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The Impact of Financial Behavior on Financial Decisions

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ABSTRACT

The aim of this research is to examine the relationship between financial behavior and financial decision-making in brokerage firms within the Iranian capital market. The statistical population of this study consists of 380 managers from brokerage firms in Tehran province, from which a sample of 191 individuals was selected over a six-month period from January 2022 to June 2022. A questionnaire was utilized to collect the necessary data, and the data analysis was conducted using Excel, SPSS, and LISREL software. The results of the hypothesis tests indicate positive and significant relationships between various financial behavior variables and financial decision-making. The first hypothesis test showed a positive and significant relationship between urgency in selection and investment decision-making. The second hypothesis test also indicated a positive and significant relationship between loss aversion and investment decision-making. Additionally, the third hypothesis test revealed that overconfidence has a positive and significant impact on investment decision-making. The findings suggest that financial behaviors such as urgency in selection, loss aversion, and overconfidence can influence investment decisions. These results emphasize the necessity of considering psychological aspects in the financial decision-making process. Therefore, investors and managers of brokerage firms should pay more attention to these behaviors to achieve more optimal financial decisions.

Keywords:

financial behavior, decision-making, brokerage firms, capital market

1. Introduction

Behavioral finance studies have emerged as a new topic in the past two decades, gaining rapid attention from professors, experts, and students in this field worldwide. Today, this topic has formed an independent branch of study within financial science (Noshadi, 2021). The goal of behavioral finance is to study the impact of psychological characteristics on individuals' behavior in financial markets and businesses and its effect on market behavior. This branch combines financial sciences with psychology and, in some cases, sociology to better analyze financial issues; it often examines the decision-making processes of individuals and their reactions to various market conditions, focusing on the influence of personality, culture, and individuals' judgments on their decisions. Behavioral finance aids in better understanding the capital market by formulating behavioral models (Badri & Goudarzi, 2020). Loewenstein et al. (2013) state that investors experience more pain from loss aversion than from gains, even if they are of the same magnitude. The despair felt by investors who are loss averse can be twice as deep as the feeling of gain, even if it is of the same magnitude (Loewenstein et al., 2018). According to Supramono and Terzia (2018), anchoring and adjustment refer to the tendency to start with a specific value for evaluation. The anchoring bias positively affects investment decisions, leading investors to make quick decisions to set targets or price standards before buying or selling investments. Based on this theory and research, anchoring bias helps improve investment decision-making (Li Long & Ti To Ha, 2022). In investing, investors face decisions regarding the allocation of funds or assets from within and outside the company with the goal of achieving future profits. In this research, the criteria for investment decision-making include anchoring bias, loss aversion, and overconfidence. In this modern era, many investments are made by students, contributing to the growth of young investors, which affects the expansion of this demographic. The side effect of the expansion of novice investors does not rule out the possibility that student investment behavior leads to behavioral biases (Hosseini et al., 2020). These behavioral deviations or biases are more prevalent among younger investors, who tend to set a standard figure for investment based on the initial purchase price. Thus, if the value of their investment begins to decrease, they often believe that it will rise again and are unwilling to sell it. Anchoring bias is a phenomenon where an individual uses the initial evaluation of the purchase price to make estimates for subsequent investments, but this often yields results different from what was expected (Li Long & Ti To Ha, 2011). Investor behavior biases, based on emotions, can lead to a tendency for loss aversion. Quick decision-making in conditions of risk and uncertainty causes many day traders' behaviors to be influenced by cognitive and psychological biases, along with emotions arising from external environments that lead to loss aversion behavior (Ady, 2018). Given the above, the aim is to answer the question of how to examine the relationship between financial behavior and financial decision-making in brokerage firms in the Iranian capital market. This article demonstrates several innovations and new aspects in the field of behavioral finance and financial decision-making in the Iranian capital market, which are as follows:

1. **Focus on the Iranian Capital Market:** This article specifically examines the impact of financial behaviors on investment decision-making in brokerage firms within the Iranian capital market. This focus is innovative compared to similar studies that primarily concentrate on Western markets.
2. **Examination of Key Behavioral Variables:** The article investigates three key behavioral variables: urgency in selection, loss aversion, and overconfidence. These variables are analyzed simultaneously within a unified framework, representing an innovative approach compared to studies that examine only one or two behavioral variables.
3. **Use of Multiple Analytical Tools:** The article employs various software tools such as Excel, SPSS, and LISREL for data analysis. The combination of these tools and analytical methods (such as confirmatory factor analysis and structural equation modeling) to examine the relationships between variables represents an innovative and comprehensive approach to analyzing behavioral finance data.
4. **Emphasis on Psychological Factors in Financial Decision-Making:** The article specifically highlights the impact of psychological factors such as urgency in selection, loss aversion, and overconfidence on

investment decision-making. This approach underscores the importance of behavioral and psychological aspects alongside economic and financial factors, which are often overlooked in traditional studies.

5. **Practical Implications for Managers and Investors:** The findings of this article indicate that financial behaviors such as urgency in selection, loss aversion, and overconfidence can significantly impact investment decision-making. These results can help managers and investors make more optimal decisions by better understanding these behaviors.
6. **Exploration of Gender and Educational Differences:** The article examines gender and educational differences in respondents' attitudes toward the research variables. These analyses reveal that gender and education level do not significantly influence investors' attitudes, except in the case of loss aversion, where gender plays a role. These findings can contribute to a better understanding of individual differences in financial decision-making.
7. **Contribution to Behavioral Finance Literature in Iran:** This article contributes to the development of behavioral finance literature in Iran and demonstrates how psychological factors can influence financial decision-making in an emerging market like Iran. This is particularly important in markets where investor behavior may be influenced by specific economic and cultural conditions.

   In summary, this article, through its combination of advanced analytical methods and focus on the Iranian capital market, represents an innovative study in the field of behavioral finance and financial decision-making.

