

PalArch's Journal of Archaeology
of Egypt / Egyptology

PROVIDE A MODEL FOR MASS BEHAVIOR IN INVESTOR DECISION-
MARKING IN INVESTMENT COMPANIES

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Ardalan Rajabi, Ataullah Mohammadi Mlgrny, Mohsen Hamidiyan: Provide a model for mass behavior in investor decision-making in investment companies -- Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(9). ISSN 1567-214x

Keywords: Behavioral Bias, Mass Behavior, Tehran Stock Exchange Companies

ABSTRACT

The present study presents a model for mass behavior (derived from behavioral distortions) in the decision-making of investors in investment companies on the Tehran Stock Exchange. The methodology of this study is applied in terms of purpose, which initially after library and Gathering information about the factors affecting mass behaviors, experts in this field were consulted and these behavioral biases were scored. The statistical population of the present study in the qualitative phase includes experts of Tehran Stock Exchange. Eleven experts collaborated with the researcher in conducting specialized interviews. The results of the research indicate a model that company managers can, according to it and based on the weight of behavioral biases and the causes and intensity of mass behaviors and the cause of sudden market fluctuations. By improving the knowledge of behavioral financial factors; Managers of investment companies and other market analysts assist in identifying behavioral factors of market fluctuations. Finally, considering the significance of the whole model and also the significance of each coefficient of the final research model with 33 indicators and six main categories, which included self-control, perceptual error, social interactions, results, cognitive from an economic and judgmental point of view, respectively.

INTRODUCTION

Today, we are witnessing financial decisions based on a series of vague information and not due to economic changes by investors in institutions and economic enterprises that people with the least research only with the advice of people and friends, colleagues and sometimes crowded enterprises and unusual queues to buy deposits from depositors, They have invested in these places and now, after revealing some facts and sometimes rumors, these ranks of repaying deposits have been formed again, companies

have gone bankrupt, and finally people have been harmed. According to the researches done in this field, Tehran Stock Exchange has the most Shows the mass behavior in relation to other stock exchanges in the developed countries of the world (Keshavarzhadad 2011). Of course, the mass behavior in different countries is different based on their level of development, which can lead to a series of behaviors called behaviors. Called anti-mass that people usually tends to take actions against the market flow. Therefore, anti-mass behavior in developed markets is much higher than other markets, which eliminates and reduces behavior. For example, in the US stock market (Rolek, 2016) in underdeveloped and developing markets, most of the buying and selling queues that arise are for no particular reason, and investors, following the initial queues and showing it positively, start Trading and queuing buy or sell. Of course, this type of market fluctuations can't be justified or predicted based on standard models, and examining how dominant behavior is formed within the framework of mass theory and not the thinking of individuals. Of course, it should be noted that in the decisions of investors in the Iranian stock market, we can also refer to non-financial factors such as culture and politics that play an important role in mass behavior (Fahimi Davab 2010). Therefore, according to all the mentioned cases, Tehran Stock Exchange suffers from fluctuations and shocks from time to time that can't be interpreted and explained by classical economic models. This study refers to investors' decisions and the effects of these decisions on the market and seeks a model. To identify and explain the dimensions, components related to the behavior of the mass importer to determine the decision of investors from the perspective of managers of investment companies.

THEORETICAL FOUNDATION OF RESEARCH

Behavioral finance

The issue of behavioral finance is one of the new topics that has been raised by some financial thinkers over the past two decades and has quickly attracted the attention of experts and students in this field around the world. In 1952, with the study of Mr. Markowitz and the publication of his paper entitled The New Portfolio Model, this model was introduced to the world, which was the source of such fundamental new models. In these models, Markowitz interpreted or predicted risk-based behavior and expected ten Investors should make decisions about their portfolios solely on the basis of expected returns and standard deviation (risk). Taghipour et al (2015) studied Risk analysis in the management of urban construction projects from the perspective of the employer and the contractor. Taghipour et al (2018) studied the Study of the Application of Risk Management in the operation and Maintenance of Power Plant Projects. Taghipour et al (2020) studied Assessment and Analysis of Risk Associated with the Implementation of Enterprise Resource Planning (ERP) Project Using FMEA Technique. Taghipour et al (2015) studied Construction projects risk management by risk allocation approach using PMBOK standard. Taghipour et al (2015) studied Necessity Analysis and Optimization of Implementing Projects with The Integration Approach of Risk Management and Value Engineering. Taghipour et al (2015) studied Risk assessment and analysis of the state DAM construction projects using FMEA technique. Taghipour et al (2016) studied

