



Impact of Overconfidence Bias on Investment Decision Making: Mediating Role of Risk Tolerance among NEPSE Investors

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ABSTRACT

Based on the behavioral finance theory, this study aims at investigating the role of overconfidence bias in the investment behavior of individual investors who transact on Nepal Stock Exchange (NEPSE) and whether risk tolerance acts as a mediator between the two. The research design adopted was quantitative, cross sectional and the primary data are collected using a structured questionnaire to the active retail investors of NEPSE. Correlation, multiple regression, and mediation analysis (Hayes' PROCESS macro) were used to analyze the data in SPSS. The results suggest that the relationship between overconfidence bias and investment decisions is direct, and that the relationship between overconfidence bias and investment decisions is partially mediated by risk tolerance. Finally, the study reveals that overconfidence is an important behavioral factor in the investment decision-making process in the Nepalese capital market, both directly and indirectly via the investors' willingness to take risks. The findings indicate that there is a need for a better targeted investor education and regulatory awareness program to promote more rational investment behavior of NEPSE investors.

Keywords: Overconfidence bias, risk tolerance, investment decision-making, behavioral finance, NEPSE

JEL Classification: G11 (Portfolio Choice); G40 (Behavioral Finance, General); G41 (Role and Effects of Psychological, Emotional, Social, and Cognitive Factors on Decision Making in Financial Markets)

Introduction

The concept of classical finance theory assumes rational behavior on the part of the investor, who understands and can efficiently process all the information available to him and who makes decisions that maximize his expected utility. Behavioral finance disproves this premise by demonstrating that psychological influences consistently bias financial decision making. Key concepts in this area of work include heuristic-driven decision making, whereby investors make decisions based on mental shortcuts instead of the full processing of information; the herding effect, which describes the tendency of investors to follow herd mentality and follow others as opposed to doing their own analysis; and prospect theory, which explains asymmetric risk preferences like loss aversion (M. A. Sattar, Toseef and M. F. Sattar 2020). All taken together, the

results suggest that these behavioral factors can result in investors taking risks that a rational model would not suggest.

Overconfidence is an investor's tendency to underestimate the accuracy of his or her knowledge, skill, and judgement, as identified in this literature, and is one of the most well documented biases (Broekema and Kramer 2021). Previous international studies suggest that overconfidence is associated with excessive trading, with overtrading causing portfolio performance to suffer due to transaction costs and poor trading timing and with lack of diversification, since overconfident investors think their own ideas are superior to others (Statman, Thorley and Vorkink 2006; Barber and Odean 2001; Gervais and Odean 2001).

In Nepal, more access to online trading platforms, real-time market news, and sentiment on social media can result in a



stronger investor confidence than what available information might suggest. Furthermore, the Nepalese capital market is dominated by retail investors and the investors are young, with comparatively limited access to independent research and, in these circumstances, behavioral biases are more likely to affect their investment decisions than they would in a more mature market. Although there is increasing international evidence, the psychological mechanism by which overconfidence turns into investment decision has been studied relatively little among the Nepalese investors, specifically, the tolerance of risk of the investor in channeling this mechanism. It is important to understand this mechanism because it helps to elucidate the nature of the role played by overconfidence—whether it is a direct driver of investment decisions or whether it is a signal of risk appetite. Hence, in this study the researcher tried to examine the relation between overconfidence bias and investment decision making of NEPSE investors considering risk tolerance as a mediating variable. For this, the project aims to:

1. Examine the impact of over confidence bias in investment decision making of NEPSE investors.
2. Investigate the impact of overconfidence bias on the risk-taking capacity of the investors in the NEPSE.
3. To analyze risk tolerance impacts on investment decision making of the NEPSE investors.
4. Investigate the mediating effect of risk tolerance between overconfidence bias and investment decision-making of NEPSE investors.

Literature and Related Work

The impact of overconfidence bias on risk-taking and portfolio management is examined in this paper. A major component of behavioral finance is overconfidence, which causes investors to overestimate their skills, trade excessively, misjudge risks, and handle portfolios badly. The emphasis emphasizes how crucial it is to comprehend psychological aspects to make wiser financial judgements.