Theoretical Foundations and Literature Review

Financial decision-making extends beyond mere stock market analyses; it significantly encompasses the behavioral psychology of investors. This research investigates the factors that influence investment decisions through the lens of investment psychology and behavioral finance. A sense of urgency in selection is primarily driven by the fear of missing out (FOMO). In the realm of stock market psychology, an impatient investor is characterized by an excessive optimism towards potential investments. While such optimism may sometimes be justified, these investors often believe that if they miss a particular opportunity, they may not encounter a similar one again (Singh et al., 2021). Conversely, in the field of behavioral finance, the urgency associated with investment selection is often described as superficiality. This concept suggests that individuals tend to base their decisions on superficial observations without adequately addressing their underlying cognitive biases. For instance, many investors are inclined to favor stocks of companies that they perceive positively, based on their experiences with the companies' products, over stocks from less familiar companies (Di Bartoli et al., 2019). Loss aversion is another critical factor influencing investment decision-making behaviors. Risk aversion implies that individuals are willing to accept risk only when it is accompanied by an appropriate reward. In financial models, risk aversion is typically symmetrical, meaning it applies equally to both potential gains and losses (Rezaei et al., 2021). The psychological rationale behind this behavior is that investors often struggle to accept the reality of having incurred a loss. By not selling their stocks, they delay the mental discomfort associated with recognizing a loss, clinging to hope for a potentially favorable future outcome. Conversely, when it comes to profitable stocks, the fear of a sudden price decline may prompt investors to sell their stocks prematurely, thereby avoiding the risk of transforming profitable investments into loss-making ones (Han et al., 2021). A brief overview of psychological research reveals that overconfidence is a prevalent trait among individuals, particularly in financial markets. Studies indicate that this phenomenon is not confined to investors but is widely observed across various professions (Glaser & Weber, 2010). In financial markets, overconfidence often manifests as investors perceiving themselves as more adept than others at selecting stocks and predicting market returns. Surveys conducted by the reputable Gallup polling institute indicate that less experienced investors tend to exhibit greater confidence than their more seasoned counterparts (Alsaban et al., 2020). From a broad perspective, investing involves allocating available resources with the aim of generating greater financial returns in the future. In essence, investment entails deferring current

consumption to facilitate the possibility of enhanced future consumption. The investment process inherently occurs within a framework of uncertainty. Given that investment decisions are made by individuals with diverse temperaments and personal characteristics, the criteria for these decisions can vary significantly.

Investment analysis related to stocks can be categorized into two primary types: first, individual stock analysis, which encompasses two overarching approaches—fundamental and technical analysis; and second, portfolio management analysis, which incorporates capital market theory and arbitrage theory. This classification establishes the foundational basis for stock analysis, guiding the choice of analytical methods (Shahvaroghi Farahani, 2020). Behavioral finance theories explore how psychological factors impact financial decision-making. Below, we outline some of the most significant theories and concepts within this field:

Prospect Theory: This theory states that individuals respond asymmetrically to gains and losses, feeling losses more acutely than equivalent gains. This concept is specifically related to the phenomenon known as "loss aversion." Daniel Kahneman and Amos Tversky (1979).

Loss Aversion: This concept suggests that individuals prefer to avoid potential losses more than they seek equivalent gains. In other words, the pain of a loss is generally greater than the pleasure of a gain of the same magnitude (Kahneman, 2011).

Overconfidence: This phenomenon indicates that individuals tend to overestimate their abilities to predict the market and select stocks. This can lead to risky behavior and excessive trading (Barber & Odean, 2001).

Mental Accounting: Richard Thaler (1980) introduced this concept, which suggests that individuals categorize their income and expenses into different mental accounts and behave according to these categories, potentially leading to irrational financial decisions.

Herding Behavior: This phenomenon refers to the tendency of individuals to follow group behavior, especially in uncertain conditions. Rather than conducting independent analysis, individuals may pay attention to and follow the behaviors of others (Bikhchandani et al., 1992).

Emotional Influences: Emotions can have a significant impact on financial decisions. For example, fear and greed can influence investor behavior during market volatility.

Fear of Missing out (FOMO): This feeling refers to the fear of missing opportunities and can lead to hasty and irrational decisions in investment selection (Przybylski et al., 2013).

These theories and concepts illustrate the psychological influences on financial behaviors and help us gain a better understanding of how investors make decisions in financial markets. Financial analysis involves identifying the strengths and weaknesses of companies primarily through judgment methods related to qualitative assessments and interpreting financial ratios obtained from financial statements. Additionally, financial analysis can be viewed as a process of inputting data into the portfolio creation section, as financial analysis encompasses analyzing the specific characteristics of stocks and related companies and ultimately providing suggestions for final selection. What has been stated so far in financial calculations and in the context of stock selection and portfolio investment prioritizes existing investments in terms of risk degree and return rate, so that the investor can form their desired portfolio considering their financial capabilities and other policies ahead (Khajavi et al., 2021). The first factor that all investors must consider is the state of uncertainty. All investors can act as much as they can to predict returns and risks or try to change the conditions and status. These investors use past data for prediction. Investors often analyze this data to utilize it for their goals. Regardless of how accurate and informed investors are, it should be noted that the future is unknown, and there is always a possibility of mistakes occurring. Some investors use quantitative models to alleviate uncertainty and ambiguity, while others ignore it. However, all investors are influenced by the confidence coefficient. What should be noted is that relying solely on past data and information may lead to mistakes (Liu, 2022). Behavioral finance can be considered one of the specialized fields of finance based on psychology that illustrates behaviors and anomalies in financial markets. In this field, it is assumed that different models can affect individuals' behavior and their decisions. This influence can manifest even when complete and sufficient information is available. In other words, not only do quantitative and qualitative economic factors affect the market and prices, but behavioral patterns also play a

role in this regard. There are multiple factors that lead to behavioral biases, which behavioral finance seeks to explain and justify (Charitsa, 2018). Decision-making is one of the most important actions that any individual must take in the market. The profit or loss depends on the decisions individuals make. Therefore, the factors that influence decisions are also among the most important considerations that every person should take into account. Many individuals believe that in financial markets, which follow specific rules and regulations, only economic and quantitative factors affect market trends and prices. By examining patterns and information, it can be concluded that other factors such as emotional factors, cognitive errors, behavioral biases, etc., can also influence trends. The field of knowledge that specifically addresses these factors and examines behavioral biases in capital markets is called behavioral finance (Ravindra, 2018).

