

Identifying behavioral financial components using Emotional-Cognitive dimensions and its role in the capital market crisis (Exploratory Analysis)

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Abstract:

Purpose: The current mixed type of research (qualitative and exploratory) aims to identify behavioral financial components using emotional-cognitive dimensions and their role in the capital market crisis.

Design/methodology/approach: The research findings contribute to academic knowledge and have significant practical implications, providing valuable insights for professionals in the finance and investment field, policymakers, and other stakeholders. In the first stage of the research, interviews were conducted with 21 experts, including professors of accounting and finance, managers of official brokerages, and official analysts of the capital market. The factors affecting behavioral finance with an emotional-cognitive approach and its role in the capital market crisis were presented.

Findings: The results showed that the most important causes of financial behavior are people's social attitudes towards the investment field, emotional and cognitive factors, the type and manner of accessing information, and behavioral and individual tendencies of investors. The basis of this irrational behavior can be factors such as the economy involved in sanctions and inflationary conditions, the lack of dynamics of capital market rules, the misperception of investors, and the type of ownership of stock companies. The diverse characteristics of industries, the policies of the stock exchange organization and the governors, the uncertainty of economic policy, the society itself, and political factors can be raised as interventionists in creating critical conditions and moving towards behavioral finance. Appropriate training, governance attitudes to this matter, the presence of consultants and analysts, and monitoring and increasing the financial literacy of investors are suitable strategies to respond to the efficiency of the capital market.

Originality/value: Not paying attention to behavioral finance will adversely affect investors, macroeconomics, society, and the capital market. In the second stage of the research, by using exploratory analysis and by distributing a questionnaire made by the researcher and taken from the

qualitative model of the study among 340 capital market participants and with exploratory analysis, it was determined that 11 basic concepts (influential factors) of behavioral finance have the most significant impact. It has emotional and cognitive biases in Iran's capital market crisis.

Keywords: components of behavioral finance, behavioral finance, cognitive biases, emotional biases, capital market crisis, exploratory analysis.

1. Introduction

Behavioral finance is a relatively young and productive field of finance that is rapidly developing and finding its place in practice. Proponents of behavioral finance claim that classical finance requires the use of very restrictive assumptions and rules of exact science that fail to explain the complex reality of finance (Chowdhary, 2020). By incorporating psychological elements, behavioral finance seeks to fill the gaps and improve classical finance theory. Psychological elements play an essential role in investors' decision-making process. Hence, behavioral finance bridges the gap between classical finance and financial realities. It also informs investors, portfolio managers, financial professionals, and other market participants on how to make better financial decisions. According to Bikas et al. (2013), the key difference between classical finance and behavioral finance is reflected in the fact that classical finance deals with the question of why investors make decisions. It has no business. Moreover, unlike classical finance, which is based on the concept of perfect rationality. In other words, classical assumes a perfectly rational investor who is well-informed and has perfect knowledge. In contrast, behavioral finance assumes an ordinary investor, i.e., the average person who is not fully informed and has insufficient knowledge and with purely economic motives. It is not guided (Chowdhary, 2020). Ordinary investors are people who make systematic mistakes in their decision-making process. Their ability to multitask could be improved, as could their capacity to process information. Also, their ability to solve complex problems is small (Todorović, 2011). Ordinary investors are characterized by cognitive defects leading to irrational financial decision-making. In real-life situations, decisions are often made based on subjective assessments, preferences, and biases that do not reflect real-world facts. Answers usually depend on how questions are framed; decision-makers are generally guided by their fears instead of facts and use mental accounting. Hence, they ignore the fact that different

asset portfolios are interrelated (Curtis, 2004). Due to the asymmetry of information and the limitation of the cognitive capacity of decision-makers, errors occur in their behavior, which negatively affects the outcome of the decision-making process (Nikolić, 2018). As a result, it can be claimed that, just as a doctor does not prescribe a common medicine for all patients, the discussion of investment can also be different from one person to another. Unlike classical finance, people's investment is influenced by various factors, the knowledge of which in each environment leads to It being invested in creating a safe platform. It should be accepted that behavioral finance is an integral part of investment, and knowing the components affecting investment from the emotional-cognitive dimensions with an emphasis on the financial crisis of Iran's capital market seems necessary. In this regard, the current research aims to identify behavioral financial components using emotional-cognitive dimensions and their role in the crisis of the Iranian capital market (exploratory analysis). First, the theoretical foundations and empirical background of the research are mentioned. Then, the research method is proposed, and as a result, the research findings and suggestions for improving the investment conditions in Iran's capital market will be presented.

2. Theoretical principles of the study

Classical financial economics theorizing is based on methodological individualism in the framework of Cartesian epistemology. Based on this rational structure, the investor benefits from unlimited rationality, unlimited selfishness and unlimited will. Based on these three assumptions, the basic principles of the investor's behavior are formalized in the form of a set of thematic principles, and all theorems and theories are produced by logical deduction from the thematic principles. This methodological approach claims to be able to descriptively and prescriptively describe, explain and predict investor behavior in the form of the principle of the optimizer factor; But in practice, the observed behavior of financial markets has a significant distance from what these theories have predicted; Especially, the observation of numerous financial crises and the inability of this knowledge to explain the reasons for their occurrence has damaged the validity of this knowledge (Hasanpour et al., 2022).

There are two views on financial markets. One is the classic view of the capital market, which refers to the efficiency of the market, and the other is the opposite view, which is referred to as behavioral finance. The efficient market hypothesis was considered one of the main bases for making investment decisions. According to this theory, no investment can obtain an abnormal return above the average return based on knowledge and the ability to process information (Alnajjar, 2013; Ross et al., 2016). This theory assumes that investors are rational and use a variety of models to narrow down investment opportunities. However, this theory could not justify the market anomalies, which led to various financial crises (Zainiwand et al., 2023). The Internet bubble bursting in the 1990s, the Dotcom crisis, the stock market crash in 2002, and the banking crises in 1994 (Sharma and Kumar, 2019) were among these crises. The second half of 2001 began with an unexpected financial crisis in the US stock market, and the credit crisis of 2007 hit the world economy as the deepest recession since the Great Depression of the 1930s. According to classical financial predictions, such crises should not happen.

Contrary to what was expected, classical financial theorists needed help explaining the causes and the roots of the phenomena of these crises. However, the rival thoughts that had obtained a unique opportunity to prove the classical financial inefficiency each explained the problem within the framework of their paradigm, and among these views, the behavioral approach was given more attention. In explaining the causes of crises, behavioral finance claims that investor errors are not random and occur systematically at the micro and macro levels.

The systematicity of errors means that learning and arbitrage mechanisms cannot limit or eliminate the effect of individual errors. Behavioral economists use the term bias to explain systematic errors. Bias is the significant distance of observational data from classical financial forecasts. According to the behavioral finance claim, bias causes investors to choose a non-optimal portfolio at the micro level. The inefficiency of the error correction mechanism leads to the effect of biases at the macro level in the form of the inability of the market to return to the predicted equilibrium and, as a result, creates a financial crisis. (Hassanpour et al., 2022). As a new school of thought in finance and economics, behavioral finance has given a unique role to investors' feelings and inner states in the decision-making process. In this paradigm, the price of securities depends on fundamental variables such as profit and estimation of the company's future cash flow and investors' emotions and mental conditions.

