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Financial Literacy and Women's Stock Market Investment Decision in the Pakistan

Kehkashan Nizam¹ & Mohammad Shaiq²

¹Phd Scholar, Faculty of Business, Economics and Finance, Greenwich University, Karachi, Pakistan

²Dean, Faculty of Business, Economics and Finance, Greenwich University, Karachi, Pakistan

ARTICLE INFO	ABSTRACT
Article History: Received: April 30, 2026 Revised: May 29, 2026 Accepted: June 01, 2026 Available Online: June 06, 2026	Financial literacy has become one of the strongest predictors of stock market participation in the 21st century. The capacity to assess risk, understand financial instruments, and make informed investment decisions has grown essential as global economies become more complex and investment choices more sophisticated. A structural gap between financial literacy and actual investment action continues to pose both a research challenge and a policy concern. Against this backdrop, this study examines the impact of financial literacy comprising financial knowledge, skills, and behavior on stock market investment decisions of women investors in Pakistan, with risk aversion as a moderating variable. Primary data were collected from women investors and analyzed using PLS-SEM through SmartPLS4, with two-tailed hypothesis testing. The findings reveal that financial knowledge, skills, and behavior each exert a significantly positive influence on women's stock market investment decisions, while risk aversion also functions as a significant moderator. Notably, the positive effect of knowledge on investment decisions stands out as particularly compelling. The study recommends that educational institutions, financial organizations, and policymakers develop targeted financial literacy programs and investment awareness initiatives to strengthen women's financial confidence, enhance their analytical capabilities, and encourage their meaningful participation in Pakistan's capital market.
Keywords: <i>Financial Literacy, Women's Investment Decisions, Skills, Behavior, Knowledge, Risk Averse, Pakistan Stock Market</i>	
Corresponding Author: Kehkashan Nizam Email: kehkashanizam@gmail.com	



Introduction

In the modern era, investors have access to a wide range of investment avenues including gold, real estate, stocks, mutual funds, and entrepreneurial ventures, each carrying varying levels of risk, return, liquidity, and required financial expertise, making investment decisions more critical and complex than ever before (Hans et al., 2026; Bachiller & Martín Vallespín, 2026). As financial

markets continue to expand, individuals are increasingly required to make complex decisions regarding portfolio diversification, retirement planning, and wealth accumulation (Sadeeq, 2026). Financial literacy is therefore essential for making informed investment decisions, requiring investors to possess sufficient knowledge, skills, attitude, awareness, and appropriate behavior (Sharma et al., 2025). The level of financial literacy varies significantly across countries and demographic groups, influencing individuals' ability to make rational and informed investment choices (Mitra & De, 2026).

Despite constituting half of the population, women's participation in investment activities remains low, though their growing involvement in startup businesses and entrepreneurship has increased the importance of understanding their financial behavior and investment decision-making patterns (SBP, 2025). Women with higher financial literacy are better equipped to evaluate risk-return tradeoffs, select suitable investment instruments, and avoid irrational financial behavior (Hans et al., 2026). Although women's financial literacy has improved in recent years, its impact on investment decisions remains largely unexplored in Pakistan. According to the State Bank of Pakistan (2025), women's financial inclusion rose from 4% to 52% between 2018 and 2025, with over 300 awareness and mentorship programs conducted engaging more than 45,000 women, reflecting Pakistan's commitment to translating inclusion goals into measurable outcomes.

Prior studies indicate that women tend to rely on traditional savings methods and have limited involvement in formal investment instruments such as bonds, digital gold, real estate, mutual funds, and stocks (Shah et al., 2024). Their decisions are frequently shaped by risk aversion, fear of potential losses, and cultural norms, even among financially literate women (Devi & Kumar, 2025). Furthermore, limited income, savings, and financial independence continue to restrict their investment capability (Dote Pardo, 2026).

Women's investment behavior has been studied across various countries including Malaysia, Africa, India, Spain, and Germany, in relation to factors such as risk tolerance, socioeconomic conditions, political factors, behavioral biases, personality traits, and investment challenges (Mujiatun et al., 2025; Sharma et al., 2025; Sadeeq, 2026; Maheshwari & Samantaray, 2026). This study therefore aims to offer a comprehensive examination of behavioral and financial literacy determinants of women's stock market decisions in Pakistan, addressing the following research questions: What is the impact of financial literacy, comprising skills, knowledge, and behavior, on women's investment decisions in Pakistan? Does risk aversion moderate the relationship between financial literacy dimensions and women's investment decisions in Pakistan?

This study contributes to the growing body of literature on behavioral finance by providing insights into how financial literacy influences women's investment decisions in the Pakistani context, while highlighting risk aversion as a moderator that offers a more comprehensive understanding of investor behavior. The findings can benefit investors, policymakers, and financial institutions by promoting more rational investment strategies and supporting the design of improved financial education programs.

