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The Influence of Risk Propensity and Psychological Factors on Investment Decisions❖

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Abstract

This study focuses on risk propensity and psychological factors influencing investment decisions among individuals in the Nepal Stock Exchange (NEPSE) in Kathmandu, Nepal. It focuses on risk perception, risk tolerance, overconfidence, and loss aversion, drawing on prospect theory and cognitive bias. Utilising an explanatory research design, data was collected from 278 respondents through structured questionnaires. A quantitative analysis was conducted using both descriptive and inferential statistics, with the PLS-SEM method employed to derive the results. Both risk propensity and psychological factors significantly affect all investment-related decisions, with overconfidence being the most influential. However, it is important to note that the study is limited to investors in Kathmandu who are trading on NEPSE, and the cross-sectional nature of the data may restrict how applicable these findings are to other settings. The study emphasises the need for stakeholders in Nepal's financial sector to consider these factors when forming financial regulations and investor protection initiatives.

Keywords: behavioural finance, investment decision, loss aversion, overconfidence, risk factors

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INTRODUCTION AND STUDY OBJECTIVES

Investment-related decision-making is a complex process influenced by numerous factors and biases individuals may exhibit when assessing risks and making choices. Traditional financial theories, such as the Efficient Market Hypothesis (EMH) and Modern Portfolio Theory (MPT), assumed rationality and emphasised maximising expected utility. However, human decisions do not always align with these rational principles, which is due to cognitive and emotional biases (Markowitz, 1952; Fama, 1970; Kahneman, 1979).

In any financial scenario, regardless of its nature, an appropriate decision has a major impact that leads to financial growth and stability. Behavioural finance emerged as a field that challenges the assumptions of traditional finance, proving that psychological elements also affect

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investment decisions (Shiller, 2003). In emerging markets like Nepal, behavioural finance theories are growing in importance in explaining investors' behaviour. As risk-involved investment decisions are often influenced by biases. The opinions of investors are influenced by how risk is perceived, regardless of how they evaluate the relationship between risk and investment (Slovic, 1988). Investment decisions are critical for individuals looking to improve financial returns and secure future financial stability. However, these decisions often face influence from various behavioural and psychological biases. These biases impact the reasoning of investors and ultimately affect their investment outcomes (Kahneman, 1979).

Risk perception is an important element of the decision-making process which influences an individual's ability to deal with uncertainty. Higher risk perception might lead to more conservative investment behaviour, favouring to safer alternatives (Nguyen et al., 2019). Conversely, those with low perceptions might go for the risky investment alternatives (Weber & Milliman, 1997). Simultaneously, the level of risk tolerance determines the composition of investment portfolios which may be shaped by a blend of behavioural, demographic, and social elements. It also indicates an investor's capacity to accept varying levels of risk (Corter & Chen, 2006). This psychological aspect of an individual directly impacts investment decisions, guiding them in selecting assets that align with their risk tolerance levels. Individuals who demonstrate higher risk tolerance typically allocate higher funds to riskier assets, where they often anticipate potentially higher returns (Ainia & Lutfi, 2019).

Also, overconfidence stands as a pervasive bias influencing investment choices. It is because overconfident individuals tend to believe that they know more than they do, and that their abilities in finance are better than average. Such overconfident investors often take excessive risks by underestimating potential downsides of a situation which can impact their asset allocation strategies and ultimately influence their investment performance. Overconfident investors might take excessive risks, often leading to suboptimal asset allocation (Pompian, 2012). Similarly, loss aversion, a characterised attitude to strongly prefer avoiding losses over acquiring gains significantly changes how people make investment decisions. This leads investors to prioritise avoiding losses, often at the expense of maximising potential gains. This bias affects in shaping risk preferences and asset allocation strategies, as individuals strive to minimise perceived losses in their investment endeavours (Thaler et al., 1997).

There have been some major significant findings from empirical studies of these behavioural biases. Studies consistently suggest that risk perception significantly influences asset allocation strategies, as investors adjust their portfolio compositions based on their perceived level of risk (Broihanne et al., 2014). Similarly, higher levels of risk tolerance have been positively associated with the allocation of funds to more risky assets (Corter & Chen, 2006). According to some studies, investors frequently deviate from rational financial

decisions due to behavioural biases like overconfidence, herding behaviour, risk perception, and loss aversion. Among Nepalese studies, Sthapit (2017) and Dangol and Sthapit (2017) discovered that herding behaviour and overconfidence bias strongly influenced investors' investment decisions. Investment strategies can be dramatically changed by overestimating one's own capabilities, imitating masses in investment decisions, making subjective judgement of risks and trying to avoid losses at all costs (Thaler et al., 1997; Weber & Milliman, 1997; Nofsinger, 2017).

Additionally, there is still a concern over the influence of technological development on investment behaviour. The accessibility of numerous opportunities for investment products and the ease of online transactions have increased investment opportunities (Barber & Odean, 2001). However, this enhanced accessibility might also lead to hasty or impulsive investment decisions influenced by behavioural biases as investors navigate an excess of choices within the digital investment environment.

Nepal's financial sector has advanced significantly, with increased efficiency, competition, and technological progress emphasising the need for investor education and informed decisions. The Nepal Stock Exchange (NEPSE) which was established in 1994 is the only securities trading platform in the country. The modernisation of NEPSE including electronic trading capabilities and NEPSE Online Trading System (NOTS) launched in 2018 has drawn more investors into the market hence shedding light on behavioural finance in investment decisions. Such emotions as risk perception, confidence or fear of loss usually guide investment decisions rather than logical reasoning. It is important to understand these motivations for predicting possible changes in the financial market. Numerous empirical studies in Nepal have explored how behavioural biases affect investment decisions and performance on the NEPSE. These studies have examined both rational and irrational factors driving equity participation and trading outcomes, revealing the complexities of investor behaviour in the Nepalese environment.

Baral and Pokharel (2020) examined various biases, including anchoring, representative bias, and overconfidence, only to find that their influence on investment performance had minimal impact. With market factors emerging more significant. In contrast, Basnet (2022) drew attention to the importance of hard numbers like accounting data, stock trends, and financial projections and observed that ethical and environmental considerations were largely overlooked. This lack of awareness provides a potential gap in investor education that must be filled. A few other studies also revealed emotional and irrational trading patterns where overconfidence caused notable distortions in the decision-making process (Acharya, 2022; Sapkota & Chalise, 2023).

Additional studies identified biases such as availability bias, herd instinct, and loss aversion as factors contributing to irrational trading behaviours, where overconfidence stand out as the most significant and moreover found Nepalese investors favouring traditional investments like gold and land over modern alternatives

(Ansari & Phatak, 2017; Karmacharya et al., 2022). There are gender differences as well, particularly males who were showing more confidence. Factors like accounting information and personal financial needs also influenced investor psychology (Shrestha, 2019; Pandey et al., 2020; Neupane, 2021).

Moreover, the exploration of behavioural aspects in Nepal is minimal, with few studies addressing biases in equity investment decisions or comparing them with other markets. The understanding of these issues is further constrained by inconsistent findings and a lack of emphasis on critical variables such as risk perception, risk tolerance, and loss aversion (Baral & Pokharel, 2020; Kasoga, 2021; Basnet, 2022). In countries such as Indonesia, India, Saudi Arabia, and Tanzania, there is a notable absence of studies specifically focusing on the Nepalese investment environment (Kiran et al., 2017; Adielyani & Mawardi, 2020; Adil et al., 2022; Almansour et al., 2023; Halim & Pamungkas, 2023;).

