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Decoding Investor Decision-Making: Unraveling Psychological Factors and Educational Moderation in Financial Markets

GLOBAL ECONOMICS REVIEW

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Abstract: This study delves into the influence of psychological factors on investors' decision-making, with a focus on the moderating role of education. The target population comprises 883 domestic individual investors registered in the Pakistan Stock Exchange. Employing a structured questionnaire, opinions were gathered from a sample of 275 financial domestic individual investors. The findings reveal a positive and significant association between risk propensity, risk perception, and investment decisions. Conversely, herding behaviour exhibits a negative and significant impact, indicating that heightened herding behaviour reduces investors' decision to invest. Further analysis underscores the combined effect (moderating effect) of risk propensity financial literacy, revealing a significant yet negative impact on investors' decisions, while risk perception financial literacy demonstrates a positive and significant effect. The concluding table highlights the positively significant presence of loss aversion bias.

Key Words: Investor Decision-making, Psychological Factors, Education Moderation, Financial Literacy, Herding Behavior

JEL Classification:

Introduction

Behavioral finance (BF) has emerged as a critical field, shedding light on the complex interplay of cognitive, psychological, social, and emotional factors that influence decision-making in both individuals and organizations. In contrast to traditional finance, which assumes rational behaviour, BF acknowledges the inherent irrationality of human actions. Researchers like Kahneman and Tversky (1972) and Ramiah, Xu, & Moosa (2015) have questioned the Efficient Market Hypothesis (EMH), contending that biases and errors in information processing render markets incomplete.

At the heart of investment decisions lie risk perception (RPE) and risk propensity (RPR), acting as pivotal factors. RPE serves as a communicative source, preparing investors to embrace risk based on psychological factors. Meanwhile, RPR reflects investors' inclinations toward avoiding or embracing risky actions. Despite existing studies focusing on RPE and RPR individually, there's a

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noticeable void in research examining their combined influence.

Conventional financial theories, including arbitrage principles and portfolio theories, assume rational decision-making. However, even experts, armed with knowledge, often succumb to cognitive biases. Behavioral Finance, introduced by Kahneman and Tversky (1979) and Shiller (1995), explores the profound impact of psychological factors on financial markets.

While BF studies have been prevalent in advanced economies, a gap exists in understanding their applicability to emerging economies like Pakistan. This study seeks to explore behavioural factors influencing investment decisions in the Pakistani stock market, accounting for the unique cultural, social, and economic dynamics of the region.

Despite advancements in BF research, there's a critical gap in comprehensively examining the joint influence of risk perception, risk propensity, and financial literacy on investor behaviour. Previous studies have predominantly focused on isolated aspects, neglecting the interaction between these factors. The unpredictability of the Pakistani financial market necessitates an in-depth investigation into the contextual impact on investor behaviour.

The objectives of this study are multi-faceted. It aims to examine the effect of risk propensity on investors' decision-making behaviour, investigate the influence of risk perception on their decisions, assess the impact of loss aversion bias, and evaluate financial literacy as a potential moderating factor between investors' decision-making behaviour and psychological factors.

In formulating hypotheses, we consider the associations between risk propensity and decision-making behaviour, risk perception and decision-making behaviour, and the potential moderation by financial literacy. These hypotheses provide a structured framework for the investigation, fostering a deeper understanding of the intricate relationships at play.

The significance of this study lies in its contribution to the limited understanding of variables influencing individual investors' behaviour. By addressing diverse demographics and exploring the roles of risk perception and risk propensity for less experienced investors, the findings have practical implications for market participants. This research offers insights into the rationality and behaviour of investors in the Pakistan Stock Exchange, contributing to the development of existing literature on behavioural finance.

In conclusion, this study aims to fill a crucial research gap by examining the interconnected influences of risk perception, risk propensity, and financial literacy on investors' decision-making behaviour in the context of the Pakistani stock market. By doing so, it contributes to a broader understanding of behavioural finance and its implications for emerging economies like Pakistan.

