The Impact of Behavioral, Demographic, Financial Self-Efficacy, and Investors' Longevity Preferences on Their Decision-Making

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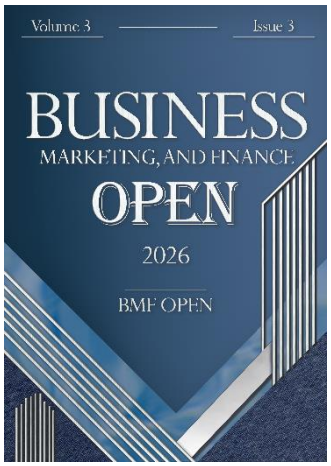

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Abstract: Investor decision-making is of exceptional and strategic significance from various perspectives. This issue is not limited to increasing investors' personal profit but also constitutes the foundation for the overall health of the economic system, as investment decisions directly influence future individual well-being, the ability to retire comfortably, fund children's education, and achieve life goals. Therefore, understanding this process assists investors in avoiding costly mistakes. Considering this importance, the present study investigates the impact of behavioral, demographic, financial self-efficacy, and investors' longevity preferences on their decision-making. The present research employed a descriptive-survey design with an ex post facto (causal-comparative) approach. Data collection instruments included the review of theoretical foundations, models, academic documents, scientific-research journals, electronic resources, and relevant websites, along with semi-structured in-depth interviews and standardized questionnaires. The statistical population consisted of all active investors in the Tehran Stock Exchange. Using simple random sampling and Cochran's formula, a sample of 384 investors was selected. Subsequently, researcher-developed questionnaires were distributed among the sample, and 365 completed questionnaires were returned. During the research process, thirteen hypotheses were formulated and tested using the required statistical analyses. The findings indicate that overconfidence, self-attribution bias, and herding behavior have a significant negative impact on investors' decision-making. In contrast, control and monitoring of daily financial affairs, control over decision-making and financial planning, control over debt and loans, control over investment and risk management, and mid-term investment management exert a significant positive influence on investors' decision-making.

Keywords: Behavioral factors; Demographic characteristics; Financial self-efficacy; Investors' longevity preferences; Investor decision-making.

1. Introduction

Investment decision-making has become one of the most critical elements in sustaining both individual financial well-being and macroeconomic stability. Investors' decisions are not only about maximizing short-term returns but also about aligning risk-taking with long-term wealth creation, retirement planning, and social objectives [1, 2]. The complexity of financial markets, technological transformations, and the growing emphasis on sustainability and corporate governance have made decision-making increasingly multi-dimensional [3-5]. Understanding the behavioral, demographic, financial, and temporal preference determinants

of investor decision-making is therefore critical for strengthening financial resilience, improving capital allocation efficiency, and advancing sustainable economic growth [6, 7].

One of the most studied dimensions in this field is behavioral finance, which explores how psychological biases distort rational decision-making [8, 9]. Traditional finance assumes that investors act rationally and make choices based on complete information, but mounting evidence shows that emotions, heuristics, and social influences significantly shape investment patterns [10, 11]. Overconfidence, for example, leads investors to overestimate their ability to forecast returns and underestimate risk, resulting in excessive trading and suboptimal portfolios [12, 13]. Similarly, self-attribution bias causes individuals to credit themselves for gains while blaming external factors for losses, reinforcing misguided strategies [14]. Herding behavior, where investors follow the majority rather than relying on fundamental analysis, can increase market volatility and lead to asset bubbles [8, 15]. Moreover, endowment effects—valuing owned assets more highly than non-owned ones—can reduce liquidity and create resistance to portfolio rebalancing [16]. Recognizing these biases is crucial for developing mechanisms to reduce their negative influence and promote more rational financial behavior [1, 12].