This study provides compelling evidence that financial literacy, encompassing knowledge, skills, and behavior, significantly shapes women's stock market investment decisions in Pakistan, while risk aversion plays a meaningful moderating role in this relationship. The findings highlight that targeted financial literacy programs, investment awareness initiatives, and supportive policy frameworks are essential for strengthening women's financial confidence, reducing risk aversion, and promoting their active and meaningful participation in Pakistan's capital market. The remainder of the paper is organized as follows: Section 2 reviews the relevant literature and

develops hypotheses, Section 3 outlines the research methodology, Section 4 presents the empirical results, and Section 5 concludes with implications and directions for future research.

Literature Review

Theoretical Background

This study aims to determine the influence of financial literacy on women's investment decisions and the moderating role of risk aversion in Pakistan's stock market. The conceptual framework draws upon three theoretical perspectives. The theory of planned behavior, introduced by Ajzen (1991), explains how individuals act based on their attitudes, intentions, and behaviors, providing a basis for clarifying the relationship between financial behavior and investment decision-making. Prospect theory, proposed by Kahneman and Tversky (1979), addresses how individuals behave under conditions of uncertainty and risk, highlighting the concept of risk aversion by suggesting that investors tend to avoid risk due to the fear of losses, thereby supporting the moderating role of risk aversion in this study. Human capital theory, originally proposed by Becker (1964), states that investment in people's health, training, skills, and education enhances their economic value and productivity, while also improving their investment and saving decisions, thus providing theoretical justification for the direct relationship between financial literacy dimensions and investment decision-making.

Investment Decision

Investment refers to the process of selecting and allocating funds into financial assets with the aim of achieving future financial returns (Umakanth et al., 2025). Hans et al. (2026) examined the impact of behavioral determinants on retail equity investment decisions in India, arguing that investors often concentrate their wealth in traditional assets such as gold or real estate without conducting proper risk assessments or developing adequate understanding of alternative investment options and diversification strategies. Mitra and De (2026) explored how financial literacy helps individuals determine the most suitable financial products, services, and investment choices, finding that low levels of financial literacy limit investors' ability to compare investment instruments based on expected returns, long-term financial outcomes, liquidity, and risk exposure.

Chowdhury, Mahdzan, and Rahman (2026) found that individuals tend to avoid risky investments such as stocks, cryptocurrencies, and entrepreneurial ventures due to risk-averse biases, despite the fact that such investments contribute significantly to wealth creation and economic growth. They suggested that investment decisions are more frequently shaped by limited financial education, cultural norms, and behavioral biases than by rational financial analysis. Risk aversion biases further lead to inefficient portfolio allocation, reduced participation in formal markets, and missed opportunities for wealth maximization. Dote Pardo (2026) argued that strong traditional and cultural values, reinforced by risk aversion biases, have historically limited women's financial empowerment, with financial matters predominantly managed by men and women largely expected to focus on household responsibilities.

Financial Literacy

Financial literacy refers to the ability to understand and apply financial concepts in order to make informed decisions and manage money effectively (Maheshwari & Samantaray, 2026). Effective participation in financial markets depends largely on an individual's level of financial literacy, encompassing confidence, awareness, skills, behavior, and knowledge required to comprehend financial concepts and make sound financial decisions (Mitra & De, 2026). This study employs financial behavior, knowledge, and skills as the key dimensions of financial literacy. Financial

behavior refers to an individual's confidence in their capability to make sound financial decisions and carry out financial tasks (Iram et al., 2026), while financial skills refer to the practical abilities to manage, invest, save, and budget personal finances effectively (Bucher-Koenen et al., 2025).

Nijanandi and Tiwari (2026) found that financially literate individuals are better equipped to understand various asset classes, including gold as a hedge against inflation, bonds as fixed income securities, real estate as long-term assets, stocks as high-return instruments carrying risk, mutual funds as diversified investment vehicles, and entrepreneurship as an alternative avenue for wealth creation. Maheshwari and Samantaray (2026) further found that individuals face significant investment challenges due to insufficient financial literacy and limited access to digital advisory services. Based on these prior studies and the underlying theoretical background, the following hypotheses have been developed.

H1: Financial knowledge has significant influence on investment decisions.

H2: Financial skills have significant influence on investment decisions.

H3: Financial behavior has significant influence on investment decisions.

Risk Aversion (Moderator)

Risk aversion refers to the tendency to prefer safer financial options with lower risk while avoiding uncertainty (Hans et al., 2026). Shunmugasundaram and Sinha (2024) argued that individuals tend to weigh the pain of losses more heavily than the pleasure of equivalent gains, which frequently leads to suboptimal financial decisions (Nguyen et al., 2025). Hans et al. (2026) further affirmed that risk aversion is a dynamic behavioral tendency shaped by socio-political context, personal financial experience, and macroeconomic factors, all of which significantly influence investment decisions. Umakanth et al. (2025) found that risk-averse investors tend to gravitate toward low-yield options such as fixed deposits while avoiding volatile markets, prioritizing capital protection over returns, which indicates that subjective risk perception and emotional loss aversion often drive investment decision-making. Based on these prior studies and the underlying theoretical background, the following hypotheses have been developed.