Literature Review

Behavioural finance delves into the financial behaviours of stakeholders engaged in saving, acquisition, and management. It encompasses saving and investment, credit and cash management, emphasizing the efficient utilization of scarce resources. Factors like locus of control and income significantly influence individual financial behaviour. This stands in contrast to traditional financial theories like the Efficient Market Hypothesis (EMH), arbitrage principles, and modern portfolio theory, which assume perfect capital markets and rational decision-making.

Kahneman and Tversky's prospect theory challenges these assumptions, asserting that investors' choices are influenced by self-utility perceptions rather than a rational evaluation of all available information. The theory highlights the impact of potential gains and losses on decision-making, with investors often prioritizing gains over losses. This departure from rational decision-making introduces the concept of behavioural biases, shaping investors' limited and sometimes irrational choices.

Psychological tendencies and financial risk tolerance are explored in studies like Kubilay et al. (2016), revealing the significant influence of personality traits on investors. Financial literacy emerges as a crucial concept, signifying financial awareness and understanding of procedures and rules. Decision-making biases, such as herding behaviour, overconfidence, and availability bias, are identified as influencers in investment choices, impacting market variables and individual investors.

The dual-process theory posits two decision-making systems: an intuitive, unconscious method based on past experiences and a deliberate, logical approach. This theory suggests that experienced investors may lean towards intuition, while educated young investors might rely on reasoning.

Loss Aversion Bias (LAB) is another psychological factor explored, highlighting individuals' tendency to avoid losses rather than pursue gains. LAB plays a crucial role in decision-

making, with potential loss looming larger in individuals' minds than potential profits. Investment decisions, defined as buying and selling financial instruments, are influenced by various factors like herding behaviour, overconfidence, and anchoring. The global financial crisis, heuristics usage, and the disposition effect also impact investment policies and decision-making.

Risk Propensity (RPR) and Risk Perception (RPE) are psychological factors influencing investment decisions. RPR reflects an individual's inclination to embrace or avoid risk, while RPE is subjective, and influenced by environmental, cognitive, and personal factors. Financial literacy is introduced as a moderating variable, with the hypothesis that it can enhance or diminish the relationship between psychological factors and investors' decision-making behaviour.

Herding behaviour is introduced as a control variable, reflecting the tendency of investors to imitate others due to a lack of public information and market transparency. In conclusion, the essay emphasizes the multifaceted nature of behavioural finance, incorporating psychological factors, biases, financial literacy, and herding behaviour into the intricate realm of investment decision-making. The interplay of these elements shapes investors' choices, challenging traditional financial theories and paving the way for a more nuanced understanding of financial behaviours.

Research Methodology

This study aims to investigate the impact of psychological factors on investors' decision-making, considering education as a moderating factor. The subsequent sections detail the nature of the study, population, sample, sampling method, data collection procedure, and model selection.

Nature of the Study

The study adopts a positivist and quantitative approach, grounded in real numbers. It utilizes quantitative research to explore the associations between predictor and response variables, with education acting as a moderator.

Population and Sample

Focusing on understanding the impact of psychological factors on investors' decision-making with the moderating role of education, the study targets all investors on the Pakistan Stock Exchange (PSE). The target population consists of 883 domestic individual investors, and data is collected through a structured questionnaire distributed among a sampled group of 275 financial investors from Stock Exchanges.

Sampling Method and Sample Size

The sample size is determined using Yamane's formula, resulting in a sample of 275 through simple random sampling. This technique is chosen to mitigate bias in the study.

$$n = N / (1 + N * e^2)$$

Where n denotes for sample size N denotes for population size e denotes for Margin of error = 0.05 $n = N / (1 + N * e^2) = 883/ (1 + 883* (0.05)^2) = 883/ (3.21) = 275.077 \approx 275$ Simple random sampling method of probability sampling technique used by the scholars to reduce biasedness.

Data Type and Collection Procedure

Primary data is collected through a structured questionnaire, employing a cross-sectional and quantitative data procedure over 6-8 months.

Variables Measurement

Dependent and independent variables are meticulously discussed. The dependent variable is investment decisions, measured using a 5-point Likert scale with seven items. Independent variables include risk propensity and risk perception, each measured with a 5-point Likert scale and six and four items/questions, respectively. Financial literacy serves as the moderating variable, employing a dummy approach. The control variable, herding behaviour, is measured using a 5-point Likert scale with five items/questions.

