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The Interconnection of Investor Cognition, Financial Literacy, and Neuroplasticity in Shaping Investment Choices in Nepal: A Study of Nepalese Investors

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Abstract

This study examines the impact of investor cognition and financial literacy on neuroplasticity among Nepalese investors, with risk absorption capacity considered as a mediating variable in Nepal's capital market. Using a quantitative, cross-sectional design, primary data were collected from 300 individual stock market investors in Nepal and analyzed using SPSS through descriptive statistics, correlation, regression, and mediation analyses, with reliability confirmed using Cronbach's Alpha. The findings reveal that investor cognition and financial literacy have a significant positive effect on neuroplasticity, indicating that greater cognitive awareness and financial knowledge enhance adaptive learning and flexibility in investment decision-making. Additionally, risk absorption capacity partially mediates the relationships between investor cognition and neuroplasticity and between financial literacy and neuroplasticity, highlighting the importance of risk-handling ability in transforming knowledge into adaptive investment behavior. The study contributes to behavioral finance literature by integrating cognition, financial literacy, and neuroplasticity within an emerging market context and offers practical implications for strengthening investor education, risk management, and cognitive resilience in Nepal's capital market.

Keywords: investor cognition, financial literacy, neuroplasticity, risk absorption capacity, Nepalese investors

Introduction

The Nepalese capital market has experienced a notable increase in individual investor participation in recent years, particularly during periods of rapid market expansion. However, heightened market volatility and subsequent downturns have exposed many investors to financial losses, leading to declining confidence and cautious investment behavior (Nepal et al., 2023). These outcomes suggest that investment decisions are influenced not only by market conditions but also by investors' cognitive processes, learning capacity, and behavioral responses (Dangol & Manandhar, 2020; Kadariya, 2012).

Investor cognition plays a critical role in shaping how individuals perceive, interpret, and respond to financial information. Although some Nepalese investors attempt to use fundamental analysis in evaluating investment opportunities, variations in experience, cognitive awareness,

and access to reliable information often limit its effectiveness (Upadhyaya, 2019; Vaidya, 2021). At the same time, financial literacy remains a significant concern, as insufficient understanding of investment principles, risk diversification, and market mechanisms can lead investors to rely on heuristics, emotions, and social influence rather than rational analysis (Bhandari, 2023; Thapa & KC, 2020)

Neuroplasticity refers to an individual's ability to adapt, learn from experience, and modify cognitive patterns over time (Ana Njegovanović, 2018; Voss et al., 2017). In the context of investment behavior, neuroplasticity reflects an investor's capacity to adjust thinking, strategies, and decision-making processes in response to market experiences. Despite growing interest in cognition and learning within financial behavior research, empirical studies integrating investor cognition, financial literacy, and neuroplasticity remain limited, particularly in developing economies such as Nepal (Behera et al., 2022; Frydman & Camerer, 2016) . Accordingly, this study aims to examine the impact of investor cognition and financial literacy on neuroplasticity among Nepalese investors, with risk absorption capacity considered as a mediating mechanism influencing adaptive investment behavior.

Problem Statement

Despite increasing participation in Nepal's stock market, a large number of individual investors have experienced financial losses and exhibit hesitation toward reinvestment, particularly following recent market downturns (Nepal et al., 2023). These experiences have heightened perceptions of uncertainty and reduced investor confidence.

Existing literature indicates that many Nepalese investors rely heavily on heuristics and emotional judgment, while levels of financial literacy and risk-handling capacity differ significantly among individuals (Bhandari, 2023; Dangol & Manandhar, 2020). Although neuroplasticity highlights the ability of investors to learn and adapt from market experiences, limited empirical evidence explains how investor cognition and financial literacy jointly influence neuroplasticity within the Nepalese context. Moreover, the mediating role of risk absorption capacity in shaping adaptive investment behavior remains underexplored. This study addresses this research gap by empirically examining these relationships in Nepal's capital market.