Research Background

Karimi Dorabi (2021) conducted a study titled "Behavioral Finance in the Investment Decision-Making Process." In the literature, the emergence of behavioral sciences in financial decisions typically examines various factors and structures that shape investor behavior. The importance of this topic lies in demonstrating that investment decisions are not solely influenced by economic indicators and rationality; rather, factors such as investment horizon, risk tolerance, confidence, and assurance that investors have in the investment options and processes in the market significantly affect investor behavior and their decision-making styles. The emergence of behavioral sciences in financial discussions represents a new approach to the study of financial markets. This research is a library-based study that examines the decision-making behavior of investors in the capital market. Khajavi and Alizadeh Talatappeh (2021) conducted a study titled "The Impact of Economic and Accounting Variables on Managers' Financial Decisions with the Role of Cognitive Errors, Based on a System Dynamics Approach." The conclusion indicates that the decision-making model of managers in the fields of investment and financing is influenced by cognitive biases, and these deviations shape managers' behavior in response to environmental and external factors. Due to the prevailing economic conditions in the country, managers limit their investments and capital expenditure policies; however, due to behavioral biases affecting economic decision-making patterns, the overall performance of companies is weakened, and they miss opportunities to create value and generate wealth. Bahrami (2021) conducted a study titled "Examining Influential Factors on Financial Management Behavior (Case Study: Employees of the Saqqez County Offices)." The paradigm of people's lives faces numerous economic challenges and how individuals react to financial events. Therefore, individual behavior and decision-making in various conditions impact their economic life and society. This study examined the factors influencing the financial behavior and personal decisions of employees. The findings from regression analysis showed that the determinants of financial management behavior include attitude, perceived usefulness, financial knowledge and awareness, and financial profit.

Noshadi et al. (2021) conducted a study titled "Predicting Company Value Based on Audit Components and Ethical Behavior of Auditors with Emphasis on Managers' Financial Intelligence." The findings indicate that audit components (internal audit unit, reputation of the auditing firm, auditor tenure, auditor expertise in the industry, and audit opinion) and the ethical behavior of auditors, with an emphasis on financial intelligence, have a positive and significant relationship with company value. The conclusion showed that the ethical behavior of auditors has direct consequences on company value. Additionally, managers can increase company value by improving the informational environment through selecting specialized auditors, the reputation of the auditing firm, the presence of internal audit, auditor tenure, and efforts to provide favorable audit opinions. Sharifi and Jafari Alavestani (2021) conducted a study titled "Examining Behavioral Factors Influencing Investor Decisions in Financial Behavior." The aim of this study is to investigate the behavioral factors influencing investor decisions in financial behavior. In this regard, behavioral finance seeks to identify which behavioral finance factors are the most important in influencing individuals' investment decisions in the stock market.

Long and Tu Ho (2022) conducted a study titled "Investigating the Impact of Investors' Behavioral Biases on Financial Decision-Making." The results of the research showed that three biases—hindsight bias, regret aversion, and ambiguity aversion—are the basis

for the analysis and investigations of the majority of market participants, and these biases need to be addressed. This evidence supports the growth and validation of behavioral topics and highlights the shortcomings of traditional optimal portfolio theories.

Lafbour (2021) conducted a study titled "Examining the Relationship Between Financial Slack and Decision-Making in the Profitability of Business Groups." The results indicate that for companies closest to the business group leader and with a higher weight in business groups, the relationship is a second-degree and U-shaped inverse relationship. These findings suggest that the bargaining power that companies have in business groups plays a significant role in explaining the relationship between financial slack and profitability.

Kim et al. (2021) conducted a study titled "Ownership Structure and the Relationship Between Financial Slack and Research and Development Investments: Evidence from Korean Companies." The results indicate that the distinction between different types of owners enhances our understanding of the nature of the relationship between financial slack and research and development investments.

Stiana and Ichsanuddin Nur (2020) conducted a study titled "The Role of Financial Behavior in Improving Investment Decision-Making." The results indicate that anchoring bias, loss aversion, and overconfidence can all help improve investment decision-making.

Jena and Ady (2019) conducted a study aimed at determining the impact of fundamental analysis, interest rates, and overconfidence on investors' investment decisions in Surabaya. The results showed that fundamental analysis and overconfidence influence investment decisions, while interest rates have no effect; however, simultaneously, fundamental analysis, overconfidence, and interest rates affect investment decisions. Based on this theory and research, overconfidence helps enhance investment decision-making.

Jung et al. (2019) conducted a study titled "Overconfidence Behavior," which refers to the tendency of individuals to feel they have above-average ability, often recognized as the better-than-average effect. This tendency leads individuals to feel intelligent, ignore potential bad risks, and believe they have control over the outcome of an event. Santash, Ogurluoglu, Ozer, and Demir (2018) conducted a study titled "Does the Function of Rumors Affect Organizational Revenge and Job Stress Among Healthcare Personnel?" The method of this research was descriptive-correlation. The results of the analyses showed that the correlation between rumor performance and job stress is low. The correlation between rumor performance and organizational revenge and the correlation between job stress and organizational revenge are moderate and significant. While rumor functions explain 31.1% of the total variance of organizational revenge, organizational revenge explains 11.3% of the variance of job stress.

Case et al. (2018) conducted a study indicating that investors experience more pain from loss aversion than from gains, even if they are of the same magnitude. The feeling of despair experienced by investors who are loss averse can be twice as deep as the feeling of gain, even if it is of the same magnitude.

Research Hypotheses

Main Hypothesis

There is a positive and significant relationship between financial behavior and financial decision-making in brokerage firms in the Iranian capital market.

