Presenting a model for identifying the risk aversion of shareholders according to the influence and role of the government's monetary and fiscal policies and the mass behavior of shareholders

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(Communicated by Seyyed Mohammad Reza Hashemi)

Abstract

Risk aversion is one of the investment theories in which the price-performance ratio reacts to the investor's risk tolerance and is guided with due attention to its changes. These settings allude to changes in the investor's activity in response to global economic patterns. According to this theory, investors tend to have higher-risk investments when the market risk is low. However, investors tend to invest in a safe asset when a high market risk is felt. The investor's tendency to avoid risk increases and decreases over time. Occasionally, investors invest more in higher-risk instruments than in other periods, such as economic prosperity in 2009. The primary purpose of this research study is to present a model for identifying the risk aversion of shareholders depending on the influence and role of the government's monetary and fiscal policies and the mass behavior of shareholders. This is applied research in terms of purpose and descriptive survey research in terms of method. The statistical population of the research is the country of Iran. The study's participants include managers, shareholders, and investors with associated scientific backgrounds and experience in the stock exchange. Thus, the managers, shareholders, and investors active in the stock exchange were selected as the participants of the present study. Besides, the purposeful sampling method and theoretical sampling strategy with maximum variation were used. The researcher reached theoretical saturation by interviewing nine people, and the interviews continued with 11 people to become confident about the results. Data analysis was done using MAXQDA OLS, pls software. The research results have been to identify the role of the government's monetary and fiscal policies and the shareholders' mass behavior in presenting the model of identifying the risk aversion of the shareholders.

Keywords: risk, risk aversion, monetary and fiscal policies of the government, mass behavior of shareholders
2020 MSC: 91B64

1 Introduction

All managers deal with the decision-making process. Decision-making and management can be synonymous since decision-making is the central part of management. That is why recognition of the decision is of particular importance.

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Investment requires the study of the investment process and the management of shareholders' wealth. The investment process in a coherent state requires the evaluation of the primary nature of investment decisions. Therefore, investment decisions should be taken according to scientific principles and with proper accuracy. Decisions are made according to the availability of the necessary information in the four situations of complete confidence, risk, uncertainty, and ambiguity, among which the level of risk acceptance according to the desired return is a significant factor in the decision-making process of investment company managers. In other words, the quality and manner of managers' decisions are influential in the success and realization of the organization's goals; This means that an organization's fate largely relies on managers' decision-making and the results obtained. The ongoing progress of technology, the globalization of the economy and business, the intensity of environmental changes, and the increase of uncertainty in the process of these changes have brought about risk and uncertainty as inseparable principles of the decision-making process in the organization. As a result, the management of organizations is more complicated today than ever.

Thus, the managers, who are the primary decision-makers of an organization, react differently, which indicates their behavior. The tendency to take risks and the managers' attitude towards risk, one of the unique personality traits, determines their behavior. Risk-taking is considered a fundamental success factor in managers' decision-making in conditions of risk and uncertainty. [11] investigated the results of several studies conducted on managers' risk-taking. Their results show that managers believe risk-taking is a primary and critical success factor in decision-making.