Additionally, the application of foundational theories such as Prospect Theory and Cognitive Bias are often neglected, which prevents comparability and generalisability (Ainia & Lutfi, 2019; Barberis et al., 2001). This paper aims to explore the impact of risk perception, risk tolerance, overconfidence, and loss aversion on investment decisions in Nepal's stock market.

LITERATURE REVIEW

Behavioural Finance: Before the mid-20th century, investment decisions were based on intuition rather than data driven (Statman, 1999). Harry Markowitz's Modern Portfolio Theory revolutionised portfolio construction by optimising asset allocation based on risk-reward profiles. In the 1970s, the Efficient Market Hypothesis (EMH) became the dominant framework, if prices fully reflect all public information, and investors make rational decisions using all data (Markowitz, 1952; Fama, 1970). However, researchers observed investor actions tended to be contrary to rationality, and the limitations of these models became evident, particularly in explaining market anomalies.

On the other hand, prospect theory introduced by Kahneman (1979) revealed systematic biases in decision-making under uncertainty, whereby gains and losses are assessed asymmetrically. Those biases led individuals to become risk-averse with potential gains but risk-seeking to avoid losses (Kahneman & Tversky, 2019). This asymmetry affects risk perception and tolerance which significantly influences investment decisions. Shefrin and Statman (1985) coined "Behavioural Finance," emphasising that psychological factors such as loss aversion and mental accounting biases lead to individuals' deviation from traditional wealth maximisation theories. Behavioural finance, which has been supported through various research studies across different regions. It merges psychology and neuroscience in a continuing struggle against conventional notions of finance by fusing them together, adding to our knowledge of investment decision-making (Nofsinger, 2017).

Investment Decisions: Investment decision refers to the process of selection and

allocation of funds into different types of assets or financial instruments in an effort of generating returns or achieving specific financial goals (Virlics, 2013; Damodaran, 2002). It involves careful consideration of various factors such as investment interest, perception, motivation, initial capital, financial literacy, risk perception, and overconfidence. A few previous studies have variously defined the theory of investment decision-making using different theoretical approaches, most of which are based on bounded rationality theory (Lestari et al., 2023). Investment decisions can be influenced by cognitive neural aspects, psychological factors, and socio-economic factors, as well as investment experience. The decision-making process can be either be rational or irrational; whatever the case, it is necessary for investors to make intelligent choices given a set of goals and opportunity (Lubis et al., 2015; Cahyono, 2023).

Risk Perception and Investment Decisions: Risk perception refers to the subjective evaluations of uncertainties and potential negative impacts. It plays a key role in shaping decision-making by capturing the emotional aspect of risk, which often contrasts with objective and data-driven estimates. This emotional perspective is closely tied to the concept of loss aversion, where the fear of losing influences behaviour more than the prospect of gains (Kahneman & Tversky, 2019; Lestari et al., 2023). An investor's sense of market uncertainty directly impacts their investment choices, often influenced by personal experience, knowledge, and psychological tendencies. Cognitive biases such as optimism and anchoring can steer investors toward behaviours like over-trading or failing to diversify properly (Weber & Milliman, 1997; Weber & Hsee, 1998).

Indeed, more recent studies by Almansour et al. (2023) and Anifa and Soegiharto (2023) noted that perceived risk significantly influences investment decisions. Investors who perceive greater uncertainties or more negative potential consequences could be more cautious in investing as compared to the received view that investors who perceive risks are relatively modest (Ainia & Lutfi, 2019). However, some evidence suggests risk perceptions do not always significantly alter investment volumes once other attitudes like risk tolerance are accounted for (Pratama et al., 2022). People who perceive more risk show loss aversion, prefer certainty, and make smaller stock investments.

H_1: There is a significant impact of risk perception on investment decisions.

Risk Tolerance and Investment Decisions: Risk tolerance reflects an investor's willingness and ability to endure the uncertainties of investment decisions, encompassing both emotional and financial aspects (Grable & Lytton, 1999). It determines the level of return variability an investor can accept and shapes asset allocation preferences to balance acceptable risks with return expectations (Ainia & Lutfi, 2019). Investors with higher risk tolerance can handle greater risks for potential growth, while risk-averse individuals prioritise minimising uncertainty, which may reduce returns (Faff et al., 2008). Additionally, risk tolerance is linked to behaviours such as overconfidence, where

investors with higher risk tolerance may overestimate their ability to outperform the market (Ahmed et al., 2022).

In contrast to risk perceptions of external hazards, risk tolerance captures one's internal ability to bear uncertainty as shaped by personality and experiences (Grable & Lytton, 1999). Investors' attitudes towards risk, shaped by their risk tolerance levels, significantly influence investment decisions (Barber & Odean, 2001). With high risk tolerance, investors will prefer a riskier investment, since this presents them with higher rewards, while low risk tolerance will make investors prefer more conservative options of investment to reduce losses that may be incurred (Ainia & Lutfi, 2019). Moreover, findings of Pramita et al. (2023) also confirm the fact that the risk tolerance affects investment decisions. It plays a pivotal role in determining asset allocation and investment choices among individuals.

H_2: There is a significant impact of risk tolerance on investment decisions.

Overconfidence and Investment Decisions: Overconfidence is a cognitive bias where individuals have excessive faith in their own judgments and abilities, particularly in investment expertise (De Bondt & Thaler, 1985). An overconfident investor overestimates his possibilities in case of success and underestimates the impending risks (Glaser & Weber, 2007). This behaviour consequently results in overtrading and an overconfidence in possessing superior information, which drives a continued tolerance for high risk even in the face of significant uncertainty (Odean, 1998; Adielyani & Mawardi, 2020). Overconfident investors contribute to the volatility and inefficiencies in the market due to their frequent trading while neglecting information that is inconsistent with their belief (Glaser & Weber, 2007; Pompian, 2012). Overconfidence encourages investors to raise their expectations of profits while diminishing the risks associated with investments, which in turn would affect investment decisions. Similarly, a previous study by Madaan and Singh (2019) and Adielyani and Mawardi (2020) found that overconfidence significantly impacts investment decisions. Because of such overestimation, investors get into unnecessary trading and taking risks beyond their capacity, which adversely affects the final outcomes of their investment activities and can add further to any possible market inefficiency.

H_3: There is significant impact of overconfidence on investment decision.

Loss Aversion and Investment Decisions: According to Kahneman (1979), loss aversion is defined as giving a higher weight on potential losses than equivalent gains. Investors who have high loss aversion avoid uncertainty in order not to feel regret; therefore, they would invest fewer assets or funds into equities and trade less. Rooted in prospect theory, loss aversion captures the asymmetric value of losses versus gains (Tversky & Kahneman, 1992). This bias contributes to a preference for existing positions instead of taking risks. It makes investors prefer existing positions, and the state of decisions on investments and behaviour gets influenced (Kiran et al., 2017). Loss aversion prompts risk avoidance when prospects involve any probability of

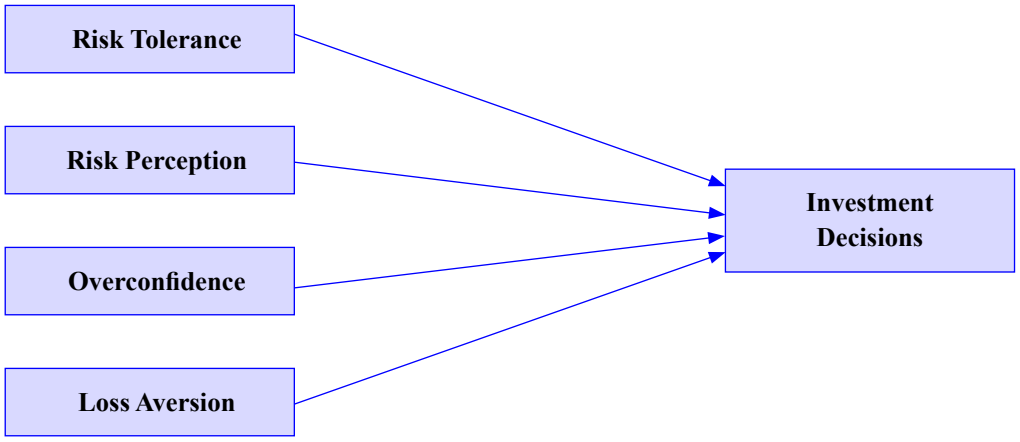

Figure 1. *Conceptual Framework*
Note. Modified from Ahmed et al., 2022; Ainia & Lutfi, 2019; Areiqat et al., 2019; Kannadhasan, 2015

loss, such as in financial investment contexts (Shafqat & Malik, 2021). According to Gupta and Shrivastava (2022), this biasness arises as losses create a more painful psychological state, causing investors to start paying too much attention to preventing the downside loss against attaining upside gains. This bias leads to more conservative investment behaviours and a preference for avoiding risks as a way of preventing potential losses.