Sub-Hypotheses

1. There is a positive and significant relationship between urgency in selection and investment decision-making in brokerage firms in the Iranian capital market.
2. There is a positive and significant relationship between loss aversion and investment decision-making in brokerage firms in the Iranian capital market.
3. There is a positive and significant relationship between overconfidence and investment decision-making in brokerage firms in the Iranian capital market.

Research Methodology

This research is considered an applied study in terms of its objectives. Based on its nature and method, it is descriptive survey research conducted cross-sectionally. The statistical population of this study consists of managers and experts from brokerage firms in Tehran province, totaling 380 individuals. In this study, a sample of 191 individuals was randomly selected. A standard researcher-designed questionnaire was used to collect data in this study. The first section

includes demographic questions to identify the demographic characteristics of the sample. The second section contains specialized questions. The general questions consist of three inquiries about the personal characteristics of the respondents: gender, age, and education level. It is worth mentioning that the questionnaire is designed based on a five-point Likert scale. The questionnaire consists of two sections: the first section includes demographic questions designed to identify the demographic characteristics of the sample. The second section contains specialized questions. The general questions consist of three inquiries regarding the personal characteristics of the respondents, namely: gender, age, and level of education. It is noteworthy that the questionnaire is structured based on a five-point Likert scale. To assess the content validity of the questionnaire, a content validity method will be employed; this means that the questionnaire will be reviewed by a number of experts and professors in the relevant field, and necessary adjustments will be made based on their feedback. For evaluating the reliability of the questionnaire, Cronbach's alpha coefficient will be calculated according to Table 1. If the Cronbach's alpha coefficient exceeds 0.7, the reliability will be considered satisfactory, and the questionnaire can be distributed among the statistical sample. To assess reliability, a pilot study was conducted in which the questionnaire was administered to 20 members of the statistical sample, and Cronbach's alpha coefficient was calculated. The results of the reliability test for the questionnaires are presented in Table 1. As observed from the data in this table, the Cronbach's alpha coefficient for all dimensions of the questionnaires was found to be greater than 0.7. Therefore, the reliability of the questionnaire has been evaluated as satisfactory.

Table 1: Cronbach's Alpha coefficient

Alpha Coefficient	Instrument
0.742	Financial Performance
0.803	Non-Financial Performance
0.721	Understanding of the COVID-19 Pandemic
0.756	Intensity of Competition in the Industry
0.816	Acceptance of Digital Marketing
0.768	Overall

Conceptual Definitions of Research Variables

Urgency in Selection: Urgency in selection is essentially driven by the fear of missing out. In the context of stock market psychology, an impatient investor is someone who is overly optimistic about any investment they wish to make. Nevertheless, this investment may be correct, and the individual believes that if they miss this investment opportunity, they may not have another chance (Singh et al., 2021).

Loss Aversion: Risk aversion means that individuals are only willing to accept risk if they receive a corresponding reward. In financial models, risk aversion typically exists symmetrically, meaning it applies to both profit acquisition and loss tolerance. While behavioral finance theories believe that risk aversion in profit and loss is different, specifically, individuals give much more weight to a specific loss compared to a similar gain. An observed phenomenon is that individuals tend to sell their profitable stocks too early and hold onto losing stocks for a long time (Li Long et al., 2022).

Overconfidence: Overconfidence or excessive confidence indicates that individuals consistently overestimate their abilities in predicting the market and selecting high-return stocks. This phenomenon can lead to a divergence of stocks from their intrinsic value and compel investors to excessively buy and sell stocks, incurring additional costs (Alsaban et al., 2020).

Investment Decision-Making: From a general perspective, investing means consuming available funds to achieve more money in the future. In other words, investing means postponing current consumption to achieve the possibility of greater future consumption. The investment process involves investing in a state of uncertainty. Since this decision is individual and made by people with various temperaments and personal characteristics, it will have different criteria (Shahvaroghi Farahani, 2020).

Research Findings

Descriptive Statistics of Research Variables

The descriptive analysis and central indicators (mean, minimum, and maximum) and dispersion (standard deviation and range of changes) of the main research variables are presented in Table 2.

Normality Test of Data

The results of the normality test of the data are shown in Table 3.

According to Table 3, in all cases, the values of skewness and kurtosis are within acceptable ranges. Additionally, the significance values of the KS statistic in all cases are greater than 0.05. Therefore, the data distribution is normal, and parametric tests can be used.

Table 2: Descriptive Analysis of Research Variables

Research Variables	Count	Mean	Minimum	Maximum	Range	Standard Deviation
Urgency in Selection	191	3.942	2.600	5.000	2.400	0.528
Loss Aversion	191	3.581	2.250	4.750	2.500	0.514
Overconfidence	191	3.770	2.400	5.000	2.600	0.605
Investment Decision-Making	191	3.746	2.500	5.000	2.500	0.529

Table 3: Normality Test of Data

Research Variables	Count	Skewness	Kurtosis	KS Statistic	Significance Value
Urgency in Selection	191	-0.254	0.046	1.472	0.067
Loss Aversion	191	-0.063	-0.463	1.699	0.075
Overconfidence	191	0.056	-0.659	1.536	0.073
Investment Decision-Making	191	-0.064	-0.441	1.163	0.060

Confirmatory Factor Analysis

In this study, a questionnaire was used to measure the research variables. Therefore, the validity of the questionnaire must first be confirmed. For this purpose, confirmatory factor analysis was used. Evaluating the validity of the questionnaire using confirmatory factor analysis is known as construct validity. Confirmatory factor analysis assesses the relationship of items with constructs.

In this research, four main factors (latent variables) and 20 questions (observable variables) were used. Each of these variables is represented by indices Q_01 to Q_20.

