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The effects of behavioral biases on investment decisions: Evidence from İstanbul stock exchange[1]

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ABSTRACT

Every investment decision at the macro or micro scale carries with it the desire to profit. At this point, profit assumes the driving role and continuity of capital. Information assumes a crucial role in the realization of this role. The field of behavioral finance, which opens a different window to the finance literature, argues that investors do not act completely rationally in financial decisions. Behavioral finance argues that there are subconscious factors that affect information. This study aims to detect the factors of behavioral bias factors influencing the investment decisions of individuals trading in Istanbul stock exchange (BIST). The importance of this study stems from the scarcity of local studies focusing on behavioral finance within the scope of stock market investment. Accordingly, it is expected that the study will enrich this awareness in the field. Therefore, the effects of non-rational cognitive elements such as loss aversion, expectation, certainty, herding effect, intuitive factors, and anchoring on individuals' investment decisions were investigated in the study. As a result, the findings obtained from the research provide useful information to investors trading in BIST to adopt scientific foundations within the scope of behavioral finance in stock investments.

KEYWORDS

Behavioral bias, exchange, investment.

Introduction

For individuals, the decision to invest in stock markets requires more information and attention than decisions made in other financial markets. One of the important reasons for this is that the individual is outside the company in which the stock is purchased and cannot directly influence the investment decisions that will affect the share price. People generally prefer to invest in high-productivity scenarios. However, as everyone knows, in order to achieve high production and increase productivity, relevant risks need to be taken (Rahman, 2023). Equities are risky assets. Capital market theory asserts that each household must invest some of its wealth in risky assets, such as equities, to yield a return on its investments with a risk premium (Curcuru et al., 2010).

Investment decisions are subject to both risk and uncertainty under uncertainty (Knight, 1921). Uncertainty is different from risk and defines events where not only future outcomes but also the underlying distribution are vague (Lakshmi et al., 2023, s.11). Comprehending the emotional elements inherent in the decision-making process holds significant value for investors. Behavioral finance explores the dynamics of investor behavior, acknowledging that investors exhibit irrational tendencies and are susceptible to human error (Statman, 1999). Behavioral finance takes into account investors' short-term investment decisions that involve biases and

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heuristics such as expectation theory, psychoanalytic theory (Fotaki et al., 2012). Meaning, the inefficiency of financial markets is analyzed with respect to psychological theories and perspectives (Birau, 2012).

Historically, numerous financial theories have posited that investors encounter minimal challenges upon making stock investment choices, attributing this to their competence, well-informed nature, cautiousness, and consistency. Nonetheless, findings from practical research in mature global capital markets have uncovered that various phenomena associated with equity investment choices remain inexplicable (Areiqat et al., 2019). Therefore, the most crucial step for an investor was to analyze his/her own financial personality. Such an analysis is useful for understanding how to smooth out irrational components of investment decisions whereas satisfying individual requirements and preferences (Birau, 2012).

The aim of the study is to determine the effects of loss aversion, expectation, certainty, herdbehavior, heuristic and anchoring biases on the investment decisions of individuals investing in stock markets and to verify these factors. Behavioral finance literature aims to understand the behavioral factors that influence individuals' decision-making processes regarding investing in stocks. There are many studies in the literature that evaluate the effects of behavioral finance factors, especially on stock market investments. In studies on this field, Altunöz (2019), over reaction, Koçyiğit and Yaman (2023), investor risk appetite, Yıldırım (2019), over confidence, news hunting and self-attribution, Kuzu and Çelik (2020), herd behavior, Aydın and Güneysu (2022), tried to evaluate th eeffects of behavioral factors on stock market investments by using over confidence and risk factors. In addition to these studies, six different behavioral scales that affect financial decisions were used in our research to address scale diversity. In terms of behavioral finance, dealing with opposing concept ssuch as certainty, herdbehavior, and hoeing makes this study different from other studies. In other words, the research did not focus on a single dimension of thought that affects behavior. What makes this study different from other studies is that it deals with six different behavioral factors.

Apart from the introduction section, the study consists of literature review, research methodology, findings and conclusion sections. In the literature, behavioral bias factors are evaluated separately.