H_4: There is a significant impact of loss aversion on investment decisions.

RESEARCH METHOD

This study follows the positivist philosophy of research and adopted a quantitative non-experimental causal-comparative survey design. It intends to understand how psychological factors and risk propensity influence investment decisions among Nepalese investors. A causal-comparative design had seemed suitable, as it explores how pre-existing differences in natural settings influence investor behaviour without the practical constraints of the study, including time and resource limitations. It allows for the efficient collection of data and analysis of relationships without the need for extensive experimental setups. The study uses a cross-sectional approach to capture data on variables examined.

Non-probability convenience sampling was chosen due to the practical limitations of obtaining a comprehensive list of stock investors and the need to gather data within a constrained timeframe. Convenience sampling allowed for the selection of participants who were easily accessible and willing to participate, which facilitated the data collection process. The study targeted investors aged 20 and above with at least one year of equity investing experience, resulting in a sample of 278 participants, exceeding the minimum required based on Hair et al. (2021) guidelines for Structural

Table 1
Construct and Observed Items

Construct	Observed Items and Adopted From
Risk Perception	5 Item (Ahmed et al., 2022)
Risk Tolerance	5 Item (Kannadhasan, 2015)
Overconfidence	4 Item (Ainia & Lutfi, 2019)
Loss Aversion	5 Item (Areiqat et al., 2019)

Equation Modelling, which suggests 10-20 observations per indicator. With 27 indicators in the study, a minimum of 270 responses was required. The data collection period spanned from the 1st week of January 2024 to the 3rd week of February 2024.

Variables and their Measurement: Each variable displayed at Table 1 uses a multi-item 5-point Likert scale ranging from "Strongly Agree to Strongly Disagree", with items validated in previous studies to ensure reliability and content validity. The constructs were assessed with specific items: risk perception and risk tolerance (Likert scale score 5 to 1), and overconfidence, loss aversion, and investment decision (Likert scale score 1 to 5). Items were selected based on their prior validation which were further adjusted for relevance to the Nepalese participants, such as contextualising statements for better reflection on local understanding and comprehension.

Research Instruments and Data Collection Procedure: Data was collected using structured self-administered questionnaires with close-ended and demographic questions, administered both online and offline. Broker offices were visited to reach a broader audience and Kobo Toolbox was used for online collection. The survey questionnaire underwent meticulous preparation with a pilot study with 65 respondents before going into the full-scale deployment for ensuring consistency and reliability of the instrument. It led to further contextualisation and translation into Nepali language to ensure relevance to participants and accurate measurement of the constructs.

Data Analysis Tools

This study used SmartPLS for data analysis as the software was renowned to handle Partial Least Squares (PLS) and Structural Equation Modelling (SEM) effectively. PLS-SEM explicitly allows complicated relationships between latent constructs and indicators, allowing both linear and nonlinear associations. Its variance-based approach is suitable for nonparametric technique which does not require a strict distributional assumption. This makes SmartPLS an ideal choice of tool for modelling intricate data and providing reliable results with smaller sample sizes (Hair et al., 2019). In addition, SPSS and Excel were also used for descriptive analysis.

DATA ANALYSIS AND DISCUSSION

Table 2 displays the demographic information gathered from respondents on age, gender, marital status, education level,

occupation, and income level. Out of the total sample size of 278 respondents, the profile reveals a well-educated sample, with (54.0%) holding master's degrees or higher, suggesting a potential for higher financial literacy. Income distribution varied, with the largest group (48.9%) earning between 30,001-60,000, indicating diverse investment capacities. Experience in NEPSE was predominantly in the 1–3-year range (52.5%), pointing to a relatively new investor base. The majority (59.7%) were married, potentially influencing financial priorities.

Table 3 reveals that 53.2% of the respondents associated "risk" with "opportunity," indicating an understanding of its potential for higher returns. While only 15.1% strongly disagreed with avoiding risks, over (80%) agreed that risk is acceptable when balanced with potential gains, emphasising the value of a calculated approach. Additionally, 45.7% agreed on seeking higher income through investments, suggesting a willingness to take on some risk. Notably, over 60% of respondents expressed a positive attitude towards taking risks, while 22.3% strongly agreed. This indicates that most investors are not entirely risk-averse and are comfortable with calculated risks, especially when potential gains justify the risk, reflecting a lower risk perception.

Table 2
Respondents Profile

Variable	Category	Frequency	Percentage
Gender	Female	59	21.2
	Male	219	78.8
	Total	278	100.0
Age	20-30 years	123	44.2
	31-45 years	103	37.1
	Above 45 years	52	18.7
Education Level	Up to Higher Secondary	27	9.7
	Bachelor's Degree	101	36.3
	Master's Degree and Above	150	54.0
Monthly Income	Less than or equal to 30,000	50	18.0
	30,001-60,000	136	48.9
	60,001-90,000	47	16.9
	Above 90,000	45	16.2
Experience in NEPSE	1-3 years	146	52.5
	4-7 years	93	33.5
	More than 7 years	39	14.0
Marital Status	Married	166	59.7
	Unmarried	112	40.3

Note. Survey data (2024)

Table 3
Opinions on Risk Perception

Risk Perception	1 SA	2 A	3 N	4 D	5 SD
I associate the word "risk" with the idea of "opportunity".	56 (20.1%)	148 (53.2%)	45 (16.2%)	21 (7.6%)	8 (2.9%)
I do not think the risk situation in investment should be avoided at all.	42 (15.1%)	137 (49.3%)	52 (18.7%)	32 (11.5%)	15 (5.4%)
There is risk involved; it is much moreacceptable if risk is confined to my potential for gains from taking the risk.	78 (28.1%)	155 (55.8%)	27 (9.7%)	13 (4.7%)	5 (1.8%)
I am looking for investment opportunities that offer higher income.	87 (31.3%)	127 (45.7%)	41 (14.7%)	17 (6.1%)	6 (2.2%)
I would show my willingness to take risks in financial decisions.	62 (22.3%)	111 (39.9%)	70 (25.2%)	32 (11.5%)	3 (1.1%)

Note. Survey data (2024)

Table 4
Opinions on Risk Tolerance

Risk Tolerance	1 SA	2 A	3 N	4 D	5 SD
I find investing is too difficult to understand.	23 (8.3%)	68 (24.5%)	73 (26.3%)	78 (28.1%)	36 (12.9%)
I am more comfortable putting my money in a bank account than in the stock market.	21 (7.6%)	36 (12.9%)	61 (21.9%)	100 (36.0%)	60 (21.6%)
When I think of the word "risk" the term "loss" comes to mind immediately.	28 (10.1%)	68 (24.5%)	51 (18.3%)	81 (29.1%)	50 (18.0%)
I believe that luck plays a significant role in earning returns from stocks.	20 (7.2%)	62 (22.3%)	92 (33.1%)	57 (20.5%)	47 (16.9%)
In terms of investing, safety of initial investment is more important than returns.	39 (14.0%)	94 (33.8%)	86 (30.9%)	50 (18.0%)	9 (3.2%)

Note. Survey data (2024)

Table 4 shows that (28.1%) of respondents do not find investing too difficult, indicating confidence in understanding investments. Additionally, (36%) prefer stocks over banks, suggesting a risk-taking orientation. Nearly (30%) associate "risk" with "loss," but a third are neutral about luck in investment returns, indicating mixed views on its role. While (33.8%) prioritise the safety of the initial investment over returns, suggesting a preference for minimising risk, the findings overall reveal a segment comfortable with market investing and moderate risk tolerance.