Most of them indicated a positive correlation between risk and return. These managers believe that risk-taking is very critical in management jobs. In their opinion, risk-taking is associated with anxiety, fear, motivation, pleasure, and happiness. When success comes from risk, the pleasure of success increases with the threat of failure. In other words, satisfaction with success is directly correlated with the level of risk-taking. The results of the research showed that there is a negative relationship between the level of risk aversion of managers and the profitability of companies. Companies with more risk-averse managers experience a decrease in changes and average profit in situations with risk and uncertainty because these managers are willing to accept a lower profit to have lower risk. A risk-averse spirit in managers makes them not inclined to choose investment projects with high profitability and risk, which decreases the investment rate. Furthermore, risk-averse managers choose activities with low risk and return and avoid accepting new and advanced technologies with high risk. In such a situation, the productivity of the organization may decrease. In addition, the research findings of Daniel et al. [7] show that risk-taking does not directly influence the performance of companies, and there is a strong correlation between risk-taking and other variables such as experience and other factors [12]. In other words, the strong correlation between risk-taking and other variables is among the factors that highlight the influence of managers' risk-taking on the performance of companies. In organizations and institutions, risk-taking behavior at high levels of management is more critical. They must take risks to design, compile, and choose new strategies, turn these ideas into reality, and achieve success. One of the factors that can affect managers' risk-taking is their mass behavior. Many theoretical models refer to the assumption that the risk-taking of each manager is influenced by other managers, namely, mass behavior. Managers' risk aversion, as one of the fiscal-behavioral issues, is the extent to which people are encouraged to take initiative and carry out risky jobs. Risk aversion is a person's tendency to be in a decision-making scenario. The theoretical foundations in this field have two general directions: firstly, the prospect theory denotes that people may not logically analyze information. According to this theory, in equal conditions of profit and loss, the negative effect of loss on the investor is greater than the positive effect of gaining profit.

The second theory considers risk-taking as an individual characteristic and believes that this issue is defined by the person's internal factors related to the external, which has different intensity and duration in different people. In other words, the inner state that dominates the person at any time is accompanied by more involvement than mere excitement. Studies show that carrying out specific jobs, such as taking an exam, participating in a sports competition, or conducting an employment interview, causes intense emotions in humans. It has also been determined that in such conditions, the mental state of people cannot predict their performance. Psychologists believe that mental state can influence performance by predicting possible outcomes of events and helping to identify potential problems, especially when the performance results are unclear. [9] investigated the effect of psychological characteristics on the investment performance of real investors in the Vietnam Stock Exchange [15]. The findings unraveled that conscience, the spirit of change, experience, and agreement directly influence investment performance. Also, conscience, the spirit of change, experience extroversion, and positive emotion have influenced investment performance. One of the concerns of psychologists is understanding the primary variables in recognizing people's mental and psychological characteristics since these states and characteristics are one of the most important influencing factors in people's decision-making. Up to the present time, many research studies have been carried out on the issue. For example, three American psychologists, Watson, Clark and Tellegen [16] invented the Positive and Negative Affect Schedule (PANAS) model used in this research. Up the model, a list including 65 to 75 words describing specific mental states or mental

properties was specified, and finally, after analyzing different factors, two scales of "positive emotion" and "negative emotion" were identified.

Any emotional experience has these two independent dimensions. This scale has 20 sentences. Each of these sentences shows a positive or negative emotion. The positive and negative emotion scale is a self-report instrument, and the subject must indicate to what extent he or she feels each of the sentences on a 5-point Likert scale. These two dimensions are correlated with broad classes of psychological variables. Positive emotion indicates to what extent a person feels passionate about life and to what extent he or she feels a sense of agency and vigilance. People with many positive emotions approach life actively and powerfully, along with enthusiasm and trust. They have complete self-confidence and satisfaction in social interactions and are unafraid to be at the center of attention. Generally, positive emotion is correlated with activity, euphoria, passion, excitement, and power [8].

The introduction of psychological topics in Classical financial theory led to the emergence of new theories under the title of behavioral finance. One of the founders of this field of financial knowledge is the famous psychologist Daniel Kahneman, who won the Nobel Prize in 2001 for presenting models to explain people's behavior in uncertain situations. Behavioral finance theories are new and can be traced back a decade ago. However, the volume of their texts has increased significantly during the last decade. On the whole, behavioral finance is a new approach to financial markets that emerged to answer some problems in classical finance. This new approach states that some financial phenomena can be better understood using models that do not consider entirely rational factors [4]. In addition, it notifies the theoreticians to consider human behavior among the other variables [3]. As achieving economic growth and development, including increasing the level of employment, controlling inflation, and balance of payment equilibrium (bpe), have always been one of the ultimate goals of countries, the government fiscal policy and the monetary policy of the central bank are taken into account by countries as levers to achieve these goals [14]. The monetary policy is of two types: expansionary monetary policy and contractionary monetary policy, which can influence the country's economy through different channels. These policies are usually used to achieve goals focused on economic growth and stability, including accelerating economic growth, creating full employment, stabilizing the general level of prices, and set forth [13].