It is evident that if the influence of investors' decisions on their emotions is more than usual, phenomena such as extreme fluctuations, bubbles, and collapse, which are all signs of crisis in the stock market, will occur (Zhang, Xian and Fang, 2019). Therefore, it is evident that with the increase in the weight of emotions in investors' buying and selling decisions, the possibility of extreme price fluctuations in the form of bubbles, falling prices, and collective behavior will increase, resulting in market inefficiency. The studies of Gol Arzi and Piri (2022) showed that investors' sentiments have a positive and significant effect on the probability of a crisis in the Tehran Stock Exchange, which is consistent with the findings of Kumar and Lee (2006), Huang, Zheng and Chia (2010), Yin and Tian (2017), Ruwei, Xiong and Dehua (2019), Pan, Xu and Zhu (2021) were consistent. Therefore, it can be acknowledged that one of the factors that has a significant relationship with behavioral finance is the role of the financial crisis, which can influence people's decisions in the financial markets. As a result, people's decisions in the financial markets also influence the investment environment. In other words, we will witness a capital market crisis with increased emotional behavior and cognitive and emotional biases. On the other hand, when critical conditions prevail, investors enter the capital market with short-term goals, which can cause irreparable damage to the capital market and, as a result, the country's economy. Slow down. In this situation, psychology and behavioral economics provided extensive evidence and showed that people are vulnerable to biases, use shortcuts in their investment thinking, and have biases in their decisions. According to the above, the aim of the current research is to identify and identify the behavioral financial components using emotional-cognitive dimensions and explain its role in the capital market crisis, and this research seeks to answer the following questions:

- What are the causes of emotional and cognitive bias in Iran's capital market crises?
- What are the background and contexts of emotional and cognitive bias in Iran's capital market crises?
- What are the appropriate strategies for recognizing emotional and cognitive biases in Iran's capital market crises?
- What are the behavioral financial intervention factors from the cognitive dimension in Iran's capital market crises?
- In your opinion, what are the consequences of behavioral financial biases in Iran's capital market crises?

One of the theories proposed in this field is the hypothesis of the reaction being less than expected by investors. In connection with the causes of the phenomenon of reaction less than expected by investors, various researchers have stated a series of psychological factors and placed this issue in the field of behavioral finance. Some of the important factors that have been raised are: 1- The conservative view presented by Edwards (1968) indicates that investors slowly adapt to the new news that enters the market and their expectations are slowly introduced in the market prices. 2- The theory of anchoring, which, according to Torsky and Kahneman (1976), is the support of a kind of conservatism and people use a certain part of information. 3- Overconfidence as proposed by Daniel et al. (2002) and this factor causes people to overestimate their abilities and creativity and make more transactions. 4- The self-attributed success presented by Bam, 1965 and originated from the theory of relativity in psychology, in which people attribute events that confirm the validity of their actions to their high abilities.

Selden (1912) believes that stock prices in the market are affected by the mental attitudes of investors. Based on this, Kahneman and Tversky (1976), by presenting the famous perspective theory, established the basis for introducing the types of cognitive-emotional biases of investors in the capital market (Babajani Mohammadi et al., 2016). Prospect theory was developed to predict behavior (how people behave) and not to determine optimal behavior (expected optimal behavior theory). This theory describes people's decision-making under conditions of uncertainty about the maximum value (Dianti Dilmi et al., 2017). Werner, Bonnet, and Thaler (1985) proposed mental accounting and overreaction in the stock market. Samuelson et al. (1988) introduced the status quo bias by examining investors' biases in the market. The main point of this critical study was Fernandes (2007), who showed with economic models that uncertainty causes a bias to maintain the status quo. This was while Benartiz and Thaler (1995) introduced behavioral concepts directly into the field of investment and introduced conservatism bias.

Grinblatt, Titman, and Wermers (1995) presented mass behavior, and Basu (1997) found that by examining lousy news, bad news spreads faster. Investors' biases in the capital market are generally divided into two groups: cognitive and affective biases. Cognitive biases are any errors that may occur because of the analysis of a decision and are caused by weakness in reasoning and information. Cognitive biases have an adverse effect on the process of human cognition and impair

cognition. Overconfidence, reliance and adjustment, agency, accessibility, self-documentation, the illusion of control, conservatism, ambiguity avoidance, mental accounting, confirmations, events, recent events and shaping, and situational effect are considered among cognitive biases. However, emotional biases state that emotions are an irreplaceable human dimension and influence decisions. Emotional biases include overestimation, self-control, optimism, loss aversion, regret avoidance, and maintaining the status quo. These biases are common in investors who prefer conditions to remain relatively constant and not change. Alternatively, we will face a situation where investors value the asset more when they own it than when they do not possess it. Therefore, in the status quo bias, investors in the capital market think that by maintaining the status quo, they will stabilize their position in the market and operate with risk aversion, in other words, with more conservatism in the market. Therefore, they influence the market with another bias called anchoring in the stock without logic. It is expected that investors will always be affected by different biases, and these biases will have different consequences in capital market crises. Its investigation of the Iranian capital market environment seems necessary and essential to show the investors' view of the capital market and the psychological factors of investment under the supervision and risk tolerance of the investor cause Decisions. However, behavioral finance states that expectations and risk are outside the scope of logic and rationality. This critical thing prompted the researcher to investigate the cause of Iran's capital market crisis with an emotional-cognitive approach, which should have been considered in previous studies, and this gap in the realities of the capital market and previous studies caused uncertainty towards the market. In general terms, uncertainty refers to cognitive situations that include incomplete or unknown information. This applies to predictions of future events, measurements already made, or unknowns. Uncertainty is visible in the environment or arises from a need for more awareness. On the other hand, uncertainty in critical situations can create emotional and cognitive biases in investment. It can be concluded that certain biases, such as overconfidence, confirmation and self-verification bias, and loss aversion bias, make people unjustifiably feel good about themselves. Therefore, the mentioned biases are elements of self-deception. Confirmation bias means underestimating evidence contrary to one's beliefs and, at the same time, over-relying on evidence in favor of a belief, ultimately leading to overconfidence in one's abilities. Self-affirmation also makes people feel good because they believe their skills cause success and blame external factors for potential failures. By summarizing cognitive biases, we can conclude that they are similar and intertwined. It is difficult

to determine the precise boundary between different cognitive biases. In other words, it is difficult to determine where one cognitive bias ends and another begins. Instead of the individual and isolated effect of a cognitive bias, it is more realistic to discuss their joint effect on financial decision-making. Therefore, the current research tries to understand behavioral finance better and identify its components to determine its dimensions and consequences in the Iranian capital market. In this regard, the following question is raised, the answer to which will indicate the position of financial behavior and its importance in the capital market of Iran. Therefore, the main research question is:

What are the behavioral financial components of emotional-cognitive dimensions and their role in the Iranian capital market crisis?

2.1. The empirical background of the study

Mohanty et al. (2023) concluded that recency biases potentially impact investor decision-making, while overconfidence bias has a negligible impact on investor decision-making. Wu, Cai and Zhang (2021) showed that investors' sentiments can significantly affect the risk of stock price decline in both the Shanghai and Shenzhen markets. In addition, the more pessimistic investors are the risk of the share price falling increases and vice versa. Guglielmo Maria Caporale et al. (2021) investigated the effect of investors buying and selling transactions on the volatility of the Korean stock market during two crises, the 1997 Asian crisis and the 2008 global financial crash. They investigated the buying and selling behavior of domestic investors versus foreign and institutional investors. The research results showed that buying and selling transactions asymmetric affected volatility, which depended on the type of investor's buying and selling and the stage of the business cycle. Buy orders were much more informative than sell orders, as most of their volatility was lower in pre-crisis periods. In contrast, post-crisis buys and sells were traded regardless of who (institutional or individual investors) and with what information (member, non-member) trades, has had positive fluctuations.