Table 5 reveals varied levels of confidence in investment abilities among respondents.

Notably, 36.0%) are neutral about their investment skills, while 39.2% display high overconfidence, believing they can fully control investment outcomes. Additionally, 36.3% credit their past successes to their expertise, and 41.0% have strong confidence in their portfolio's performance. The findings show that most respondents exhibit high overconfidence, believing they control outcomes and attributing successes to their expertise, while a smaller segment remains neutral or less confident.

Loss Aversion

Table 6 shows that 48.2% of respondents are more concerned about potential losses than missing out on gains, reflecting strong risk aversion. Over 29% feel nervous during market downturns, and 36% avoid additional investments in declining markets. A majority prioritise avoiding capital loss

Table 5
Opinions on Overconfidence

Overconfidence	1 SD	2 D	3 N	4 A	5 SA
I am sure that my ability is better than that of others to choose investment assets.	13 (4.7%)	82 (29.5%)	100 (36.0%)	63 (22.7%)	20 (7.2%)
I am able to fully control the results of my investment decisions.	8 (2.9%)	71 (25.5%)	64 (23.0%)	109 (39.2%)	26 (9.4%)
The success of my investment in the past was due to the unique expertise I have.	12 (4.3%)	53 (19.1%)	93 (33.5%)	101 (36.3%)	19 (6.8%)
I am sure about the performance of my investments.	9 (3.2%)	41 (14.7%)	96 (34.5%)	114 (41.0%)	18 (6.5%)

Note. Survey data (2024)

Table 6
Opinions on Loss Aversion

Loss Aversion	1 SD	2 D	3 N	4 A	5 SA
I am more concerned about a large loss in my stock than missing a substantial gain (profits).	7 (2.5%)	39 (14.0%)	53 (19.1%)	134 (48.2%)	45 (16.2%)
I feel nervous when large price drops are in my invested stocks.	26 (9.4%)	63 (22.7%)	74 (26.6%)	81 (29.1%)	34 (12.2%)
I will not increase my investment when the market performance is poor.	21 (7.6%)	39 (14.0%)	78 (28.1%)	100 (36.0%)	40 (14.4%)
When it comes to investment, no loss of capital (invested money) is more important than returns (profits).	6 (2.2%)	30 (10.8%)	71 (25.5%)	124 (44.6%)	47 (16.9%)
I avoid selling shares that have decreased in value, hoping for a future recovery.	7 (2.5%)	50 (18.0%)	83 (29.9%)	105 (37.8%)	33 (11.9%)

Note. Survey data (2024)

Table 7
Opinions on Investment Decision

Investment Decision	1 SD	2 D	3 N	4 A	5 SA
I consider the overall stock market index when making my investment decisions.	8 (2.9%)	37 (13.3%)	50 (18.0%)	116 (41.7%)	67 (24.1%)
I consider sectoral indices when deciding where to invest my money.	23 (8.3%)	34 (12.2%)	75 (27.0%)	108 (38.8%)	38 (13.7%)
I believe that investments with high historical returns are likely to continue performing well, so I often buy shares with good past prices.	8 (2.9%)	40 (14.4%)	71 (25.5%)	99 (35.6%)	60 (21.6%)
I usually buy shares that I believe their price is below its true price so that I can make a gain/profit when its price goes up.	3 (1.1%)	31 (11.2%)	67 (24.1%)	132 (47.5%)	45 (16.2%)
The trading volume of a security influences my investment decision.	14 (5.0%)	46 (16.5%)	104 (37.4%)	87 (31.3%)	27 (9.7%)
I tend to sell an investment when its price increases.	0 (0.0%)	12 (4.3%)	32 (11.5%)	162 (58.3%)	72 (25.9%)
I tend to buy an investment when its price decreases.	4 (1.4%)	20 (7.2%)	69 (24.8%)	134 (48.2%)	51 (18.3%)
The opinions of big investors influence my investment decisions.	6 (2.2%)	32 (11.5%)	77 (27.7%)	116 (41.7%)	47 (16.9%)

Note. Survey data (2024)

over potential profits, with 44.6% agreeing and 16.9% strongly agreeing. Additionally, 37.8% show a disposition effect bias by holding onto depreciated stocks. These findings highlight a high level of loss aversion, with investors prioritising loss avoidance and exhibiting reluctance to sell losing investments.

Table 7 shows that 41.7% of respondents focus on the overall stock market index, while 38.8% use sectoral indices. A notable 35.6% believe past returns predict future performance, suggesting potential bias. Most respondents 47.5% agree, 16.2% strongly agree) seek undervalued stocks, and 58.3% agree with profit-taking on price increases, while 48.2% buy the dip. Opinions of major investors influence 41.7% of respondents. The data reflects a preference for value investing, profit-taking, and diverse market analysis approaches.

Inferential Analysis

Although PLS-SEM does not require strict distributional assumptions, descriptive analysis was carried out which showed mean scores between 1.964 and 4.058, indicating varied respondent opinions. Standard deviations ranged from 0.737 to 1.271, reflecting moderate to high response variability. Skewness values from -0.742 to 1.228 and kurtosis values from -1.13 to 2.165 suggest that the data distributions are generally normal or mesokurtic, making them suitable for further analysis.

Table 8
Evaluation of the Outer Measurement Model

Construct	Observed Item and Coding	Factor Loading	Average variance extracted (AVE)	Composite Reliability (CR)	Cronbach's Alpha
Risk Perception (RP)	RP1	0.829	0.647	0.901	0.863
	RP2	0.688			
	RP3	0.853			
	RP4	0.850			
	RP5	0.791			
Risk Tolerance (RT)	RT1	0.707	0.612	0.861	0.816
	RT2	0.920			
	RT3	0.804			
	RT4	0.676			
Overconfidence (OC)	OC1	0.686	0.599	0.856	0.781
	OC2	0.802			
	OC3	0.759			
	OC4	0.841			
Loss Aversion (LA)	LA1	0.767	0.506	0.803	0.688
	LA3	0.726			
	LA4	0.672			
	LA5	0.675			
Investment Decision (ID)	ID1	0.832	0.515	0.879	0.838
	ID2	0.865			
	ID3	0.675			
	ID4	0.718			
	ID5	0.700			
	ID7	0.528			
	ID8	0.655			

Note. Survey data (2024)

Measurement Model

To assess the model's reliability and validity, the study examined Standardised Factor Loading (SFL), Composite Reliability (CR), Cronbach's Alpha, Convergent Validity, and Discriminant Validity. Initially, SFL values were computed, revealing some scores below the recommended threshold of 0.708, indicating inadequate reliability. Factor loading should exceed 0.708 for satisfactory reliability (Vinzi et al., 2010). Given that lower loadings are common in social sciences, the study evaluated whether removing such items would improve Composite Reliability and Average Variance Extracted (AVE). Cronbach's Alpha values ranged from 0.688 to

Table 9
Fornell and Larcker Criterion

	ID	LA	OC	RP	RT
ID	0.718				
LA	0.199	0.711			
OC	0.368	0.000	0.774		
RP	-0.272	-0.109	-0.203	0.805	
RT	0.189	-0.170	0.221	-0.133	0.782

Note. Survey data (2024)

Table 10
Discriminant Validity (HTMT)

	ID	LA	OC	RP	RT
ID					
LA	0.249				
OC	0.426	0.182			
RP	0.313	0.167	0.250		
RT	0.202	0.269	0.249	0.131	

Note. Survey data (2024)

Note. One item of Risk Tolerance (RT5), one item from Lvoss Aversion (LA2) and one item from Investment Decision (ID6) was dropped due to the factor loading issue, as its factor loading was less than 0.5.