Demographic characteristics also play a significant role in shaping investment preferences and risk tolerance [17, 18]. Age, for instance, is a well-documented determinant: younger investors often demonstrate higher risk tolerance due to longer investment horizons, whereas older investors tend to adopt more conservative strategies to preserve capital [19, 20]. Education and financial literacy have also emerged as powerful predictors of portfolio diversification and resilience to behavioral biases [21, 22]. Investors with higher financial knowledge are more likely to assess market information critically and avoid irrational trends [4, 9]. Employment status and income stability can influence both the amount invested and the risk profile chosen [16, 23]. Gender differences have also been explored; some evidence suggests that female investors exhibit greater caution and a preference for long-term, lower-risk investments compared to male investors [18, 24]. Additionally, geographic and cultural contexts influence access to market information, perceptions of risk, and ethical priorities [25, 26].

Another vital construct in predicting investor decision-making is financial self-efficacy—the belief in one's ability to manage personal financial affairs effectively [1, 27]. Investors with high financial self-efficacy demonstrate better control over budgeting, debt management, and investment choices [28, 29]. They are more resilient to market fluctuations and less likely to be swayed by speculative noise [30, 31]. This competence also empowers investors to critically evaluate complex financial products, align their choices with long-term goals, and reduce susceptibility to manipulative trends [10, 32]. Furthermore, self-efficacy influences the degree of diversification and proactive risk management, enabling investors to adjust their asset allocation strategically [25, 33].

Temporal orientation and longevity preferences have recently gained attention as a critical dimension of investment behavior [14, 34]. Investors differ significantly in how they distribute their capital among short-, mid-, and long-term instruments. Short-term investment preferences are often linked to liquidity needs and market speculation but can expose individuals to volatility and psychological stress [16, 35]. Mid-term strategies, on the other hand, balance flexibility and growth potential, allowing investors to adapt to changing market conditions while pursuing capital appreciation [36, 37]. Long-term preferences typically reflect retirement planning, wealth accumulation, and intergenerational transfer of assets, but they require sustained risk tolerance and confidence in future market stability [20, 38]. Understanding these temporal choices is essential for designing policies and tools that encourage sustainable investing and financial well-being [5, 22].

Technological innovation and information availability are also reshaping the investor landscape [8, 11]. Machine learning models and digital financial platforms have democratized access to sophisticated analytics and predictive

tools, helping investors navigate uncertainty [4, 11]. However, easier access to trading platforms may also amplify behavioral biases by promoting excessive trading or emotional decision-making [1, 12]. At the same time, the rise of environmental, social, and governance (ESG) considerations has shifted investor priorities beyond pure profit maximization [16, 24]. ESG transparency and corporate social responsibility disclosures influence risk perception and portfolio selection, indicating that modern investors increasingly integrate ethical and sustainability concerns into decision-making [5, 13].

In emerging markets such as Iran, these dynamics become even more complex due to structural market inefficiencies, limited transparency, and cultural influences on financial risk-taking [6, 39]. Investors face unique challenges related to information asymmetry, regulatory unpredictability, and fluctuating macroeconomic conditions [2, 27]. These contextual realities amplify the relevance of behavioral and demographic determinants while highlighting the importance of fostering financial literacy and self-efficacy [1, 30]. Moreover, the integration of digital technologies in brokerage services and the growing exposure to global financial narratives are gradually reshaping local investor behavior [10, 12].

Despite the breadth of research globally, gaps remain in understanding how these factors jointly shape investor decision-making in transitional markets and rapidly digitizing economies [2, 21]. Most previous studies have focused on single variables such as risk tolerance or gender, whereas integrated models capturing behavioral biases, demographic traits, financial self-efficacy, and longevity preferences remain underexplored [15, 25]. By developing a comprehensive framework that accounts for these multi-dimensional influences, this research aims to inform both individual financial strategies and policymaking to enhance market efficiency and investor protection [5, 6].

In this context, the present study investigates how behavioral factors (e.g., overconfidence, regret aversion, self-attribution bias, herding behavior, endowment effect), demographic characteristics (age, financial literacy, employment status, gender, place of residence), financial self-efficacy, and investors' longevity preferences (short-, mid-, and long-term investments) collectively affect decision-making among active investors.

Main Hypothesis 1: Behavioral factors of investors affect their decision-making.

Sub-Hypothesis 1: Investors' overconfidence affects their decision-making.

Sub-Hypothesis 2: Investors' regret aversion affects their decision-making.