Literature

Obtaining clear information in stock markets, which is one of the most important investment areas of financial markets, is of great importance for investors. It is very difficult to obtain information in this market where millions of investors take part. For this reason, not every individual involved in such investment areas can make rational decisions. It is possible to talk about many studies examining irrational financial behavior on this subject.

Appiah and McMahon (2002), defined behavioral finance as the exploration of the actions and interactions of financial practitioners concerning financial data, and the consequent impacts on markets. On a similar note, Gachter et al. (2010) posited that behavioral finance enhances the comprehension of investment choices influencing market values. Bırau (2012), stated in her study that the importance of understanding the individual financial behavior of capital market investors cannot be ignored and that it is necessary to understand that investment decisions do not focus only on financial theory. Alrabadi et al. (2017), conducted a study to investigate the presence of behavioral biases in the Amman Stock Exchange and their repercussions on investment performance from the view point of investors. Inparticular, the impacts of familiarity, over confidence, loss aversion, propensity, representativeness, availability, confirmation, and herd biases are explored.

In their study examining the effect of behavioral finance on investment decisions, Ogunlusi and Obademi (2019), reported that behavioral finance generally has a significant impact on

investment decisions and that heuristics affect investors' decisions. Parveen et al. (2020), concluded in their study that intuitive approaches and biases dominate when making investment decisions. Additionally, the authors stated that the Pakistani stock market is under developed and investors are not financially literate to avoid psychological factors affecting them. Hung and Toan (2023) reported that markets are driven by both irrational and non-rational investors and behavioral biases play an important role in investors' decision-making processes.

Almansour et al., (2023), in their study, they examined the impact of four behavioral finance factors (herding behavior, disposition effect, blue chip bias and overconfidence) on risk perception and investment decision-making. As a result of the findings, it was stated that these behavioral finance factors have a significant impact on the individual's risk perception and investment decision-making process. Quang et al., (2023), reported that investor mood has significant effects on investment decisions, in their study where they conducted a comprehensive analysis of its effects on the performance and investment preferences of investors in the Ho Chi Minh Stock Exchange.

After discussing the studies that reveal the eeffect of behavioral finance on investment decisions, studies on the six behavioral bias dimensions considered in terms of creating research hypotheses are given below.

Loss aversion

This implies that an investor tends to seek risk when confronted with a loss, yet exhibits risk aversion when there's a potential for realizing a gain. Loss aversion suggests that individuals are more inclined to embrace higher risk to avert a loss than to secure a gain (Chaudhary, 2013). Chaffai and Medhioub (2014), in their study, investigated the effects of psychology on the behavior of Tunisian investors. Mahina et al. (2017) in their study revealed that loss aversion bias significantly affects investment in the Rwandan stock market. Based on the findings, the study also concluded that investors in the stock market feel more regret about holding losing stocks for too long than selling winning stocks too soon. This is because for many stock market investors, failure makes them depressed. Rieger (2022), stated in his study that there search results show quite briefly and directly that, at the country level, uncertainty avoidance has a significant impact on the decision to enter the stock market through its effect on loss aversion. The researchers stated that loss aversion is the most important psychological factor affecting stock market investors. Xu (2023), claimed that individuals tend to be more loss averse than satisfied with equivalent gains, commonly known as loss aversion.

H_1 = A significant relationship occurs between loss aversion and investment decisions.

Expectation

Manski (2004) has argued convincingly in his work that data on expectations are crucial for distinguishing between various economic models. Increasingly, there's evidence suggesting a high level of consistency in expectations across diverse surveys involving different investor groups, exhibiting a relatively defined forecast frame work, mirroring investoractions, and proving valuable in projecting returns (Greenwood and Shleifer, 2014). One of the basic principles of economics, especially macroeconomics, is the idea that decisions are shaped according to expectations, as emphasized by Gennaioli et al., (2016). Wang and Deng (2018), stated in their research that in a healthy and orderly market, effective investors can provide normal investors with a good guide in forming expectations and making decisions. Additionally, the authors reported that the health and stability of the market could be jeopardized if influential investor stook advantage of their ability to mislead the expectations and behavior of others.

H_2 = A significant relationship occurs between expectation orientation and investment decisions.