Assessment of the Relationship Between Knowledge Management Implementation and Managers Skills. Following this, a one-factor model was introduced to the market in 1961 by William F. Sharpe, who tried other factors in addition to the capital decision model. Investors added that two-factor and multi-factor models were introduced with the aim of finding some non-market effects that lead to the simultaneous movement of stocks. The capital asset pricing model was created and expanded based on the capital market model. Unsystematically divided, in 1970 Ross introduced the theory of arbitrage pricing. The basic concept in this model is the law of one price; That is, two assets (shares) that are similar in risk and return cannot be sold at different prices. All of these models were based on an efficient market, complete rationality, and the absence of arbitrage - or the elimination of such opportunities in the short term - as usual. Sometimes it does not exist in the market. In the 90's, a new school gradually began to take shape, which was accepted as one of the financial fields. This school of thought, seeing all the inadequacies and weaknesses of existing models in interpreting and predicting decision-making behavior, relied on psychology. And science turned to decision making. The followers of this school of finite rationality, which Herbert Simon proposed as a "good enough" theory, accepted as a presupposition and tried to fertilize financial models with the science of psychology. Among the founders of this school were and priest, who wrote a series of articles. They developed applications of psychological knowledge in finance and economics, and in 1979 they proposed the theory of perspective. This theory shows how investors in some cases ignore desirability. According to this theory, investors are risk averse, which means that the slope of the wealth utility curve decreases as it increases. Their efforts eventually led to Kahneman receiving the Nobel Prize in Economics in 2002. Today, attention to behavioral finance is increasing due to a greater tendency to the field of behavior and psychology. One of the reasons for this increasing attention is a series of financial puzzles that occupy the minds of thinkers and their number is increasing day by day.

Behavioral biases

Financial bias, which is a subset of financial knowledge, is controlled and structured by a complex system of power relations in political-economic structures in global markets. Financial knowledge is both an art (a function such as designing new financial instruments) and a science such as evaluation and valuation. In the business or investment market, there are many different biases or mental traps Behavioral biases are defined as "systematic errors" in judgments and decisions. (Peterson,2010). One of the important factors studied in research on behavioral finance is the existence of various behavioral biases in the decision-making process of investors at the time of choosing investment methods and principles. The investor is always exposed to bias according to psychological principles. Behavioral habits are at the time of decision making and the intensity of the unity of these effects changes at specific times and conditions. Unless a person is in a special situation and circumstances, he can't understand the effects of behavioral bias and as soon as he is in the relevant situation, the judgment and knowledge of the investor will change (Saeedi and Farhanian, 2012)

COGNITIVE FROM AN ECONOMIC POINT OF VIEW

Relative profit (loss) (subjective)

Mental accounting is also part of landscape theory, which shows the tendency of people to place special events on different mental accounts based on physical characteristics. Mental accounting can help explain why investors are reluctant to re-adjust their turning point for a new stock. It refers to the tendency of individuals to codify, classify and evaluate economic outcomes by grouping their scores into a set of mental accounts. In other words, investors want to look at each component of their investment portfolio separately. This issue can lead to inefficient decisions. In fact, people do not look at different decisions as a whole and ignore relationships (Saif Elahi, 2015)