Theoretical Review

Behavioral finance examines the impact of psychological factors on financial decisions with the challenge that investors are not entirely rational. It combines the knowledge in psychology with conventional finance to describe why investors usually do not follow rational decision-making models. Key principles include Heuristic behavior, in which decisions are based on rules of thumb or trial and error, and the Herding Effect, in which investors follow others rather than performing their own study. Prospect Theory emphasizes biases such as loss aversion, which leads to risk-seeking in prospective losses and risk-avoidance in potential benefits (M. A. Sattar, Toseef and M. F. Sattar 2020). These findings demonstrate how behavioral factors might influence investors to accept more risks than sensible portfolio management would recommend.

The overconfidence bias has a significant impact on the investment decisions among NEPSE investors resulting in overtrading, poor diversification, and poor portfolio performance. This is more effective in the emerging capital market in Nepal where the access of investors to credible data is constrained. The extreme volatility of the price and the tendency to trade based on sentiment, further consolidate overconfidence as investors incorrectly attribute the short-term successes to their skills. Moreover, overconfident investors have a greater risk tolerance, which contributes to decision-making biases. To minimize such biases and encourage rational investment behavior within the NEPSE, enhanced investor education and awareness programs are necessary.

Empirical Studies

Developing Market Context

Studies have shown that overconfidence bias can lead to excessive trading, inefficient asset allocation, impulsive judgments, market timing errors, risk underestimating, and loss aversion (Awalakki 2023). Empirical study indicate that both overconfidence and herding are important influences on investment decisions, and these results are supported by earlier studies because of the tendency of investors, because of a lack of adequate knowledge, to make mistakes because of these biases, affecting financial advisers who try to help investors make right investment decisions (Madaan and Singh 2019). The findings indicate that overconfidence is a particularly dangerous bias in behaviors, since it causes investors to be guided by false confidence instead of judgement. Further studies have examined the determinants of overconfidence bias and how it influences investment performance through investors risk propensity. Additional research indicates that cognitive patterns like self-attribution, the illusion of control, and the conviction that one is superior to the typical investor are the root causes of overconfidence. Due to these psychological inclinations, investors in developing market are more likely to take bigger, sometimes unreasonable, risks (Dangol and Manandhar 2020). The results of the research above suggest that the underlying cognitive biases that cause overconfidence cause it to be an especially persuasive influence on investor behaviors, since they systematically promote larger and frequently irrational amounts of risk-taking. Subsequent studies show that overconfident investors often take unjustified risks and adopt unfavorable investment strategies because they believe they have superior information and forecasting skills. People often overestimate their skills and ignore crucial information, which makes them think they are superior to the accepted norm (Chaudhary 2025). This behavior shows that overconfidence always misleads the judgement of investors and drives them to take unnecessary risks.

Emerging Markets

Studies argue that overconfident investors are more likely to make quick decisions, rely too much on their own judgement, and be more eager to trade frequently. Other biases did exist, but their impact was insufficient to affect the results. This implies that overconfidence is the most significant behavioral element influencing investors' decision-making and investment

management (N. Aryal 2021). Specifically, three cognitive biases—illusion of control, self-attribution, and the better-than-average effect—have been identified as key contributors to overconfidence. These biases not only directly affect investment decisions but also indirectly impact performance by shaping risk-taking behavior (Abdin et al. 2022). The most powerful bias in behavior is overconfidence, which influences the decision-making process of investors who tend to overtrade and depend too much on their judgment. Additional research reveals how behavioral biases are widespread in making investment choices across various markets and cultures. The findings demonstrate the pressing necessity of increasing investor awareness and education that could prevent the negative impact of those biases on investment outcomes. Combining the insights provided by the global and Nepalese perspectives, the literature gives a holistic view of how behavioral biasness promotes and influences investment behavior, and as such, it is relevant in both developed and emerging markets (Kandel, Basnet and M. Aryal 2024). Knowledge of behavioral biases is essential since a higher level of investor awareness and education can reduce their adverse impact and so this knowledge is useful in both developed and emerging markets. It is claimed that investors that are overconfident overestimate their skills and expertise, which causes them to trade and invest more since they think they can beat the market.