H4: Risk aversion significantly moderates the relationship between financial knowledge and investment decision.

H5: Risk aversion significantly moderates the relationship between financial skills and investment decision.

H6: Risk aversion significantly moderates the relationship between financial behavior and investment decision.

Conceptual Model

Figure 1 illustrates the conceptual framework of the study, presenting financial literacy as a multidimensional construct comprising three core dimensions, namely financial knowledge, financial skills, and financial behavior. Each of these dimensions is proposed to exert a direct and positive effect on investment decisions, suggesting that women who possess greater financial knowledge, stronger practical skills, and higher confidence in managing financial matters are more likely to make effective and well-informed investment choices. Additionally, risk aversion is incorporated into the framework as a moderating variable, influencing the strength and direction of the relationship between each financial literacy dimension and investment decisions.

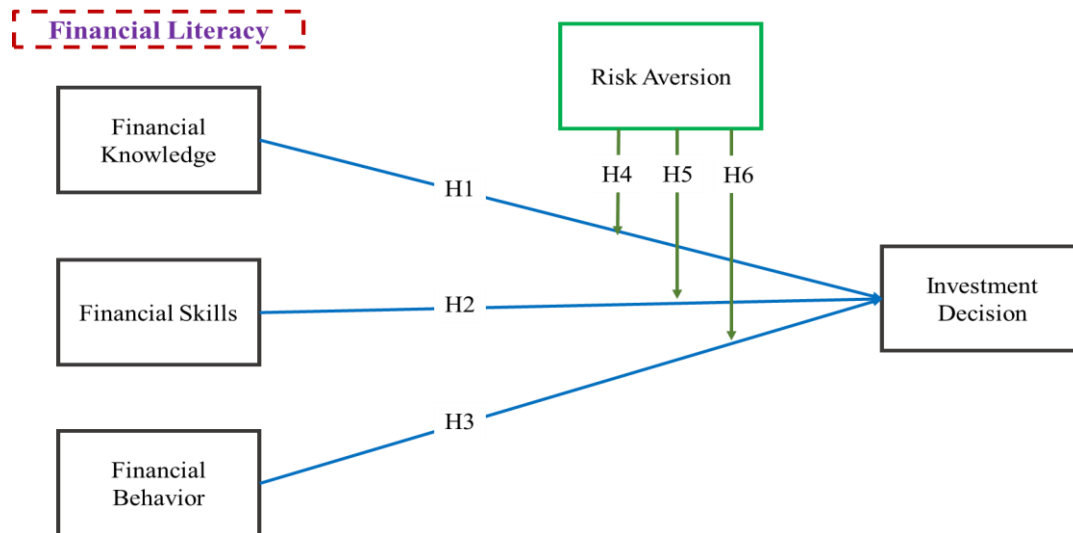


Figure 1 Conceptual Model

Methodology

The research onion framework by Saunders, Lewis, and Thornhill (2019) guides researchers through methodology design, moving from broad philosophical assumptions to specific data collection methods, ensuring consistency and justification throughout. This study is grounded in a positivist philosophy, as it focuses on objectively measuring variables such as financial literacy, investment decisions, and risk aversion through quantifiable and observable data. Positivism is appropriate here because the study aims to test hypotheses and examine relationships using statistical models.

A deductive approach is followed, beginning with established theories on financial literacy, investment decision-making, and risk aversion, deriving hypotheses from prior literature, and testing them using empirical data collected from women investors in Pakistan. The underlying theoretical premise is that higher financial literacy leads to improved investment decisions. A survey strategy is adopted since data are gathered from a large number of women investors through a Google Form questionnaire, making it effective for obtaining standardized responses and generalizing findings across the target population. A quantitative method is employed as numerical data are collected through structured questionnaires and analyzed statistically, which suits the purpose of measuring variable relationships and testing moderating effects.

A cross-sectional time horizon is used, meaning data are collected at a single point in time, capturing women investors' financial literacy levels and investment decisions within a defined research period. Primary data are gathered through close-ended questions using a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. A non-probability purposive sampling technique is applied, selecting respondents based on their direct relevance to the research objectives, specifically women investors with financial literacy, as their investment behavior is closely tied to the variables under investigation.

The target population comprises financially literate women actively participating in stock market activities in Pakistan. Questionnaires are distributed both online and physically in Karachi, Lahore, and Islamabad, where stock market participation among women is comparatively higher. Sample size is determined using the 10:1 item-to-response ratio recommended by Hair et al. (2010). With 22 measurement items across five constructs, a minimum of 220 respondents is required to ensure adequate statistical power and reliable model estimation.

SmartPLS 4 is used for data analysis to examine both measurement and structural models, being well-suited for testing complete relationships including moderation effects and widely used in behavioral finance research. The analysis begins with descriptive statistics to summarize demographic profiles, followed by reliability and validity assessments through the measurement model, including Cronbach's alpha, composite reliability, average variance extracted, and discriminant validity. The structural model then evaluates the influence of financial literacy on women's investment decisions, while moderation and direct relationships are examined through bootstrapping, supported by R^2 , F^2 , and Q^2 values to assess the model's explanatory power and predictive relevance.