Control Variable

In order to measure the investment attitudes of investors, the scale of Hala1, Abdullah, Andayani, Ilyas, and Akob (2020) has been adopted to find out herding behaviour from domestic individual investors of Stock Exchanges, a 5-point Likert scale used for the variable and 5 items/questions was used. The scale for measurement for the construct ranged from Strongly Disagree (1) to Strongly Agree (5).

Statistical Tools

Different statistical tools were employed to investigate the influence of psychological factors on decisions made by investors with the role of financial literacy as a moderating. To analyze the data, the best statistical model is regression. Descriptive statistics, regression analysis and correlation were used to find out results through SPSS software. The models are;

ID = β0 + β1RPR + β2RPE + β3LAB+ β3HBei … (1), Where

ID stands for Investment Decision

RPR stands for risk propensity

RPE stands for risk perception

LAB stands for Loss Aversion Bias.

HB stands for herding behaviour as a control variable. ei stands for random error and

ID=β0+β1RPR+β2RPE+ β3FL +βFL4*RPR+β5FL*RPE +ei … (2) Where

ID stands for Investment Decision

RPR stands for risk propensity

RPE stands for risk perception

FL*RPR stands for the interaction effect of financial literacy and risk propensity.

FL* RPE stands for the interaction effect of financial literacy and risk perception.

ei stands for random error

ID=β0+β1LAB+ β2FL+β3FL*LAB+ ei … (3) Where

ID stands for Investment Decision

LAB stands for Loss Aversion Bias

FL*LAB stands for the interaction effect of Financial Literacy and Loss Aversion Bias.

ei stands for random error

Variance Inflation Factor

Variance Inflation Factor (VIF) is a post-estimation test. It is used to check the multicollinearity amount in the regression model. The multicollinearity assumption of the regression model is that there is a correlation existing among multiple independent variables.

Figure 1

Conceptual Framework
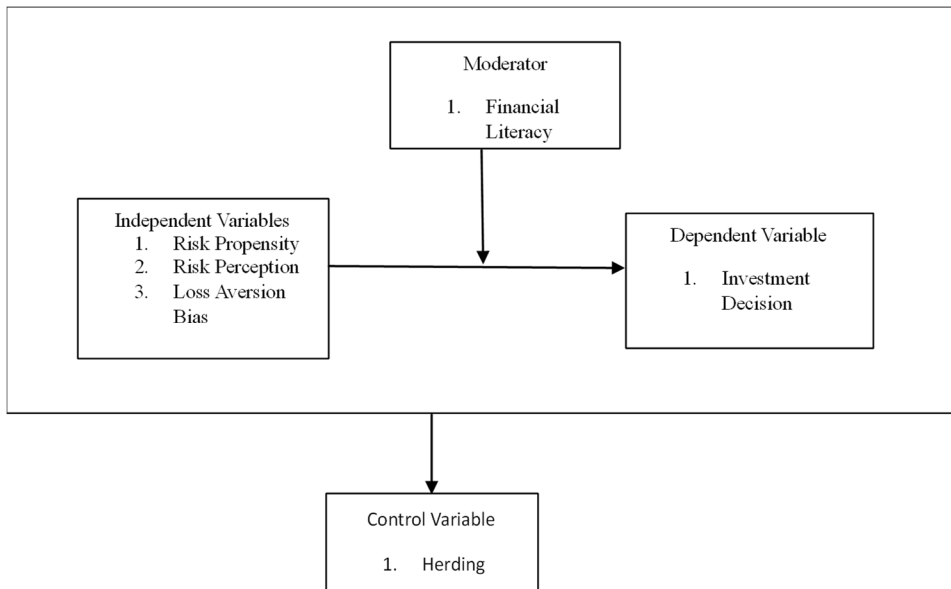
Results and Discussions

This chapter depicts the picture of the demographic attributes of the respondents and thoroughly discusses the results of the analyzed data.