Table 4: Summary of Acceptable Ranges for Model Fit Indices (Schumacher & Lomax, 2010)

Fit Index	χ^2/df	SRMR	RMSEA	GFI	AGFI	NFI	NNFI	IFI
Acceptable Range	1-5	<0.05	<0.05	>0.9	>0.9	>0.9	>0.9	0-1

Table 5: Distribution of Questions and Items Measuring Dimensions and Research Variables

Dimension	Symbol	Item
Urgency in Selection	X1	1-5
Loss Aversion	X2	6-9
Overconfidence	X3	10-14
Investment Decision-Making	Y	15-20

Confirmatory Factor Analysis of the Research

In confirmatory factor analysis, the goal is to ensure an organized factor structure. Once the items for the main factors of the research are identified, confirmatory factor analysis is used to ensure the existing factor structure. First-order confirmatory factor analysis assesses the relationship of the factor(s) (latent variables) with the items (observable variables). In this method, no relationship between the latent variables is examined. This type of measurement model is solely to ensure that the latent variables are correctly measured. In first-order confirmatory factor analysis, the relationship of one factor with several items or several factors with several items can be examined. In this research, it is necessary to use first-order factor analysis.

As shown in Figures 1 and 2, the factor loadings in all cases are greater than 0.3, indicating that the correlation between the latent variables and the

observable variables is acceptable. The t-value is greater than 1.96, which indicates that the observed correlations are significant.

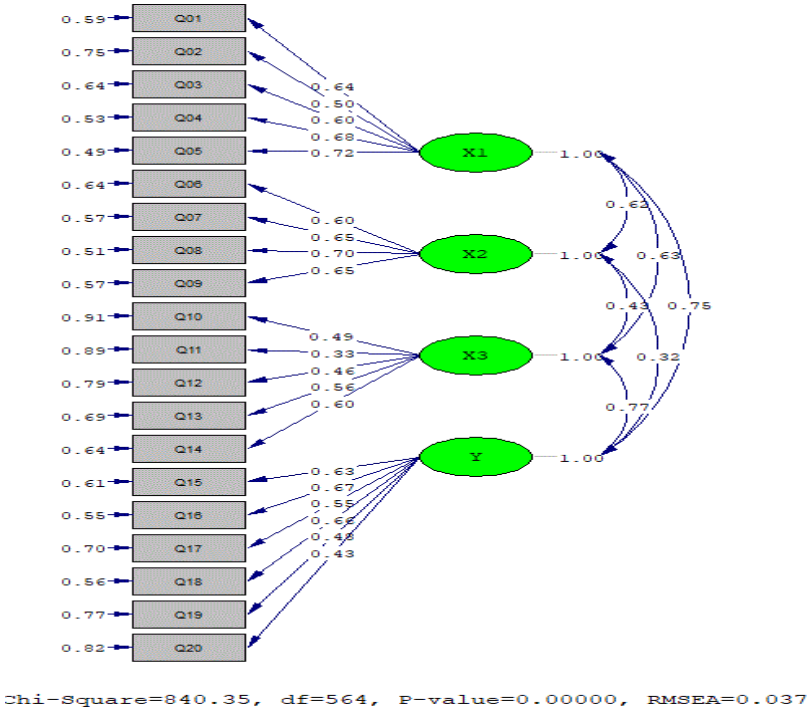

Figure 1: Confirmatory Factor Analysis of Research Variables (Standard Estimates)

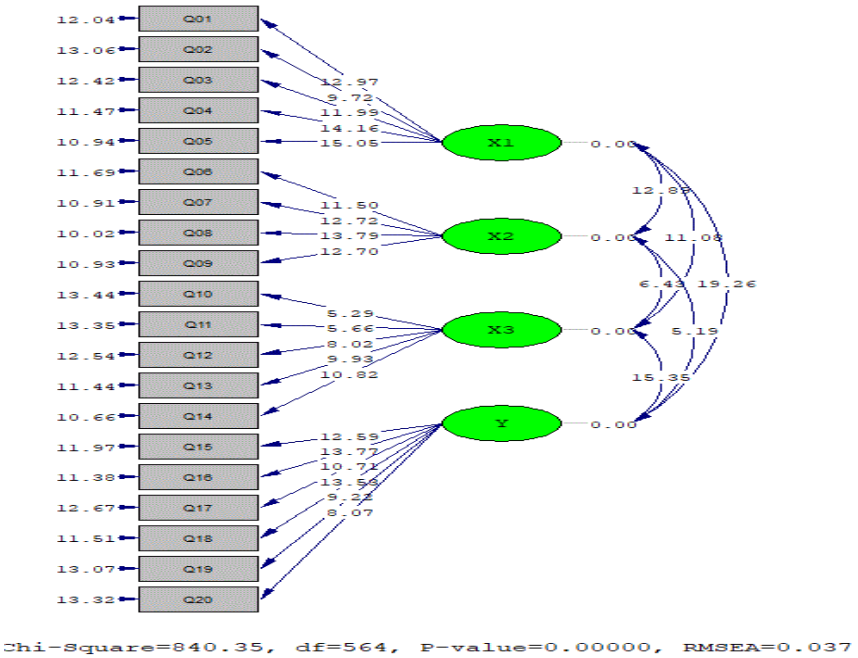

Figure 2: Confirmatory Factor Analysis of Research Variables (t-Statistic)

Testing Research Hypotheses

The research hypotheses have been tested using structural equation modeling. The results of the structural equation modeling using LISREL software are presented in Figure 3.