Data Analysis

Demographic Profile

Table 1 presents the demographic profile of the study's participants. Out of 318 total respondents, 44% were single and 55% were married. In terms of age, the majority fell within the 28–37 and 38–47 year brackets, accounting for 43% and 45% respectively, suggesting that the sample was predominantly composed of economically active and financially mature individuals. Educational background revealed that 81% of participants were graduates, with the remaining being undergraduates, PhD holders, and A-level qualified individuals, reflecting an overall highly educated sample. With respect to occupation, salaried employees formed the largest group at 65%, followed by self-employed, unemployed, and retired respondents. The monthly income distribution indicated that approximately half of the participants earned between PKR 101,000 and PKR 200,000, while a considerable portion earned between PKR 51,000 and PKR 100,000. Smaller proportions of respondents fell into either higher or lower income brackets. Finally, regarding investment preferences, entrepreneurship and startup businesses were the most favored investment avenue among participants, followed by gold, stock market, and cryptocurrency. Real estate ranked thereafter, while mutual funds, bonds, and digital investment platforms were among the least preferred choices.

Table 1 Demographic Profile

Demographic Characteristics		Frequency	Percent
Marital Status	Single	140	44.0
	Married	178	56.0
Age	18-27	13	4.1
	28-37	137	43.1
	38-47	144	45.3
	48-57	12	3.8
	58 and Above	12	3.8
	A level and Equivalent	8	2.5
	Undergraduate	30	9.4
Education	Graduate	259	81.4
	PhD or Equivalent	21	6.6
	Student	15	4.7
Occupation	Salaried	209	65.7
	Self Employed	68	21.4
	Unemployed	22	6.9
	Retired	4	1.3

Monthly Income	Less than PKR 50,000	28	8.8
	PKR 51,000-100,000	78	24.5
	PKR 101,000-200,000	159	50.0
	PKR 201,000-300,000	16	5.0
	PKR 301,000 and above	18	5.7
Investment	Housewife	19	6.0
	Gold	53	16.7
	Stock Market	52	16.4
	Real Estate	17	5.3
	Cryptocurrency	37	11.6
	Bonds and Mutual Funds	4	1.3
	Start-up Business & Entrepreneurship	151	47.5
	Digital Platform	4	1.3

Reliability and Validity

Table 2 presents the outer loadings of all indicators on their respective constructs. With the exception of FK4 and FS4, which fell slightly below the benchmark, all factor loadings surpassed the recommended threshold of 0.700 as suggested by Hair et al. (2019), demonstrating strong indicator reliability throughout the model. Investment decision loadings ranged from 0.824 to 0.845, while risk aversion loadings fell between 0.725 and 0.818, confirming that each item adequately represents its corresponding construct. Financial knowledge loadings ranged from 0.816 to 0.863, and financial behavior loadings spanned from 0.756 to 0.912. Financial skills recorded the highest loadings across all constructs, ranging from 0.755 to 0.949. Overall, the results confirm satisfactory indicator reliability across all constructs. The algorithm results are further illustrated in Figure 2.

Table 2 Outer Loadings

	FB	FK	FS	ID	RA
FB1	0.884				
FB2	0.912				
FB3	0.756				
FB4	0.767				
FB5	0.870				
FK1		0.852			
FK2		0.863			
FK3		0.832			
FK5		0.816			
FS1			0.949		
FS2			0.913		
FS3			0.755		
ID1				0.835	
ID2				0.845	
ID3				0.836	
ID4				0.824	
RA1					0.725
RA2					0.818

RA3	0.786
RA4	0.797

Note: RA=Risk Aversion, FS=Financial Skills, FK=Financial Knowledge, FB=Financial Behavior, ID=Investment Decision