0.863, slightly below the 0.7 threshold but still acceptable while CR values ranged from 0.803 to 0.901, surpassing the 0.70 threshold and confirming high internal consistency. Average Variance Extracted (AVE) ranged from 0.506 to 0.657, surpassing the recommended cut-off value of 0.5. Therefore, the data demonstrate convergent validity, affirming the meaningful associations between the assessed constructs. Thus, the data meet all criteria (see Table 8) for convergent validity and internal consistency as outlined by (Hair et al., 2019).

Furthermore, discriminant validity of the constructs was evaluated using the "Fornell-Lacker criterion", and Heterotrait – Monotrait "HTMT". The Fornell-Larcker criterion confirms discriminant validity by showing that the square root of the Average Variance Extracted (AVE) for each latent variable exceeds its correlations (cross-loadings) with other variables (Hamid et al., 2017), as illustrated in Table 9. Additionally, Henseler et al. (2015) recommended the HTMT approach for assessing discriminant validity, using thresholds of 0.85 for conceptually distinct constructs and 0.90 for particularly highly similar constructs. Table 10 shows that all HTMT ratios met the 0.90 threshold, confirming that the constructs are distinct and measure different underlying concepts.

Structural Model Analysis

Assessing multicollinearity is crucial before SEM analysis using PLS-SEM. The VIF values in this study ranged from 1.049 to 1.099, well below the 3.3 threshold, indicating no significant multicollinearity or common method bias (Kock, 2015). The Coefficient of Determination (R^2) measures the explanatory power of the model, with 0.75, 0.50, and 0.25 indicating strong, moderate, and weak power, respectively (Hair et al., 2019). In Table 11, the R^2 value for Investment Decision (ID) is 0.224, indicating weak explanatory power, meaning the model's predictors explain only 22.4 percent of the variance in ID. Similarly Effect sizes (f^2) measure the impact of independent variables on the dependent variable, with small values (0.021 to 0.109) indicating varying influence (Cohen, 2013). The Q^2 value for Investment Decision (ID) is 0.171, reflecting weak but adequate predictive relevance (Hair et al., 2019). Finally, the Standardised Root Mean Square Residual (SRMR) value of 0.073, which is below the 0.08 cutoff criterion, indicates a good fit of the model to the data.

Furthermore, Path analysis using SmartPLS software revealed the relationships among psychological factors (loss aversion, risk perception, risk tolerance, overconfidence) and investment decisions, as depicted in Figure 2. Overconfidence showed a moderate positive relationship (β = 0.304) with investment decisions, indicating that higher overconfidence leads to increased investment activity. Risk tolerance had a weak positive relationship (β = 0.133) with investment decisions, suggesting a slight increase in investment activity among those with higher risk tolerance. Risk perception exhibited a weak negative relationship (β = -0.170), implying that lower perceived

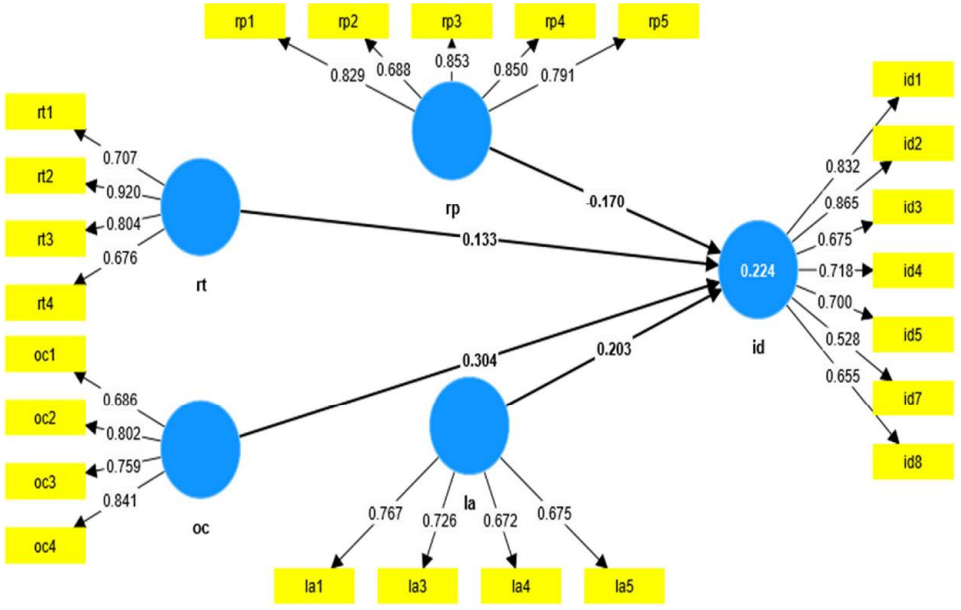

Figure 2. Path Analysis
Note. Survey data (2024)

Table 11
Predictive Relevance R^2, F^2 and Q^2

Predictors (s)	Outcome (s)	R-square	F-square	Q-square
LA	ID	0.224	0.051	0.171
OC			0.109	
RP			0.035	
RT			0.021	

Note. Survey data (2024)

Table 12
Hypothesis Testing

Structure Path	Beta Coefficient	Sample Mean (M)	CI (95%) LLCI 2.50%	CI (95%) ULCI 97.50%	T Statistics	P Values	Conclusion
LA → ID	0.203	0.222	0.107	0.330	3.261	0.001	Supported
OC → ID	0.304	0.307	0.195	0.412	5.435	0.000	Supported
RP → ID	-0.170	-0.174	-0.303	-0.046	2.592	0.010	Supported
RT → ID	0.133	0.145	0.039	0.246	2.298	0.022	Supported

Note. Survey data (2024)

risk encourages investment. Lastly, loss aversion displayed a weak positive relationship (β = 0.203) with investment decisions, indicating that those more averse to loss are slightly more likely to participate in investment activities.

Hypothesis Testing

Using standard bootstrap procedures with 10,000 data resampling, all path coefficients in Table 12 were found to be statistically significant. Specifically, risk tolerance (RT) showed a positive significant effect on investment decision (ID) (β = 0.133, t = 2.298, p < 0.022), followed by the negative significant effect of risk perception (RP) on ID (β = -0.170, t = 2.592, p < 0.010). Similarly, loss aversion (LA) positively impacted ID (β = 0.203, t = 3.261, p < 0.001). Additionally, overconfidence (OC) emerged as a most significant predictor for ID among others (β = 0.304, t = 5.435, p < 0.000). The findings support the hypothesis (H_1, H_2, H_3, and H_4), as they showed statistical significance (p < 0.05) and confidence intervals excluding zero. A p-value less than 0.05 indicates support for the hypothesis, while a p-value greater than or equal to 0.05 leads to its rejection (Kock, 2016).