Sub-Hypothesis 3: Investors' self-attribution bias affects their decision-making.

Sub-Hypothesis 4: Investors' herding behavior affects their decision-making.

Sub-Hypothesis 5: Investors' endowment effect affects their decision-making.

Main Hypothesis 2: Demographic factors of investors affect their decision-making.

Sub-Hypothesis 6: Investors' age affects their decision-making.

Sub-Hypothesis 7: Investors' financial literacy affects their decision-making.

Sub-Hypothesis 8: Investors' employment status affects their decision-making.

Sub-Hypothesis 9: Investors' gender affects their decision-making.

Sub-Hypothesis 10: Investors' place of residence affects their decision-making.

Main Hypothesis 3: Financial self-efficacy of investors affects their decision-making.

Sub-Hypothesis 11: Control and monitoring of daily financial affairs by investors affect their decision-making.

Sub-Hypothesis 12: Proper decision-making and financial planning by investors affect their decision-making.

Sub-Hypothesis 13: Control over debt and loans by investors affects their decision-making.

Sub-Hypothesis 14: Control over investment and risk management by investors affects their decision-making.

Main Hypothesis 4: Investors' longevity preferences affect their decision-making.

Sub-Hypothesis 15: Short-term investments by investors affect their decision-making.

Sub-Hypothesis 16: Mid-term investments by investors affect their decision-making.

Sub-Hypothesis 17: Long-term investments by investors affect their decision-making.

2. Methodology

The present research adopted a descriptive–survey design with an ex post facto (causal-comparative) approach, aiming to examine the influence of behavioral factors, demographic characteristics, financial self-efficacy, and investors' longevity preferences on investment decision-making. The target population consisted of all active investors in the Tehran Stock Exchange, totaling 1,452,050 individuals at the time of study. To ensure that the sample size accurately reflected the characteristics of this large population, Cochran's formula was applied, which is a widely accepted method for determining sample size when dealing with qualitative variables. Since the exact distribution of attributes in the population was unknown, the maximum variability values of $p = 0.5$ and $q = 0.5$ were used to achieve the highest precision. A 95% confidence level was selected, with $z = 1.96$, and a margin of error (d) of 0.05 was considered appropriate for this type of behavioral and management research. The computation yielded a minimum sample size of 384 participants. After random selection through a simple random sampling procedure, questionnaires were distributed, and 365 fully completed responses were collected and included in the final analysis.

The study relied on multiple complementary sources to gather comprehensive and valid information. For the theoretical and conceptual foundations, an extensive review of scholarly literature was conducted, including models, academic documents, scientific-research journals, and electronic resources available on reputable websites. These sources provided the conceptual framework for defining constructs such as behavioral biases, financial self-efficacy, and longevity preferences.

For primary data collection, two key tools were utilized. First, semi-structured in-depth interviews with selected investors were conducted to refine the understanding of relevant behavioral and financial factors and to ensure the contextual validity of the constructs within the Iranian stock market environment. These interviews allowed the researchers to adapt and confirm the appropriateness of the standardized instruments for the local setting. Second, structured questionnaires were used to measure the research variables quantitatively. The questionnaire included validated scales for behavioral biases such as overconfidence, self-attribution bias, and herding behavior, as well as items assessing dimensions of financial self-efficacy, including daily financial control, planning, debt and loan management, investment control, and risk management. Longevity preference items evaluated individuals' orientation toward long-term investment and future financial security. Demographic questions captured age, gender, education level, and investment experience to analyze their potential impact.

Data analysis followed a structured, multi-step procedure to ensure methodological rigor and reliability of the findings. Initially, completed questionnaires were screened for accuracy and completeness, and the data were coded and entered into Microsoft Excel for primary organization and error checking. Descriptive statistics such as frequency, percentage, mean, and standard deviation were computed to summarize demographic characteristics and provide an overview of the main variables.