Investors' feelings

Investors' emotional decisions cause stock prices to deviate from real prices and lead to incorrect stock pricing. Inefficient and inefficient emotional investing is rooted in information economy theory. But corporate governance can improve the investment efficiency of the company in various ways to adverse effects. Moderate investors' emotional decisions and recognize emotions on the one hand to drive the market to rationality and on the other hand as the basis for designing investment strategies for managers evaluates the efficiency of listed companies. Emotion is the initial perception of an issue. Perception means believing that there is a problem or problem. There are limits to limited rationality and satisfaction in identifying solutions. Limited rationality states that the human mind is not unlimited, and this limitation does not allow for a complete and comprehensive identification of all solutions. Satisfaction refers to a type of conscious or unconscious behavior on the part of the individual that is sufficient for several basic solutions to solve problems and does not go to more complex solutions, which are also called satisfactory solutions. The feedback loop shows whether or not the problem has been solved by implementing this process. Based on the studies and results presented, it can be stated that investor sentiment is an important factor in capital market activities. Financial markets in their true sense have The dimension is psychological, and it is claimed to have the personality of thoughts, beliefs, temperament, and sometimes emotions (Lou et al. 2010). The main feature of this definition of the market is extreme anxiety due to risk tolerance, which makes investors full of hope in one moment and full of worry and anxiety in the next. But knowing capital market predicting better reduces investment risk and return. Investors' feelings are defined as a belief in future cash flows or investment risks that are not confirmed by available facts. Therefore, investors react to a lot of accounting information. They said that the stock market reacts to fundamental deviations from the dividend process. (Bicklerwegler, 2007) Thus, investor sentiment, which is not derived from fundamental changes in the stock market, is related to behavioral responses to available information: the emotional behaviors of stockbrokers. Some shareholders, especially shareholders with a constant monopoly presence, create excitement in the market and provoke the emotions of others, leading them to mass behavior. Capital market experts have always advised and asked investors about the emotional presence of investors; Do not enter the market without sufficient

information, avoid emotional buying and selling in the market, do not pay attention to rumors and unofficial news about companies, avoid speculation in the stock market and base their strategy on a medium and long-term perspective. Some are signs of investors' emotional decision-making in the capital market. Of course, on the other hand, the emergence of emotional behaviors by stock market investors is influenced by other factors such as political and economic issues (intensification of sanctions, parallel markets, economic transformation plan,), especially in recent years, more prominent than before, They have been shown and the research course also includes them. In other words, the issue of investors' emotional behavior in the research period is more acute compared to other time periods, which adds to the importance and necessity of research.

Mass behavior

In his book *The Psychology of the Masses*, Gustave Le Bon writes that the masses are a group of human beings in which, under certain conditions, the individual's conscious features disappear and the feelings and thoughts involved in the masses are realized. A common spirit is created in individuals. At the same time, it is variable. According to him, no matter how intelligent and educated a person is, he loses some of his independence among a large number of people and becomes subject to group pressure and the dominance of the majority. In other words, some "intellectual reasoning" The individual "becomes weaker in the crowd and his" indoctrination "becomes stronger" (Sotoudeh, 2010). However, in the nineties, ignorance of mass behaviors is due to information cascades that old information cascades are destroyed with new information. Like Fruit and Heirschleifer, such behaviors are due to the correlation of investor information, which means that managers and decision makers consider similar criteria for decision making. do not be There are two aspects to consider: 1. Avoiding damage to their credit 2. Credit costs of investment failure; Falkstein in 1996 identified similar interests in stocks with specific characteristics as the criteria for this behavior, including size, risk, liquidity; Individuals such as Friedman Dreamman 1979 and Barbary Weschleifer 2003 considered following the fashion and general market flow to be effective in causing such behaviors. Christie and Huang also proved in 1995 that more herd behavior occurs when the market is turbulent, that is, when the market is moving abnormally; Researchers such as Demir Rokutan 2006, Islam Bidgoli, and Shahriari 2005, by examining the Shanghai markets of China and the Tehran Stock Exchange, showed that the tendency of herd behavior in the market is more decreasing; In 1985, Prof. Stuttman and Schefferin made a wishful thinking. Investors in the losing company kept Rabies too much and sold the shares of the winning companies quickly.