The experience of the financial crisis of 2008 showed that following an expansionary monetary policy along with increasing risk-taking, banks offered risky loans, which increased the debt-to-asset ratio of banks and ultimately led to financial instability and the occurrence of a crisis. Thus, after this crisis, the research studies were conducted in the risk-taking channel of monetary policy. Despite the risk-taking channel, expansionary monetary policy increases risk-taking and, in effect, the supply of risky loans. As a result of this action, the banking system's stability is endangered, and the financial system may encounter instability [10]. Today, economists believe that financial stability is a prerequisite for sustainable economic growth. The stability of the financial system is the adjustment and regulation of the banking system through reducing the probability of bank bankruptcy, and in other words, improving the financial stability of the banking system. Financial stability in the banking system is one of the main features of successful world economies. Financial institutions, especially the banking system, play an irreplaceable and central role in the economic system since their performance can present, on the one hand, economic growth and development and, on the other hand, the conditions of disorder and the collapse of an economic system, an example of which the destructive and unfortunate effects of the American banking crises of 2007-2010 can be mentioned. Therefore, the existence of an efficient and stable banking system to prevent or reduce the possibility of a financial crisis due to an economic crisis is undeniable [2]. Reviewing the literature on the Channels of Monetary Policy Transmission, there is still a gap in how monetary policy influences risk-taking, known as the risk-taking channel. According to the issues raised in this research, the present research aims to answer the following research questions:

What is the role of monetary and financial policies of the government in presenting the risk aversion identification model of shareholders in the stock market?

What is the role of the mass behavior of shareholders in presenting the risk aversion identification model of shareholders in the stock market?

Amini Rad et al., [1], stated that people's preferences towards risk are among the most important economic variables and significantly influence economic decisions. Investment decisions, consumption, savings, insurance purchases, and future contracts are among the decisions in which risk preferences play a fundamental role. Due to the importance of risk preferences in the decision-making process, it is necessary to calculate the index of risk tendency in the entire economy. To this end, the GARCH model was used in the average with variable parameters over time. The results of the estimation of risk aversion in Iran's economy revealed that this parameter was not constant in Iran's economy and fluctuated between 0.81 and 7.6 during the period under investigation. Besides, the research showed that risk aversion in the economic prosperity period is much lower than in the recession and has a counter-cyclical behavior.

Zare et al., [17], declared that gold asset has an inherent value and the dollar currency market is supported by an extensive global economy, undoubtedly, it seems necessary to improve the economic infrastructure, build the company presence in the stock exchange, provide government support for competitive conditions, and not have direct interference in the stock exchange market in order to strengthen the support for Iran stock exchange. In addition, due to the complex nature of the stock exchange market and the lack of sufficient familiarity among the general public, it is necessary to inform and increase the awareness of people in the community for a long-term presence in the stock market. In [5] and [6], authors used a smooth transition model, in which these main drivers of stock returns are separately considered as a threshold variable. The results show that the index's return decreases with the reduction of investors' risk after a positive shock to the volatility index in most markets. A restrictive monetary policy has a negative effect on index returns in the low regime for some countries, and such an effect in the high regime is more significant for higher liquidity markets. When investors show too much pessimism or optimism, the market turns from a bearish (descending) to a bullish (ascending) situation according to the heterogeneous reactions of market participants and the amount of compensation due to other trading risks. Evaluation of predictive performance provides convincing evidence for the model's superiority with monetary shocks as a transition variable over competing models.

Zhou [18], stated that after the final trade, a large amount of private information could not be disclosed, and market liquidity declined over time. Furthermore, the noise demand with a positive correlation concentrates early. In that case, information is disclosed faster, while if the noise demand with a negative correlation concentrates later, more information remains hidden after the final trade. The inefficiency caused by negative noise demand can be resolved if the organization's internal stakeholders have competitive power or are risk-averse.