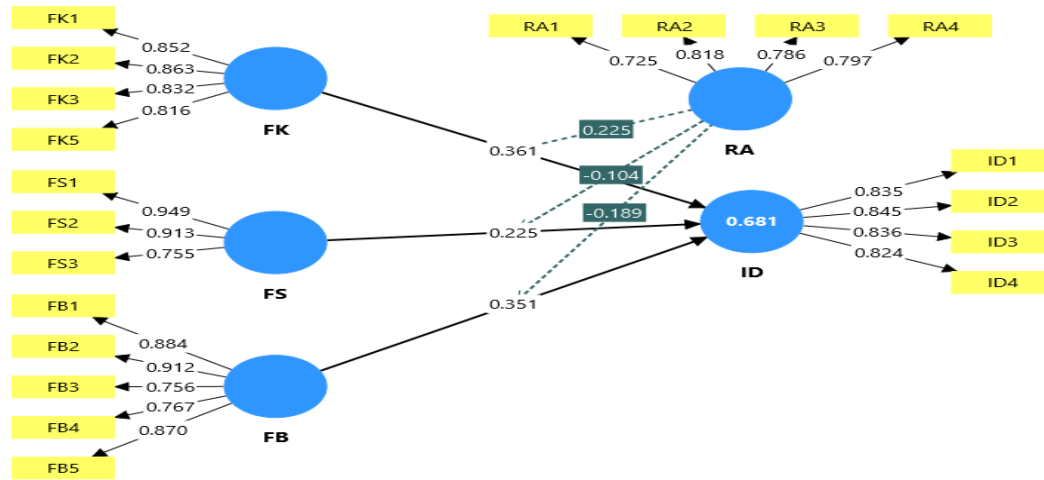


Figure 2 Algorithm Results

Table 3 presents the convergent validity and reliability results for all five constructs. Cronbach's Alpha values exceeded the 0.70 threshold across all constructs, ranging from 0.791 for risk aversion to 0.894 for financial behavior, confirming adequate internal consistency. Composite reliability values ranged from 0.863 to 0.923, surpassing the recommended 0.80 benchmark. Average variance extracted values ranged from 0.612 for risk aversion to 0.768 for financial skills, all exceeding the 0.50 threshold recommended by Hair et al. (2019), thereby confirming convergent validity. Financial skills demonstrated the highest AVE at 0.768, while risk aversion recorded the lowest at 0.612, though both remain within acceptable ranges. Collectively, these results confirm that all five constructs possess satisfactory levels of convergent validity and reliability, consistent with the criteria established by Hair et al. (2019).

Table 3 Reliability and Convergent Validity

	Cronbach's alpha	CR (rho_a)	CR (rho_c)	AVE
FB	0.894	0.906	0.923	0.706
FK	0.863	0.866	0.906	0.708
FS	0.847	0.906	0.908	0.768
ID	0.855	0.856	0.902	0.697
RA	0.791	0.807	0.863	0.612

Note: RA=Risk Aversion, FS=Financial Skills, FK=Financial Knowledge, FB=Financial Behavior, ID=Investment Decision

Discriminant Validity

Tables 4 and 5 present the discriminant validity assessment using the Fornell-Larcker criterion and the HTMT criterion respectively. All HTMT values between distinct constructs fell below the conservative threshold of 0.85 as recommended by Henseler, Ringle, and Sarstedt (2015), confirming adequate discriminant validity and indicating that each construct is empirically distinct from the others. Notably, investment decision and financial knowledge shared the highest

correlation at 0.758, which is consistent with the strong direct relationship observed between these two variables within the structural model.

Table 4 HTMT

	FB	FK	FS	ID	RA	RA x FS	RA x FB	RA x FK
FB								
FK	0.574							
FS	0.454	0.463						
ID	0.632	0.758	0.572					
RA	0.361	0.681	0.356	0.596				
RA x FS	0.136	0.062	0.425	0.117	0.425			
RA x FB	0.505	0.074	0.182	0.171	0.431	0.509		
RA x FK	0.072	0.205	0.041	0.229	0.236	0.381	0.492	

Note: RA=Risk Aversion, FS=Financial Skills, FK=Financial Knowledge, FB=Financial Behavior, ID=Investment Decision

Table 5 displays the Fornell-Larcker discriminant validity matrix, where the diagonal values represent the square root of the AVE for each construct. All diagonal values exceed their corresponding off-diagonal inter-construct correlations, satisfying the criterion established by Fornell and Larcker (1981). For instance, investment decision recorded a diagonal value of 0.835, while financial skills demonstrated the highest diagonal value at 0.876. These results further confirm that each construct captures more variance from its own indicators than from any other construct within the model, thereby establishing satisfactory discriminant validity.

Table 5 Fornell Larcker

	FB	FK	FS	ID	RA
FB	0.840				
FK	0.505	0.841			
FS	0.374	0.409	0.876		
ID	0.557	0.656	0.499	0.835	
RA	0.322	0.582	0.315	0.507	0.782

Note: RA=Risk Aversion, FS=Financial Skills, FK=Financial Knowledge, FB=Financial Behavior, ID=Investment Decision

Coefficient of Determination, Effect Size and Q²

Table 6 presents the coefficient of determination R² for the endogenous construct. The R² value for investment decision is 0.681, with an adjusted R² of 0.674, indicating that approximately 68.1% of the variance in women's investment decisions is explained by the three dimensions of financial literacy, namely financial skills, financial knowledge, and financial behavior, along with risk aversion and their respective interaction terms. According to Chin (1998), R² values above 0.67 are considered substantial, and the obtained value therefore reflects strong predictive power of the proposed model, further demonstrating the practical significance of each path within the structural model.

Table 6 Coefficient of Determination

	R-square	R-square adjusted
ID	0.681	0.674

Table 7 presents the effect size values (F^2) for the constructs in the model. Among the three dimensions of financial literacy, financial behavior recorded the highest effect size at 0.176, surpassing both financial skills and financial knowledge, though it still falls within the medium effect range. This indicates that financial behavior plays the most dominant role among all financial literacy dimensions in influencing investment decisions. Based on the threshold values established by Cohen (1988), effect sizes of 0.02, 0.15, and 0.35 represent small, medium, and large effects respectively. The obtained values therefore reflect the practical significance of individual paths within the structural model.