Nepalese Context

Overconfidence bias is not significantly related to investor experience, although it is related to the number of trades, suggesting that frequent investors tend to be more overconfident in their investment choices. Investors become more and more overconfident because they use mental shortcuts in their investment decisions, called heuristics, which involve overestimating the accuracy of their predictions and ignoring the potential risks, which reinforces the impact of psychological biases such as overconfidence on decision-making in a Nepalese investment context (Pandit 2021). Although this confidence might improve decisions, there are serious hazards associated with it since overconfident investors may ignore important information and misjudge market volatility, which could result in rash decisions and financial losses. To lessen its detrimental effects and encourage better investing decisions, overconfidence bias must be addressed through financial education and advice services. It is critical that investors, financial advisors, and legislators are aware of this bias (Gurung et al. 2024). Overconfidence may cause investors to overrate their capacities, risk too much and make poor choices concerning money, and in this regard the services of a financial educator and financial advisor can help in reducing the negative impacts of overconfidence.

Overall, overconfidence bias is a major source of irrational investment behavior, which makes investors overestimate their abilities, underestimate risks, and overtrade and in a poorly timed manner. This tendency is further supported by cognitive processes like the illusion of control, self-attribution bias, and better-than-average effect, leading to a higher risk-taking and a decrease in portfolio performance. It is important to

note that overconfidence has a serval role in influencing investor behavior through risk tolerance. These findings imply that enhancing the financial education programs and investment advisory services can be used as effective interventions in reducing the negative effects of overconfidence bias and promote a more rational and informed investment decision-making.

Conceptual Framework

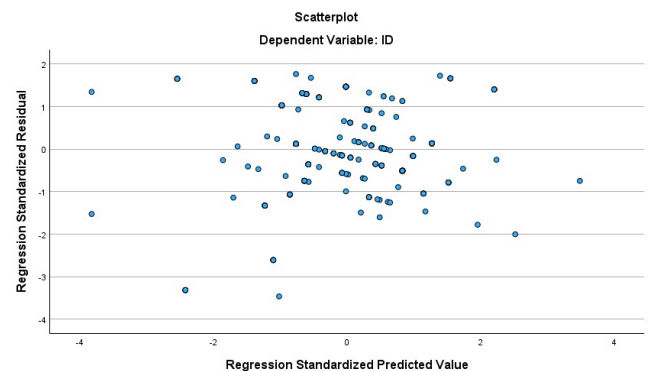


Figure 1: Conceptual Framework (Bist, 2025)

This conceptual framework states that the phenomenon of overconfidence bias affects the investment decisions of individual investors directly and indirectly through risk tolerance. Overconfidence also leads to greater risk taking where investors become more comfortable to take more risk and invest in risky markets. In that way, risk tolerance mediates the association between overconfidence bias and making investment decisions, which demonstrates the significance of the psychological aspect of investment decision-making in the developmental financial market in Nepal.

Research Hypotheses

- H1:** The overconfidence bias has a positive impact on investment decisions by Nepalese investors.
- H2:** The overconfidence bias has a positive effect on risk tolerance on Nepalese investors.
- H3:** The relationship between overconfidence bias and investment decisions of Nepalese investors is mediated by risk tolerance.

Methodology

Research Philosophy

The research philosophy that is adopted in this study is positivism. Positivism refers to a philosophical paradigm that places special focus on the establishment of laws that can be used in the explanation and prediction of both social and natural sciences. It is based on a hypothetico-deductive framework in which theories are developed, and hypothesis tested and the results of these tests are obtained based on empirical data (Park, et al., 2020).

This is suitable in the current study because it attempts to test

the causality of the relationship between overconfidence bias and investment decision-making and test the mediating influence of risk tolerance among NEPSE investors.