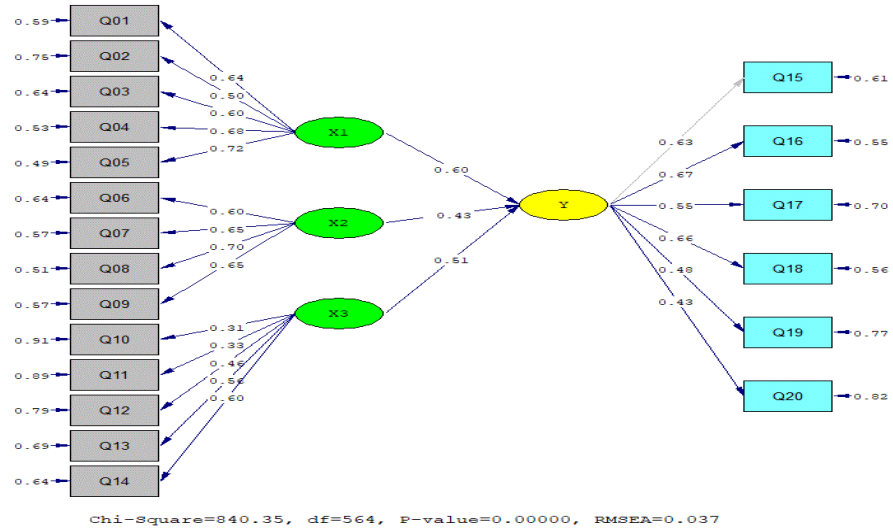

Figure 3: Testing Research Hypotheses (Standard Estimates)

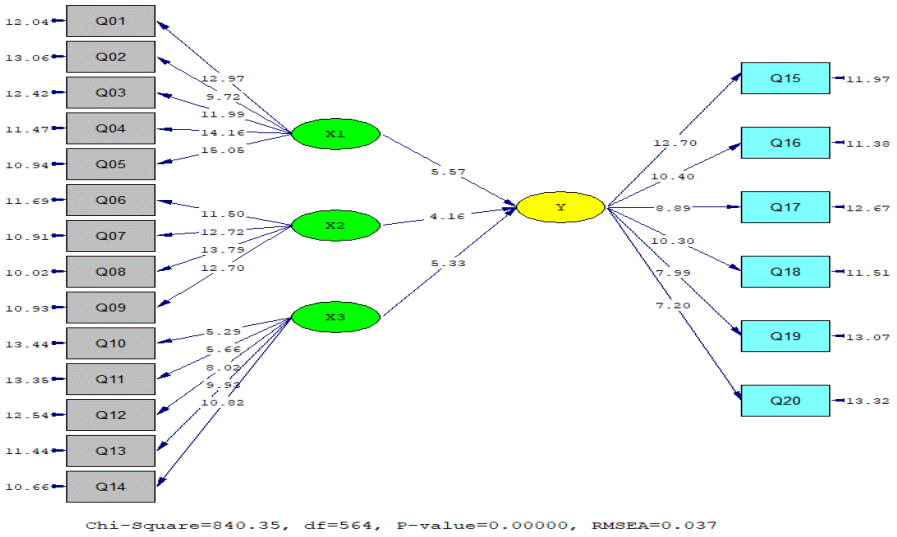

Figure 4: Testing Research Hypotheses (Student's t-Statistic)

Goodness of Fit Test

One of the general indices for considering the degrees of freedom in calculating fit indices is the normalized chi-square, which is calculated by dividing the chi-square value by the degrees of freedom of the model. A value less than 2 is considered desirable, and if it is less than 5, it is acceptable with some leniency.

$$x^2/_{df} = \frac{840.35}{546} = 1.48$$

In this study, the normalized chi-square obtained is 1.48, which is less than 2. In most confirmatory factor analyses and structural equation modeling, the RMSEA index is used. If the value of this index is less than 0.05, the model fit is considered good, and if it

falls between 0.05 and 0.08, the model fit is considered moderate.

$$RMSEA = 0.037; GFI = 0.92; NFI = 0.94; SRMR = 0.034$$

The RMSEA index is obtained as 0.037, and the SRMR is 0.034. Other indices also fall within acceptable ranges, indicating that the model fit is satisfactory.

Testing Research Hypotheses

Hypothesis 1: There is a positive and significant relationship between urgency in selection and investment decision-making in brokerage firms of the Iranian capital market.

The standardized factor loading for the impact of urgency in selection on investment decision-making is found to be 0.60. Additionally, the t-statistic is 5.57, which is greater than the critical value of 1.96. Therefore, with 95% confidence, it can be claimed that there is a positive and significant relationship between urgency in selection and investment decision-making in brokerage firms of the Iranian capital market.

Table 6: Impact of Urgency in Selection on Investment Decision-Making

Variables	Factor Loading	t-Statistic
Urgency in Selection on Investment Decision-Making	0.60	5.57

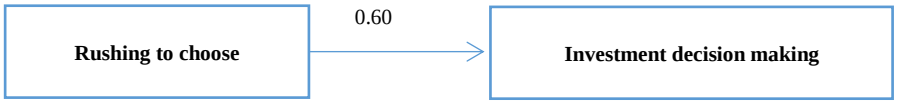

Figure 5: Impact of Urgency in Selection on Investment Decision-Making

Hypothesis 2: There is a positive and significant relationship between loss aversion and investment decision-making in brokerage firms of the Iranian capital market.

The standardized factor loading for the impact of loss aversion on investment decision-making is found to be 0.43. Additionally, the t-statistic is 4.16, which is greater than the critical value of 1.96. Therefore, with 95% confidence, it can be claimed that there is a positive and significant relationship between loss aversion and investment decision-making in brokerage firms of the Iranian capital market.

Table 7: Impact of Loss Aversion on Investment Decision-Making

Variables	Factor Loading	t-Statistic
Loss Aversion on Investment Decision-Making	0.43	4.16

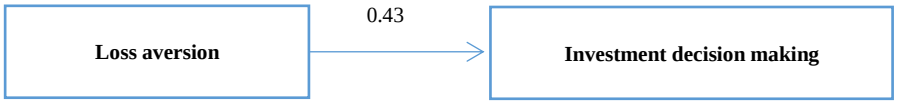

Figure 5: Impact of Loss Aversion on Investment Decision-Making

Hypothesis 3: There is a positive and significant relationship between overconfidence and investment decision-making in brokerage firms of the Iranian capital market.

The standardized factor loading for the impact of overconfidence on investment decision-making is found to be 0.51. Additionally, the t-statistic is 5.33, which is greater than the critical value of 1.96. Therefore, with 95% confidence, it can be claimed that there is a positive and significant relationship between overconfidence and investment decision-making in brokerage firms of the Iranian capital market.