Behavior that is called fear of regret;

RESEARCH BACKGROUND

In 2017, Omerkamara examined the US market in a study of industry mass behavior in financial decision-making using variables such as the capital structure (assets and income) of the industry and the capital structure of the industry leader - the time of recession and boom and the Chang Chang and Khourana model. And it was concluded that in the four manufacturing-service-wholesale-construction companies in the US market,

they behave in a massive way during the economic downturn (recession) and only the manufacturing company shows more logical behavior. John Christophe Rollk, in 2016 in a study entitled *Mass Behavior of Business Cycle Predictors, Considering Macroeconomic Variables (GDP Growth, Inflation, Current Account Balance, Interest Rates) and the Self-Economy Considering 45 Industrialized World Countries and Using the Illiteracy Model* As a result, anti-mass behavior (deliberately contradicting the views of others) is more likely to occur in the long run, and in times of high economic uncertainty and disagreement among forecasting pioneers, this behavior is reduced.

Homayoun Kabiroshim Shakur in 2018 with a study on the mass behavior of the regime in the stock markets of Asia and Latin America with reference to variables such as stock returns of eight Asian countries (Malaysia, Singapore, China, Hong Kong, Taiwan and Thailand, India and South Korea) and four US countries Latin (Argentina, Brazil, Chile, and Mexico) and using the Chang Cheng and Khourana models, concluded that the mass behavior of investors in Asian and Latin American markets was affected by the US market and regime fluctuations, and that the US market's emotional role played a role. Among these countries, Argentina and Brazil show the least mass behavior. Taghipour et al (2016) studied the impact of ICT on knowledge sharing obstacles in knowledge management process. In 2018, Bijol Aitik studied the mass behavior among wine investors and considered variables such as returns and wine prices in the London wine market and the New York index, using the Christie Wahwang model (CSSD regression and the new return regression approach) concluded that macroeconomic variables (US stocks) affect the dispersion of wine returns, and of course the herd behavior of wine investors is based on foreign probabilities and is controlled by the US market. In 2018, Hoodalimi examined the mass of excess risk in the US stock market and took into account returns, trading volume, stock prices and average stock market returns on the US Stock Exchange, and by combining several models, Christie and Huang csad, cssd, Garch, and Granger Automated Causality Test. As the volume of transactions increases, mass behavior increases. The factor of investor feelings during turmoil and industry returns to the average industry returns affect the creation of mass behaviors. In a sample of non-financial research by Rogiro Lurgillo in 2016, in the study of mass behavior, the choice of exit means In an emergency, based on a random theory using a questionnaire and logit model, rut model and loverglio model, preliminary analysis-qualitative analysis-behavioral modeling was performed and the following results were reached that both environmental and environmental factors are effective in the occurrence of risk behavior. Personal characteristics other than gender In a study conducted by Ouddin Shah's hair in 2017 entitled *Mass Behavior on the Pakistan Stock Exchange*, some new approaches; Considering variables such as daily returns and bond prices, using the Christie and Huang model: cssd, csad, it was concluded that large companies behave more than small companies and such behaviors are more severe in times of crisis.

Khalilpour et al. In their research in 2018, during explaining the concept of social responsibility by basing the conceptual framework of accounting and reporting framework of traditional social responsibility to

examine the desired features, sought to provide a conceptual framework for reporting corporate social responsibility. The research results show that in terms of reporting objectives, quality characteristics of information, responsibility for preparing and submitting reports, accreditation, institutions that develop corporate social responsibility standards and financing, there are many similarities with the field of financial reporting and Taghipour et al (2020), studied The Impact of Working Capital Management on the Performance of Firms Listed in Tehran Stock Exchange (TSE).