Research Approach

The research is deductive in nature and under this approach, a set of established premises are used to derive conclusions. It outlines the objectives to formulate accounting theory, based on assumptions to justify this method through inferences of these premises. The study looks at bias in investment decisions and evaluates the role of risk tolerance as a mediator between NEPSE investors, based on the behavioral finance theory (Zalaghi and Khazaei 2016).

Research Design

The research design is a quantitative, cross-sectional study that collects data through surveys among NEPSE investors. The research will examine the relationship between overconfidence bias and investment decision-making and use risk tolerance as a mediating variable. The structured questions are open to analysis using correlation, regression, and mediation methods, which results can be generalized to a larger population of NEPSE investors.

Population and Sampling Strategy

All the individual retail investors who are currently trading on the Nepal Stock Exchange and take their own investment

decisions were included in the study population while institutional investors and non-active investors were excluded. Participants were selected using purposive sampling technique which is a non-probability sampling because it is used to reach participants which meet specific criteria in terms of age (18 years and older), actively trading, and responsible for their own investment decision. The minimum sample size required was computed using the formula for large or unknown populations used by Cochran (1977) for a 95% confidence level, a 5% margin of error and an assumed population proportion of 50%, yielding a minimum sample of around 384 respondents.

Data Collection Methods

The primary data was collected by using a structured questionnaire online (Google Forms) and investor networks and intermediaries. The questionnaire had four sections: 1) Demographic characteristics (age, gender, income, investment experience, and trading frequency); 2) An overconfidence bias scale adapted from existing behavioral finance questionnaires; 3) A risk tolerance scale which is based on the validated financial risk tolerance scale of Grable and Lytton (1999); 4) An investment decision making scale derived from previous research on investor behavior, information use and decision quality.

Variables and Measurements

Table 1: Held-Out Test Set (n = 160), Extended Metrics

Variable	Role	Basis	Dimensions	Measurement
Overconfidence Bias	Independent	Ahmad & Shah (2020)	Miscalibration, Overestimation, Perceived Knowledge	Likert-scale questions
Risk Tolerance	Mediating	Grable & Lytton (1999)	Willingness, Comfort, Psychological Preparedness	Multiple choice questions
Investment Decision-Making	Dependent	Ahmad & Shah (2020)	Information Evaluation, Investment Behavior Management	Likert-scale questions

Note. Variable roles and measurement instruments as applied in this study.

Data Analysis

Multiple regression was used to explore the relation between overconfidence bias and investment decision making, where investment decision making was the dependent variable and overconfidence bias and risk tolerance were the predictors. The mediating effect of risk tolerance between overconfidence bias and investment decision was tested using Hayes' PROCESS macro (Model 4), which is the product of path a (overconfidence bias → risk tolerance) and path b (risk tolerance → investment decisions, accounting for overconfidence bias). This indirect effect was evaluated using a percentile bootstrap confidence interval (with 5,000 resamples), and a confidence interval that excludes zero means that the indirect effect is statistically significant. Full mediation is suggested when the direct effect of overconfidence bias on investment decisions is not significant when risk tolerance is added to the model, and partial mediation is indicated when both direct and indirect effects are significant.

Ethical Considerations

The research was conducted in accordance with the ethical norms for research. The participation was voluntary and informed; respondents were assured that their responses would only be used for the purposes of academic research and all data was collected and stored anonymously. The interviews were non-invasive and non-judgmental, as indicated in the wording of the questionnaire, and people had the right to withdraw from the interviews at any time.

Limitations

This study is self-reported and thus may be vulnerable to social-desirability or self-perception bias. The findings cannot be generalized to other markets due to purposive, non-probability sampling and NEPSE investors' focus. The cross-sectional design precludes drawing causal inferences and the focus of the study is limited only on overconfidence, not including other possible behavioral biases that can affect investment behavior, such as herding or loss aversion.

Results and Discussion

This chapter presents the findings from the quantitative data analysis used to answer the study's research objectives and hypotheses. The analysis comprises the response rate, respondents' demographic information, descriptive statistics, reliability analysis, correlation analysis, regression assumption tests, direct effect regression analysis, mediation analysis, and hypothesis testing. The data were examined by IBM SPSS Statistics and, where appropriate, Hayes PROCESS Macro.