Discussion

With the increase of investment instruments and popularity of IPO along with secondary market involvement, this study aimed to gain a better knowledge of the factors that impact retail investor's investment decision making. In accordance with prior studies, the respondents' socio-

demographic background reveals a group of young, educated, married males engaged in stock investment, with many holding advanced degrees and earning moderate to high incomes, which likely influences their financial behaviour. The sample includes both novice and experienced investors, reflecting diverse levels of experience in NEPSE (Karmacharya et al., 2022; Pandey et al., 2020).

Furthermore, support from higher income has encouraged investors to actively participate in the stock market. Investors in Kathmandu, Nepal, can leverage their education and experience to analyse the market effectively, with observed patterns of low-risk perception, moderate risk tolerance, high overconfidence, and high loss aversion, consistent with previous findings (Ansari & Phatak, 2017; Baral & Pokharel, 2020; Sapkota & Chalise, 2023). Initially drawn to IPOs for additional income, investors often see the stock market as a favourable opportunity. However, prominent exposure to market complexities and potential losses shifts their risk attitudes, with accumulated experience tempering overconfidence as they face both gains and setbacks.

The primary finding of this study highlights the impact of behavioural finance on investment decisions. The current study investigates the impact of perceived risk on investment decisions, based on prospect theory that people's subjective view of gains and losses shapes their decisions. In agreement with the theory, the finding reveals a significant impact of the risk perception on investment decisions. The research is in line with Almansour et al. (2023), who reported that risk perception significantly affects investment decisions. Additionally, the study's findings are in line with previous studies of Halim and Pamungkas (2023) and Ainia and Lutfi (2019) from Indonesia. They also concluded that risk perception significantly affects investment decisions.

Similarly, Shafqat and Malik (2021) and Hasan and Mustafa (2023), in Pakistan also reported that risk perception negatively impacts investment decisions and, therefore, supports the study evidence. More precisely, those investors who have a higher magnitude of risk perception are characterised by being loss-averse and like certainty, thus investing less funds in stock. On the other hand, low risk perception may promote excessive risk-taking and possible investment pitfalls, since investors will not give enough attention to probable downsides and speculated behaviour. Suboptimal decisions and market inefficiencies may result from such behaviour. Thus, this study provides further support for prospect theory to explain investment decisions.

The study confirms the hypothesis that risk tolerance significantly impacts investment decisions, which is also consistent with the principles of prospect theory. According to prospect theory, individuals exhibit risk-seeking behaviour for potential losses and risk aversion for gains. Higher risk tolerance enables an investor to bear uncertainty; hence, they end up participating in risky investments with expectations of higher returns. This finding is consistent with past studies considering different contexts. For example, from the study of Ramu (2021)

in India, it was found that perceived risk significantly influences investors' risk tolerance and its resultant behaviour.

Ainia and Lutfi (2019) in Indonesia found that, in individual investors, risk tolerance positively influenced investment decisions. Similar outcome was derived from a study conducted earlier where Adielyani and Mawardi (2020) found a positive and significant impact of risk tolerance on investment decisions. One of the problems with risk tolerance is that it is treated as a trait-theorist would have it-as a static characteristic, whereas in reality, it may vary with recent experience, current financial state, and even mood. Such variability casts doubt upon its usefulness as a predictor of investment behaviour. High risk tolerance always led to better investment outcomes, causing people to become reckless, overtrade, or diversify poorly, to the detriment of their longer-term financial health.

The study also investigated and supported the hypothesis that there is a significant impact of overconfidence on investment decisions. This finding aligns with other studies that explored the influence of overconfidence on investment behaviour. For instance, Adielyani and Mawardi (2020) found a positive and significant effect of overconfidence on stock investment decisions among investors in Indonesia. Similar result, which showed a positive influence of overconfidence in investment decisions in India was obtained by Adil et al. (2022). All these studies suggest that individuals with higher levels of overconfidence tended to exhibit a greater propensity to engage in investment activities. Overconfidence was observed to be the most impacting bias on investment decisions, thus indicating how overconfidence is of great importance as a driver of investment behaviour (Kasoga, 2021; Pramita et al., 2023).

This study confirms the theory of cognitive bias in investment decisions. Overconfidence distorts judgement, causing individuals to overestimate their abilities and underestimate risks (Barber & Odean, 2001). Overconfidence persists across cultures and economic conditions, which only goes to show that it is basically imbued in human psychology. This universality makes it particularly challenging to deal with this bias. This is not only a question of education or the issuing of information, since even professional investors fall into the trap of overconfidence. If a significant portion of market participants consistently overestimate their ability to beat the market or predict future outcomes, it could lead to mispricing of assets and increased market volatility.

The study's findings on the significant impact of loss aversion on investment decisions align with the principles of prospect theory. Loss aversion, as described by prospect theory, reflects individuals' tendency to prioritise avoiding losses over acquiring equivalent gains investors with higher levels of loss aversion tend to adopt conservative investment strategies, avoiding risky ventures to minimise the possibility of experiencing regret associated with losses. However, the findings are inconsistent as support varies across studies. Kiran et al. (2017) contradicted the anticipated negative link between loss aversion and investment choice in Pakistan. Conversely, studies in India and Pakistan

observed investors' decisions were indeed affected by loss aversion bias, aligning with our study's findings (Gupta & Shrivastava, 2022; Hasan & Mustafa, 2023; Kumar & Babu, 2018). However, in the study of Ainia and Lutfi (2019) in Indonesia it was observed that while risk perception negatively affected investment decisions, loss aversion had no significant impact, which indicated some variability across geographical contexts.

However, aligning with Baral and Pokharel (2020), the study confirms the significant impact of loss aversion on investment decisions in Nepal. The study's results strongly support Acharya's (2022) conclusions, emphasising the substantial influence of both overconfidence and loss aversion, with overconfidence emerging as the most impactful factor. The impact of loss aversion appears to be contextual and complex in nature. This inconsistency seems to indicate that cultural norms, economic conditions, and even personality might modulate the effect of loss aversion. Loss aversion bias drives investors toward trying more to avoid losses than to achieve gains. It influences decisions of individuals to prioritise perceived safety and security in investment options.

The findings of the study both corroborate and diverge from other Nepalese studies. It offers refined comprehensions into investor behaviour. For instance, findings on prospect variables run contrast to Karmacharya et al. (2022); however, the studies agree on the significant role of heuristics, especially overconfidence. The study reinforces the observation of Shrestha (2019) about overconfidence in the investment decisions of overconfident investors. Among these, the psychological and risk propensity factors, overconfidence has been found to be the most influencing in Nepalese investment contexts, which is also very strongly corroborated through the present study.

Nepalese investors, just like those of other emerging markets, experience higher market volatility. With fewer investment options, and less market efficiency than in developed economies. Such uncertainty can also lead to overconfidence quite often and drive speculation. Further, scarcity of reliable financial data may compel investors to make judgments based on personal intuition, thus giving an inflated sense of one's control and making riskier choices based on intuition rather than objective data.

CONCLUSION AND IMPLICATIONS

This study draws upon the fundamental principle of prospect theory. It shows how psychological factors such as risk perception, risk tolerance, overconfidence, and loss aversion influence investors' choices, challenging traditional assumptions of purely rational behaviour. Cognitive bias (like overconfidence) seems to have a stronger influence on investment decisions than risk-related factors. Supporting Prospect Theory's core principle of subjective evaluation of gains and losses, the positive relationship with loss aversion is particularly interesting, as it suggests that fear of losses might drive more active investment behaviour rather than passivity. The relatively weak influences of risk tolerance and risk perception suggest that objective and subjective assessments of

risk play a role in decision-making. It also concludes that these are significant but not the dominant factors. Decisions are constantly shaped by these psychological factors, with emotional and heuristic considerations playing prominent roles. Investors also tend to hold on to losing investments and may even increase their positions in those losing stocks, during stock market decline.