Research Objectives

The primary objective of this study is to examine the impact of investor cognition and financial literacy on neuroplasticity among Nepalese investors. Specifically, the study seeks to analyze the direct effects of investor cognition and financial literacy on neuroplasticity and to assess the mediating role of risk absorption capacity in these relationships within the context of investment decision-making in Nepal.

Literature Review

Theoretical Foundations

Investor behavior integrates cognitive psychology, behavioral finance, and learning theories, where decisions blend rationality with cognitive biases, emotions, and experiential adaptation (Kahneman & Tversky, 1979; Behera et al., 2022). Dual Process Theory distinguishes intuitive Type 1 and analytical Type 2 thinking, explaining neuroplasticity's role in shifting toward adaptive strategies (Behera et al., 2020). Information Processing Theory posits learning via sensory input and feedback reshapes cognition, while Social Cognitive Theory emphasizes reciprocal environment-behavior interplay (Ana Njegovanović, 2018; Behera et al., 2022). Behavioral Finance highlights heuristics' impact, framing neuroplasticity as a counter to biases in volatile markets like Nepal's NEPSE.

Thematic Literature Synthesis

Literature reveals cognition and neuroplasticity evolve through experience, enabling risk management and refined decisions (Pokhrel, 2023). Globally, developed markets leverage literacy for

rational choices, whereas emerging ones grapple with biases mitigated by training (Cavezzali et al., 2012; Naiwen et al., 2021). Regionally, India links cognition to risk absorption (Behera et al., 2020); Thailand/Indonesia show training's bias reduction (Ana Njegovanović, 2018); Europe ties cognition to post-crisis participation (Cavezzali et al., 2012); and Africa/US note cultural/emotional influences (Naiwen et al., 2021). In Nepal, social networks and literacy gaps drive male risk-taking, with education fostering adaptation (Behera et al., 2022; Pokhrel, 2023).

Empirical Evidence

Studies confirm investor cognition strongly predicts neuroplasticity ($r \approx 0.7$), mediated by risk absorption (Behera et al., 2022). Cognitive dimensions (hot/cold/social/meta) boost interest, amplified by tolerance (Behera et al., 2021). Literacy improves risk perception across contexts, curbing poor choices (Cavezzali et al., 2012). Digital finance demands neuroplastic integration of tech data (Ana Njegovanović, 2018), while emotions interact with cognition for stress resilience (Kahneman & Tversky, 1979).

Contemporary Extensions

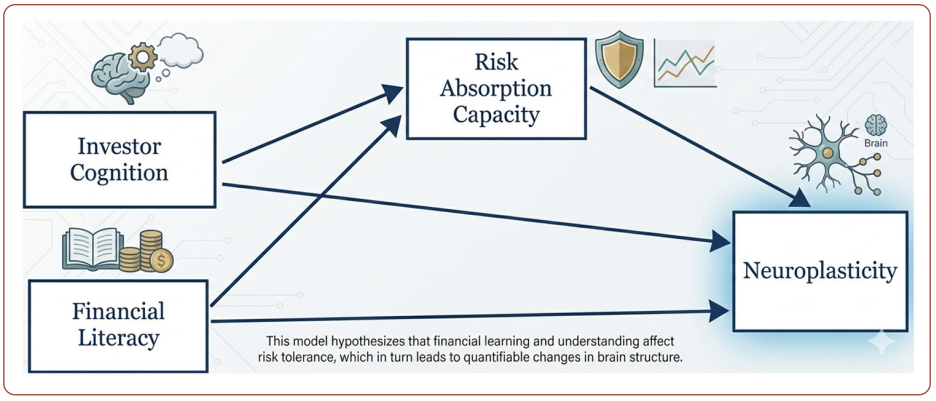
Celestin et al. (2025a) show AI analytics enhance cognition via forecasting; Celestin et al. (2025b) advocate blockchain for transparent audits aiding adaptive risk assessment; Celestin et al. (2025b) link AI to accountability training neuroplasticity. Mishra (2020) offers cross-country decision frameworks; Celestin and Mishra (2025a) parallel budgeting with literacy-driven discipline; Mishra and Rahman (2025) tie Nepal's working capital to profitability, reinforcing literacy's outcomes. These bridge neuroscience to practical finance in emerging markets.