Response Rate and Demographic Characteristics of Respondents

Table 2: Response Rate and Demographic Characteristics of Respondents of the Survey

Category	Group	n	%
Gender	Male	185	48.3
	Female	196	51.17
	Other	2	0.52
Age	18–24	234	61.1
	25–34	80	20.89
	35–44	27	7.05
	45 and above	42	10.97
Education	Higher Secondary (+2)	47	12.27
	Bachelor's Degree	261	68.15
	Master's Degree or higher	75	19.58
Occupation	Student	168	43.86
	Employed	121	31.59
	Self-employed	74	19.32
	Unemployed	20	5.22
Monthly Income	Below NPR 10,000	95	24.8
	NPR 10,000–25,000	81	21.15
	NPR 25,000–50,000	87	22.72
	Above NPR 50,000	120	31.33

Note. Percentages are based on valid responses (n = 384, unless otherwise indicated by missing values).

A total of 450 questionnaires were sent out and 432 of these were returned, with 48 being incomplete, leaving 384 for analysis (85.3%). A summary of the demographic profile of respondents is presented in Table 2. Females comprised 51.2%, males 48.3%, the age group 18–24 was the largest (61.1%), and students and salaried employees were the largest groups (43.9% and 31.6% respectively), the age groups were evenly spread across the four age bands, with education

levels fairly evenly distributed and student and salaried employees being the largest groups (68.2% and 31.6% respectively).

Descriptive Statistics

Descriptive statistics were employed to summarize the study variables' central tendency and distribution. For each construct, the mean and standard deviation were determined.

Table 3: Descriptive Statistics by Construct

Construct	Items	Item Mean Range	Overall Mean	Item SD Range
Overconfidence Bias (OB)	8	2.26–4.11	3.35	0.93–1.40
Risk Tolerance (RT)	7	1.63–2.91	2.32	0.65–1.21
Investment Decision (ID)	5	2.93–4.01	3.47	0.86–1.09

This table is not intended to provide all the details of the items for each construct, but rather to provide descriptive statistics for each construct at the item level, to avoid redundant information in the full data set. The average extent of overconfidence was moderate for the

items on the Overconfidence Bias (OB) scale; comparatively low for the items on the Risk Tolerance (RT) scale; and intermediate-to-elevated for the items on the Investment Decision-Making (ID) scale.

Reliability Analysis

Table 4: Reliability Statistics for Study Scales

Scale	Original Items	Items Retained	Item(s) Removed	Cronbach's α
Overconfidence Bias	8	8	—	0.71
Risk Tolerance	7	6	RT1	0.6
Investment Decision	5	4	ID2	0.7

Note. $\alpha \geq .70$ is considered good internal consistency; $\alpha \geq .60$ is treated as acceptable for exploratory research (Hair et al., 2010).

Cronbach's alpha was used to determine the internal consistency. One item was deleted from the Item 1 on the Risk Tolerance scale (RT1) and one item from the Item 2 on the Investment Decision scale (ID2) because of low or negative corrected item-total correlations, thus increasing the internal consistency of the scales. Following the widely accepted advice provided for exploration, behavioral research, α values of .70 or higher are considered good, and values as low as .60 would be considered acceptable, especially for shorter scales. The three scales were then all found to be internally consistent for the analyses that follow, with the Risk Tolerance scale ($\alpha = .60$) being somewhat lower than the conventional .70 and results on this scale should be interpreted with a corresponding degree of caution.

Correlation Analysis

Pearson's correlation analysis was used to determine the direction and strength of the correlations between the research variables.

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Table 5: Pearson Correlations Among Study Variables

Variable	1. OB	2. RT	3. ID
1. Overconfidence Bias (OB)	—		
2. Risk Tolerance (RT)	.531**	—	
3. Investment Decision (ID)	.260**	-.085	—

Note. * $p < .05$. ** $p < .01$.