Inferential statistical analyses were then applied to test the study's thirteen hypotheses and assess the significance of the relationships among behavioral factors, financial self-efficacy components, longevity preferences, and investment decision-making. Given the nature of the constructs and the focus on examining predictive relationships, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed using

SmartPLS software. This method was chosen due to its suitability for complex models, its robustness with non-normal data distributions, and its ability to handle both reflective and formative measurement constructs simultaneously. Hypothesis testing included examining path coefficients, t-values, and significance levels to evaluate the direct and indirect effects of each variable on investment decision-making. Reliability and validity of the measurement models were assessed through composite reliability, Cronbach's alpha, and average variance extracted (AVE), ensuring the appropriateness of the constructs before structural analysis. This multi-stage analytical strategy provided a robust understanding of the factors influencing investor decision-making within the Tehran Stock Exchange context.

3. Findings and Results

In this study, 95% of the distributed questionnaires were returned, resulting in 365 valid responses. After collecting the data from the distributed questionnaires, the information was analyzed using factor analysis and path analysis through Excel and SmartPLS software. The results of the validity and reliability testing of the questionnaires are presented in Table 1.

Table 1. Validity and Reliability Results of the Questionnaires

Factors	Variable	Cronbach's Alpha ($\alpha > 0.7$)	Composite Reliability (CR > 0.7)	Convergent Validity (AVE > 0.5)
Behavioral Factors	Overconfidence	0.826	0.878	0.656
	Regret Aversion	0.878	0.715	0.685
	Self-Attribution Bias	0.896	0.777	0.699
	Herding Behavior	0.812	0.769	0.649
	Endowment Effect	0.833	0.866	0.512
Demographic Factors	Age	0.802	0.813	0.593
	Financial Literacy	0.788	0.799	0.599
	Employment Status	0.856	0.720	0.612
	Gender	0.802	0.719	0.603
	Place of Residence	0.864	0.802	0.559
Financial Self-Efficacy	Control and Monitoring of Daily Financial Affairs	0.858	0.830	0.622
	Control over Decision-Making and Financial Planning	0.898	0.811	0.605
	Control over Debt and Loans	0.855	0.825	0.633
	Control over Investment and Risk Management	0.812	0.785	0.614
Longevity Preferences	Short-Term Investments	0.863	0.755	0.690
	Mid-Term Investments	0.826	0.717	0.655
	Long-Term Investments	0.846	0.728	0.587
Investment Decision-Making	—	0.799	0.768	0.568

According to the results, Cronbach's alpha and composite reliability coefficients are greater than the standard threshold of 0.7, and the average variance extracted (AVE) exceeds the standard threshold of 0.5. Therefore, the reliability and convergent validity of the distributed questionnaires are confirmed.

The results of testing the first five hypotheses are shown in Table 2.

Table 2. Results of Testing Hypotheses One to Five

Description	Path Coefficient (β)	t-value	Coefficient of Determination (R^2)
Behavioral Factors	Overconfidence	-0.241	-4.141
	Regret Aversion	-0.266	-1.120
	Self-Attribution Bias	-0.487	-6.501
	Herding Behavior	-0.255	-6.111
	Endowment Effect	-0.455	-0.718

For the first hypothesis, the path coefficient of the independent variable (overconfidence) was -0.241, and its t-value was -4.141. Since the t-value is negative and its absolute value is greater than the critical threshold of 1.96, this indicates that investors' overconfidence has a significant negative effect on their decision-making. The model explains approximately 73% of the variance in the dependent variable through the independent variable.

For the second hypothesis, the path coefficient for regret aversion was -0.266, with a t-value of -1.120. Because the t-value is negative and its absolute value is less than the critical threshold of 1.96, regret aversion does not have a statistically significant effect on investors' decision-making. The model explains about 14% of the variance in the dependent variable through this factor.

For the third hypothesis, the path coefficient for self-attribution bias was -0.487, with a t-value of -6.501. The negative t-value with an absolute value greater than 1.96 indicates that self-attribution bias significantly and negatively affects investors' decision-making. The model accounts for approximately 68% of the variance in the dependent variable.

For the fourth hypothesis, the path coefficient for herding behavior was -0.255, with a t-value of -6.111. As the negative t-value's absolute value is greater than 1.96, herding behavior significantly and negatively influences investors' decision-making. The model explains around 60% of the variance in the dependent variable.