Most importantly, the breakdown of total buy and sell trades into trader-type categories showed that some institutional investors were more informed traders who stabilized the market than those who consistently increased volatility. Foreign investors reduced the volatility crisis through their purchases and total trading activity in the Asian sample, but only before the recent global financial turmoil. Rezaei and Elmi (2018) stated that the stock market is influenced by news and

information. If the stock market is inefficient, the stock price reaction to news and information puts the stock market in overreaction and underreaction mode. Many models have already been proposed using different tools and techniques to predict stock market behavior. This study modeled the stock price reaction in the stock market with a behavioral finance approach. The statistical population of this research includes companies admitted to the Tehran Stock Exchange.

The final price data for the end of June, September, Azar, and March were analyzed as examples to predict the stock price. This research used Bayes' law to estimate the probability of changing the model. Through this law, the probability of the occurrence of an event can be calculated by conditioning the occurrence or non-occurrence of another event. The model estimation results showed the possibility of being in the regimes of high volatility (non-reaction) and low volatility (non-reaction of the stock price despite the shocks to the stock market). The closing price remained constant in monthly modeling, while the actual stock price did not differ from the market price. Bird, Du and Willett (2017) examined whether financial markets fully exhibit the characteristics associated with the efficient market hypothesis or whether behavioral approaches that emphasize excessive pessimism and confirmation bias also provide evidence of functioning markets. They tested several essential aspects of market behavior. Specifically, they examined the extent to which significant changes in risk premiums among crisis-affected countries were related to news. Also, they investigated whether the effects of good and bad news were symmetrical. Finally, they investigated whether the change in the risk premium in Greece affects the premium in other countries in an asymmetric and biased way. They found that although there is considerable evidence that financial markets often function effectively during crises, there are also essential deviations from this pattern consistent with the behavioral approach. Their findings suggest that functional and behavioral approaches are helpful when trying to understand the functioning of markets. McNair et al. (2016) showed that understanding the individual factors associated with consumer financial behaviors during periods of specific financial stress may provide new insights into better control of one's finances and reducing one's spending. The research method used was linear regression and variance analysis. Also, the behavior of borrowing was investigated using binary logistic regression. In this research, it is mentioned that certain individual differences lead to different financial behaviors. Their findings show that interventions to improve financial decisions by recognizing individual issues can lead to greater effectiveness. If psychological issues such as developing coping skills (coping with stress, etc.) are emphasized, it will be more effective

in controlling people's financial behaviors (Kerami et al., 2023). O'Neill and Khao (2012) examined the financial method before and after the recent global financial crisis. Data were obtained from an online financial self-assessment tool using responses from January 2005 to December 2010. For comparison, 10,661 respondents were divided into groups before and after December 31, 2007. A significant difference in the period was found in the positive direction for test scores, which indicates the frequency of performance of 12 financial methods and the total score of all measures. After converting the items into three general behavior categories, the scores for all three behaviors (budgeting, spending, and saving) were significantly higher after the financial crisis began. Rajabi et al. (2024) investigated the impact of financial-behavioral factors on investors' decision-making from the point of view of managers of investment companies in the Iranian Stock Exchange. Regarding financial-behavioral factors and its impact on managers' decision-making, experts have been consulted in this field. Based on the obtained results, all the six dimensions are greater than 0.3 and the t-statistic value is greater than 1.96, so the six main financial-behavioral factors correctly justify and interpret the effects of these behaviors on the decision-making of investors in the Iranian stock market. they do Aalipour and Zanganeh (1402) conducted a research entitled a study on emotional finance as a new approach to understand and influence stock markets (from a behavioral finance point of view). They provided new explanations about the causes and predictions of crises and bubbles that have been experienced repeatedly, especially since the 2000s. In this framework, it uses concepts such as narrative, group feeling, mental conditions, and imaginary goal that have not been included in financial studies to date. This paper analyzes and models the basic components of the theory in the context of factors and their effects. does This report presents findings to help market regulators, fund managers and investors understand bubbles in the markets. Kerami et al. (2023) stated that the behavioral finance perspective that emerged from the integration of psychology and finance states that psychology plays a role in financial decision-making. Gol Arzi and Piri (2022) stated that investors' emotions can cause them to make emotional and sometimes irrational decisions and, as a result, cause anomalies such as extreme price fluctuations and even crises in the financial markets. The statistical population of the 15 years from 2006 to 2020 is based on 179 companies admitted to the Tehran Stock Exchange, which, by applying logistic regression, concluded that investors' sentiments could be effective on the possibility of a financial crisis in the capital market. Khodaprost Salek Moalemi et al. (1401) investigated the experimental behavioral finance test to

compare the efficiency of common stock cost models under the influence of the fundamental characteristics of companies. To achieve the goal of the research, the data of 87 sample companies were collected in 2017 and were analyzed in the descriptive analysis method by performing the Data Envelopment Analysis (DEA) test and paired t-test. Gordon and Olson-Junter growth models have been used to compare the performance. Taking into account the test results and comparing the explanatory power and accuracy of each model, it can be said that the two Olson-Junter and Gordon models are suitable at different confidence levels. and have reliability and there is a significant difference between these two models in terms of comparison. Based on the results, the level of dimensions of personality types included in the research as a moderating variable, a strong relationship between the significant difference between the efficiency of common stock cost models (Gordon model) and the Olson Junter model). Abdi Golbaghi et al. (1400) studied the prediction of changes in the exchange rate based on behavioral finance and classical finance using the systemic dynamics approach. In their research, they tried to provide a model with more explanatory power to realize this by using the integrated approach of behavioral finance and classical financial approaches. In this regard, a model based on the approach of systemic dynamics, considering the impact of psychological, political and economic variables, has been presented. The results obtained from the research indicate that on average, each of the four situations of widespread prosperity, prosperity of behavioral trends, stagnation of behavioral trends and widespread stagnation can respectively be 5.37%, 4.31%, 3% and Reduce 2.4% of behavioral distortions in the currency market. Naib Mohseni, Khalifa Soltani and Hejazi (2021) show that the causal factors affecting investors' decision-making are regret, greed, fear, cognitive dissonance, reputation effect, mental anchor, self-documentation, loss aversion, gambling pleasure, investment thinking, mass behavior, having foresight, Imagery, false excitement, false self-confidence, bias towards the past, novelty, mental accounting, empowerment, transactional asymmetry, similarity error, amber effect, gambler's illusion, motivation, time horizon, initial profit effect, experience, age, gender, and analysis. Based on the research results, individual investors can improve the quality of their decision-making and make better investment decisions by identifying and reducing their mental strains by implementing the presented strategies. These strategies include self-awareness, note-taking, knowledge of the capital market, concentration, overview, patience, acceptance and examination of mistakes, self-reliance, consultation, criticism, flexibility, study, diversification, and distraction. Bekhardi Nesab, Jolanjad and Rahmani (2019) showed that the