Table 14 shows that Overconfidence Bias (OB) has a significant and positive relationship with the dependent variable Investment Decision (ID) $r = .260$, $p < .01$. The mediating variable Risk Tolerance (RT) was also significantly associated with the Overconfidence Bias (OB) $r = .531$, $p < .01$, but the mediating variable (Risk Tolerance) was insignificantly related to the dependent variable Investment De-

cision (ID), $r = -.085$, $p > .05$.

Regression Assumptions

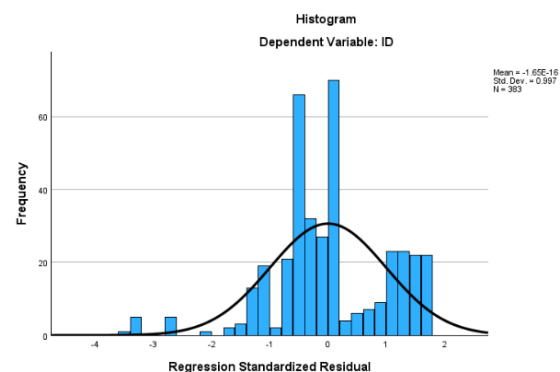


Figure 2: Scatterplot of Regression Standardized Residuals Against Regression Standardized Predicted Values for Investment Decisions

The regression assumptions were checked prior to hypothesis testing. Samples had acceptable residual skewness (-0.443) and kurtosis (0.922), and histograms and normal P-P plots showed a normal distribution despite large results on Kolmogorov-Smirnov test and Shapiro-Wilk test (probably due to sample size of 383). There were no non-linear patterns in the scatterplots, thus confirming the linearity assumption. There was no multicollinearity as shown by tolerance value (.718) and variance inflation factor (1.393). The standardized residuals versus standardized predicted values were used to test homoscedasticity. A limitation of the regression model was the Durbin-Watson statistic, which was 1.744, suggesting positive autocorrelation, not independence, with the regression model. Future analyses are recommended to use robust standard errors.

Regression Results: Direct Effects

Table 6: Regression Coefficients for Direct Effects (DV: Investment Decisions)

Predictor	B	SE B	β	t	p
Constant	3.139	0.177	—	17.71	< .001
Overconfidence Bias (OB)	0.425	0.056	.426	7.58	< .001
Risk Tolerance (RT)	-0.411	0.074	-.312	-5.55	< .001

Note. $R^2 = .138$; $F(2, 380) = 30.33$, $p < .001$.

Multiple regression analysis was performed with investment decision-making as the dependent variable and overconfidence bias and risk tolerance as predictors. The model was statistically significant, $F(2, 380) = 30.33$, $p < .001$, and explained 13.8% of

the variance in investment decisions ($R^2 = .138$, $AdjustedR^2 = .133$). After controlling overconfidence bias, investment decisions were significantly positively predicted by overconfidence bias ($B = 0.425$, $\beta = .426$, $p < .001$), and significantly negatively predicted

by risk tolerance ($B = -0.411$, $\beta = -.312$, $p < .001$).

Mediation Analysis

Mediation analysis was performed to determine if the mediator variable accounts for the relationship between the independent variable and the dependent variable. Mediation can be assessed using Hayes PROCESS Macro Model 4 or bootstrapping.

Table 7: Mediation Analysis: Path Coefficients and Bootstrap Effects

Path	Relationship	B	SE / Boot SE	95% CI	p
a	OB → RT	0.402	0.033	—	< .001
b	RT → ID (controlling for OB)	−0.41	0.074	—	< .001
c	OB → ID (total effect)*	0.26	—	—	< .01
c'	OB → ID (direct effect, controlling for RT)	0.425	0.056	[0.315, 0.535]	< .001
a × b	Indirect effect: OB → RT → ID	−0.17	0.039	[−0.242, −0.091]	Sig.

Note. *The total effect (path c) corresponds to the zero-order relationship between OB and ID ($r = .260$, Table 5); the exact unstandardized coefficient and standard error for the total-effect (Step 1) model should be verified against the original PROCESS output, as the manuscript draft did not report this figure separately from the direct effect. Significance of the indirect effect is based on a 95% bootstrap confidence interval (5,000 resamples) that excludes zero.