Conceptual Framework

This study is grounded in behavioral finance and social cognitive theory and proposes that investor cognition and financial literacy directly influence investors' neuroplasticity. It further posits that risk absorption capacity plays a mediating role by translating cognitive ability and financial knowledge into adaptive learning and decision-making behavior among Nepalese investors.

Figure 1

Conceptual Framework



- Investor Cognition and Financial Literacy function as the independent variables.
- Risk Absorption Capacity acts as the mediating variable.
- Neuroplasticity serves as the dependent variable.

Arrows indicate the direction of influence, showing both the direct effects of investor cognition and financial literacy on neuroplasticity,

as well as the indirect effects transmitted through risk absorption capacity.

Hypothesis Development

Based on the proposed conceptual framework and the relationships examined in this study, hypotheses are formulated to examine the effects of investor cognition and financial literacy on neuroplasticity, as well as the mediating role of risk absorption capacity in these relationships within the context of Nepalese investors.

Accordingly, the following hypotheses are proposed:

H1: Investor cognition has a significant effect on neuroplasticity among Nepalese investors.

H2: Financial literacy has a significant effect on neuroplasticity among Nepalese investors.

H3: Risk absorption capacity mediates the relationship between investor cognition and neuroplasticity.

H4: Risk absorption capacity mediates the relationship between financial literacy and neuroplasticity.

Methodology

This study adopts a quantitative approach to examine the influence of investor cognition and financial literacy on neuroplasticity among Nepalese investors, with risk absorption capacity as a mediating variable. An explanatory research design was employed to systematically assess the relationships among the study variables and to evaluate how variations in investor cognition and financial literacy affect neuroplasticity.

The population includes individual investors in Nepal who actively participate in the capital market through shares, debentures, mutual funds, and other securities. Due to the unavailability of official records on active investors, a purposive approach was used to select respondents with relevant investment experience. A total of 300 valid responses were collected from multiple regions, including Kathmandu Valley and districts outside Bagmati Province, ensuring diversity in investment exposure and experience.

Primary data were collected using a structured online questionnaire distributed through social media, investment-related online groups, and personal contacts. The questionnaire comprised demographic questions and multiple items measuring investor cognition, financial literacy, risk absorption capacity, and neuroplasticity on a five-point Likert scale. A pilot test was conducted to ensure clarity and reliability of the instrument.

Data were analyzed using IBM SPSS, applying descriptive statistics, reliability testing, and correlation, regression, and mediation analysis to examine the proposed relationships. This methodology provides a systematic, reliable, and replicable approach for understanding the behavioral and cognitive determinants of investor neuroplasticity in the Nepalese capital market.

Table 1

Reliability Statistics of Study Variables

Variables	No. of Items	Cronbach's Alpha
Investor Cognition	8	0.857
Financial Literacy	5	0.877
Risk Absorption Capacity	6	0.881
Neuroplasticity	6	0.928

Reliability analysis using Cronbach's Alpha shows that all constructs exceed the 0.60 threshold, indicating satisfactory internal consistency. This confirms that the measurement scales are reliable for further analysis.

Table 2

Profile of the Respondents

Variable	Category	Frequency (N)	Percentage (%)
Gender	Female	157	52.33
	Male	142	47.33
	Other	1	0.33
AGe	18–24	143	47.67
	25–34	119	39.67
	35–44	20	6.67
	45–54	10	3.33
	55+	8	2.67
Education	SEE or below	9	3
	+2	21	7
	Bachelor	151	50.33
	Masters	102	34
	Above Master's	17	5.67
Marital Status	Married	78	26
	Unmarried	222	74
Occupation	Student (Not Working)	135	45
	Private Sector Employee	102	34
	Business/Enterprise	36	12
	Government Employee	12	4
	NGOs/INGOs	11	3.7
	Others (Abroad, Household, Retired, PE)	4	1.3
Investment Experience (Years)	<2	139	46.33
	2–5	109	36.33
	5–8	34	11.33
	8+	18	6
Monthly Income (Rs.)	<25,000	139	46.33
	25,000–50,000	91	30.33
	50,000–75,000	37	12.33
	75,000+	33	11
Investment Amount (NEPSE)	<50,000	140	46.7
	50,001–200,000	64	21.3
	200,001–500,000	35	11.7
	500,001–1,000,000	28	9.3
	1,000,001–2,000,000	9	3
	2,000,001+	24	8