Hyrofomi Achida in 2007 examines herd behavior in the Japanese lending market, evidence from banking panel data; Payment by using the main variables such as lending and average lending and control variables such as GDP growth - land price and interest rates of financial liberalization bonds and using lacuncheit - Schliefer - Vishni models proved that lending to domestic Japanese banks was herd and Due to regional conditions, this type of behavior is more common in bubble periods. Elizabeth Simmons in 2015 in an article entitled Mass Behavior and Emotions, Evidence in Small European Markets; Considering the relationship between emotion variables (industry confidence-service-construction-construction-consumption-retail) and price changes and model of Patterson and Sharma-Chang model et cssd and using Granger test, it was concluded that emotions (pessimism and optimism) affect herd behavior. Dardo in order to neutralize it Niko Papa Postolo in 2017 in a study entitled Mass Behavior in the heavy industry market; decision analysis in the exclusion and repatriation of new capital, using price data and London stock returns and using the model Christie and Huang prove Showed that intentional behaviors (lack and asymmetry of information and professionalism and lack of reputation and ability and following professionals (and unintentional herd) similar investment on.

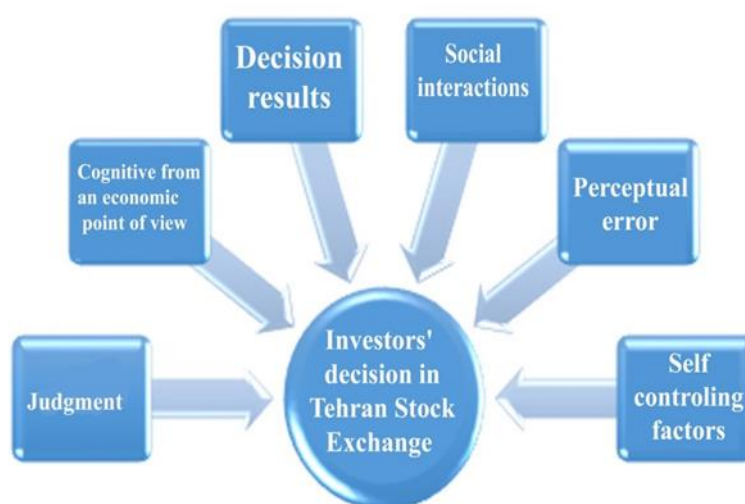


Figure 1 - Conceptual model drawing (Kahneman Verip, 2004)

MAIN GOALS

Presenting a model for mass behavior in investor decision-making in investment companies Tehran Stock Exchange.

Sub-objectives

1. Identifying the impact of market information on the decisions of investors in investment companies on the Tehran Stock Exchange.
2. Identifying the effect of investment characteristics in the decisions of investors in investment companies in the Tehran Stock Exchange.
3. Identifying the effect of market characteristics on the decisions of investors in investment companies on the Tehran Stock Exchange.
4. Identifying the effect of behavioral biases on investors' decisions in investment companies on the Tehran Stock Exchange.

RESEARCH METHOD

This research is applied in terms of purpose and descriptive research in terms of method and post-event research in terms of time dimension. This research method is used to conduct research that seeks to investigate the cause or causes of certain relationships that have occurred in the past and have been completed. This type of research method has a relatively high validity because it seeks to achieve causal relationships or causes and effects between research factors. At this stage, 11 experts collaborated with the researcher in conducting specialized interviews and 4 factors (hidden variable) and 45 items (observable variable) were identified to provide a model for mass behavior in managers' decision making. In the first step, the initial indicators were identified and selected from the text of the interviews.

Once the information has been entered, it is time to process it. Processing means using different methods to summarize and classify data in order to describe and analyze the research results. In fact, by processing the information, the answers to the research questions were obtained using MAXQDA software. In the first stage, with the approach of qualitative research method, a large number of indicators were extracted from the relevant interviews.