conflict of interest between the manager and the owner had a negative effect on the investors' reaction, and the investor's support directly affected the investors' reaction. Also, another result of the research has been that the positive effect of investor support and the negative effect of the conflict of interests between the manager and the owner on the reaction of investors during the economic recession are strengthened. Finally, the interaction effect of investor support and the conflict of interests between the manager and the owner during the economic recession has had the opposite effect on the investors' reaction. Hassas yeganeh et al. (2018) identified and evaluated the behavioral financial factors affecting the investment selection of angels. After studying the background and literature of the subject, they provided a total of 23 behavioral financial variables to a Delphi group. After reaching a consensus and removing some variables, they compiled a research questionnaire and used a sample of 183 people from Angeles based on behavioral financial factors. The effect on their decisions was investigated and questioned. Next, the collected data were first analyzed using exploratory factor analysis. Seven hidden factors, including hope, hindsight, overconfidence, simplicity, risk-taking, mental accounting, and self-documentation, were identified as behavioral financial factors affecting angels' decisions. Then, a hypothesis with the theme of investigating the possibility of limiting the variables to seven factors was tested using confirmatory factor analysis. Finally, these number of factors were confirmed again. Dadras, Toloui Ashlaqi and Radfar (2017) showed that internal and external studies have identified relatively similar influential factors such as financial ratios, recommendations, behavioral trends, etc. Also, the effect of demographic factors on investors' behavior in the Tehran stock market has yet to be studied. Miralavi and Pourzmani (2018) showed that all factors except the overconfidence factor influenced investment and the extent of this effect for each of them, including relative profit and loss factors, tendency effect, conservatism, mass behavior, agency intuition, ownership effect, and the avoidance of regret has been different. Among these factors, relative profit and loss have the most significant effect. The factor of regret avoidance has had a minor effect on the investment of financial assets in the stock exchange, directly affecting the stock price index. Gurjizadeh and Khanumahdi (2016) showed that, in order, the amount of current return obtained by the investor in the stock exchange, savings, years of presence in the stock exchange, income, and investment horizon had the most significant effect on the amount of investment of people in the stock exchange. Gharib Lo and Sharfi (2013) showed that Sunday had a strong effect and Saturday had a semi-strong effect compared to other days of the week, and the average efficiency was lower

than other days. Wednesday also showed a strong effect compared to other days of the week, and its average yield was higher than other days. Regarding the volume of transactions, there was also the effect of Saturday and Wednesday, so the average of transactions on Wednesday was higher than on Saturday. These effects showed the shareholders' hopes on Wednesday regarding obtaining higher returns in the coming week, buying more shares, and the loss of their hopes in the first week regarding higher returns and selling their shares.

3. Research method

The time dimension includes cross-sectional research and the year 2023; the interviews and questionnaires were prepared in 2023. Therefore, regarding the method and nature of data collection, it is a descriptive, which includes a set of exploratory factor analysis methods to describe the research subject. The first stage was done qualitatively to develop knowledge of traders' behavior. From the point of view of the implementation process (type of data), this research is a type of mixed research, and at the same time, a qualitative and quantitative approach was considered. The first part (data) was collected through interviews. Also, this section includes analytical and interpretation methods used to reach findings or theories. These methods include methods of conceptualization of data, which is expected for coding. Open, central, and selective coding methods have been used in this research. The last part of the first stage of the research consists of written reports or drawing diagrams and figures with oral presentation, which is used in this research using the graphical method. Then, using a researcher-made questionnaire, the analysis and confirmation of the components in the broader society were discussed. Also, from the point of view of the result of the implementation, the current research is of a fundamental type, which is carried out to discover the nature of the phenomena. From the point of view of implementation logic (or type of reasoning), it is of inductive type because, in this research, the interviewees provide explanations regarding the results of the phenomena according to their experience. The statistical population of the qualitative stage of the research includes the leading experts and activists in the field of behavioral finance in the country, including university professors who teach investment courses at the graduate level, as well as managers of official capital market brokerages and capital market analysts, who at this stage, according to the goal The research uses snowball or chain sampling method to select research experts. In the second stage of the research, the identified influential factors were provided to more than 400 experts and capital

market activists, and 340 questionnaires were tested according to the process of reliable information.

In the interview process, first, several knowledgeable persons with financial and accounting education and sufficient experience (teachers of financial and investment courses in graduate school, managers of official capital market brokerages, and official capital market analysts) and related to the subject in a targeted manner by the professors The guide and consultant were proposed and adapted based on the conditions of the statistical sample and then selected, and at the end of the interview, they were requested to introduce other informed and knowledgeable people regarding the subject of the research. The interview continued until a new idea was obtained; theoretical adequacy or theoretical saturation occurred. It should be noted that the repetition of codes was observed in 16 interviews. However, the data collection process continued until the 21st interview to ensure complete theoretical saturation, so a total of 21 interviews were conducted, and the information related to the characteristics of the interviewees is shown in Figure 1.

Table 1. The employment status and educational qualifications of the participants in the research

Job position/Education	PhD	Master's	Total
University faculty	14		14
Broker managers and capital market analysts	2	5	7
	Total		21

Table 2. The amount of work experience (in terms of years) of the participants

Description	Frequency – work experience in terms of year
Over 25 years old	6
20-25 years	5
10-20 years	8
under 10 years old	2
Total	21

The average duration of the interviews was 48 minutes. The total frequency of concepts extracted from open interviews (taking into account similar codes) is 72 concepts (central coding), which were classified into 32 categories (selective coding) and averaged about seven new concepts (subcategory) from each interview. Was extracted, and each concept was repeated four times on average.

Data analysis in grounded theory is done through three stages of coding. The first step is to find conceptual categories in the data at the initial level of abstraction. The second step is to find connections between these categories, and the third step is to conceptualize and report these connections at a higher level of abstraction. It is worth noting that these steps are not necessarily done sequentially but overlap and are done simultaneously. The questions asked at this stage are:

- What causes emotional and cognitive bias in Iran's capital market crises?
- What are emotional and cognitive bias contexts in Iran's capital market crises?
- What are the appropriate strategies for recognizing emotional and cognitive biases in Iran's capital market crises?
- What are the behavioral financial intervention factors from the cognitive dimension in Iran's capital market crises?
- What are the consequences of behavioral financial biases in Iran's capital market crises?

The stages of coding and analysis are as follows (Dadashzadeh et al., 2019):

Open coding is crushing, comparing, conceptualizing, and categorizing data. The open coding method not only leads to the discovery of categories but also clarifies their characteristics and dimensions. This text coding is done after repeated and detailed reading of its items, where the meaningful units are introduced, explained, and named. These units may be words, phrases, or larger pieces of text. The researcher can reach tens or even hundreds of conceptual labels in the research process. These concepts must be classified. Concepts are categorized and classified based on their similarities, which is called categorization. When concepts are compared with each other and appear to be related to similar phenomena, categories are discovered, and thus, concepts are grouped in a higher order. A category is a concept that is more abstract than other concepts; That is, the title abbreviated to the categories is more abstract than the concepts that make up the set of that category. Categories have high conceptual power Because they can collect concepts and sub-categories on their axis. Therefore, this type of coding has created a set of conceptual categories. Then, these concepts with commonality were classified at a higher level (Bazargan, 2013).

The main sentences were extracted and coded from the interview text in the open coding stage. For example, the coding process is presented in the following quote:

Financial behavioral patterns have different forms. If, in general, we consider investors' decisions far from logic and rationality, the issue of behavioral biases or behavioral distortions of investors is raised. These behavioral biases can have different forms, and various studies have studied them. Among these biases is the excessive conservatism of investors...

In this quote, investors' excessive conservatism is presented as the concept of infrastructure in the form of causal factors.

In another quote:

Let us separate emotional and cognitive factors from behavioral factors. Including gender, age of people, experience of investors, and financial knowledge, which are influential factors...

In this quote, concepts such as gender, people's age, investors' experience, and financial knowledge were introduced as causal factors.

Axial coding is a series of procedures after open coding to connect information in a new way by establishing links between categories (Bazargan, 2013). In axial coding, extracted categories are presented around the axes of "causal" conditions, "phenomena," "substrate," "intervening" conditions, "strategies," and "consequences."

... The policies of the stock exchange organization require companies to report promptly.

Industries have characteristics, such as rules and regulations and intensity of competition, which can be very effective in improving performance and attracting capital.

... Upstream laws, including commercial law requirements in corporate governance, auditing, and inspection of companies, can be effective.

Government policies can effectively stabilize investment and encourage investors towards a safe and stable future. Policies that provide stability and a bright future for investors...