Precision

Heath and Tversky (1991), observed that familiarity engenders a heightened sense of competence and knowledge. Familiarity is closely linked to investors' perceived awareness of future uncertainty, as investors often discern that the certainty level of their knowledge varies between familiar and unfamiliar investment alternatives (Huberman, 2001; Wang et al., 2011). Investment decisions are typically analyzed as prototypical situations of decisions at risk in which investors maximize returns and minimize risks by calculating expected returns. Standard findings in the behavioral finance literature are that investors often avoid uncertainty and are either risk averse and/or uncertainty averse (Barberis and Thaler, 2003; Statman, 2011). Hence, comprehension of ambiguous information, inclusive of the diverse facets of uncertainty and the correlated certainty, is poised to impact investment appraisal and decision-making processes. Investment opportunities often contain vague information about various sources (outcomes, probabilities, or both). Investors' responses to information certainty can explain or predict the actions of particular investors, particularly what types of portfolios they choose to hold and how they trade over time. Knowledge about uncertainty and its associated certainty is extremely important in the investment environment (Du and Budescu, 2021). Investment prospects frequently encompass ambiguous information from various origins. The way investors respond to the certainty of information can elucidate or forecast the behaviors of specific investors, particularly regarding the kind of portfolios they opt to maintain and their trading patterns over time. Understanding uncertainty and the associated certainty is significantly pertinent in the investment realm.

H_3 = A significant relationship occurs between precision tendency and investment decisions.

Herd behavior

Herd behavior is one of the behavioral finance concepts used by economists to explain this behavior of investors (Kashif et al., 2021). Regarding the classification of the herd effect, different scientists have proposed different classification methods. In terms of internal mechanism, it can be divided into two as real herd effect and fake herd effect, and in terms of whether rational behavior is distinguished, it can be divided into two: rational herd effect and irrational herd effect (Huangwei et al., 2013). Investors who experience emotional fluctuations have difficulties in acting rationally. This shows that stock markets are not efficient. Various theories have been to explain herding behavior among investors. Some of proposed studies in the literature showed that herding behavior was more pronounced during periods of extreme volatility in stock prices (Topol, 1991; Shiller, 2000), while others conclude that the presence of this behavior intensifies during periods of market stability (Hudson et al., 2018). Devenow and Welch (1996), argued that following the crowd provided comfort to investors, especially during periods of high uncertainty.

H_4 = A significant relationship occurs between herd behavior tendency and investment decisions.

Heuristics

Heuristics are simple, effective rules proposed to explain how people make decisions, make judgments, and solve problems, often when faced with complex problems or incomplete information. Following one's impulses or what feels right is often described as intuitive behavior (Alos- Ferrer and Hügelschäfer, 2012). Intuition can also be seen as holistic thinking, immediate insight, seeing without knowing how the answer was arrived at, or compressed expertise (Seal, 1990). Kahneman and Tversky (1981), defined a heuristic as a strategy that can be applied to a variety of problems and usually, but not always, provides a correct solution. Proficient managerial decision-makers not only engage in rational analysis of the choices they encounter when fitting, but also utilize intuitive reasoning to endorse a risk- taking, entrepreneurial, and visionary leadership style (deVries, 2004; Evgeniou and Cartwright, 2005). At the same time,

people often use heuristics (or shortcuts) that reduce complex problem solving to simpler judgment operations (Kahneman and Tversky, 1981).

H_5 = A significant relationship occurs between intuitive tendency and investment decisions.

Anchoring

Anchoring tendency, as defined by Tversky and Kahneman (1986), is a cognitive bias that appears when individuals place too much emphasis on one direction and ignore the other, basing decisions on prior knowledge and past experience and ignoring current market conditions. Anchoring bias is the tendency for investors to rely too much on existing ideas or information and ignore new information (especially when it conflicts with previous opinions) when making decisions (Owusu and Laryea, 2022). Anchoring impacts all investors, including those with substantial experience and expertise in a domain. Investors' decisions are influenced by preliminary information and the anchoring effect (Ishfaq and Anjum, 2015). Shiller (2003), suggests that anchoring denotes a skewed judgment that deviates from the initial evaluation, and often, these judgments can lead investors to incorrect conclusions.