Table 1- Interview Questions

Interview questions	Row
The role of mass behavior in decision- making corporate executives capital investment in the Tehran Stock Exchange to explain.	1
What factors in the decision- making capital investment in the Tehran Stock Exchange is effective?	2
In order to avoid causing volatility in Tehran Stock Exchange, what do you propose to use?	3
What are the instructions and rules related to working in the Tehran Stock Exchange?	4

Which of bias behavioral bulk of the capital investment is seen to be?	5
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The following are the categories of each interview separately and the concepts extracted

Table 1 - The main and sub-topics of the research

Mass behavior like making capital investment in the company's capital investment securities Drbvrs Tehran	
Sub-theme	The main theme
Bad news and rumors	Market information
Information correlation	
Emotions capital investors	
Sharp price fluctuations in the market.	
Level Complexity Market	
Decreased market effectiveness and stability	
Web market	
Objectivism	
Conservative Work	
Behavior People like Other Rational RAS big Markets Finance	
Reluctant effect	
Capital investment to the Adherence From others Capital investors	
Profit Relative Mental	
Delay effect	
Positions decision maker	
The number of people close to the decision- maker	
Features of Industry and Trade	
Buying stocks with risk and return analysis	
Buying stocks and measuring and determining the risk of deviation from returns	
Suppose the utility function inside From price	
Factors Specification Personal	
Information cascades	
Strategic complement	
High rate of economic and political fluctuations	
Distance From Regret And regret	
money value	
Effect of ownership	Properties Capital Investments
Limited liquidity	
Arbitrage	
More Assurance	
Number of people in the mass	

Risk- taking	Market characteristics
Lack of follower reputation	
Rules of conduct	
Leading amount of private information	
Leading number	
Accuracy of leading information	
Reputation of the institution	
Representative intuition	
Level Desirability Property Similar	
Similar interests	
Yourself Deception Trust	
Avoid ambiguity	
Repentance escape	
Damage Escape	

According to professors and experts, the initial indicators of 430 were adjusted to 45 indicators in accordance with Table 2. Based on Table 2, the main structures of the study are: market information, investment characteristics, market characteristics, behavioral biases were classified and divided.

After performing a qualitative analysis, finally 45 indicators were extracted to examine the mass behavior of investors in decision making. The identified indicators are the researcher's inference from the interviews conducted. The fuzzy Delphi approach has been used to ensure the importance and screening of the indicators and to identify the final indicators.

Table 2- Screening of indicators of mass behavior of investors

Result	certain	Fuzzy average	Index Primary	X
the reception	0.85	(0.745,0.873,0.932)	Bad news and rumors	C01
the reception	0.82	(0.686,0.845,0.936)	Information correlation	C02
the reception	0.77	(0.609,0.782,0.914)	Emotions capital investors	C03
the reception	0.77	(0.627,0.791,0.891)	Level Complexity Market	C04
Red	0.45	(0.323,0.45,0.586)	Sharp price the in fluctuations .market	C05
the reception	0.76	(0.623,0.777,0.877)	Web ازمد Follow market	C06

the reception	0.80	(0.655,0.814,0.923)	Repentance escape	C07
the reception	0.78	(0.636,0.8,0.914)	Conservative Work	C08
the reception	0.80	(0.659,0.818,0.914)	Reluctant effect	C09
Red	0.39	(0.286,0.386,0.5)	Decreased market effectiveness and stability	C10
the reception	0.74	(0.55,0.768,0.914)	Relative Profit (وزیانProfit ((mental	C11
the reception	0.75	(0.605,0.777,0.882)	Delay effect	C12
Red	0.40	(0.314,0.391,0.505)	like Behavior People Other Rational RAS big Markets Finance	C13
the reception	0.86	(0.732,0.882,0.959)	- Positions decision maker	C14
the reception	0.79	(0.664,0.8,0.891)	The number of people - close to the decision maker	C15
Red	0.41	(0.309,0.4,0.509)	investment to Capital the Adherence From investors others Capital	C16
the reception	0.80	(0.659,0.814,0.923)	of Industry Features and Trade	C17
the reception	0.79	(0.636,0.809,0.936)	Factors Specification Personal	C18
the reception	0.75	(0.614,0.759,0.864)	Information cascades	C19
the reception	0.78	(0.627,0.795,0.909)	Avoid regrets and regrets	C20
the reception	0.78	(0.623,0.791,0.914)	money value	C21
Red	0.19	(0.127,0.168,0.273)	Buying stocks with risk and return analysis	C22
the reception	0.93	(0.832,0.955,1)	Effect of ownership	C23
the reception	0.84	(0.714,0.859,0.945)	Overconfidence	C24
the reception	0.75	(0.591,0.759,0.9)	Number of people in the mass	C25
Red	0.25	(0.191,0.227,0.323)	liquidity Limited	C26
the reception	0.88	(0.764,0.914,0.973)	taking- Risk	C27
the reception	0.85	(0.695,0.868,0.973)	Lack of follower reputation	C28
the reception	0.83	(0.714,0.85,0.927)	Rules of conduct	C29