2 Research methodology

The current study is a mixed-method research (qualitative and quantitative) conducted to discover, describe, and explain the research problem. Firstly, documentary and library data collection methods are used to review and critically study the available and accessible scientific literature through published authoritative articles, treatises, books, and scientific databases to calculate the factors influencing the research problem. Then, the qualitative (Delphi) method was used to finalize and localize the influencing factors of the risk aversion components of the shareholders. The experts' opinion was used until the theoretical saturation was reached. After finalizing the factors and confirming their validity and reliability, the relationships between variables were identified and how they affect the risk aversion of shareholders through quantitative research methods, namely, the survey method in the target population and the structural equation method.

To evaluate the internal consistency and reliability of the measurement scale used in this study, Cronbach's Alpha was employed. Cronbach's Alpha is a widely used statistic that quantifies the extent to which items in a scale or test are correlated. A higher Cronbach's Alpha indicates greater internal consistency among the items.

The formula for Cronbach's Alpha is given by:

$$Cronbach's\ alpha\ = (k/(k-1)) * (1 - (SumVar(X_i)/Var(T)))$$

In this formula:

- X_i represents the scores for each item in the scale.

- T represents the total score on the scale.

- k is the number of items in the scale.

Cronbach's Alpha values range between 0 and 1, where values closer to 1 indicate higher internal consistency. An Alpha value above 0.70 is generally considered acceptable, while values above 0.80 are often desired for robust reliability.

Through this method, the acceptability of theoretical models can be tested in a particular statistical population using correlation and non-experimental data. Other techniques used in this research are multivariate regression analysis and factor analysis. The regression model can be as follows:
Risk

$$Aversion = \beta_0 + \beta_1 \times MonetaryPolicy + \beta_2 \times FiscalPolicy + \beta_3 \times InvestorBehavior + \epsilon$$

Here:

- $\beta_0, \beta_1, \beta_2, \beta_3 \beta_0, \beta_1, \beta_2, \beta_3$ are the coefficients of the model.

- MonetaryPolicy, FiscalPolicy, InvestorBehaviorMonetaryPolicy, FiscalPolicy, InvestorBehavior are the input features of the model.

- Risk Aversion denotes the level of shareholders' risk aversion.

- $\epsilon\epsilon$ represents the error term in the model.

In this context, the model aims to quantify the impact of monetary and fiscal policies implemented by the government, as well as the collective behavior of shareholders, on the level of risk aversion observed among shareholders. The coefficients $\beta_1\beta_1, \beta_2\beta_2,$ and $\beta_3\beta_3$ indicate the respective weights of the monetary policy, fiscal policy, and investor behavior in influencing the dependent variable Risk Aversion. The error term $\epsilon\epsilon$ accounts for unobserved factors and inherent variability in the data.

3 Spatial domain of research

The scope of the present research is investment companies and investment funds.

4 Temporal domain of research

The time period of the present research is 2021.

5 Operational definition of research variables

The research variables will be measured based on the questionnaire. Questionnaire is defined as a set of qualitative and pre-determined questions based on certain options in which the respondents enter their answers.

6 Statistical population

The statistical population of the current research in the Delphi phase were experienced finance professors, managers of investment companies, managers of investment funds, and managers of capital supply. The selection of experts in the Delphi method will be done through snowballing. However, in the phenomenological research design, according to the depth of the conducted interviews, scientific texts confirm the sample size of less than 15 people. This research conducted interviews with all participants at their workplace or by phone. However, this stage was accompanied by many restrictions due to the busyness of these people.

Purposeful sampling process

Developing the selection criteria

Selecting people based on established criteria.