Variable	Category	Frequency (N)	Percentage (%)
Investment Sectors	Hydropower	179	59.7
	Banks & Financial Institutions	175	58.3
	Insurance Companies	102	34
	Manufacturing & Products	83	27.7
	Hotel & Tourism	52	17.3
	Others	53	17.7

The respondent profile shows that most participants were young (18–34 years), well-educated (bachelor's and master's degree holders), and unmarried. Students (45%) and private sector employees (34%) formed the largest occupational groups, with nearly half having less than 2 years of investment experience and most investing less than Rs. 50,000. Hydropower (59.7%) and Banks & Financial Institutions (58.3%) were the most preferred sectors. Overall, the sample represents young, educated investors with limited experience who favor stable and high-growth sectors, providing a relevant context for analyzing investor cognition, financial literacy, risk absorption capacity, and neuroplasticity in Nepal.

Table 3

Descriptive Statistics of Study Variables

Variable	Statement	Mean	SD
IC1	Investment in the stock market needs knowledge relating to it.	3.91	1.09
IC2	I collect and read past and expected returns before making an investment.	3.68	0.94
IC3	I try to analyze the reason for the fall and rise of a stock market index.	3.56	0.94
IC4	I usually study scholarly articles about stock market investment to obtain greater knowledge.	3.19	0.95
IC5	I prefer views from expert stock market investors.	3.48	0.98
IC6	I consult my family members before making an investment decision.	3.07	1.06
IC7	Investment-related mobile apps (Mero Share, Share Hub, TMS) help me make better investment decisions.	3.67	1.05
IC8	I prefer to observe the social media pages of big stock market investors.	3.49	1.03
Average		**3.5**	**0.711**
FL1	I can easily understand simple financial terms.	3.54	1.092
FL2	I am knowledgeable about stock market activities on the NEPSE.	3.51	0.912
FL3	I can easily analyze the latest reports, prospects, and financial statements of any company listed on the NEPSE annually.	3.3	0.986
FL4	I am capable of accurately determining the benefits and costs of different financial securities.	3.29	0.982
FL5	I always read the terms and conditions of different financial securities before buying them.	3.3	1.07
Average		**3.38**	**0.827**

Variable	Statement	Mean	SD
RAC1	I will continue my investment even when prices are low, if I have analyzed it well.	3.41	1.016
RAC2	I am not emotional but rather rationally choose my investments.	3.43	1.03
RAC3	Past losses don't stop me from investing.	3.37	1.005
RAC4	I have patience with the present investment even if the present profits are not good.	3.44	0.964
RAC5	I am optimistic regarding the growth of my investment.	3.52	0.979
RAC6	I gradually take more and more risks while investing.	3.18	0.966
Average		**3.39**	**0.786**
NP1	In the future, I can make better investment decisions.	3.65	1.055
NP2	I am mentally prepared to handle investment securities in the future.	3.58	0.928
NP3	I will soon make more investments as my ability has improved.	3.62	0.993
NP4	Continuous learning and experience can improve my investment- making abilities.	3.75	1.07
NP5	I actively seek new investment opportunities.	3.54	1.019
NP6	New investment knowledge and skills help me make better investment decisions.	3.73	1.021
Average		**3.64**	**0.87**

The descriptive analysis indicates that respondents exhibit moderate to moderately high levels across all study variables. Investor cognition (M = 3.50) reflects active information seeking and analytical engagement, while financial literacy (M = 3.38) shows a reasonable understanding of financial concepts with some gaps in analytical evaluation. Risk absorption capacity (M = 3.39) indicates a balanced approach to risk, combining optimism, patience, and rational decision- making, though respondents are cautious in taking higher risks. Neuroplasticity (M = 3.64) demonstrates a high level of adaptability and learning, with investors valuing continuous learning and skill development for better investment decisions. Overall, the findings suggest that Nepalese investors are moderately informed, rational, and adaptive, with potential to enhance financial literacy and risk-handling skills through targeted education and awareness programs.