In this quotation, the concepts of stock exchange organization policies, industry characteristics, etc., were raised as factors of strategies. Common perceptions in executive bodies and program and budget organizations are considered intervening factors.

Selective coding involves regularly selecting the core category and relating it to other categories, validating the relationships, and filling the empty spaces with categories that need to be modified and expanded (Bazargan, 2013). This type of coding analyzes the storyline and explains the relationships between extracted categories.

In order to validate the findings, the following steps were taken:

Reliability: Reliability refers to the consistency of research findings. In the present study, retest reliability was used. About one-third of the interviews (i.e., six interviews) were randomly selected, and each of them was conducted twice in a 2-week interval by the researcher and supervisors, as well as three independent people, including two random interviewees (participants) and one A statistical analyst (outside of the participants) coded.

Validity: To increase the reliability of the research findings, the interview protocol included starting the interview, entering the discussion, and examining the questions. The researcher was a guide during the interviews, so there was no scattering and fluctuation. On the other hand, by specifying the main points of the interview, the researcher was free to ask his questions. Therefore, the validity of the research has been preserved in each axis. The researcher's independence from the research subject and eliminating bias and unnecessary presuppositions are the most essential elements of reliability in qualitative research. The validity of the research was done on two levels after extracting the primary codes. First, the contributors, the collected data, analyses, interpretations, and conclusions were presented to 6 participants and independent foreign people who had the most knowledge about the subject according to the interview method, and they were asked to judge its authenticity and validity. Review by external audit: The opinions of respected professors and advisors who are experts in the field of research were reviewed, and the results were announced and modified in different time frames to ensure the necessary validity.

In the second research stage, a questionnaire containing 36 items extracted from the first stage was compiled and distributed among more than 400 people with the guidance of supervisors, advisors, and some experts active in the research process. Among the received questionnaires, 340 had the required accuracy and reliability in the exploratory analysis process, 53% of which were completed by men (180 out of 340 correct questionnaires) and 47% by women. Figure (3) shows the sociological status of the active people in the correct questionnaires regarding occupation, level of education, and level of activity in the capital market.

Table 3. Sociological quantitative research stage

Occupation	Description	no.	Education	Description	no.	Activity in the capital market	Description	no.
		University professor		52			Bachelor's degree or less	92

	the manager	24		Master's degree	160		Between 5 and 10 years	82
	Official accountant	65		Doctoral student	66		Between 10 and 20 years	100
	Capital market expert	87		PhD	22		Over 20 years old	134
	Financial Expert	112		Total	340		Total	340
	Total	340						

Uncorrected Proof

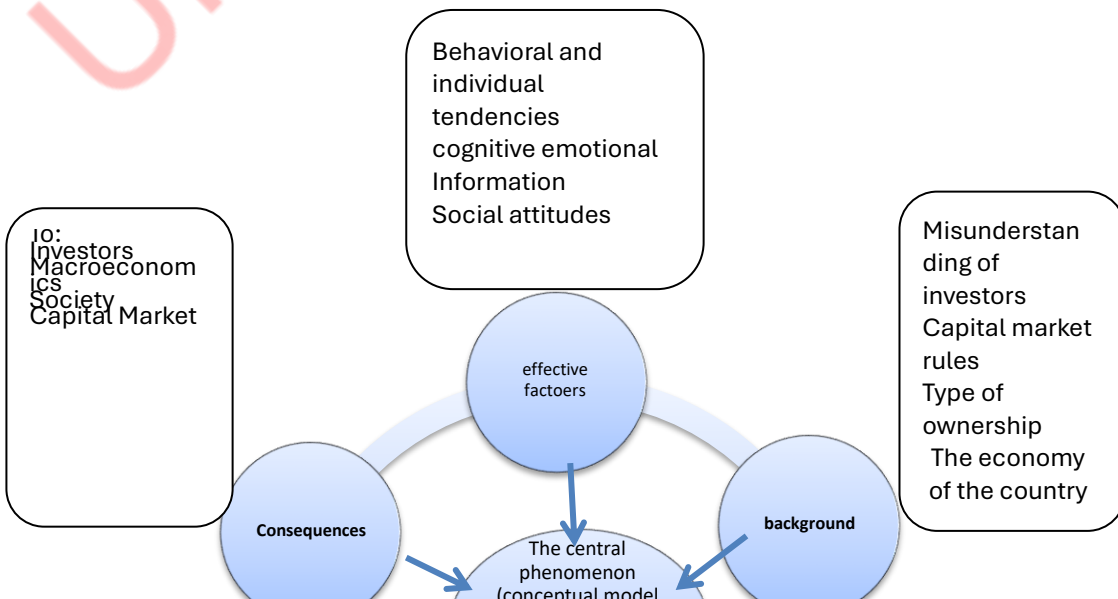


Figure 1. Paradigm model of emotional and cognitive biases in capital market crises

According to the above paradigm model, they designed a questionnaire with 36 items to identify the key factors and provide them to the community. To check the validity of the research questions, the opinions of four respondents who were experts in the above field, as well as the opinions of supervisors and advisors, were used. The results obtained from the exploratory analysis and the assumptions are presented below.

4. Findings

4.1. Cronbach's alpha test

In the present study, to determine the reliability of the questionnaire, Cronbach's alpha was calculated, and its value was (0.906). The closer Cronbach's alpha index is to one, the higher the internal correlation between the questionnaires will be, and, as a result, the questions will be more homogeneous.

Table 4. Determining the reliability of the questionnaire

No. of questions	Cronbach's Alpha
340	0.906

The exploratory factor analysis method was used to analyze the data in the present study. The purpose of the factor analysis method is to obtain a set of variables based on a smaller number of hypothetical variables. In other words, in factor analysis, many variables are expressed in terms of a small number of dimensions or structures. The mentioned structures are called agents. In this situation, factor analysis can be used to reduce the amount of data as much as possible and achieve the lowest factors that can explain the observed covariance. It is also a tool to reduce the amount of data as much as possible. This factor analysis method is exploratory, called exploratory factor analysis (Pourghaffar et al., 2023).

4.2. Data adequacy test

Before doing the factor analysis, ensure the available data is suitable. For this purpose, we use KMO indices and Bartlett's test. According to the value of the significance level, we conclude that the desired data are suitable for sampling. The KMO test shows whether the number of sample data is suitable for factor analysis or not. The value of this index is variable in the range of zero to one. If the value of the index is close to one (at least 0.6), the desired data are suitable for factor analysis. Otherwise (usually less than 0.6), the factor analysis results are unsuitable for the data (Pourghaffar et al., 2023).

Table 5. KMO sampling adequacy test

Kaiser, Meyer and Olkin and Bartlett test		
The value of Kizer, Mir and Olkin sampling adequacy test	0.653	
Bartlett test value	Chi-square statistic value	7270.103
	Degrees of freedom	630
	Significant level	0.000
a. Based on the correlation coefficient		

Considering that the result of the KMO test is equal to (0.723), it shows that the number of data is sufficient and suitable for factor analysis.

4.3. Bartlett's test

Bartlett's test tests the hypothesis that the "correlation matrix of observed variables is unity." This test confirms that the variables are unrelated, which is obtained through the significance of the chi-square test. Suppose the significance level in Bartlett's test is less than 5%. In that case, the correlation matrix will not be the same, which means there is a relationship between the variables, and the statistical null hypothesis will be rejected (Pourghaffar et al., 2023). According to Figure 5, the significance level of the test is (0.000), which means that the null hypothesis is rejected and there is a significant relationship between the variables.