H_6 = A significant relationship occurs between anchoring tendency and investment decisions.

Methodology

Study sample

The objective of this study is to pinpoint behavioral biases believed to influence the investment decisions of individuals partaking in stock market investments. To meet the research goals, this study employs the Istanbul Stock Exchange as a sample to gather data from actual investors in the stock market.

Survey questionnaire and measurement

In order to measure the impact of behavioral bias determinants on investment decisions in the stock market, a structured questionnaire consisting of two parts such as demographic information and measurement questions was applied. Ethical permission for the research was applied according to the decision of Gümüşhane University Ethics Committee dated 25.10.2023 and numbered 2023/5.The questionnaire consists of thirty-two items including demographic factors such as gender, age, education and marital status, total income, and investment valuation questions. The scales used in this study were adapted from existing literature. A 5-point Likert-type scale was used for each statement in the questionnaire. Heuristics scale and, expectancy scale on Kahneman and Tversky (1979), herd behavior scale on Kengatharan and Kengatharan (2013), precision tendency scale on Küçük (2014), Böyükaslan (2012), anchoring, loss aversion and investment decision scales are based on Hamurcu and Aslanoğlu (2016) and Keswani et al. (2019).

Table 1 Questions in the Research Survey

Scale	Scale Questions
Loss Aversion	When I make a profit on the asset I invested in, I quickly dispose of that asset
	I will dispose of my investment even if it is trending upward
	I can easily dispose of the asset I own easily
	I would rather win 3,000 TL with 100% probability than 4,000 TL with 80% probability
Expectation Tendency	After a previous gain, I seek out more risk than usual
	After a prior loss, I become more risk averse
	I avoid selling stocks that have fallen in value and sell stocks that have increased in value immediately
Precision Tendency	I don't invest when the stock market is moving up and down
	I invest more in investment instruments where the principal is safe and the return is fixed
	I invest in companies I know
	I don't like surprises. Security is very important to me
Herd Behavior	My stock purchasing decisions are affected by the decisions of other investors
	My decision to buy stock volume is affected by other investors' buying

	Other investors' decisions to buy and sell shares affect my investment decisions
	I usually react quickly to changes in other investors' decisions and follow their reactions to the stock market
Heuristics	I believe that my knowledge and skills in the stock market can help me outperform the market
	I rely on my previous experience in the market for my next investment
	I try to predict future stock price changes based on current stock prices
Anchoring Tendency	When an asset I invest in loses value, I do not dispose of it before it reaches the purchase price
	When I believe that an asset will bring profit, I never give it up
	When I invest, I always set the sales price and do not sell until the value of the investment reaches this price
Investment Decision	I think investing in the stock market is risky
	I want to invest in the stock market next time
	Next time I'll probably invest in the share market
	I prefer investing to saving

Data collection

The study's sample encompasses investors in Borsa Istanbul. The primary data for the study were amassed from active investors within Borsa Istanbul, utilizing a survey method as the tool for data collection. According to the data of the Central Registry Agency in Borsa Istanbul, the number of investors exceeded 8 million in October 2023. When the minimum sample size for the main population was calculated, taking this number into consideration, approximately 276 people were determined as the sample mass. The process of identifying and reaching participants was a result of individual efforts. The questionnaires were sent to the investors online and 552 valid survey data were obtained.

Purpose and model of the study

There are many psychological factors that influence individual investment decisions. These psychological factors are considered as behavioral biases. In this study, the effects of anchoring, herding behavior, loss aversion, expectation, heuristics and precision tendencies on investment decisions are tried to be determined. In the model, loss aversion, expectation, certainty, heuristic, hoeing tendencies and herding behavior scales were treated as independent variables, and the investment decision scale was considered as the dependent variable.