Table 4.1

Frequency Distribution of Ages

Ages	Frequency	Percent	Cumulative Percent
21-25	18	6.60	6.6

Ages	Frequency	Percent	Cumulative Percent
26-30	42	15.30	21.9
31-35	71	25.90	47.9
36-40	48	17.50	65.3
41-45	44	16.10	81.4
46-50	51	18.60	100
Total	274	100	100

Table 4.1 shows the statistics of different categories of ages with frequencies and their percentages. The aforementioned table shows that the maximum number of investors aged between 31 to 35 ranges. It means that middle age got the maximum presentation in this study with 25.90 percent. It is evident from the table that investors' numbers getting low for the age group 41-45. The least number of investors present in the age group 21-25. They are the potential investors in the forthcoming future. It is interesting that 18.60 percent well well-versed experienced investors participated in this study of group 46-50 with 51 numbers out of 274 investors.

Table 4.2

Frequency Distribution of Gender, Marital status, and Education

Gender Freq		Percent	Marital status	Freq	Percent	Education		Freq
F 39		14.2	Married	207	75.5	Education in Finance		214
M 235		85.8	Unmarried	67	24.5	Education other than Finance		60
Total	274	100.0	Total	274	100.0	Total		274

Table 4.2 displays the frequencies of investors' gender, marital status and education. The table reports that male investors get the maximum numbers, i.e., 235 out of 274 with 85.8 Percent and females place just 14.2 percent which hints at the minimum role of females in business-related affairs. Marital status shows that 207 investors are married to 75.5 percent and unmarried investors are 67 out of 274 in this research study. In the third category, the most important category in this study, 214 investors are financially qualified. It means that are well aware of the stock market and stock shares.

They can better utilize their expertise than other than financial qualifications.

Table 4.3

Frequency Distribution of Experience

Experience	Frequency	Percent	Cumulative Percent
5-10 Years	106	39	39
11-15 Years	48	17	56
16-20 Years	71	26	82
21-25 Years	49	18	100
Total	274	100.0	100.0

Table 4.3 reports on the experience of investors in business and stock-related issues. The maximum number of investors, 106 out of 274, have 5-10 years of experience in the required field with a high percentage of 39%. 48 investors have 11 to 15 years' experience while 71 investors have 16-20 years' experience. The last 49 investors have the maximum experience of 21 to 25 years' experience.

Table 4.4

Frequency Distribution of Total Trading Experience

Total Trading Experience	Frequency	Percent	Cumulative Percent
Less than 3 years	130	47.4	47.4

4-8 years	62	22.6	70.1
More than 8 years	82	29.9	100.0
Total	274	100.0	

Table 4.4 reports on the trading experience of investors in business and stock-related issues. The maximum number of investors, 130 out of 274, have less than three years of trading experience in the required field with the highest percentage 47.4%. 62 investors have 4 to 8 years of experience while 82 investors have 8 or more years of experience.

Table 4.5

Frequency Distribution of Amount of Investment

Amount of Investment	Frequency	Percent	Cumulative Percent
Less than 100,000	26	9.5	9.5
101,000-300,000	47	17.2	26.6
301,000-500,000	60	21.9	48.5
501,000-700,000	37	13.5	62.0
701,000-1,000,000	63	23.0	85.0
Above 1,000,000	41	15.0	100.0
Total	274	100.0	

Table 4.5 shows the investors' invested amount of income in their stock or business. The table reveals that the lowest amount of investment is less than one lac with 9.5%, 47 investors have invested 101,000 to 300,000.

Table 4.6

Correlation Matrix of Dependent and Independent Factors

Variables	Investment Decision	Risk Propensity	Risk Perception	Loss Aversion Bias	Herding Behavior
Investment Decision	1				
Risk Propensity	0.619**	1			
Risk Perception	0.461**	0.594**	1		
Loss Aversion Bias	0.220**	0.318**	0.380**	1	
Herding Behavior	0.101	0.251**	0.322**	0.293**	1

Table 4.6 reports the data analysis of the correlation matrix. This table shows the relationship between the included variables in the study. If look over the table it is mentioned that investment decision is positively and significantly correlated with risk propensity. The correlation between investment decisions and risk propensity is 0.619. It is evident that both are strongly correlated to each other and go in the same direction. Investment Decision and Risk Perception are also directly and significantly linked to each other with moderate correlation, i.e., 0.461. Investment decision and Loss Aversion Bias are significantly associated in the same direction with a weak correlation. The last correlation between investment decision and herding behaviour is insignificant but positive, meaning investment decision and herding behaviour are in the same direction. The relationship between the two variables is weak as the correlation between them is just 0.101.