the reception	0.77	(0.609,0.786,0.905)	Leading amount of private information	C30
Red	0.14	(0.091,0.118,0.218)	Arbitrage	C31
the reception	0.86	(0.75,0.886,0.945)	Leading number	C32
the reception	0.81	(0.695,0.832,0.891)	Accuracy of leading information	C33
Red	0.04	(0.0009,0.118)	Strategic complement	C34
the reception	0.83	(0.695,0.859,0.95)	Reputation of the institution	C35
Red	0.38	(0.291,0.368,0.473)	High rate of economic and political fluctuations	C36
the reception	0.89	(0.777,0.909,0.977)	Representative intuition	C37
the reception	0.82	(0.677,0.836,0.936)	Level Desirability Property Similar	C38
the reception	0.77	(0.623,0.795,0.905)	Similar interests	C39
the reception	0.87	(0.741,0.886,0.968)	Yourself Deception Or Trust ^{فرا}	C40
Red	0.41	(0.291,0.4,0.536)	Suppose the utility of function endogenous Price	C41
the reception	0.81	(0.682,0.832,0.923)	Avoid ambiguity	C42
Red	0.36	(0.3,0.345,0.427)	Objectivism	C43
the reception	0.79	(0.691,0.809,0.873)	Damage Escape	C44
Red	0.30	(0.245,0.282,0.364)	Buying stocks and measuring and determining the risk of deviation from returns	C45

Accordingly, 4 indicators are deleted and other indicators were accepted.

SUGGESTIONS FROM THE RESEARCH

In the first step, the initial indicators were identified and selected from the text of the interviews. In the first stage, with the approach of qualitative research method, a large number of indicators were extracted from the relevant interviews. Then, by removing the codes and concepts with repetition and putting together the concepts of the same meaning, the main and sub-themes of the research were obtained. According to the professors and experts, the initial indicators of 430 were adjusted to the following 45 people:

Market Information: Bad News and Rumors, Information Correlation, Investor Feelings, Extreme Price Fluctuations in the Market, Market Complexity, Decreased Market Effectiveness and Stability,

Materialism, Conservatism, Irrational Mass Behavior of the Great Plague of the Financial Markets, Effect Reluctance to invest following other investors, relative (subjective) profit and loss, delay effect.

In 2018, Hoodaltimi examined the mass and excess risk in the US stock market and inferred the volume by considering the returns of the stock price trading volume and the average stock market return on the US Stock Exchange and by combining several models by Christie and Huang Garch, the automatic regression causality test. Mass behavior transactions increase and the two factors of investors' feelings in times of turmoil and industry returns relative to the average industry returns affect the development of mass behaviors.

The results of this study are consistent with the present study in terms of mass behavior and surplus risk and investors' feelings.

In 2015, Zohreh Pezeshki, in an article entitled Behavioral Factors Affecting the Decision Making and Performance of Individual Investors in the Tehran Stock Exchange, examined the type and behavioral tendencies of investors in the Tehran Stock Exchange and considered the variables of mass behavior, including: stagnant fear. In the past, historical background, share growth using the combined method has inferred that mass behavior is more influential in investor decision making than other behavioral factors.