Table 4

Reliability Statistics of Study Variables

Variables	Risk Absorption Capacity	Neuroplasticity
Investor Cognition	.586**	.717**
Financial Literacy	.666**	.676**
Risk Absorption Capacity	1	.742**

Note. **. Correlation is significant at the 0.01 level (2-tailed).

All variables show significant positive relationships. Investor Cognition correlates with Risk Absorption Capacity (r = 0.586) and Neuroplasticity (r = 0.717). Financial Literacy

correlates with Risk Absorption Capacity (r = 0.666) and Neuroplasticity (r = 0.676). Risk Absorption Capacity is strongly linked to Neuroplasticity (r = 0.742). This indicates that higher cognition and financial knowledge improve investors' risk-handling and adaptive investment behavior.

Regression Analysis

Regression analysis was conducted to examine how investor cognition (IC) and financial literacy (FL) affect neuroplasticity (NP) among Nepalese investors, using model summary, ANOVA, and regression coefficients.

Table 5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.769a	0.591	0.588	0.55857

Note. a. Predictors: (Constant), IC, FL

The model shows strong explanatory power with R = 0.769. The R^2 value (0.591) indicates that 59.1% of the variation in neuroplasticity is explained by investor cognition and financial literacy. The adjusted R^2 (0.588) is close to R^2, suggesting a stable and reliable model. The low standard error (0.55857) indicates that predicted values are close to observed values. Overall, the model confirms that IC and FL jointly explain neuroplasticity effectively.

Table 6

ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	133.729	2	66.864	214.310	.001b
Residual	92.664	297	0.312		
Total	226.392	299			

Note. Dependent Variable: NP; Predictors: (Constant), IC, FL

The ANOVA results confirm the model is statistically significant (Sig. = 0.001 < 0.05). The high Regression Sum of Squares (133.729) compared to Residual (92.664) and F = 214.310 indicate that IC and FL explain a substantial portion of variation in NP. This validates the model and highlights the importance of cognitive and knowledge-based factors in shaping adaptive investment behavior.

Table 7

Coefficient Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.287	0.167		1.720	0.087		
IC	0.588	0.060	0.481	9.857	0.001	0.579	1.728
FL	0.382	0.051	0.364	7.449	0.001	0.579	1.728

Note. Dependent Variable: NP

Both IC and FL have a positive and significant effect on neuroplasticity ($p < 0.05$). A one-point increase in IC increases NP by 0.588 units, while a one-point increase in FL increases NP by 0.382 units. Standardized beta values show IC ($\beta = 0.481$) has a stronger effect than FL ($\beta = 0.364$). VIF values < 3 indicate no multicollinearity. Overall, IC and FL significantly enhance neuroplasticity, with IC being the dominant predictor.

Analysis of the Mediating Effect of Risk Absorption Capacity

This section analyzes the mediating role of Risk Absorption Capacity (RAC) between Investor Cognition (IC), Financial Literacy (FL), and Neuroplasticity (NP) among Nepalese investors, using bootstrapping to test indirect and direct effects, with significance determined by confidence intervals and $p < 0.05$.

Table 8

Mediating Effect Analysis - Indirect effect

Variable	Effect	Boot SE	Boot LLCI	Boot ULCI
Investor Cognition	0.1376	0.0493	0.0506	0.2431
Financial Literacy	0.2196	0.0386	0.1518	0.3033

The indirect effects of IC and FL on NP through RAC are statistically significant, as their bootstrapped confidence intervals do not include zero. This indicates that Risk Absorption Capacity significantly mediates the relationship, transmitting part of the influence of Investor Cognition and Financial Literacy to Neuroplasticity.