Table 4.7

Regression Analysis of Control, Independent and Dependent Variables

Model	β	Std. Error	t	Sig.
Constant	3.741	2.149	1.740	0.083***

Model	β	Std. Error	t	Sig.
Risk Propensity	0.758	0.083	9.145	0.000*
Risk Perception	0.304	0.113	2.694	0.008*
Loss Aversion Bias	0.028	0.127	0.224	0.823
Herding Behavior	-0.182	0.102	-1.783	0.076**
F-statistic	45.609	d.f.	4	0.000*
R	0.636	R²	0.404	

*Note: *, **, and *** represent significance levels at 1%, 5% and 10% respectively.*

Table 4.7 describes the analysis of entire factors including investment decision (dependent variable), risk propensity, risk perception and loss aversion bias (independent variables) while herding is the control variable. According to Table 4.9, the constant is positively significant (As β = 3.741 and p-value = 0.083 < 0.10). It is also observed that risk propensity and investment decisions are positively significant (As β = 0.758 and p-value = 0.000 < 0.01) and similar significant results were found by (Niazi & Malik, 2019) but in a negative direction. It means that risk propensity and investment decisions are directly linked to each other. In simple words, by taking risk propensity, investment decisions become more reliable. Similarly, risk perception and investment decisions are positively significant (As β = 0.304 and p-value = 0.008 < 0.01). It means risk perception and investment decisions are in the same direction and this result is matched with (Ademola, et al., 2016), who found risk perception has a significant effect on investment decisions as p-value = 0.076 less than 10% significance level. By increasing risk perception, investment decisions are consistent in implementing the investment. The third factor, loss aversion bias is positively insignificant (β = 0.028 and p-value = 0.823 > 0.10) this result is inconsistent with (Kumar, Babu, & Scholar, 2018). It explains that loss aversion bias plays an insignificant role in the decision-making process. Herding behaviour is a negatively significant effect on investment decisions (As β = -0.182 and p-value = 0.076 < 0.10) and this result is consistent with (Adil, Singh, & Ansari, 2021). It is evident that increased herding behaviour reduces the investment decision of investors.

Another criterion for the best-fitted model are F-statistic. In this research study statistic is significant (As F-value = 45.609 and p-value = 0.000 < 0.01). The above result of F-statistic shows that the entire model is well-fitted, and the outcomes of the analyses are reliable. R-value represents correlation value (As R = 0.636), which shows a strong relationship between investment decision and (dependent variable), risk propensity, risk perception and loss aversion bias (independent variables) while herding is the control variable. The last factor is the coefficient of determination which shows the percentage change in investment decision and (dependent variable) due to risk propensity, risk perception and loss aversion bias (independent variables). As R2 = 0.404, it means that 40.4% variation in investment decision (dependent variable) due to risk propensity, risk perception and loss aversion bias (independent variables).

Table 4.8

Regression Analysis of control, Independent and Dependent and interaction effect of Moderate Variables

Model	β	Std. Error	t	Sig.
(Constant)	3.856	1.938	1.990	0.048**
Risk Propensity	1.071	0.194	5.515	0.000*
Risk Perception	-0.153	0.279	-0.549	0.583
Herding Behavior	-0.185	0.100	-1.857	0.064***
Interaction FL*RPR	-0.349	0.199	-1.751	0.081***
Interaction FL*RPE	0.539	0.300	1.800	0.073***
F-statistic	37.439	d.f.	5.0	0.000*
R	0.641	R²	0.411	

*Note: *, **, and *** represent significance levels at 1%, 5% and 10% respectively.*

Table 4.8 refers to the analysis of factors including, investment decision (dependent variable), risk propensity and risk perception (independent variables), herding is the control variable while the factors InterFL*RPR and InterFL*RPE represent interaction effects (risk propensity*financial literacy and risk perception*financial literacy). According to Table 4.10, the constant is positively significant (As β = 3.856 and p-value = 0.048 < 0.05). It is also observed that risk propensity and investment decisions are positively significant (As β = 1.071 and p-value = 0.000 < 0.01) and similar significant results were found by (Niazi & Malik, 2019) but in a negative direction. It means that risk propensity and investment decisions are directly linked to each other. In simple words, by taking risk propensity, investment decisions become more reliable.