Table 6. The results of extracting components using the principal component method

How to communicate with foundation data approach questions	Question	component	Initial extraction			Extraction after varimax rotation		
			total	variance percentage	density percentage	total	variance percentage	density percentage
Effective factors	1	Investors' conservatism and overconfidence are factors influencing the attention to the behavioral finance approach in the financial crisis of the capital market.	8.847	24.576	24.576	8.847	24.576	24.576
	2	The prominence effect of a share is one of the factors influencing attention to the behavioral finance approach in the financial crisis of the capital market.	2.667	7.435	32.011	2.677	7.435	32.011
	3	Time limitations are one of the effective factors in paying attention to the behavioral finance approach in the financial crisis of the capital market.	2.407	6.687	38.698	2.407	6.687	38.698
	4	Intellectual biases are one of the effective factors on paying attention to the behavioral finance	2.299	6.387	45.085	2.299	6.387	45.085

	approach in the financial crisis of the capital market.							
5	Risk aversion and loss aversion of investors is one of the effective factors for paying attention to the behavioral finance approach in the financial crisis of the capital market.	1.980	5.500	50.585	1.980	5.500	50.585	
6	Selective desirability is one of the factors influencing attention to the behavioral finance approach in the financial crisis of the capital market.	1.674	4.650	55.236	1.674	4.650	55.236	
7	Limited rationality and emotional tendencies are effective factors on paying attention to the behavioral finance approach in the financial crisis of the capital market.	1.494	4.150	59.386	1.494	4.150	59.386	
8	Mental accounting is one of the effective factors in paying attention to the behavioral finance approach in the financial crisis of the capital market.	1.367	3.798	63.184	1.367	3.798	63.184	
9	Culture is one of the factors influencing the attention to the behavioral finance approach in the financial crisis of the capital market.	1.223	3.398	66.582	1.223	3.398	66.582	
10	People's gender can be one of the effective factors on paying attention to the behavioral finance approach in the financial crisis of the capital market.	1.176	3.268	69.850	1.176	3.268	69.850	
11	People's age can be one of the effective factors on paying attention to the behavioral finance approach in the financial crisis of the capital market.	1.021	2.836	72.686	1.021	2.836	72.686	
12	The experience of investors can be one of the effective factors in paying attention to the behavioral finance approach in the financial crisis of the capital market.	0.974	2.705	75.391				
13	Investors' financial knowledge can be one of the effective factors for paying less attention to the	0.943	2.620	78.012				

		behavioral finance approach in the financial crisis of the capital market.						
	14	Ambiguity avoidance of investors is one of the effective factors for paying attention to the behavioral finance approach in the financial crisis of the capital market.	0.860	2.389	80.401			
	15	Investors' individualism is one of the factors influencing the attention to the behavioral finance approach in the financial crisis of the capital market.	0.696	1.934	82.335			
	16	Information asymmetry and quality of information can be one of the effective factors for not paying attention to the behavioral finance approach in the financial crisis of the capital market.	0.653	1.813	84.148			
	17	The development of financial institutions and investment is one of the effective factors in paying attention to the behavioral finance approach in the financial crisis of the capital market.	0.616	1.712	85.860			
Background factors	18	Investors' misperception and conservatism, including the importance of stocks, can be one of the background factors for paying attention to the behavioral finance approach in the capital market.	0.577	1.602	87.462			
	19	Incomplete rules of the capital market, including the lack of licensed financial analysts, current rules, and the lack of a comprehensive investment plan can be one of the background factors in considering the behavioral finance approach in the capital market and its crisis.	0.512	1.422	88.884			
	20	The type of ownership, both governmental and the presence of institutional	0.493	1.368	90.252			

		investors in a company, can be one of the factors that create the foundation for attention and movement towards behavioral finance.						
	21	The country's economy, including the unfavorable situation of economic instability and business models, can be the basis for moving towards behavioral finance in the capital market.	0.420	1.167	91.420			
Interfering factors	22	Stock exchange policies in reporting and mandatory regulations can be one of the intervening factors to pay attention to behavioral finance.	0.397	1.102	92.522			
	23	The characteristics of industries and competition in the product market can be intervening factors to pay attention to behavioral finance.	0.349	0.969	93.491			
	24	Government policies in the discussion of investment can be one of the interfering factors in paying attention to behavioral finance.	0.307	0.853	94.344			
	25	Political factors, including interaction with the world and sanctions, can be interfering factors in investors' attention to behavioral finance.	0.280	0.778	95.122			
	26	The society and its beliefs can be one of the intervening factors in paying attention to the behavioral finance approach and financial market crises.	0.269	0.747	95.869			
	27	Uncertainty of economic policy can be one of the intervening factors in paying attention to the behavioral finance approach and financial market crises.	0.248	0.689	96.558			
	Strategies	28	Proper education is one of the factors that can affect the financial crisis of the capital market.	0.209	0.581	97.139		

	29	Attitudes of governance towards the stock market and investment can be on the use of behavioral finance as a threat as well as an advantage in the capital market.	0.190	0.528	97.668			
	30	The investment culture by society can be one of the strategies for optimizing the behavioral finance approach in the capital market.	0.169	0.468	98.136			
	31	The presence of consultants and financial analysts can strengthen the behavioral finance approach in the capital market.	0.158	0.439	98.574			
	32	Professional supervisions can strengthen the behavioral finance approach in the capital market.	0.150	0.418	98.992			
Consequences	33	Behavioral finance has favorable and unfavorable consequences for investors.	0.118	0.327	99.319			
	34	Behavioral finance leads to loss of trust in macroeconomics.	0.106	0.296	99.614			
	35	Behavioral finance affects the economy of households and society.	0.093	0.258	99.872			
	36	Behavioral finance will affect capital market management.	0.046	0.128	10.000			

The above figure shows a table of commons in the state without rotation. The commonality of a variable is the square of multiple correlations for the corresponding variable using factors, so it is a proportion of the desired test variance estimated by the common factors extracted in factor analysis. For example, in the extracted values column of question 11, it can be seen that 72% of the variance of the scores of questions 11 is the variance of the common factor. The column of initial values reports all the shares before extraction, so all of them are one.

At this stage, using the principal components analysis method, 11 critical factors were identified in Figure 6, and these 11 factors explain 72.686% of the total variance. The first factor, with a value of 24.576, shows the highest variance, and the eleventh factor, with a value of 2.836, shows the lowest variance.

In the following, the relevance of the main findings of the research is examined.