This study offers valuable insights for both academia and finance practitioners, particularly in emerging markets like Nepal. It applies Prospect Theory to reveal how psychological factors influence financial decision-making, challenging traditional notions of rationality. Some of the broad implications of the study relate to how the biases in behaviour influence investment decisions, inclusive of a new comprehension of dynamics pertaining to Nepal's capital market. Methodologically speaking, this study would set a standard for future research. This provides real guidance for the investment professional to tailor services and proposes specific interventions that may reduce irrational behaviour. With the knowledge of "why" investors make certain choices, the stakeholders are in a better position to develop an enabling investment environment.

Individual investors are advised to pursue continuous education, seek reliable information, and develop personalised investment strategies. The study suggests that financial advisors design and implement cooling-off periods and framing techniques in a balanced manner. At the same time, policymakers and regulators should have some pre-defined requirements on the clarity of fee and risk disclosure, having a robust investor protection regime and fair-treatment principles. Although the study brings some valuable insights, it recognises the limitations of the narrow demographics of its sample and cross-sectional data, calling for further research on other psychological factors, socio-economic impacts, and longitudinal effects. Further, it emphasises the use of moderating and mediating factors. Similarly, the inclusion of institutional investors would clarify broader investment behaviour in Nepal.

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Conflict of interest

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REFERENCES

Acharya, S. (2022). An empirical study on behavioural factors influencing individual investors decision making in Nepal Stock Exchange [Dissertation, Tribhuwan University]. https://elibrary.tucl.edu.np/handle/123456789/18700

Adielyani, D., & Mawardi, W. (2020). The influence of overconfidence, herding behavior, and risk tolerance on stock investment decisions: The empirical study of millennial investors in Semarang City. *Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship*, *10*(1), 89 https://doi.org/10.30588/jmp.v10i1.691

Adil, M., Singh, Y., & Ansari, M. S. (2022). How financial literacy moderate the association between behaviour biases and investment decision? *Asian Journal of Accounting Research*, *7*(1), 17–30. https://doi.org/10.1108/AJAR-09-2020-0086

Ahmed, Z., Rasool, S., Saleem, Q., Khan, M. A., & Kanwal, S. (2022). Mediating role of risk perception between behavioral biases and investor's investment decisions. *Sage Open*, *12*(2). https://doi.org/10.1177/21582440221097394

Ainia, N. S. N., & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making. *Journal of Economics, Business & Accountancy Ventura*, *21*(3), 401. https://doi.org/10.14414/jebav.v21i3.1663

Almansour, B. Y., Elkrghli, S., & Almansour, A. Y. (2023). Behavioral finance factors and investment decisions: A mediating role of risk perception. *Cogent Economics and Finance*, *11*(2). https://doi.org/10.1080/23322039.2023.2239032

Anifa, A. S., & Soegiharto, S. (2023). Does the psychology of investment decisions depend on risk perception and financial literacy? *Maksimum*, *13*(2), 152. https://doi.org/10.26714/mki.13.2.2023.152-163

Ansari, S., & Phatak, Y. (2017). A study on financial risk tolerance and preferred investment avenues of investor. *International Journal of Application or Innovation in Engineering & Management*, *6*(7), 1–6.

Areiqat, A. Y., Abu-Rumman, A., Al-Alani, Y. S., & Alhorani, A. (2019). Impact of behavioral finance on stock investment decisions applied study on a sample of investors at Amman Stock Exchange. *Academy of Accounting and Financial Studies Journal*, *23*(2), 1–16.

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, *116*(1), 261–292. https://doi.org/10.1162/003355301556400

Barberis, N., Huang, M., & Santos, T. (2001). Prospect theory and asset prices. *The Quarterly Journal of Economics*, *116*(1), 1–53.

Basnet, R. C. (2022). Decision making behavior of individual stock investors' in Nepal. *Journal of Nepalese Business Studies*, *15*(1), 107–124. https://doi.org/10.3126/jnbs.v15i1.50397

Broihanne, M.-H., Merli, M., & Roger, P. (2014). Overconfidence, risk perception and the risk-taking behavior of finance professionals. *Finance Research Letters*, *11*(2), 64–73.

Cahyono, A. D. (2023). The psychological, neuroscience, and socio-economic factors of mindset investors in buying mutual fund for investments decisions. *Jurnal Ilmu Ekonomi Dan Manajemen [Journal of Economics and Management]*, *14*(1), 102–113. https://doi.org/10.30996/die.v14i1.8341

Cohen, J. (2013). Statistical power analysis for the behavioral sciences. Academic press.

Corter, J. E., & Chen, Y.-J. (2006). Do investment risk tolerance attitudes predict portfolio risk? *Journal of Business and Psychology*, *20*, 369–381.

Damodaran, A. (2002). *Investment valuation: Tools and techniques for determining the value of any asset. (2nd ed.)*. John Wiley & Sons.

Dangol, R., & Sthapit, A. (2017). Impact of herding behaviour and overconfidence bias on individual investors' investment decisions**:** A study of Nepalese stock market. *7th ORSN International Conference* on Operations Research for Productivity. Organised by ORSN and Patan College of Professional Studies, 2nd February 2017: Lalitpur, Nepal.

De Bondt, W. F., & Thaler, R. (1985). Does the stock market overreact? *The Journal of Finance*, *40*(3), 793–805.

Faff, R., Mulino, D., & Chai, D. (2008). On the linkage between financial risk tolerance and risk aversion. *Journal of Financial Research*, *31*(1), 1–23.

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, *25*(2), 383–417.

Glaser, M., & Weber, M. (2007). Overconfidence and trading volume. *The Geneva Risk and Insurance Review*, *32*, 1–36.

Grable, J. E., & Lytton, R. H. (1999). Financial risk tolerance revisited: The development of a risk assessment instrument. *Financial Services Review*, *8*(3), 163–181.

Gupta, S., & Shrivastava, M. (2022). Herding and loss aversion in stock markets: Mediating role of fear of missing out (FOMO) in retail investors. *International Journal of Emerging Markets*, *17*(7), 1720–1737. https://doi.org/10.1108/IJOEM-08-2020-0933

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24.

Halim, R., & Pamungkas, A. S. (2023). The influence of risk perception, overconfidence, and herding behavior on investment decision. *International Journal of Application on Economics and Business*, *1*(1), 521–529. https://doi.org/10.24912/v1i1.521-529

Hamid, M. A., Sami, W., & Sidek, M. M. (2017). Discriminant validity assessment: Use of Fornell & Larcker criterion versus HTMT criterion. *Journal of Physics: Conference Series.* https://doi.org/10.1088/1742-6596/890/1/012163

Hasan, M., & Mustafa, S. (2023). Prospect theory and investment decision biases: The mediating role of risk perception: Case study of Pakistan Stock Exchange. *International Journal of Social Science and Entrepreneurship (IJSSE)*, *3*(2), 569–593. https://ijsse.salmaedusociety.com/index.php/ijsse/article/view/163

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*, 115–135.

Kahneman, D. (1979). Prospect theory: An analysis of decisions under risk. *Econometrica*, *47*, 278.