Table 9

Mediating Effect Analysis - Direct effect

Variable	Effect	Se	T	P
Investor Cognition	0.4505	0.0546	8.2476	0.0001
Financial Literacy	0.1627	0.0510	3.1883	0.0016

Both IC and FL have significant direct effects on NP. Higher Investor Cognition and Financial Literacy are directly associated with increased Neuroplasticity ($p < 0.05$).

The results indicate partial mediation of Risk Absorption Capacity. While Investor Cognition and Financial Literacy directly enhance Neuroplasticity, a portion of their influence operates indirectly through investors' ability to absorb and manage risk. This highlights that developing both cognitive understanding and financial knowledge, alongside risk-handling skills, is essential for improving adaptive investment behavior among Nepalese investors.

Table 10

Hypothesis Testing

Hypothesis	Unstandardized Beta (B)	p-value/ C.I.	Decision
H1: Investor cognition has a significant impact on the neuroplasticity of Nepalese investors.	0.588	0.001	Accepted
H2: Financial literacy has a significant impact on the neuroplasticity of Nepalese investors.	0.382	0.001	Accepted

Hypothesis	Unstandardized Beta (B)	p-value/ C.I.	Decision
H3: Risk absorption capacity mediates the relationship between investor cognition and neuroplasticity among Nepalese investors.	0.1376	0.0506-0.2431	Accepted
H4: Risk absorption capacity mediates the relationship between financial literacy and neuroplasticity among Nepalese investors.	0.2196	0.1518-0.3033	Accepted

All hypotheses are supported. Investor cognition and financial literacy positively affect neuroplasticity both directly and indirectly through risk absorption capacity. The mediation is partial, showing that investors' ability to manage risk partly transmits the effects of cognition and financial literacy on neuroplasticity. This highlights the combined importance of cognitive, financial, and risk-handling skills in shaping adaptive investment behavior among Nepalese investors.

Discussion

This study examined the roles of investor cognition, financial literacy, and risk absorption capacity in shaping neuroplasticity among Nepalese investors. The demographic profile indicates that the sample largely represents young, educated, and relatively new investors in the Nepalese capital market. Most respondents were aged between 18–34 years (87.34%), held at least a bachelor's degree (84.33%), had less than two years of investment experience (46.33%), and invested below NPR 50,000 (46.70%). This reflects the growing participation of young and first-time investors in NEPSE, making cognitive and learning-related factors particularly relevant in this context.

Descriptive analysis revealed that respondents demonstrated a moderately high level of investor cognition (Mean = 3.50, SD = 0.711). Investors strongly acknowledged the importance of knowledge in stock market participation (Mean = 3.91), while reliance on family consultation was relatively low (Mean = 3.07), suggesting a preference for independent and informed decision-making. This finding aligns with behavioral finance literature emphasizing analytical thinking and information processing as essential for adaptive investment behavior (Behera et al., 2021; Frankish, 2010).

Financial literacy among respondents was found to be moderate (Mean = 3.38, SD = 0.827). While investors showed good understanding of basic financial terms (Mean = 3.54), they reported comparatively lower confidence in evaluating the benefits and costs of different financial securities (Mean = 3.29). This indicates that although foundational knowledge exists, advanced analytical skills remain limited, supporting earlier findings that financial education in Nepal needs greater depth and practical orientation (Nepal Rastra Bank, 2023; Rasool & Ullah, 2020).

Risk absorption capacity also recorded a moderate level (Mean = 3.39, SD = 0.786). Investors expressed optimism regarding investment growth (Mean = 3.52) but showed caution in gradually increasing risk exposure (Mean = 3.18). This balanced yet conservative risk behavior reflects the relatively low risk tolerance observed among Nepalese investors in prior studies (Parajuli & Shrestha, 2020), highlighting the importance of emotional control and risk-handling ability in volatile markets.