Table 7. Correlation of the main findings with all items

Question	1	2	3	4	5	6	7	8	9	10	11
1	0.597	0.095	0.002	0.074	0.526	0.034	0.040	-0.107	0.056	-0.080	-0.021
2	0.555	0.243	-0.145	0.195	0.260	0.307	0.115	-0.144	0.114	-0.041	0.172
3	0.625	-0.111	-0.007	-0.226	0.088	0.0254	0.034	0.104	0.243	-0.204	0.143
4	0.557	-0.114	-0.219	0.118	0.246	-0.346	-0.203	-0.147	-0.037	-0.220	0.035
5	0.506	0.098	-0.196	0.040	0.363	-0.280	-0.330	-0.168	-0.363	0.137	0.065
6	0.489	-0.235	-0.128	0.346	-0.215	-0.280	0.231	-0.031	0.024	0.106	0.125
7	0.566	-0.321	-0.270	-0.357	0.091	0.146	0.080	-0.189	-0.008	0.137	0.088
8	0.459	-0.287	-0.091	-0.478	0.138	0.269	0.212	-0.110	-0.125	-0.095	0.154
9	0.243	0.014	0.579	-0.397	0.099	0.025	0.292	0.071	0.025	-0.062	0.314
10	0.419	-0.261	0.520	0.240	0.153	0.253	0.005	-0.129	-0.002	-0.238	0.255
11	0.415	-0.295	0.393	0.340	0.298	0.316	0.010	-0.021	-0.028	0.122	0.089
12	0.329	0.485	-0.181	0.081	0.422	-0.186	0.057	0.087	0.314	-0.134	0.241
13	0.242	-0.020	0.246	0.009	0.276	-0.408	0.434	0.227	0.031	0.178	0.083
14	0.623	-0.084	-0.211	0.007	0.010	0.185	-0.028	0.442	-0.283	-0.152	0.105
15	0.476	-0.344	-0.055	-0.347	0.124	0.049	-0.289	0.345	-0.260	0.008	0.011
16	0.455	-0.075	-0.068	-0.341	-0.226	0.233	-0.096	-0.300	0.174	0.349	0.320
17	0.323	-0.287	-0.088	0.365	0.047	0.238	0.026	-0.066	0.072	-0.010	0.177
18	0.565	-0.210	0.339	-0.141	-0.027	-0.250	-0.213	-0.288	0.045	-0.055	0.176
19	0.593	0.225	-0.388	-0.161	0.128	-0.142	-0.150	-0.129	-0.084	-0.128	0.114
20	0.524	0.118	0.128	-0.371	0.037	0.347	-0.101	0.099	0.029	-0.016	0.315
21	0.311	0.373	-0.405	0.265	-0.023	0.285	0.215	-0.111	-0.358	0.090	0.041
22	0.454	0.211	-0.143	0.235	-0.494	-0.094	0.056	0.102	0.013	-0.378	0.322
23	0.545	-0.062	0.227	0.273	-0.291	-0.101	-0.016	-0.204	-0.310	-0.342	0.089
24	0.497	0.267	0.334	0.068	-0.206	-0.161	-0.475	-0.120	0.139	0.155	0.129
25	0.422	0.388	0.108	0.366	-0.001	0.237	-0.202	-0.218	0.238	0.228	0.162
26	0.567	0.158	0.348	0.174	0.035	-0.102	0.225	0.195	-0.268	0.168	0.113
27	0.413	0.422	0.299	0.221	-0.351	0.294	-0.063	0.257	-0.170	0.164	0.037
28	0.417	0.625	-0.118	-0.147	0.163	-0.127	0.173	0.170	0.030	0.202	0.113
29	0.594	0.158	0.027	-0.291	-0.339	-0.040	-0.303	0.266	0.101	-0.158	0.122
30	0.614	0.290	0.431	-0.295	-0.080	-0.244	0.103	-0.077	-0.059	0.076	0.112
31	0.563	0.191	-0.276	-0.259	-0.286	0.154	0.342	-0.187	0.065	-0.148	0.145
32	0.394	0.002	-0.072	-0.242	-0.367	-0.205	0.354	-0.215	0.118	0.009	0.185

33	0.458	-0.327	-0.123	0.108	-0.159	-0.251	0.054	-0.030	-0.214	0.402	-0.100
34	0.597	-0.420	-0.011	0.279	0.077	-0.080	0.126	0.010	0.151	0.001	-0.273
35	0.568	-0.255	-0.084	0.283	0.013	-0.057	-0.062	0.378	0.405	0.008	-0.160
36	0.480	-0.280	-0.363	0.027	-0.122	0.066	-0.088	0.255	0.196	0.276	0.174

Pearson's correlation component matrix shows the relationship between observations and components. These correlations are called factor loading. The factor loadings of 11 confirmed variables show that column one, with the title of conservatism and overconfidence of investors, is one of the influential factors in paying attention to the behavioral finance approach in the financial crisis of the capital market, which has a direct relationship with all the items, while in the analysis of the item 2 Accounting conservatism can lead to a reduction of intellectual prejudices and risk aversion in the share.

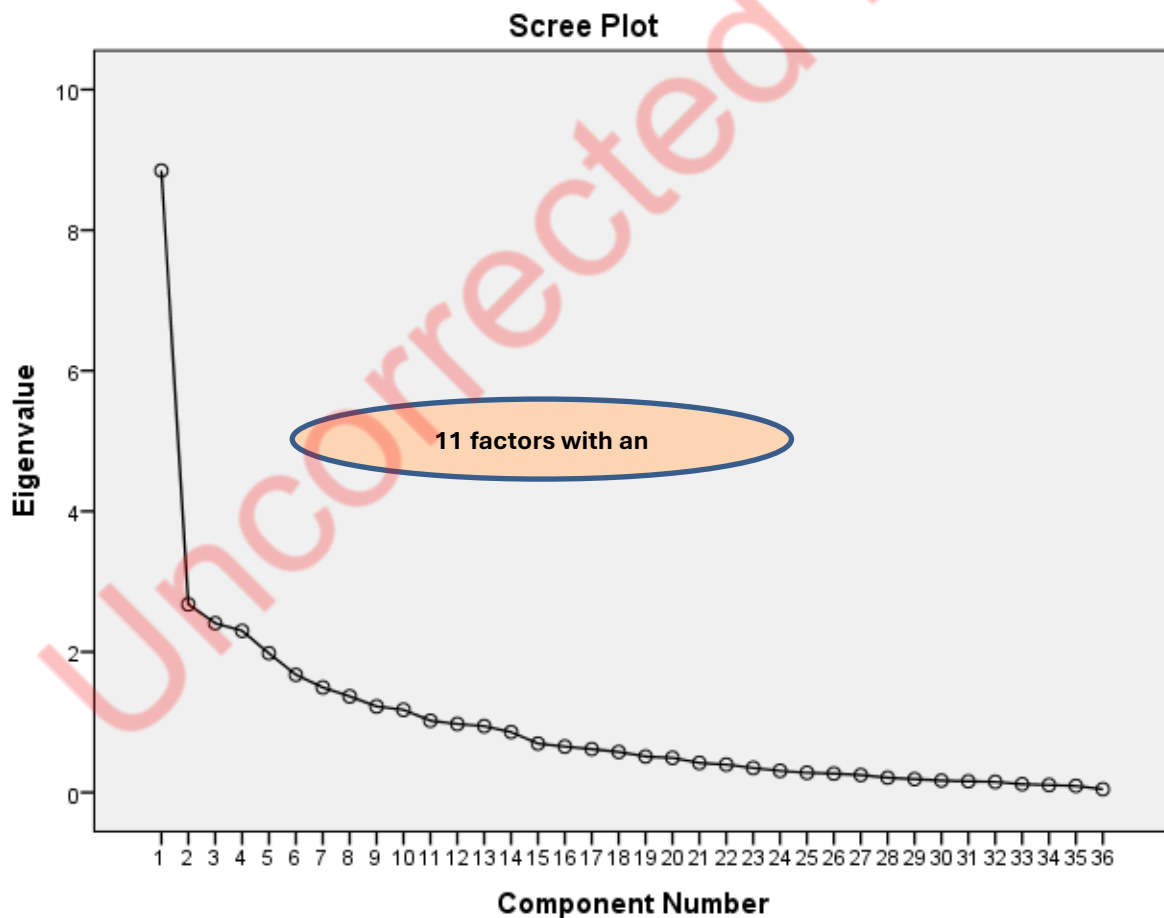


Figure 2. Gravel diagram (scree plot)

This rock diagram (pebble) shows the image of the eigenvalue in each of the extracted components. It starts from the largest eigenvalue and is always a descending one. The eigenvalue drops rapidly when the following factors are extracted. The eigenvalue of the tenth factor is less than 1. According to the obtained results, the model of effective behavioral financial indicators with an emotional-cognitive approach and its role in the capital market crisis (11 factors) is as follows:

Table 8. The effective indicators of behavioral finance with an emotional-cognitive approach and its role in the capital market crisis

Behavioral and individual tendencies such as conservatism and overconfidence of investors, salience effect, time limitations, thought biases, risk aversion and loss aversion of investors, favoritism of limited rationality and emotional tendencies, mental accounting and culture are effective factors. It is cognitive-emotional on the financial crisis in Iran's capital market.
Cognitive-emotional factors such as gender, age of people, investors' experience, financial knowledge of investors, ambiguity avoidance, individualism are cognitive-emotional effective factors on the financial crisis in Iran's capital market.
Information and its features, such as information asymmetry and the quality of information provided by companies, are cognitive-emotional factors affecting the financial crisis in Iran's capital market.
The misperception and misperception of investors, such as excessive conservatism of investors, salience effect and emotional feelings can be the basis for moving towards the financial crisis of the capital market from the emotional-cognitive dimension.
Laws and regulations, including the lack of licensed analysts in the market, momentary decisions of the legislator, the lack of a comprehensive plan of the legislature can be the basis for moving towards the financial crisis of the capital market from an emotional-cognitive perspective.