Table 7 Effect Size

	ID
FB	0.176
FK	0.167
FS	0.100
RA x FS	0.034
RA x FB	0.085
RA x FK	0.362

According to Cohen (1988), Q^2 values greater than zero indicate that the model possesses predictive relevance for the endogenous variables. The benchmark values of 0.02, 0.15, and 0.35 represent weak, moderate, and strong predictive relevance respectively. As shown in Table 8, the Q^2 value obtained in this study is 0.644, which substantially exceeds the 0.35 threshold, thereby confirming strong predictive relevance of the structural model. This result demonstrates that the model holds considerable predictive power in explaining women's stock market investment decisions.

Table 9 Q^2 Predictive Relevance

	Q^2 Predict
ID	0.644

Model Fit and Multicollinearity

Table 10 presents the model fit indices for both the estimated and saturated models. The SRMR values for both models stand at 0.08, meeting the recommended threshold of 0.08 and thus indicating acceptable model fit. Additionally, the NFI value for the saturated model is 0.787, while the estimated model recorded 0.792, both reflecting a moderate level of model fit. Although these NFI values fall slightly short of the ideal threshold of 1, they remain acceptable particularly in the context of behavioral research involving complex models. Overall, the findings suggest that the structural model demonstrates an acceptable fit with the observed data.

Table 9 Model Fit

	Saturated model	Estimated model
SRMR	0.08	0.08
NFI	0.787	0.792

SRMR value should be <0.08, and NFI should be closer to 1 show better fit. The model meets acceptable fit criteria.

Table 10 presents the multicollinearity assessment of the model. All variance inflation factor values fall below the threshold of 5, confirming the absence of severe multicollinearity among the constructs, as recommended by Hair et al. (2019).

Table 10 Multicollinearity

	VIF		VIF		VIF
FB1	3.317	FK3	1.955	RA2	1.736
FB2	3.934	FK5	1.974	RA3	1.616
FB3	1.803	ID1	1.955	RA4	1.564
FB4	1.843	ID2	2.112	FS1	3.815
FB5	2.495	ID3	2.051	FS2	3.373
FK1	2.338	ID4	1.816	FS3	1.544
FK2	2.298	RA1	1.635		

Structural Modeling (Bootstrapping)

Path coefficient (Hypotheses Testing)

Table 11 illustrates the structural model results based on bootstrapping with 5,000 samples and two-tailed hypothesis testing. Path coefficients range between -0.104 and 0.361, with an acceptable p-value of less than 0.05 and a t-value greater than 1.97. The results confirm that all direct paths are statistically significant. Financial behavior exerted the strongest positive influence on investment decision with values of $\beta=0.351$, $t=4.803$, and $p=0.000$, indicating that women who proactively seek financial information and apply structured decision-making processes are most likely to participate in stock market investment. Financial knowledge also demonstrated a significant positive influence on investment decision with values of $\beta=0.361$, $t=4.257$, and $p=0.000$, while financial skills similarly exerted a significant positive effect with values of $\beta=0.225$, $t=4.290$, and $p=0.000$.

Table 11 Hypotheses Testing

Hypotheses	Ori. Sam	Sample mean	STDEV	T statistics	P values
FK -> ID	0.361	0.352	0.085	4.257	0.000
FS -> ID	0.225	0.231	0.053	4.290	0.000
FB -> ID	0.351	0.351	0.073	4.803	0.000
RA x FK -> ID	0.225	0.214	0.048	4.699	0.000
RA x FS -> ID	-0.104	-0.100	0.051	2.038	0.042
RA x FB -> ID	-0.189	-0.175	0.074	2.570	0.010

Note: RA=Risk Aversion, FS=Financial Skills, FK=Financial Knowledge, FB=Financial Behavior, ID=Investment Decision

Similarly, the moderating role of risk aversion reveals significant results across multiple relationships. Risk aversion significantly and positively moderated the relationship between financial knowledge and investment decision with values of $\beta=0.225$, $t=0.214$, and $p=0.000$, suggesting that even risk-averse women possessing higher financial knowledge and skills are still capable of making deliberate investment choices. Conversely, risk aversion negatively moderated the relationship between financial skills and investment decision with values of $\beta=-0.104$, $t=2.038$, and $p=0.042$, indicating that substantial risk aversion weakens the positive effect of financial skills on investment decisions. Likewise, risk aversion negatively moderated the relationship between

financial behavior and investment decision with values of $\beta=-0.189$, $t=2.570$, and $p=0.010$, suggesting that heightened risk aversion similarly undermines the positive influence of financial behavior on investment decision-making. Overall, the results confirm that all proposed hypotheses are accepted.