The results of this study are consistent with the present study in terms of behavioral factors, willingness effect, conservatism, personal characteristics factors and relative (mental) profit and loss.

Investment characteristics: decision maker position, number of people close to the decision maker, characteristics of industry and trade, stock buying with risk and return analysis, stock buying and risk measurement and determination of the possibility of deviation from return, assuming utility as an endogenous function of price, characteristics Personal, information cascades, high rates of economic and political fluctuations, avoidance of regret and regret, value for money, effect of ownership.

In a 2014 paper entitled "Study of Mass Behavior on the China Stock Exchange", Yayo et al. Proved that mass behavior is more common in industry and is higher than growth stocks in value stocks, and is more pronounced in sluggish markets.

The results of this study in terms of stock buying with risk and return analysis and stock buying and measuring and determining risk that probability of deviation from the return is consistent with the present study.

Mostafa Jahangiri Rad in 2014 in a study entitled Investigating the group behavior of investors in the Tehran Stock Exchange using solid regression and stock return deviation data in the Tehran Stock Exchange proved that investors in the Tehran Stock Exchange have group behavior, and this The type of behavior in the incremental market is more than the decreasing market, unlike its previous foreign research.

Market Characteristics: Liquidity constraints, arbitrageurs, overconfidence, number of people in the mass, risk-taking, lack of following reputation, rules of conduct, amount of leading private information, leading number, accuracy of leading information, reputation of the institution, agency intuition, desirability of similar assets, Similar interests.

In an article titled Mass, Social Network, and Fluctuations in 2018, Guching Wang examined variables such as high-risk and low-risk assets,

leading accurate information, and leading reputation of leading types, sensitivity of herd behavior, and fundamental value in the US market. Models such as the Brugg's heterogeneous model and the Markov process numerical simulation model concluded that the more leading private information and more manipulation of information, the more market fluctuations and herd behavior and vice versa and the increase in the number of leads and their information accuracy decreases market fluctuations. The market environment during times of recession and boom is also effective in intensifying herd behavior. The results of this study are consistent with the present study in terms of the amount of leading private information, the number of leading and the accuracy of leading information.

Nojan Qanat also confirmed the existence of mass behavior in the Iranian stock market in 2013 in an article entitled "Study of the existence of mass behavior in the Iranian stock market using lacuncheit Schiffler Vision and political models and variables such as lack of personal information, insufficient information, uncertainty and mass behavior in the Iranian stock market." It identified its level more than the developed markets in the world.

Behavioral biases: self-deception or overconfidence, ambiguity avoidance, regret avoidance, loss avoidance.

Jalil Khodaparast Shirazi in 2012 in a study entitled The study of the effect of mass behavior in the formation of the rational bubble, through the Kalman filter method to study the factors of mass behavior including inclination, insistence, conservatism, delay effect, gambling behavior and speculation, hallucinations, delusions Rational ignorance, mental calculations, fashion, price aggregation, psychological security and sudden policy change in the Tehran Stock Exchange paid attention and the results were that fashion behavior and reduced psychological security are effective in forming the Tehran Stock Exchange bubble.

The results of this study in terms of the effect of self-deception or overconfidence, delayed, temporary Decision maker, willingness effect, adherence to fashion and market are consistent with the present study.

In 2016, a sample of non-financial research by Rogero Lorgillo in 2016 in the study of mass behavior in emergency exit selection based on random theory using a questionnaire and model and model rut and loverglio model to conduct a preliminary analysis of qualitative analysis of behavioral modeling and It was concluded that both environmental factors and personal characteristics other than gender are effective in the occurrence of mass behavior in times of risk. After conducting a qualitative analysis, 45 indicators were extracted to study mass behavior in investors' decisions. The identified indicators are the researcher's inference from the interviews conducted. The fuzzy Delphi approach has been used to ensure the importance and screening of the indicators and to identify the final indicators.

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