Kahneman, D., & Tversky, A. (2019). Prospect theory: An analysis of decision under risk. In *Choices, values, and frames* (pp. 17–43). World Scientific. https://doi.org/10.1017/CBO9780511803475.003

Kannadhasan, M. (2015). Retail investors' financial risk tolerance and their risk-taking behaviour: The role of demographics as differentiating and classifying factors. *IIMB Management Review*, *27*(3), 175–184. https://doi.org/10.1016/j.iimb.2015.06.004

Karmacharya, B., Chapagain, R., Dhungana, B. R., & Singh, K. (2022). Effect of perceived behavioral factors on investors' investment decisions in stocks: Evidence from Nepal stock market. *Journal of Business and Management Research*, *4*(01), 17–33. https://doi.org/10.3126/jbmr.v4i01.46680

Kasoga, P. S. (2021). Heuristic biases and investment decisions: Multiple mediation mechanisms of risk tolerance and financial literacy: A survey at the Tanzania stock market. *Journal of Money and Business*, *1*(2), 102–116. https://doi.org/10.1108/jmb-10-2021-0037

Kiran, A. M., Munir, M. A., & Sarwar, S. (2017). Impact of overconfidence and loss aversion biases on investor decision making behavior: Mediating role of risk perception. *International Journal of Public Finance*, *1*(1), 13–24.

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of E-Collaboration*, *11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Kock, N. (2016). Hypothesis testing with confidence intervals and P values in PLS-SEM. *International Journal of E-Collaboration (IJeC)*, *12*(3), 1–6.

Kumar, A., & Babu, M. (2018). Effect of loss aversion bias on investment decision: A study. *Journal of Emerging Technologies and Innovative Research*, *5*(11), 71–76.

Lestari, D. M., Sadalia, I., & Silalahi, A. S. (2023). The effect of financial literacy, risk perception, overconfidence, and investment experience on cryptocurrency investment decision. *19th International Symposium on Management (INSYMA 2022)*, 158–164. https://doi.org/10.2991/978-94-6463-008-4_21

Lubis, H., Dileep Kumar, M., Ikbar, P., & Muneer, S. (2015). Role of psychological factors in individuals investment decisions. *International Journal of Economics and Financial Issues*, *5*(1), 397–405.

Madaan, G., & Singh, S. (2019). An analysis of behavioral biases in investment decision-making. *International Journal of Financial Research*, *10*(4), 55–67. https://doi.org/10.5430/ijfr.v10n4p55

Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, *7*(1), 77–91. https://doi.org/10.1111/j.1540-6261.1952.tb01525.x

Metawa, N., Hassan, M. K., Metawa, S., & Safa, M. F. (2019). Impact of behavioral factors on investors' financial decisions: Case of the Egyptian stock market. *International Journal of Islamic and Middle Eastern Finance and Management*, *12*(1), 30–55. https://doi.org/10.1108/IMEFM-12-2017-0333

Neupane, P. (2021). Factors determining risk tolerance of individual investors in Kathmandu Valley. *Journal of Business and Social Sciences Research*, *6*(1), 77–88. https://doi.org/10.3126/jbssr.v6i1.38131

Nguyen, L., Gallery, G., & Newton, C. (2019). The joint influence of financial risk perception and risk tolerance on individual investment decision-making. *Accounting & Finance, 59,* 747–771.

Nofsinger, J. R. (2017). *The psychology of investing*. Routledge.

Nyamute, W. I. (2016). *Investor behaviour, investor demographic characteristics, investment style and individual investor portfolio performance at the Nairobi Securities Exchange.* Business Administration, JKUAT.

Odean, T. (1998). Volume, volatility, price, and profit when all traders are above average. *The Journal of Finance*, *53*(6), 1887–1934.

Pandey, D., Risal, N., & Shaifali, C. (2020). The psychology of investors in Nepalese stock market and investment decisions. *Wutan Huatan Jisuan Jishu*, *16*, 726–755.

Baral, S., & Pokharel, P. R. (2020). Behavioral factors and investment decision: A case of Nepal. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3687104

Pompian, M. M. (2012). *Behavioral finance and wealth management: How to build investment strategies that account for investor biases (Vol. 667)*. John Wiley & Sons.

Pramita, P. P., Rahayu, T., Diono, C. K., & Hendriana, E. (2023). Effect of psychological factors on investment decisions of millennial investors in an emerging country. *International Journal of Economics and Finance*, *15*(11), 83. https://doi.org/10.5539/ijef.v15n11p83

Pratama, A., Fauzi, A., & Purwohedi, U. (2022). Pengaruh persepsi risiko, ekspektasi return, dan behavioral motivation terhadap keputusan investasi mahasiswa yang terdaftar di galeri investasi pada perguruan tinggi negeri Jakarta [Pengaruh persepsi risk, ekspektasi return, dan behavioral motivation terhadap keputusan investasi mahasiswa yang terdaftar di galeri investasi pada perguruan tinggi negeri Jakarta]. *Indonesian Journal of Economy, Business, Entrepreneurship, Business and Finance*, *2*(3), 252–267.

Ramu, M. (2021). Analysing the effect of financial risk perception, risk tolerance on investment behaviour: An empirical analysis. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(3), 5511–5516. https://doi.org/10.17762/turcomat.v12i3.2214

Sapkota, M. P., & Chalise, D. R. (2023). Investors' behavior and equity investment decision: An evidence from Nepal. *Binus Business Review*, *14*(2), 209–221. https://doi.org/10.21512/bbr.v14i2.9575

Shafqat, S. I., & Malik, I. R. (2021). Role of regret aversion and loss aversion emotional biases in determining individual investors' trading frequency: Moderating effects of risk perception. *Humanities & Social Sciences Reviews*, *9*(3), 1373–1386. https://doi.org/10.18510/hssr.2021.93137

Shefrin, H., & Statman, M. (1985). The disposition to sell winners too early and ride losers too long: Theory and evidence. *The Journal of Finance*, *40*(3), 777–790.

Shiller, R. J. (2003). From efficient markets theory to behavioral finance. *Journal of Economic Perspectives*, *17*(1), 83–104.

Shrestha, N. R. (2019). Overconfidence and investment decisions in Nepalese stock market. *PYC Nepal Journal of Management*, *12*(1), 27–36. https://doi.org/10.3126/pycnjm.v12i1.30583

Slovic, P. (1988). Risk perception. In Curtis C. Travis (Eds.). *Carcinogen Risk Assessment*, 171–181. https://doi.org/10.1007/978-1-4684-5484-0.

Statman, M. (1999). Behaviorial finance: Past battles and future engagements. *Financial Analysts Journal, 55*(6), 18–27.

Sthapit, A. (2017). Impact of behavioural factors on share investment decisions: A study of herding behaviour and overconfidence biases of Nepalese investors (2017). *7th WWA International Conference* on Global Peace through Emotional Literacy in Education and Psychology of Management. Organised by World Without Anger, Global Peace Foundation and World Emotional Literary League (USA), Prime College. Dec 2, 2017: Kathmandu.

Thaler, R. H., Tversky, A., Kahneman, D., & Schwartz, A. (1997). The effect of myopia and loss aversion on risk taking: An experimental test. *The Quarterly Journal of Economics*, *112*(2), 647–661.

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, *5*, 297–323.

Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). *Handbook of partial least squares* (Vol. 201). Springer.

Virlics, A. (2013). Investment decision making and risk. *Procedia Economics and Finance*, *6*, 169–177. https://doi.org/10.1016/S2212-5671(13)00129-9

Weber, E. U., & Hsee, C. (1998). Cross-cultural differences in risk perception, but cross-cultural similarities in attitudes towards perceived risk. *Management Science*, *44*(9), 1205–1217. https://doi.org/10.1287/mnsc.44.9.1205

Weber, E. U., & Milliman, R. A. (1997). Perceived risk attitudes: Relating risk perception to risky choice. *Management Science*, *43*(2), 123–144.