Similarly, risk perception and investment decision are negatively insignificant (As β = 0.153 and p-value = 0.583 > 0.10), this result is completely contradicted by Ademola, et al. (2016), who found risk perception has a significant effect on investment decisions as p-value = 0.076 less than 10% significance level. It means risk perception and investment decisions are in the opposite direction. By increasing risk perception, investment decisions are inconsistent in implementing the investment. Herding behaviour is a negatively significant effect on investment decisions (As β = -0.185 and p-value = 0.064 < 0.10) this result is in line with (Adil, et al., 2021). It is evident that increased herding behaviour lessens the investment decision of the investors.

The next two factors show the combined effect (moderating effect) of risk propensity*financial

literacy and risk perception*financial literacy (InterFL*RPR and

InterFL*RPE). InterFL*RPR has a significant but negative impact on investors' decisions (As β = -0.349 and p-value = 0.081 < 0.10) and this result is consistent with Niazi and Malik (2020), which states that financial

literacy has been found to significantly moderate the relationship between risk propensity and investment decision-making. While

InterFL*RPE has a positive and significant effect (As β = 0.539 and p-value = 0.073 < 0.10) and this result is aligned with (Ademola, Musa, & Innocent, 2019).

The second main benchmark for the best-fitted model is the F-statistic. In this research study, the F-statistic is significant (As F-value = 37.439 and p-value = 0.000 < 0.01). The above result of F-statistic shows that the entire model is well fitted and the outcomes of the analyses are reliable. R-value represents the correlation coefficient value (As R = 0.641), which shows a strong relationship between investment decision and (dependent variable), risk propensity, risk perception and loss aversion bias (independent variables) while herding is the control variable. The last factor is the coefficient of determination which shows the percentage change in investment decision and (dependent variable) due to risk propensity, risk perception and loss aversion bias (independent variables). As R^2 = 0.411, it means that 41.1% variation in investment decision (dependent variable) due to risk propensity, risk perception and loss aversion bias (independent variables).

Table 4.9

Regression Analysis of Loss Aversion Bias, Moderate and Control Variables.

Model	β	Std. Error	t	Sig.
(Constant)	12.715	2.150	5.914	0.000*
Loss Aversion Bias	0.525	0.152	3.462	0.001*
Herding Behavior	-0.114	0.314	-0.365	0.715
Interaction FL*LAB	0.026	0.051	0.506	0.613
F-statistic	4.708	d.f.	3	0.003*
R	0.223	R^2	0.050	

*Note: *, **, and *** represent significance levels at 1%, 5% and 10% respectively.*

Table 4.9 displays the analysis of factors including, investment decision (dependent variable), loss aversion bias (independent variable), and herding is a control variable while the factors InterFL*LAB denotes interaction effects (loss aversion bias*financial literacy). The constant is positively significant (As β = 12.715 and p-value = 0.000 < 0.01). Loss aversion bias is positively significant (β

= 0.525 and p-value = 0.001 > 0.01) but this result is consistent with (Kumar, Babu, & Scholar, 2018). It explains that loss aversion bias plays a significant role in the decision-making process.

Herding behaviour is a negatively insignificant effect on investment decisions (As β = 0.114 and p-value = 0.715 > 0.10), this result is partially in line with (Adil, et al., 2021). It is evident that increased

herding behaviour reduces the investment decision power of investors. The InterFL*LAB denotes interaction effects (loss aversion bias*financial literacy) is positively insignificant and this result is contradicted with (Atesa, Cos¸kunb, Abdullah¸ ahinc, and Demircan, 2016) that financial literacy has a negative influence on loss aversion.