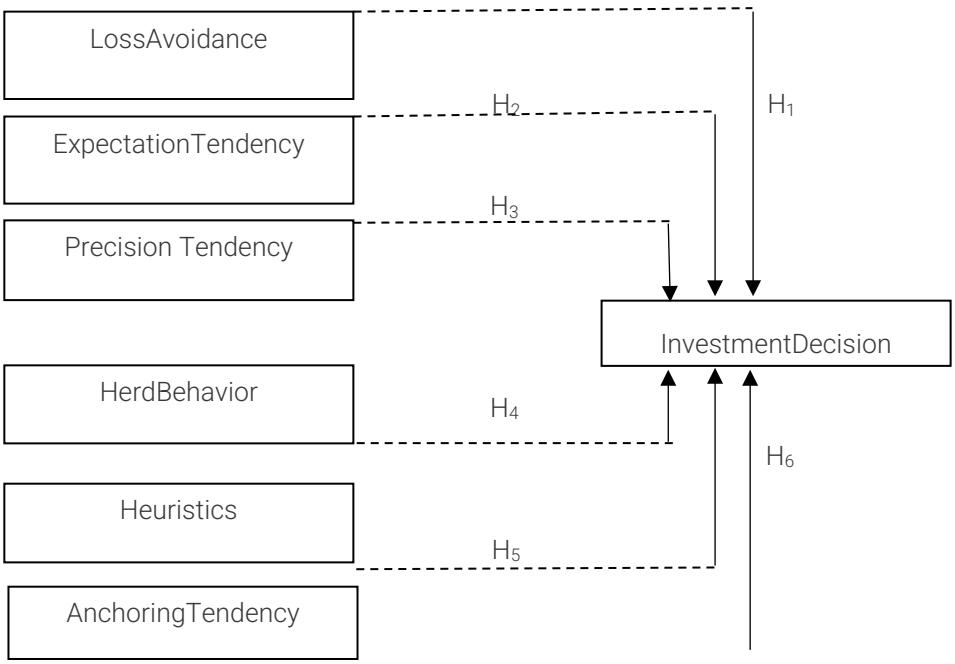

Figure 1 Research model

Findings

The findings obtained from a total of 552 stock exchange participants are as follows.

Descriptive statistics

The demographic profiles of the participants are shown in Table 2.

Table 2 Profiles of Participants

Variables	Type	Frequency	Percentage (%)
Gender	Female	38	7.0
	Male	514	93.0
Age	25-34	130	23.6
	35-44	171	31.0
	45-54	251	45.5
Education Status	High School	36	6.5
	Undergraduate	328	59.4
	Master's	158	28.6
	Ph.D.	30	5.4
Marital Status	Married	359	65.0
	Single	193	35.0
Income Level	12.000 TL and lower	63	11.4
	12.001 TL-20.000 TL	94	17.0
	20.001TL – 30.000 TL	267	48.4
	30.001 TL-40.001 TL	67	12.1
	40.001 TL and higher	61	11.1
Investment Review Period	Every hour	63	11.4
	Every day	487	88.2
	Once a week	2	0.4
Invested Assets	Stocks and shares	489	88.6
	Gold	33	6.0
	Foreign Currency	30	5.4

Of the 552 respondents, 93% were male and 7% were female investors. 23.6% were in the 25-34, 31% in the 35-44, and 45.5% in the 45-54 age groups. 59.4% of the respondents held a bachelor's degree and 28.6% acquired a master's degree. 65% of the respondents were married and 35% were single. In terms of income level, the highest rate was between 20,001 TL and 30,000 TL with 48.4% and the lowest rate was 40,000 TL and above with 11.1%. In terms of the time the participants review their investments, the highest rate was 88.6% (every day) and the lowest rate was 11.4% (every hour). In terms of the assets invested in, the investment instrument with the highest response rate was equities with 88.6%.

Reliability analysis

A high-quality test should include reliability testing as a key element. Reliability testing shows the consistency with which the measurement is used. The higher the reliability, the better the test performs. Cronbach's Alpha is the most widely used and reliable test. The range of Cronbach's Alpha coefficient is between 0 and 1. If the coefficient is greater than 0.70, reliability is considered sufficient (Cho and Kim, 2015). The following tables show the results of the validity and reliability tests.