Table 8: Impact of Overconfidence on Investment Decision-Making

Variables	Factor Loading	t-Statistic
Overconfidence on Investment Decision-Making	0.51	5.33

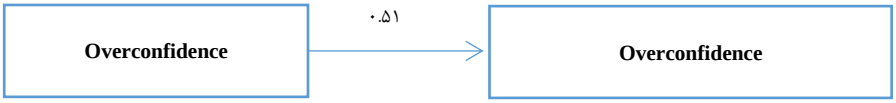

Figure 7: Impact of Overconfidence on Investment Decision-Making

Table 9: Summary of Research Hypothesis Testing Results

Research Hypotheses	Independent Variable	Dependent Variable	Factor Loading	t-Statistic	Result
Hypothesis 1	Urgency in Selection	Investment Decision-Making	0.60	5.57	✔
Hypothesis 2	Loss Aversion	Investment Decision-Making	0.43	4.16	✔
Hypothesis 3	Overconfidence	Investment Decision-Making	0.51	5.33	✔

Side Findings of the Research

Independent t-Test

The independent t-test is used when examining the difference in means between two populations. Since the gender variable has two levels, the independent t-test has been employed to investigate the differences in the perspectives of respondents.

It is necessary to determine whether the variances of the two groups are equal. The output of Levene's test (assumption of equal variances) indicates that in all cases, the tests were conducted under the assumption of unequal variances. The significance values in all cases, except for the variable of loss aversion, were greater than the error level (0.05). Therefore, the results indicate that the differences in perspectives between men and women are not significant. However, for the variable of loss aversion, the significance value was calculated to be below the error level, suggesting that gender is a significant factor influencing respondents regarding this variable.

Table 10: Results of the Independent t-Test Based on Gender

Research Variables	Gender	Mean	Mean Difference	Equality of Variance	Significance of Mean Difference
				F	Significance (T)
Urgency in Selection	Male	3.934	-0.027	0.073	0.787
	Female	3.961			
Loss Aversion	Male	3.601	0.065	7.433	0.007
	Female	3.536			
Overconfidence	Male	3.767	-0.012	0.315	0.575
	Female	3.779			
Investment Decision-Making	Male	3.708	-0.125	0.244	0.622
	Female	3.833			

Analysis of Variance (ANOVA)

Respondents in the current study are categorized into more than two groups based on age and education level. Therefore, to compare the differences in perspectives based on age and education status, Analysis of Variance (ANOVA) has been used. ANOVA will determine whether age and education status affect their views on the research variables. The ANOVA analysis has also been conducted at a 95% confidence level.

Table 11 shows the results of the analysis of variance based on age status.

Table 11: Results of Analysis of Variance Based on Age Status

Research Variables	F Statistic	Significance Value
Urgency in Selection	1.127	0.339
Loss Aversion	1.149	0.330
Overconfidence	0.370	0.775
Investment Decision-Making	0.613	0.608

At a 5% confidence level, the differences in age status concerning the research variables were examined. As observed, the significance values for all components are above the error level, indicating that there is no reason to reject the null hypothesis. Therefore, age differences among individuals do not have an impact on their perspectives.

Differences in Respondents' Perspectives Based on Educational Qualification

Respondents in the current study have also been categorized into four groups based on their educational qualifications. Therefore, to compare the differences in perspectives based on educational qualifications, Analysis of Variance (ANOVA) has been utilized. ANOVA will determine whether individuals' educational qualifications affect their views on the research variables.

Table 12: Results of ANOVA for Educational Qualifications

Research Variables	F Statistic	Significance Value
Urgency in Selection	0.901	0.442
Loss Aversion	0.631	0.596
Overconfidence	1.127	0.339
Investment Decision-Making	1.629	0.184

As observed, based on educational qualifications, the significance values for the mean differences in respondents' perspectives for all cases are greater than 0.05. Therefore, individuals with different educational qualifications have similar views regarding the research variables, and with 95% confidence, it can be stated that these factors are not influenced by individuals' educational qualifications.

Conclusion

The objective of the present research is to examine the relationship between financial behavior and financial decision-making in brokerage firms within the Iranian capital market. This study seeks to fill a significant gap in the existing literature by exploring how psychological factors affect investment choices and outcomes in a specific market context. To address the research questions, the general framework of the study was meticulously outlined, followed by a comprehensive review of the literature related to the factors influencing the relationship between financial behavior and financial decision-making in these firms. The statistical population of this study consisted of 380 managers from brokerage firms in Tehran province, from which a sample of 191 individuals was selected. A structured questionnaire was utilized to collect the necessary data, ensuring that a wide array of insights was captured regarding financial behaviors and decision-making processes. The analysis of the obtained data was conducted using advanced statistical tools, including Excel, SPSS, and LISREL software, which facilitated a robust examination of the relationships posited in the hypotheses.

The first hypothesis test indicated a positive and significant relationship between urgency in selection and investment decision-making in brokerage firms in the Iranian capital market. The standardized factor loading for the impact of urgency in selection on investment decision-making was found to be 0.60, and the t-statistic value was 5.57, which exceeds the critical value of 1.96. Therefore, with 95% confidence, it can be concluded that there is a positive and significant relationship between urgency in selection and investment decision-making in these firms. This finding suggests that traders who exhibit a sense of urgency in their decision-making processes are more likely to make swift investment choices, which can lead to both opportunities and pitfalls. Successful traders must not only learn analysis and trading methods but also maintain control over their emotions, avoiding haste. It is often observed that traders who quickly profit at the beginning of a bullish market may act prematurely or hastily sell when facing slight losses, only to see the market move contrary to their predictions. Thus, investors should adopt a slow and steady approach to grow their portfolios and achieve desired returns in the long term. By examining the growth index of their stocks, individuals can realistically assess the rise and fall of their shares, avoiding hasty decisions and unrealistic expectations for short-term returns. The findings of Hosseinitabar et al. (2019) support the results obtained in this study,

highlighting the detrimental effects of impulsive decision-making in trading environments.