For the fifth hypothesis, the path coefficient for the endowment effect was -0.455, with a t-value of -0.718. The negative t-value with an absolute value less than 1.96 indicates that the endowment effect does not significantly affect investors' decision-making. The model explains approximately 10% of the variance in the dependent variable.

The results of testing hypotheses six to ten are presented in Table 3.

Table 3. Results of Testing Hypotheses Six to Ten

Variable	Path Coefficient (β)	t-value	Coefficient of Determination (R^2)
Demographic Factors	Age	0.556	1.658
	Financial Literacy	0.380	4.546
	Employment Status	0.698	1.555
	Gender	0.221	0.485

For the sixth hypothesis, the path coefficient for the independent variable age was 0.556, and its t-value was 1.658. Since the t-value is positive but its absolute value is less than the critical threshold of 1.96, age does not have a statistically significant effect on investors' decision-making. The model explains approximately 13% of the variance in the dependent variable through this factor.

For the seventh hypothesis, the path coefficient for financial literacy was 0.380, and its t-value was 4.546. As the t-value is positive and its absolute value is greater than 1.96, financial literacy has a statistically significant positive effect on investors' decision-making. The model explains about 80% of the variance in the dependent variable.

For the eighth hypothesis, the path coefficient for employment status was 0.698, and its t-value was 1.555. Because the t-value is positive but its absolute value is less than 1.96, employment status does not significantly

affect investors' decision-making. The model accounts for approximately 14% of the variance in the dependent variable.

For the ninth hypothesis, the path coefficient for gender was 0.221, and its t-value was 0.485. As the t-value is positive but its absolute value is less than 1.96, gender has no statistically significant effect on investors' decision-making. The model explains around 9% of the variance in the dependent variable.

The results of testing hypotheses eleven to fourteen are presented in Table 4.

Table 4. Results of Testing Hypotheses Eleven to Fourteen

Variable	Path Coefficient (β)	t-value	Coefficient of Determination (R^2)
Financial Self-Efficacy	Control and Monitoring of Daily Financial Affairs	0.646	8.465
	Control over Decision-Making and Financial Planning	0.859	6.250
	Control over Debt and Loans	0.513	7.548
	Control over Investment and Risk Management	0.568	5.698

For the eleventh hypothesis, the path coefficient for control and monitoring of daily financial affairs was 0.646, with a t-value of 8.465. Since the t-value is positive and its absolute value exceeds 1.96, this factor significantly and positively influences investors' decision-making. The model explains approximately 93% of the variance in the dependent variable.

For the twelfth hypothesis, the path coefficient for control over decision-making and financial planning was 0.859, with a t-value of 6.250. The positive t-value with an absolute value greater than 1.96 indicates a significant positive effect of this factor on investors' decision-making. The model accounts for about 60% of the variance in the dependent variable.

For the thirteenth hypothesis, the path coefficient for control over debt and loans was 0.513, with a t-value of 7.548. As the t-value is positive and its absolute value is greater than 1.96, this factor significantly and positively affects investors' decision-making. The model explains approximately 71% of the variance in the dependent variable.

For the fourteenth hypothesis, the path coefficient for control over investment and risk management was 0.568, with a t-value of 5.698. Since the t-value is positive and its absolute value exceeds 1.96, this factor significantly and positively influences investors' decision-making. The model explains about 83% of the variance in the dependent variable.

The results of testing hypotheses fifteen to seventeen are presented in Table 5.

Table 5. Results of Testing Hypotheses Fifteen to Seventeen

Variable	Path Coefficient (β)	t-value	Coefficient of Determination (R^2)
Investors' Longevity Preferences	Short-Term Investments	0.645	0.998
	Mid-Term Investments	0.521	10.151
	Long-Term Investments	0.215	1.141

For the fifteenth hypothesis, the path coefficient for short-term investments was 0.645, and its t-value was 0.998. Because the t-value is positive but its absolute value is less than the critical threshold of 1.96, short-term investments do not have a statistically significant effect on investors' decision-making. The model explains approximately 14% of the variance in the dependent variable.

