25] supported these results by revealing that individuals with a greater inclination toward financial planning demonstrate higher risk tolerance levels, highlighting the interconnected nature of financial planning and risk tolerance.

Beyond financial planning, emotional comfort and behavioral control significantly influence risk tolerance. These psychological factors also affect financial planning and help investors control stress and negative thoughts during risky investments [26], increasing individual risk tolerance [23]. Other demographic factors such as age, experience, income stability, and portfolio diversification significantly determine individual risk-taking capacity [27]. Some studies show that financial literacy increases individual risk tolerance by building self-confidence, which increases willingness to accept higher risks [23], resulting in improved financial decisions and behavior.

Although many studies demonstrate that financial literacy increases risk tolerance, the effect is often insignificant or partial, with emotional intelligence or financial planning playing key roles [16]. Sometimes, financial literacy mediates risk tolerance through financial behavior, creating a partial impact. Some studies reveal that financial literacy plays a significant role for people with lowrisk appetites but negatively impacts those with high-risk tolerance [28]. However, contrary to expectations, results show that financial literacy does not directly impact risk tolerance. Moreover, no significant mediating effect of financial literacy exists when evaluating financial planning's impact on risk tolerance. Similar results were found by [29], proving that financial literacy does not affect risk tolerance levels, but demographic factors such as income and gender influence risk appetite. Furthermore, arguments suggest that combinations of financial literacy and demographic characteristics should affect risk tolerance during investment decisions. This justification receives support from [30], who showed that middle-aged individuals with higher education qualifications and income demonstrate higher risk tolerance. Therefore, financial literacy does not individually impact risk appetite.

These findings are further explained through the heuristics theory [31]. Heuristic theory suggests that rational individuals do not operate purely based on information and knowledge but rather consider their current mood and mental state. An important factor influencing risk appetite is individual experience in financial investments. Research by [32] signifies that real-life and hands-on financial market experiences are superior to financial literacy alone. Therefore, financial literacy alone does not impact risk tolerance, but other complementary factors such as demographics, experience, financial planning, and heuristics significantly determine risk appetite.

#### 5. Conclusion

Multiple factors impact individual risk tolerance. This paper studies and examines the relationships between financial planning and literacy on risk tolerance. Quantitative data were collected using standardized surveys with random and targeted sampling to evaluate this comprehensively. Correlation analysis, regression analysis, and mediation impact assessment were used to analyze data from 76

responses. Correlation coefficients indicated that financial planning correlates positively and significantly with risk appetite and financial literacy. However, a negative but insignificant correlation exists between financial literacy and risk tolerance. Regression analysis findings revealed that risk tolerance is positively and significantly influenced by financial planning but not financial literacy. Additionally, no mediating impact of financial literacy exists when evaluating financial planning's impact on risk tolerance.

Literature indicated that many other factors affect risk tolerance, including demographics, experience, and heuristics. Financial planning requires strategizing savings and investments, which assists in risk management. These actions have a direct impact on individual financial behavior through financial planning. When youth gain more hands-on money-handling experience, they become more confident and risk-tolerant. Along with planning, emotional comfort and behavioral control significantly determine risk appetite. The study showed that many demographic factors, such as age, income, and experience, significantly impact risk tolerance levels. Conversely, financial literacy is a complex and inconsistent factor in risk tolerance. Financial literacy involves individual learning and knowledge acquisition about financial markets. The effect of financial knowledge is negligible for people with high-risk tolerance, while the impact is significant for those with low-risk tolerance. Individual heuristics also impact risk tolerance. Conclusions indicate that rational persons cannot work based solely on knowledge; they must consider mood, mental state, and experience. In conclusion, financial planning significantly impacts youth risk tolerance, while financial literacy has a minimal tangible impact. However, when combined with other demographic factors and heuristics, financial literacy can influence risk appetite.

Despite valuable findings, several research limitations exist. First, the study was geographically limited and did not survey people from different regions. Second, the sample size was limited to 76 respondents after data cleaning. Third, demographic factor comparisons that could be analyzed alongside the main objectives were lacking. Finally, regression lacked controlled variables that might influence relationships between key variables. These limitations may result in limited generalizability. Restricted sample size, regions, and comparisons might reflect inaccuracies in findings due to coefficient overestimation underestimation.

This study can be improved by incorporating limitations in future research. Further research can examine individual demographic impacts on risk appetite by diversifying studies across regions with larger sample sizes. Research findings can be utilized by financial institutions and policymakers to design various financial planning programs, integrating components such as expense management, savings, and

investments. This will empower the general public to make rational financial decisions with confidence. Additionally, governmental bodies partnering with banks and NGOs can launch targeted financial literacy drives, particularly among youth. Finally, education camps where financial advisors coach young minds in portfolio diversification based on risk tolerance levels should be established. This can help young generations make rational and informed financial decisions, resulting in stable and financially aware economies.

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