Another model standard for best fitted model is F-statistic. In this research study, the F-statistic is significant (As F-value = 4.708 and p-value = 0.003 < 0.01). The above result of F-statistic shows that the entire model is well fitted and the outcomes of the analyses are reliable. R-value represents the correlation value (As R = 0.223), which shows a weak relationship between investment decision (dependent variable) and loss aversion bias (independent variable) while herding is the control variable. The last factor is the coefficient of determination which shows the percentage change in investment decision and (dependent variable) due to risk propensity, risk perception and loss aversion bias (independent variables). As R2 = 0.050, it means that 5% variation in investment decisions (dependent variable) due to loss aversion bias (independent variables).

Discussion

Different categories of ages were intercepted and investigated, which included 235 males and 39 females. 207 investors are married, and 67 unmarried investors, 67 of which 214 investors are financially qualified. They can better utilize their expertise than those other than financial qualifications with less or more trading experience. They earn 30000 thousand to 110000 per month from their invested amount (100000 to 1000000). It is observed that investment decision is positively and significantly correlated with risk propensity and risk perception and loss aversion bias are significantly associated in the same direction. The outcomes of the Chow test and Hausman test statistics are significant outcomes suggesting to application fixed effect model.

It is also observed that risk propensity and investment decisions are positively significant, which means by taking risk propensity, investment decisions become more reliable. Similarly, risk perception and investment decision are positively significant, which means risk perception and investment decision are in the same direction. By increasing risk perception, investment decisions are consistent in implementing the investment. Loss aversion bias is positively insignificant, it explains that loss aversion bias plays an insignificant role in the decision-making process. Herding behaviour

has a negatively significant effect on investment decisions means increased herding behaviour reduces the investment decisions of investors. The correlation value shows a strong relationship between dependent variables and independent variables. The coefficient of determination shows a 40.4% variation in investment dependent variable due to variables.

Another table observed that risk propensity and investment decisions are positively significant. It means by taking risk propensity, investment decisions become more reliable. Similarly, risk perception and investment decisions are negatively insignificant. It means by increasing risk perception, investment decisions are inconsistent to implement the investment. Herding behaviour has a negatively significant effect on investment decisions. It is evident that increased herding behaviour lessens the investment decision of the investors. The combined effect (moderating effect) of risk propensity*financial literacy had a significant but negative impact on investors' decisions while risk perception*financial literacy had positive and significant effects. The final table found Loss aversion bias is positive. It explains that loss aversion bias plays a significant role in the decision-making process. Herding behaviour is the negatively insignificant effect on investment decisions that increased herding behaviour reduces the investment decision power of investors. F-statistic shows that the entire model is well-fitted, and the outcomes of the analyses are reliable.

Conclusions

The correlation analysis indicates a robust relationship between the dependent variable and independent variables. Both risk propensity and risk perception exhibit a positive and significant association with investment decisions, suggesting that an increase in these factors aligns with a consistent implementation of investment choices. Loss aversion bias, however, shows positive insignificance, while herding behaviour negatively influences investment decisions, deterring investors.

Further examination reveals that the combined effect (moderating effect) of risk propensity financial literacy has a significant but negative impact on investors' decisions, while risk perception financial literacy has a positive and significant effect.

Recommendations

Investors should consider both social and psychological factors in decision-making,

acknowledging the influence of positive mood, anger, fear, and stress.

- Decision-making in a positive mood is advised, as it enhances intuitive judgments.
- Stress, negatively linked to risk perception, should be avoided during decision-making.
- Investors are recommended to avoid herd behaviour and trust their own perceptions.

Implications

The study's outcomes are valuable for investors, shareholders, securities brokers, and decision-makers. The findings aid in risk assessment, potential returns, and decision-making. Organizations, financial managers, SECP, and educational workshops can utilize the results for awareness and education, directing market participants toward informed decisions.

Limitations and Future Direction

This study's limitations, such as focusing on only two psychological factors due to time constraints suggest opportunities for future research. Future studies could explore additional psychological and social factors, delve into microfinance, and consider district-wise divisions of investors. Variables like moral norms, religiosity, and brand equity are suggested for inclusion in future studies to broaden the scope of behavioural finance.

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