For the sixteenth hypothesis, the path coefficient for mid-term investments was 0.521, and its t-value was 10.151. Since the t-value is positive and its absolute value is greater than 1.96, mid-term investments have a statistically

significant positive effect on investors' decision-making. The model accounts for about 85% of the variance in the dependent variable.

For the seventeenth hypothesis, the path coefficient for long-term investments was 0.215, and its t-value was 1.141. Because the t-value is positive but its absolute value is less than the critical threshold of 1.96, long-term investments do not significantly affect investors' decision-making. The model explains approximately 14% of the variance in the dependent variable.

4. Discussion and Conclusion

The findings of this study provide important insights into the complex determinants of investor decision-making by integrating behavioral, demographic, financial self-efficacy, and longevity preference factors. One of the most prominent results concerns the significant and negative effect of behavioral biases on decision-making quality. Overconfidence emerged as a major determinant, showing that when investors overestimate their predictive ability, they take on unnecessary risk and make suboptimal portfolio choices. This observation aligns with behavioral finance theory, which argues that cognitive overestimation leads to excessive trading and poor diversification [1, 12]. Self-attribution bias also showed a strong negative influence; when individuals attribute successful investments to their own skill while blaming external forces for failures, they fail to reassess strategy objectively, leading to path-dependent and irrational actions [8, 14]. Similarly, herding behavior negatively impacted decision-making, confirming that following crowd sentiment rather than fundamentals distorts market efficiency and increases susceptibility to volatility [8, 15]. Interestingly, regret aversion and the endowment effect did not show significant relationships, suggesting that while psychological factors matter, their influence may vary depending on market structure and investor sophistication [11, 16].

Demographic characteristics also played an important but uneven role. Financial literacy exhibited a clear positive effect on decision-making, reinforcing the idea that knowledge is a key safeguard against cognitive and emotional biases [9, 21]. Investors with stronger financial understanding were better able to evaluate risks, avoid momentum-driven trading, and manage portfolios with greater confidence [1, 4]. In contrast, age, gender, and employment status did not demonstrate statistically significant effects. This may reflect a shift in market accessibility and digitalization, where technological platforms and democratized information reduce the historical impact of such demographic boundaries [23, 25]. However, place of residence and cultural context may still influence risk perceptions indirectly, especially in transitional economies like Iran [2, 39]. The non-significant effect of gender may also point to a narrowing of behavioral differences between male and female investors due to increased access to financial education and digital investing tools [18, 24].

A particularly strong and novel contribution of this study lies in the demonstrated role of financial self-efficacy in predicting high-quality investment decision-making. All dimensions of self-efficacy—including control over daily financial affairs, financial planning, debt and loan management, and investment risk management—were found to have a robust positive effect. This suggests that investors' internal confidence in managing their own finances can buffer against market turbulence and cognitive biases [27, 30]. These findings echo arguments that self-efficacy drives proactive information search, better risk assessment, and disciplined investment execution [28, 29]. The ability to control debts and loans, in particular, appears essential for freeing cognitive resources and reducing emotional decision-making under stress [31, 32]. Furthermore, effective risk management within investment strategies strengthens long-term portfolio stability, enhancing resilience against speculative trends and market shocks [25, 33].

Another major insight concerns the heterogeneity of longevity preferences and their implications for decision quality. Mid-term investment orientation had a highly significant positive effect on decision-making, suggesting that balancing liquidity and growth provides psychological and strategic benefits [36, 37]. Mid-term horizons allow investors to adjust to new information and macroeconomic changes while still aiming for capital appreciation. By contrast, short-term and long-term orientations did not show significant relationships with decision-making quality. The insignificance of short-term preferences might be attributed to the high volatility and speculation in such investments, which can overwhelm less experienced investors and erode decision confidence [16, 35]. Meanwhile, the lack of effect for long-term investing may reflect market uncertainty and low institutional support in emerging contexts, discouraging truly patient capital accumulation [19, 20]. These results highlight the importance of developing mid-term strategies that provide adaptive flexibility without succumbing to short-term noise.