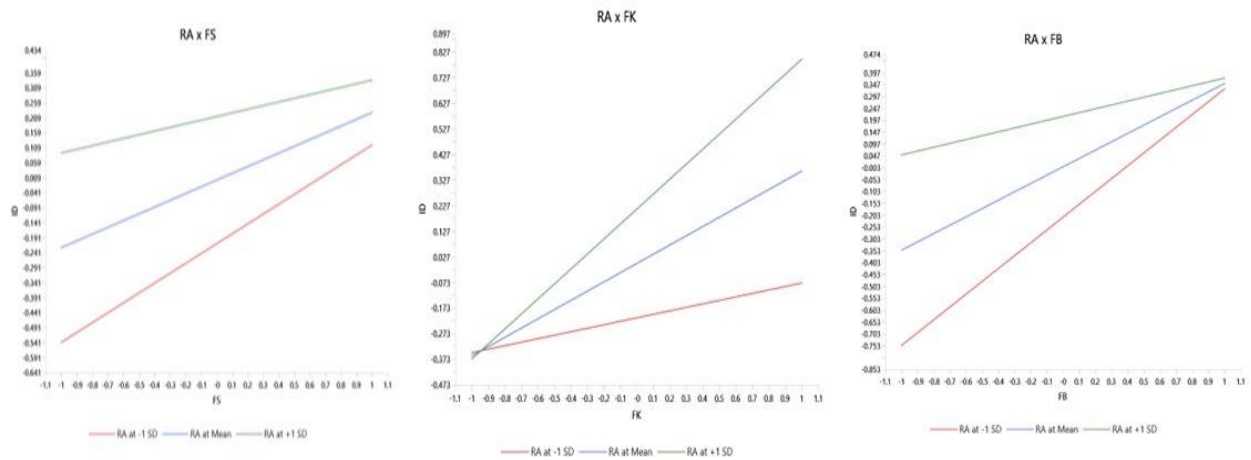


Figure 3 Moderator Role of Risk Aversion (Simple Slope)

Figure 3 illustrates the moderating effects of risk aversion through simple slope analysis. Regarding the relationship between financial behavior and investment decision, the slope for risk aversion at +1 SD represented by the green line is comparatively flatter, while the slope at -1 SD represented by the red line is steeper. This indicates that as risk aversion increases, the positive influence of financial behavior on investment decisions weakens, suggesting that highly risk-averse investors may demonstrate sound financial behavior yet still tend to avoid stock market investment. In terms of the financial skills and investment decision relationship, the high risk aversion line shows a weaker slope, while the low risk aversion line reflects a stronger influence of financial skills on investment decisions. This reveals that risk aversion diminishes the practical impact of financial skills on investment behavior, implying that even highly skilled individuals may hesitate to invest when their fear of risk is pronounced. With respect to the financial knowledge and investment decision relationship, the green line representing high risk aversion becomes notably steeper, demonstrating that the effect of financial knowledge on investment decisions actually strengthens as risk aversion increases. This suggests that risk-averse investors tend to rely more heavily on financial knowledge before committing to investment decisions.

Discussion

The results confirm that all outer loadings exceeded the recommended threshold of 0.700, with the exception of FK4 and FS4, which recorded lower loadings and were consequently dropped from the model. All constructs satisfied the internal consistency requirement with Cronbach's Alpha values exceeding 0.70, composite reliability ranging from 0.863 to 0.923, and AVE values ranging from 0.612 to 0.768, all meeting their respective benchmarks and confirming convergent validity. HTMT values remained below the 0.85 threshold, establishing adequate discriminant validity.

The R^2 value of 0.681 with an adjusted R^2 of 0.674 indicates that approximately 68.1% of the variance in women's investment decisions is explained by the three financial literacy dimensions, risk aversion, and their interaction terms. Direct path coefficients ranged from -0.104 to 0.361, with all direct hypotheses H1 through H3 confirmed as statistically significant. The moderating

role of risk aversion was similarly confirmed across the FK-ID, FS-ID, and FB-ID relationships, with all hypotheses H1 through H6 accepted.

The findings reveal that investment decisions are strongly shaped by financial behavior, skills, and knowledge, reinforcing financial literacy as a key determinant of sound financial decision-making among women investors in Pakistan (Maheshwari & Samantaray, 2026; Iram et al., 2026). Regarding moderation, risk aversion strengthens the relationship between financial knowledge and investment decisions, as risk-averse investors tend to rely more heavily on knowledge to minimize uncertainty, avoid losses, and evaluate risk-return tradeoffs, making financial knowledge particularly valuable under cautious conditions (Chowdhury et al., 2026; Shanmugam et al., 2022).

Conversely, risk aversion weakens the influence of financial skills and behavior on investment decisions. Even financially literate individuals may fail to translate their skills and behavioral tendencies into actual investment action when risk aversion is high. As argued by Mitra and De (2026), many investors continue to depend on emotional judgment, social influence, and informal advice rather than systematic financial analysis, which reduces the practical application of sound skills and behavior while amplifying behavioral biases. Dhiman et al. (2026) further noted that high risk aversion may diminish the positive impact of financial literacy dimensions on investment decisions, as such individuals tend to favor safer options and avoid riskier instruments, whereas women with lower risk aversion are more likely to invest actively across various financial products. Dote Pardo (2026) also highlighted that investment behavior is not uniform, as socio-cultural norms, financial access limitations, income disparities, social influence, and educational differences collectively shape women's financial investment decisions.