The indirect effect of overconfidence bias on investment decision through risk tolerance was statistically significant ($B = -0.165$, Boot SE = 0.039, 95% CI [−0.242, −0.091]). However, the direct effect of

overconfidence bias on investment decisions was still present in the model when risk tolerance was added ($B = 0.425$, $p < .001$), indicating partial mediation, rather than complete mediation.

Summary of Hypothesis Testing

Table 8: Summary of Hypothesis Testing

Hypothesis	Path Tested	Result
H1	OB → ID (positive direct effect)	Supported
H2	OB → RT (positive effect)	Supported
H3	RT → ID (significant effect)	Supported (negative direction)
H4	RT mediates OB → ID	Supported (partial mediation)

Overall, the findings indicate that the overconfidence bias has a direct positive impact on investment decisions, and an indirect positive impact via risk tolerance. Even though overconfidence raises investors' risk taking, overconfidence is also linked to lower reported investment-decision quality, partially negating the direct effect of overconfidence on this investment-decision quality.

Discussion of Findings

Direct Effect of Overconfidence Bias on Investment Decision Making

The first aim of this study was to investigate the impact of overconfidence bias on investment decision-making of NEPSE investors. As found with H1, the direct effect of overconfidence bias on investment decision was significant and positive ($B = 0.425$, $p < .001$). This result is consistent with the international evidence linking overconfidence and overtrading and linking overconfidence and poor diversification to international evidence of other forms of biased, as opposed to purely rational, decision-making and with the evidence from the region that overconfidence is the most consistent of the behavioral predictions of investment decisions, as opposed to other (N. Aryal 2021; Chaudhary 2025). The relatively high levels of overconfidence in the sample, as well as most investors in the age group 18-24 (61.1% of the sample), align with previous arguments that younger and less experienced investors are especially susceptible to overconfidence, partly because of the role of social media and their limited investment experience.

This finding needs to be interpreted in conjunction with studies sug-

gesting that in certain contexts, overconfidence's impact on investment outcomes is primarily mediated by risk-seeking rather than through a direct pathway (Abdin et al. 2022). The present study also offers some evidence for both pathways which indicates that the weight of each pathway might be influenced by market and investor characteristics that could be different for the NEPSE sample from those of the samples used in some previous mediation studies (e.g., the more retail oriented, younger, and trading frequency-oriented profile of the NEPSE sample).

Overconfidence Bias and Risk Tolerance

The second objective examined the effect of overconfidence bias on risk tolerance. The overconfidence bias was significantly and positively correlated with risk tolerance ($B = 0.402$, $p < .001$) and accounted for 28.2% of the variance in risk tolerance, which supported H2. This is aligned with available evidence showing that investors with high self-confidence are likely to engage in higher levels of financial risk due to their self-perceived high level of judgment and their low perception of financial losses (Dangol and Manandhar 2020; Kandel, Basnet and M. Aryal 2024). This finding also supports Nepal-specific evidence showing that overconfidence is not significantly related to the experience of investors, but is related to trading frequency that is, overconfidence seems to be encouraged by trading in the Nepalese market, rather than it being a constant factor that is simply dependent on how long the investor has been involved in the market (Pandit 2021). This distinction implies that it might be better to try to reduce overconfidence among high-frequency traders, not among investors.

Mediating Role of Risk Tolerance

The third and fourth goals explored the effect of risk tolerance on investment decisions and the mediating effect between overconfidence and investment decisions. Results indicated that overconfidence bias partially mediated its effect on investment decisions via risk tolerance ($B = -0.165$, 95% CI $[-0.242, -0.091]$) and that overconfidence bias directly affected investment decisions when the mediating role of risk tolerance was eliminated ($B = -0.411$, $p < .001$), thereby supporting H3 and H4. Although like Abdin et al (2022), this study found some tension as risk tolerance was not significantly associated with investment decisions ($r = -.085$, $p > .05$), it was a significant and negative predictor in the model controlling for overconfidence. The internal consistency of the risk tolerance scale is low ($\alpha = .60$), indicating that it needs to be replicated with a more credible measure.