Table 3 Reliability analysis

Scales	Cronbach's Alpha Coefficient	Number of Items
Loss Avoidance	0.857	3

Expectation Tendency	0.718	3
Precision Tendency	0.721	3
Herd Behavior	0.837	4
Heuristics	0.875	3
Anchoring Tendency	0.893	3
Investment Decision	0.742	4

The Cronbach's Alpha values of the items used to measure each factor in Table 3 are 0.857 for loss aversion, 0.718 for expectation tendency, 0.721 for precision tendency, 0.837 for herd behavior, 0.875 for heuristics, 0.893 for anchoring tendency and 0.742 for investment decision. The Cronbach's Alpha values of all scales in this study are above 0.70, indicating that they are reliable. Hence, the outcomes of the reliability analysis affirmed that the consistency of each factor is at a satisfactory level.

Correlation analysis

Table 4. Correlation Analysis Results

Correlation							
		1	2	3	4	5	6	7
Loss Avoidance	Pearson Correlation	1	0,740**	0,752**	-0,060	-0,205**	0,345**	-0,05
	Sig. (2-tailed)		0,000	0,000	0,000	0,000	0,000	0,903
Expectation Tendency	Pearson Correlation		1	0,839**	0,398**	-0,187**	0,491**	-0,198**
	Sig. (2-tailed)			0,000	0,000	0,000	0,000	0,000
Precision Tendency	Pearson Correlation			1	0,462**	-0,075	0,649**	0,179**
	Sig. (2-tailed)				0,000	0,000	0,000	0,000
Herd Behavior	Pearson Correlation				1	-0,276**	0,434**	0,582**
	Sig. (2-tailed)					0,000	0,000	0,000
Heuristics	Pearson Correlation					1	0,271**	0,579**
	Sig. (2-tailed)						0,000	0,000
Anchoring Tendency	Pearson Correlation						1	-0,067
	Sig. (2-tailed)							0,114
Investment Decision	Pearson Correlation							1
	Sig. (2-tailed)							

** Correlation is significant at the 0.01 level.

Table 4 explains the relationship between loss aversion, expectation, precision, heuristics, anchoring tendencies, herding behavior and investment decision. When the correlation analysis results are analyzed, it is seen that the weakest correlation is between loss aversion and investment decision with -0.05. Among the behavioral bias variables, the highest and positive correlation between the investment decision and herding behavior is 0.582. Investment decision is positively correlated with herd behavior, heuristics, and precision tendencies and negatively correlated with loss aversion, expectation and anchoring tendencies. The fact that the degree of association between the variables is not greater than 0.90 indicates that there is no multicollinearity problem among the variables.

Table 5 VIF Results

Variables Model 1	
Loss Avoidance	8.514
Expectation Tendency	4.251
Precision Tendency	9.101
Herd Behavior	4.918
Heuristics	2.246
Anchoring Tendency	2.475

Whether there is a multicollinearity problem in the model is measured by the Variance Inflation Factors (VIF) value (Bahçecitapar and Aktaş, 2017). In Table 5, VIF values of the independent

variables were calculated. The fact that the calculated VIF values are lower than 10 (Dikmen, 2017) indicates that no multicollinearity exists in the research model.

Table 6 Summary of the research model

Model	R	R2	Adjusted R2	Std. Error of the Estimate
1	0.732	0.636	0.631	0.55311

The regression model summary shows that the R value is 0.732 and the adjusted R2 value is 0.631 (63%). This value indicates that all independent variables explain 63% of the change in the dependent variable.

Table 7 Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	192.934	6	32.156	105.108	0.000
	Residual	166.732	545	0.306		
	Total	359.666	551			

Predictors: (Constant), Loss Avoidance, Expectation Tendency, Precision Tendency, Herd Behavior, Heuristics. Anchoring Tendency
Dependent Variable: Investment Decision

Anova test is used to test whether the difference between the means of two or more independent groups is statistically significant. When Anova results are evaluated in Table 7, it is understood that loss aversion, herding behavior, expectation, certainty and intuitive tendencies significantly differentiate investors' investment decisions. The Anova table indicates the fit of the model. The F value calculated from the Anova test (105,108) shows the fit of the model. Significance values (p=0.000), are less than 0.005. Therefore, it can be stated that at least one of the independent variables has a significant impact on the dependent variable.