Conclusion and Future Recommendations

Conclusion

The growing complexity of financial products underscores the importance of understanding how women's financial literacy shapes their investment decision-making. Examining this relationship is essential not only for improving individual financial well-being but also for promoting sustainable economic growth, market stability, and financial inclusion. Gender-based investment decision-making holds particular significance, as greater women's participation in diversified investment contributes to household stability, poverty reduction, and broader economic development (Dhiman et al., 2026). Accordingly, understanding the role of financial literacy in shaping women's investment decisions is critically important within the Pakistani context, while the moderating role of risk aversion offers deeper insight into why financially literate women may still avoid certain investment opportunities.

The conceptual model of this study draws upon three theoretical foundations, namely prospect theory, human capital theory, and the theory of planned behavior. A positivist philosophy and deductive approach are adopted, with primary data collected through a quantitative survey questionnaire administered to financially literate women stock market investors. A cross-sectional research design with purposive sampling is employed to obtain relevant responses from participants actively engaged in stock market activities, with sample size determined based on the item-to-response ratio. SmartPLS 4 is utilized to analyze both measurement and structural models, encompassing reliability, validity, model fit, path coefficients, moderating effects, and predictive relevance.

All hypotheses from H1 to H6 are supported by the results. The study confirms a direct and positive influence of financial knowledge, skills, and behavior on women's stock market

investment decisions in Pakistan, demonstrating that financially literate women are better equipped to make informed decisions, manage financial risks, and evaluate investment opportunities. While hypotheses H4 to H6 are supported, risk aversion was found to weaken the influence of financial skills and behavior on investment decisions. This suggests that even when women possess adequate financial understanding, their investment behavior may still be shaped by psychological biases such as risk aversion, as women are generally perceived as more cautious in financial matters due to cultural norms, limited financial exposure, and fear of potential losses, all of which may discourage active investment participation.

Theoretical and Practical Implications

This study offers valuable implications for policymakers, bankers, and financial institutions, providing a basis for designing targeted financial awareness programs, workshops, and skills development training that equip women with knowledge about suitable investment products. Such initiatives can enhance women's financial literacy, reduce risk aversion, and foster greater financial empowerment, ultimately increasing their participation in investment markets and contributing to Pakistan's broader economic growth.

Women represent a substantial portion of Pakistan's population, yet their participation in investment decision-making remains low due to limited access to financial services, cultural restrictions, family environment, and socioeconomic background. This research contributes to understanding how improved financial literacy can strengthen women's capacity for informed decision-making, leading to greater financial independence and long-term wealth creation. The study is particularly valuable in its examination of risk aversion as a behavioral factor that moderates the relationship between financial literacy and investment decisions, highlighting that even women possessing financial skills, knowledge, and self-efficacy may still be discouraged from pursuing higher-return investment options such as mutual funds and stocks when risk aversion is substantial.

By providing deeper insight into why financially literate women may continue to avoid investment opportunities, this study holds significance for a wide range of stakeholders including educational institutions, financial organizations, researchers, and policymakers. It can support the development of women-focused investment products and effective financial literacy programs. Furthermore, it may assist financial service providers and banks in formulating strategies that promote financial inclusion, encourage saving and investing behavior, and ultimately contribute to Pakistan's sustained economic development.

Limitation of the study

Despite its contributions, this study is subject to several limitations. First, the sample is geographically restricted to women from specific cities, namely Karachi, Islamabad, and Lahore, which may limit the generalizability of the findings to women in rural areas or across the country as a whole, meaning the results may not fully represent the investment behavior of women throughout Pakistan. Second, the study concentrates primarily on financial literacy and risk aversion, while other potentially influential factors such as income level, education, cultural norms, social influence, and access to technology are not fully accounted for, which means that not all aspects of women's investment decision-making may be adequately explained within the scope of this research. Lastly, the adoption of a cross-sectional research design means that data were captured at a single point in time, making it impossible to track changes in financial literacy levels or investment decisions over an extended period, which limits the study's ability to draw conclusions about long-term behavioral trends.

Future Recommendations

Future research may broaden its scope to examine women's participation across both formal and traditional investment avenues, including gold, equities, mutual funds, entrepreneurship, cryptocurrencies, agribusiness, real estate, and banking products. Extending the research beyond current women investors to include potential investors from diverse socioeconomic backgrounds would also enrich the understanding of financial literacy and investment behavior. Additionally, future studies may incorporate male investors or conduct gender-based comparative analyses to identify differences in investment decision-making between men and women. Furthermore, future research could utilize secondary data through market indices to empirically examine the relationship between financial literacy and investment decisions, offering an alternative and complementary perspective to primary survey-based approaches.

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