From a substantive point of view, the indirect effect with a negative sign suggests that while overconfident investors are more likely to accept risk, they are not necessarily better investors as this increased risk-taking seems to have a detrimental effect on investment decision-making. That is, the positive direct link between overconfidence and investment decisions is partially dampened through the negative indirect effect of overconfidence on investment decisions through excessive risk-taking. This agrees with the main story of behavioral finance literature which finds that overconfidence spurs investors to take more risk than is warranted by their own actual information advantage, or that the net direct effect of overconfidence is not necessarily beneficial for the investor (Gervais and Odean 2001; Chaudhary 2025). Overall, the model accounted for a relatively small percentage of the variance ($R^2 = .138$), suggesting that other variables that were not explored here may also have an important impact on investment decisions, and warrant further investigation in subsequent research.

Conclusion

The present study is designed to investigate the role of overconfidence bias on investment decision making of the investors of NEPSE and whether it can be mediated by the investors' risk tolerance. There were four hypotheses, each of which was supported; overconfidence bias was found to have a direct positive relationship with investment decisions, a positive relationship with risk tolerance, and an indirect relationship with investment decisions operating through risk tolerance, though the latter was not found to be fully mediated. Combined, the results indicate that the overconfidence effect increases investors' risk-taking appetite, but this increased risk-taking appetite does not seem to help investors make better investment decisions it may even hurt their ability to make better investment decisions. This trend is especially applicable to the rapidly expanding retail sector investment market in Nepal, where there is a growing number of young and less experienced investors. The study provides empirical evidence from an emerging market which is relatively under-researched in the behavioral finance literature and thus supports the general thesis that behavioral biases are not unique to developed markets. The results indicate that financial education, awareness of the regulations and advisory services are still needed to promote more rational investment habits among investors in the NEPSE.

Implications and Future Research Avenues

Theoretical Implications

By finding that risk tolerance acts as a mediator, not merely an amplifier, of the overconfidence-investment decision link, this study de-

velops behavioral finance theory in a context different from that explored by previous research. The suppression pattern also points to the need for future theoretical models of overconfidence in emerging markets to consider the possibility that risk tolerance could act differently at both the bivariate and multivariate level, rather than in a simple and uniformly positive manner.

Practical and Policy Implications

The following are some practical implications of these findings. Academic institutions and brokerage firms should integrate behavioral finance topics, such as overconfidence and the impact that this emotion has on risk taking and investment returns, into investor onboarding and investor education programs due to the specific susceptibility of investors aged 18 - 24. Financial advisors need to include behavioral profiling in the process of evaluating clients and give them counterevidence or a cooling-off cue if there are indications that they are becoming overconfident before they perform a trade. Financial-literacy requirements need to be considered in the registration of new accounts by regulatory bodies like Securities Board of Nepal (SEBON) and awareness programme on behavioral biases need to be targeted for existing customers. Lastly, individual investors are encouraged to keep trading records to objectively examine the past and make trading decisions, diversify their investments systematically, and not rely too heavily on social media and online stock forums to make investment decisions.

Future Research Directions

This study may be extended in future research by using a longitudinal study design to investigate the relationship between overconfidence and risk tolerance and on the quality of investment decisions as investors become more experienced, overcome the shortcomings of the current cross-sectional study design. Moreover, examining other behavioral biases to supplement the herding, loss aversion, and disposition effects may extract the unexplained variance of investment decisions and also include financial literacy as a moderator. Future research should try to duplicate the mediation model using a more robust risk tolerance instrument and more objective indicators of investment decision quality, such as objective portfolio returns, to further confirm the suppression relationship between risk tolerance and investment decisions. Last, qualitative or mixed methods might offer a more meaningful understanding of the beliefs of Nepalese retail investors about the confidence and risk they feel in their trading.

Disclosure Statement

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