The second hypothesis test indicates a positive and significant relationship between loss aversion and investment decision-making in brokerage firms in the Iranian capital market. The standardized factor loading for the impact of loss aversion on investment decision-making was found to be 0.43, with a t-statistic value of 4.16, which is greater than the critical value of 1.96. Therefore, with 95% confidence, it can be concluded that there is a positive and significant relationship between loss aversion and investment decision-making in these firms. A common observation in the capital market is that individuals tend to sell their profitable stocks too quickly while holding onto losing stocks for extended periods. This behavior cannot be explained solely by risk aversion; in fact, individuals often exhibit risk-seeking behavior for losing stocks, preferring to hold onto them rather than accepting realized losses. This tendency may stem from a psychological desire to avoid the pain of loss, which often leads to poor investment strategies. The findings of Le Luong et al. (2022) and Rezaei et al. (2021) are consistent with the results obtained in this study, illustrating how loss aversion can skew rational decision-making and result in suboptimal portfolio management.

The third hypothesis test indicates a positive and significant relationship between overconfidence and investment decision-making in brokerage firms in the Iranian capital market. The standardized factor loading for the impact of overconfidence on investment decision-making was found to be 0.51, and the t-statistic value was 5.33, which is greater than the critical value of 1.96. Therefore, with 95% confidence, it can be concluded that there is a positive and significant relationship between overconfidence and investment decision-making in these firms. The sensitivity of investment cash flows is influenced not only by market conditions and company characteristics but also by personal traits of managers, such as excessive overconfidence. Overconfidence refers to the tendency of individuals to consistently overestimate their abilities in predicting the market and selecting high-yield stocks. This phenomenon can lead to a divergence of stocks from their intrinsic value and compel investors to excessively buy and sell stocks, incurring additional costs. The findings of Alsabban et al. (2020) and Bahrami et al. (2021) align with the results obtained in this study, emphasizing the risks associated with overconfident behavior in trading.

Overall, the findings of this research highlight the significance of psychological factors in financial decision-making. The study underscores that financial behaviors such as urgency in selection, loss aversion, and overconfidence significantly influence investment decisions. If not properly managed, these behaviors can lead to suboptimal financial outcomes. Thus, it is crucial for investors and managers to be aware of these psychological biases and develop strategies to mitigate their impact. For instance, investors should focus on long-term investment strategies rather than short-term gains, and managers should implement training programs to enhance decision-making skills and reduce the influence of cognitive biases. Additionally, brokerage firms should consider incorporating behavioral finance principles into their advisory services to help clients make more informed and rational investment decisions. Furthermore, the study suggests that future research should explore the impact of other behavioral biases, such as herd behavior and confirmation bias, on financial decision-making. Longitudinal studies could provide deeper insights into how these biases evolve over time and their long-term effects on investment performance. Policymakers and regulatory bodies should also consider these findings when designing financial regulations and investor protection mechanisms to ensure a more stable and efficient capital market. Such considerations are vital for fostering an environment where informed and rational financial decisions can thrive, ultimately leading to healthier market dynamics and improved investor outcomes.

Research limitations

Based on the provided text, the limitations of the research can be articulated as follows:

Limitations of the Research

1. **Sample Size and Generalizability**: The study is based on a sample of 191 managers from brokerage firms in Tehran province, which may not fully represent the broader population of managers in the Iranian capital market or in other regions. Consequently, the findings may have limited generalizability, and caution should be

exercised when extrapolating the results to other contexts or markets.

2. **Cross-Sectional Design**: The research utilizes a cross-sectional design, capturing data at a single point in time. This approach may not account for changes in financial behavior and decision-making over time, limiting the ability to draw conclusions about causality or the evolution of these behaviors.
3. **Self-Reported Data**: The study relies on a structured questionnaire for data collection, which may introduce biases associated with self-reporting. Respondents may provide socially desirable answers or may not accurately recall their financial behaviors, potentially affecting the validity of the findings.
4. **Focus on Specific Psychological Factors**: While the study examines urgency in selection, loss aversion, and overconfidence, it does not consider other relevant psychological factors that could influence financial decision-making, such as herd behavior, confirmation bias, or emotional reactions to market fluctuations. This narrow focus may limit a comprehensive understanding of the complexities of investor behavior.
5. **Cultural Context**: The research is situated within the Iranian capital market, where cultural, economic, and regulatory factors may differ significantly from other markets. As such, the psychological factors affecting investment decisions may not be applicable or relevant in different cultural or economic contexts.
6. **Potential for Confounding Variables**: The analysis may not fully account for other variables that could influence investment decision-making, such as market conditions, economic indicators, or individual differences in risk tolerance and financial literacy. These confounding factors could affect the observed relationships between psychological factors and investment decisions.
7. **Limitations of Statistical Tools**: Although advanced statistical tools such as SPSS and LISREL were employed for data analysis, the results may still be influenced by the assumptions underlying these models. If the assumptions are violated, it may affect the accuracy and reliability of the findings.
8. **Implications of Psychological Factors**: While the study highlights the importance of psychological factors in financial decision-making, it does not delve deeply into how these factors interact with each other or how they may influence long-term investment strategies. A more nuanced understanding of these interactions could provide greater insights for investors and managers.

Future Directions

While this research has briefly touched upon some ideas, the conclusion could be more impactful by providing specific and practical recommendations for future research. For example, examining additional biases in financial decision-making could enhance our understanding of investor behavior. Furthermore, utilizing longitudinal designs could offer deeper insights into changes in financial behavior and decision-making over time. Additionally, expanding research towards retail investors could help identify the specific characteristics and behavioral patterns of this group, ultimately leading to improved financial services and advice tailored to their needs. These approaches could contribute to the development of existing knowledge in the field of behavioral finance and enhance investor decision-making.

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