The type of ownership, such as the presence of institutional investors and government ownership, can be the basis for moving towards the financial crisis of the capital market from an emotional-cognitive perspective.
The economic conditions of the country, including the unfavorable and unstable situation of the economy and the patterns of earning in the economy, should be the basis for moving towards the financial crisis of the capital market from the emotional-cognitive dimension.
The policies of the stock exchange organization can be one of the intervening factors in the capital market crisis from the emotional and cognitive dimension.
The characteristics of industries can be one of the intervening factors in the capital market crisis from the emotional and cognitive dimension.
Government policies can be one of the intervening factors in the capital market crisis from the emotional and cognitive dimension.
Political factors can be one of the intervening factors in the capital market crisis from the emotional and cognitive dimension.

5. Conclusion and recommendations

Anticipation and appropriate handling of financial crises in the capital markets has always been the concern of shareholders, analysts and financial advisors of the capital market. In this research, according to the important and fundamental role of behavioral financial components in the financial crisis, the emotional and cognitive dimensions of investors were identified and it was determined that, states that psychological dimensions play an essential role in modern financial decision-making. Since cognitive errors and deviations affect investment theories, they also affect financial options. Today, thinking about the utterly rational behavior of investors (who constantly seek to maximize utility) is not enough to justify the behavior and reaction of the markets, so behavioral finance can be considered a paradigm by which financial markets are affected. Behavioral finance abandons the traditional paradigm's two central and limiting assumptions, i.e., maximization of expected utility and complete rationality. Also, the confrontation of these two theories in price bubbles in the market has revealed the existence of excessive fluctuations in stock prices and more (less) reaction of investors to new information. Even behavioral finance is opposed to modern finance. Modern financial theory states that the stock market is efficient and stock prices reflect all available information. In contrast, behavioral finance theory claims that psychological

and emotional factors can influence stock prices. Behavioral finance claims that sometimes, to find answers to empirical puzzles in finance, it is necessary to accept the possibility that some economic factors are not subject **Investors and market agents**.

Proponents of behavioral finance firmly believe that one of the influential factors in the emergence of behavioral finance is the discussion of financial crises. Financial crisis refers to a wide range of situations where some financial resources lose a large part of their nominal value. So, the financial crisis of 2008 and the Great Recession are still fresh in many investors' memories. Hibti and Zandieh (2018) showed that instead of rational behavior in markets affected by the financial crisis and severe bearish markets, investors will be associated with an overreaction bias (occurs when stock prices increase more than what is rationally expected concerning new information) is going to change and is usually accompanied by a price reversal) Moreover, investors are making things worse instead of being rational with more excitement. On the other hand, many panicked investors are forced to sell their assets at a **lower** price, and a small group of patient investors consider the stock market's fall as an opportunity. They can benefit from more profit by investing at the price floor. One of the reasons for the different approaches of investors in this situation is the emotional and cognitive approaches that lead to their wrong decisions. In this regard, in the second stage of the research, by designing a researcher-made questionnaire (taken from the extracted concepts of the qualitative model) consisting of 36 items and distributed among more than 400 financial experts active in the capital market and receiving 326 responses that met the validity and reliability criteria. It was concluded that the following criteria are the most explanatory in the behavioral financial sector of Iran's environment. These criteria are:

- Behavioral and individual biases such as conservatism and overconfidence of investors, salience effect, time limitations, thought biases, risk aversion and loss aversion of investors, preference selection of limited rationality and emotional tendencies, mental accounting, and culture are among the cognitive-emotional factors on the crisis Finance is in Iran's capital market.

Cognitive-emotional factors such as gender, age of people, investors' experience, financial knowledge, ambiguity avoidance, and individualism are influential cognitive-emotional factors in the financial crisis in Iran's capital market.

- Information and its characteristics, such as information asymmetry and the quality of information provided by companies, are cognitive-emotional factors affecting the financial crisis in Iran's capital market.

- Investors' incorrect knowledge and perception, such as the excessive conservatism of investors, the effect of salience, and emotional feelings, can be the basis for moving toward the financial crisis of the capital market from the emotional-cognitive dimension.

Laws and regulations, including the lack of licensed analysts in the market, momentary legislative decisions, and the legislator's lack of a comprehensive plan, can be the basis for moving toward the financial crisis of the capital market from an emotional-cognitive perspective.

From an emotional-cognitive perspective, the type of ownership, such as the presence of institutional investors and government ownership, can be the basis for moving toward the capital market's financial crisis.

- The country's economic conditions, including the unfavorable and unstable situation of the economy and the patterns of earning money in the economy, should be the basis for moving towards the financial crisis of the capital market from an emotional-cognitive perspective.

- The policies of the stock exchange organization can be one of the intervening factors in the capital market crisis from the emotional and cognitive dimensions.

Therefore, after receiving the Nobel Prize from Richard Thaler in behavioral finance, it can be concluded that behavioral finance is an integral part of the capital market. A severe competitor to the efficient market hypothesis is raised, which should be considered in decisions. Therefore, the following proposals are presented to the beneficiaries.

Potential investors:

In the past decades, investors are the central pillar of the capital market. No one can argue that investors' behavior has little effect on the market **and the components introduced by elites are suggested to potential investors** because it will only be meaningful with investment. After receiving the Nobel Prize from Kahneman and Thaler, financial science has bowed its head and accepted that human behavior should be investigated before behavioral finance and the investigation of human behavior in the investment environment. The behavior of capital market activists in the environment is affected by various factors, and based on the findings of the current research, attention should be paid to the sanctioned and inflationary economy, the lack of dynamics of capital market rules, the incorrect knowledge and perception of investors, the type of ownership of stock companies by investors to avoid behavioral distortions. Moreover, be able to have a reliable investment.

Analysts:

Capital market analysts need information that can also measure investor behavior. In this regard, using the findings of the current research, they are emphasized to examine all aspects of the environment and actors of the capital market using the extracted qualitative criteria so that they can provide a suitable platform for investment.

Capital market legislator:

Investors need reliable rules for safe investment; they show a risk-averse attitude when investing and prefer more uniform and stable risk. Due to low-risk perception, market participants tend to herd behavior, negatively affecting their investment decisions. Also, investors tend to overreact to negative news and underestimate the likelihood of rare events leading to inefficient markets and adverse investment decisions. All these and other factors require the legislator to adopt laws so that investors are examined psychologically when they enter the capital market, and their behavioral results are evaluated for entering the capital market to create a healthier environment for investment. It is suggested that the fields of investment be introduced according to the individual-cognitive criteria of people, which is necessary to use the opinions of psychology, sociology, and finance experts in the investment process. This importance can be more effective in block and collective investments. To create the necessary awareness, investors should be prepared for optimal investment through media and university education.

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