The combined findings point toward a conceptual model where investor decision-making quality emerges from the interplay of psychological control, knowledge, and time orientation, moderated by the digital and cultural environment. Behavioral biases erode rationality, but financial self-efficacy and literacy provide countervailing forces. Meanwhile, mid-term investment preference appears to offer a practical balance between agility and discipline. This integrated understanding is especially relevant for economies in transition, where volatility, information asymmetry, and regulatory uncertainty heighten the risks of biased decision-making [2, 6].

Technological and social changes add further nuance. As digital trading platforms and AI-driven analytics become widespread, investors are simultaneously empowered and exposed to new risks [8, 11]. Access to big data and machine learning predictions can improve rationality and reduce uncertainty [4], yet the gamification of trading and the ease of speculative behavior can amplify impulsive decisions [1, 12]. Similarly, the rise of ESG transparency and sustainability awareness influences decision frameworks. While some investors integrate ethical concerns to reduce long-term risk [5, 16], others may treat ESG signals as trend-following cues, risking new forms of herding [13, 24]. These contradictions underscore the need for educational and regulatory frameworks to guide healthy adoption of digital and sustainability-driven investing.

From a policy and market design perspective, the findings suggest that enhancing investor education and confidence could be more effective than focusing solely on demographic segmentation. Financial literacy programs, especially those that develop self-efficacy and practical risk management skills, can reduce vulnerability to psychological traps [21, 30]. Moreover, investment products and advisory services could be tailored to encourage mid-term horizons, helping investors avoid both reactionary short-term speculation and overly rigid long-term commitments [22, 36]. Regulators might also consider how digital interfaces and information disclosures can be designed to minimize behavioral triggers, such as overconfidence cues and social comparison features [11, 12].

In emerging markets like Iran, the practical implications are especially salient. Structural inefficiencies and macroeconomic uncertainty make behavioral resilience critical for sustainable capital market development [2, 39]. Improving transparency, strengthening governance, and supporting digital financial literacy can empower investors to make disciplined, informed decisions despite volatility [3, 6]. Integrating behavioral finance insights into investor protection frameworks can also help mitigate collective irrationality that exacerbates market swings [8, 15].

Although this study contributes a comprehensive model, it is not without limitations. The sample was limited to active investors in the Tehran Stock Exchange, which may restrict generalizability to other emerging or developed markets with different regulatory structures, cultural values, and information environments. The cross-

sectional nature of the data limits the ability to establish causal relationships among variables; investor decision-making is dynamic and may evolve with market cycles or personal experience. The study also relied on self-reported measures, which can be subject to social desirability bias and retrospective inaccuracies, particularly in assessing psychological constructs such as overconfidence or self-efficacy. Additionally, while key behavioral and demographic factors were included, other potentially influential elements such as social networks, macroeconomic sentiment, or algorithmic trading exposure were beyond the study's scope.

Future research should explore these relationships in longitudinal and cross-market contexts to capture how investor behavior adapts over time and across institutional settings. Comparative studies between emerging and developed markets could shed light on the contextual moderators that shape behavioral biases and financial self-efficacy. Incorporating real transaction data alongside self-reported surveys would strengthen the validity of behavioral measures and reduce response bias. Further exploration of digital transformation—including AI-driven investment tools, gamification, and social trading networks—could deepen understanding of how technology interacts with investor psychology. In addition, future work could integrate macro-level factors such as economic policy uncertainty and global shocks to examine how systemic risk perceptions influence longevity preferences and portfolio strategies.

For practitioners, the findings highlight the need to focus on building investors' confidence and knowledge rather than relying on broad demographic targeting. Financial advisors and fintech platforms can integrate behavioral nudges that counter overconfidence and herding while promoting disciplined mid-term strategies. Educational initiatives should move beyond basic literacy to include practical risk management and self-efficacy training, empowering investors to make balanced, future-oriented decisions. Policymakers and regulators can design disclosure frameworks and digital interfaces that guide rational investment behavior while safeguarding against speculation and emotional reactivity. By aligning behavioral insights with regulatory oversight and innovative financial products, market actors can foster a more resilient, informed, and sustainable investment environment.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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