Table 8 Regression analysis results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,281	0,202		16,254	0,000
	Loss Avoidance	-0,045	0,057	-0,067	-0,791	0,429
	Expectation Trend	0,041	0,039	0,063	1,043	0,297
	Precision Tendency	0,111	0,074	0,132	1,505	0,000
	Herd Tendency	-0,446	0,055	-0,519	-8,031	0,000
	Heuristics	0,392	0,037	0,459	10,512	0,000
	Anchoring Tendency	-0,038	0,029	-0,060	-1,307	0,000

Dependent variable: Investment Decision

Table 8 is prepared to measure the effect of behavioral bias factors on the investment decisions of stock market investors. When the table is analyzed, it is seen that the independent variables of loss aversion and expectation tendencies do not have a significant impact on the dependent variable, investment decisions. On the other hand, precision, herding, heuristics, and anchoring tendencies have a significant effect on investment decisions. Therefore, while H_1 and H_2 hypotheses are rejected, H_3, H_4, H_5, and H_6 hypotheses are accepted.

Table 9 Summary of the hypotheses

Hypothesis No	Hypothesis	Result
H_1	A significant relationship exists between loss aversion and investment decisions.	Reject
H_2	A significant relationship exists between expectation tendency and investment decisions.	Reject
H_3	A significant relationship exists between precision tendency and investment decisions.	Accept
H_4	A significant relationship exists between herd behavior tendency and investment decisions.	Accept
H_5	A significant relationship exists between heuristics and investment decisions.	Accept
H_6	A significant relationship exists between anchoring tendency and investment decisions	Accept

Conclusion

Stock exchanges, one of the important actors of capital markets, provide investors with the opportunity to invest by offering various financial products. The diversity of financial products further increases the need for information. Especially stock markets operate on information and gain value with information. Information is the concept that causes the difference between expectation and realized value. Insufficient information will bring excessive risk in investment decisions. Access to information in this market is usually possible with the extra efforts of investors. In our study, we aim to identify the behavioral bias factors that push individuals to make investments apart from rational information. In this framework, whether 552 stock market investors behave rationally while making investment decisions is the subject of the study.

Behavioral bias factors are categorized in six groups: loss aversion, expectation, precision, herd behavior, heuristics, and anchoring tendencies. As a result of the analysis, we observe that loss aversion and anticipation tendencies do not have a significant effect on stock market investment decisions. On the other hand, precision, herd behavior, heuristics, and anchoring tendencies have a positive effect on investors' decisions. The study differs from local studies in this field in that it incorporates more than one opposing behavioral finance scale. In terms of the results obtained on the basis of scales, it was observed that behavioral biases were effective on individuals' investment decisions, similar to the results of the studies of Gupta and Shrivastava (2022) and Athur (2014).

Some of the behavioral bias factors discussed may lead investors to take excessive risks as a result. The results suggest that herd behavior, heuristics, and anchoring tendencies may encourage investors to take excessive risks. Some of these bias factors that affect the study results use past information sources, while others seek to obtain information from other trends. When the aim of individual investment is to gain profit, uncertainty should be minimized as much as possible. On the other hand, considering the financial risk factor of investments, it is recommended that investors be aware of their own behavioral biases. In this regard, individuals need to access new financial guiding resources in order to minimize the negative effects of behavioral bias factors that direct their investments. Therefore, policymakers should put in place quality information channels and financial decision-making mechanisms that investors can easily access. Daniel et al. (2002), made a similar suggestion regarding risk disclosure in the US markets. They argue that an enabling environment for appropriate financial education will lead to better utilization of information relevant to investment decisions. In conclusion, behavioral biases continue to influence human decisions. Although it is possible to avoid some biases in certain situations, it is not possible to eliminate these biases. Therefore, investors need to be more informed in order to minimize the negative consequences of behavioral judgments. Making and developing the Public Disclosure Platform within Borsa Istanbul more effective at this point can produce very positive results. In addition, all segments of the stock exchange, from company partners to stock advisors, must undertake important duties in conveying the correct information to investors. In order to guide future studies, evaluating the educational policies made by politicians to prevent asymmetric information in financial markets will fill the gap in the literature.

Author Contribution

The study was conducted by a single author.

Conflict of Interest Statement

There is no financial conflict of interest with any institution, organization, person related to our article titled "The Effects of Behavioral Biases on Investment Decisions: The Stock Exchange Istanbul Sample"

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