Neuroplasticity recorded the highest overall mean among the study variables (Mean = 3.64, SD = 0.870). Respondents strongly agreed that continuous learning and experience improve investment decision-making (Mean = 3.75), indicating openness to adaptation, learning, and behavioral change. This supports neuroplasticity research suggesting that repeated exposure,

feedback, and learning experiences reshape cognitive flexibility and decision-making pathways over time (Ricker et al., 2001; Voss et al., 2017).

Correlation and regression analyses confirmed strong and statistically significant relationships among the study variables. Investor cognition showed a strong positive correlation with neuroplasticity (r = 0.717), while financial literacy was also strongly correlated with neuroplasticity (r =0.676). Risk absorption capacity demonstrated the strongest correlation with neuroplasticity (r = 0.742). Regression results further revealed that investor cognition and financial literacy jointly explain 59.1% of the variation in neuroplasticity (R^2 = 0.591, F = 214.310, p = 0.001). Investor cognition emerged as the strongest predictor (B = 0.588, β = 0.481), followed by financial literacy (B = 0.382, β = 0.364), indicating the dominant role of cognitive abilities in adaptive learning.

Mediation analysis showed that risk absorption capacity partially mediates the relationships between investor cognition and neuroplasticity, and between financial literacy and neuroplasticity. The indirect effects were statistically significant for both investor cognition (Effect = 0.1376; Boot CI = 0.0506–0.2431) and financial literacy (Effect = 0.2196; Boot CI = 0.1518–0.3033), while direct effects remained significant. This confirms partial mediation, suggesting that cognition and financial literacy enhance neuroplasticity both directly and by strengthening investors' ability to absorb and manage risk. Findings validate an integrated framework, bridging cognition, literacy, and risk to neuroplasticity in emerging markets like Nepal's. They challenge static investor models by evidencing dynamic neural adaptation, urging tailored interventions: experiential financial curricula for youth, AI-enhanced simulations per Celestin et al. (2025b), and literacy programs linking working capital insights (Mishra & Rahman, 2025) to profitability. Policymakers should prioritize NEPSE education campaigns fostering neuroplastic growth for sustained market maturity.

Conclusion

This study confirms that neuroplasticity among Nepalese investors is significantly shaped by investor cognition and financial literacy, both directly and indirectly through risk absorption capacity. These results validate an integrated model linking cognition, literacy, risk capacity, and neuroplasticity in emerging markets, challenging static behavioral finance views by evidencing dynamic neural adaptation. Strong correlations (r=0.717–0.742) extend mediation frameworks, positioning risk-handling as a bridge from foundational skills to adaptive decision-making amid NEPSE volatility. Investors with stronger cognitive awareness and financial knowledge demonstrate greater adaptability and learning ability in response to capital market dynamics. The partial mediating role of risk absorption capacity indicates that effective risk-handling skills enhance, but do not replace, the direct influence of cognition and financial literacy on neuroplasticity. Despite increasing participation in Nepal's capital market, moderate levels of financial literacy and risk tolerance suggest persistent capability gaps. The findings highlight the need for targeted investor education, financial literacy initiatives, and risk management training to foster adaptive investment behavior and strengthen the long-term resilience of Nepal's capital market. Policymakers and NEPSE should launch youth-targeted programs: experiential financial curricula, AI-driven simulations, and literacy modules tying working capital to profitability. Brokerages could integrate neuroplasticity-focused training via apps promoting real-time learning and risk calibration.

Recommendations

Based on the study's findings, recommendations to enhance investor decision-making, learning, and participation in Nepal's NEPSE capital market include targeted investor education emphasizing cognitive skills like analytical thinking, reflective learning, and disciplined strategies. Structured financial literacy programs should deliver practical training in investments, portfolio management, risk-return analysis, and market interpretation,

prioritizing young and novice participants. Risk-handling capacity can be built through simulations and experiential learning to assess tolerance, manage volatility emotions, and boost confidence. Financial institutions and intermediaries must provide clear guidance, simplified information, and accessible resources for rational behavior. Policymakers should incorporate cognitive-behavioral elements into national strategies, while future research explores longitudinal, sector-specific, and psychological aspects of investment behavior.

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