Conducting interviews simultaneously with interview analysis

Continuing the interviews until theoretical saturation is reached

Theoretical saturation

To select the sample, criteria were developed to select interviewees. People with the first and the second, as well as at least one of the other criteria, are selected as the study participants. The participants include managers, shareholders, and investors with associated scientific backgrounds and experience in the stock exchange. The mentioned experts have a relevant educational background in investment and have published some articles and books in this field. As the context and background in the strategy of the data foundation theory method is significantly essential, in the current research, managers, shareholders, and investors active in the field of the stock exchange have been selected as the participants. In addition, the purposeful sampling method and theoretical sampling strategy with maximum variation are used. In the heterogeneous purposeful sampling method, depending on the criteria, the participants are selected according to the knowledge and awareness of the researcher and the main research questions; they were selected from among the people who have sufficient knowledge of the desired phenomenon or have much information in the particular field.
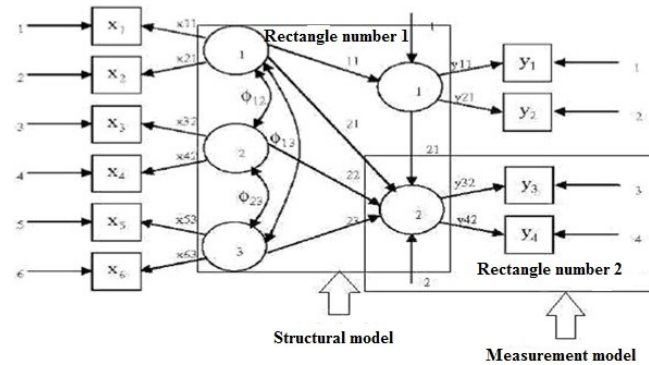
Figure 1:

7 Data analysis

For quantitative analysis and testing the hypotheses of the components of the model and the entire research model, the demographic information of the experts is presented in the first part of the study. In the qualitative part of the study, the data obtained from the interview has been analyzed using the foundation's qualitative data analysis method. In the following, the resulting paradigm model has been validated using the partial least squares (PLS) technique and SMART PLS software. The current research is conducted to present a model for identifying the risk aversion components of the shareholders. Currently, the results of data analysis are presented in qualitative and quantitative sections. In the first part, the demographic information of the experts is presented. In the qualitative part, the data obtained from the interview has been analyzed using the foundation's qualitative data analysis method. In the following, the resulting paradigm model has been validated using the partial least squares technique and SMART PLS software.

8 Demographic characteristics of the experts

The study's participants are the managers, shareholders, and investors with associated scientific backgrounds and experience in the stock exchange. The mentioned experts have a relevant educational background in investment and have some articles and books in this context. As the texture and context in the strategy of the data foundation theory method are very critical, the managers, shareholders, and investors active in the stock exchange market have been selected as the participants of the current research. The purposeful sampling method and theoretical sampling strategy with maximum variation are resorted to in the present paper. In the criteria-dependent heterogeneous purposeful sampling method, the participants are selected according to the knowledge and awareness of the researcher and the main research questions. They were selected from those with sufficient knowledge of the phenomenon or are very sapient in the particular field. Furthermore, the criterion for determining the number of participants was theoretical saturation in each category and a complete understanding of the phenomenon under study. Therefore, the number of participants could not be calculated from the beginning. In the current study, the researcher reached theoretical saturation by interviewing nine people; however, the interviews continued with 11 people to become confident about the results.

9 Demographic characteristics of the quantitative part of the study

10 Data coding in Ground Theory

Open coding

Axial coding

Axial coding is the second step of analysis in grounded theory. This step aims to draw a connection between the categories developed in the open coding step.

Table 1: Demographic characteristics of fund members and investment and capital supply companies

Frequency		Demographic characteristics	
76%	76	Male	Gender
23%	23	Female	
24%	24	30 to 40 years	Age
61%	61	40 to 50 years	
14%	14	More than 50 years	
13%	13	BA.	Education
59%	58	MA.	
28%	28	Ph.D	
24%	24	Less than 5 years	Work Experience
22%	22	5 to 10 years	
31%	31	10 to 20 years	
22%	22	More than 20 years	
	99	Total	

Table 2: Primary (open) coding of research interview transcript

References	Descriptive codes	Basic concepts	Row
$\{M_3, 4\}$ $\{M_4, 1\}$	Government monetary policies	The type of monetary and fiscal policies of the government	1
$\{M_1, 2\}$ $\{M_5, 1\}$ $\{M_3, 41\}$ $\{M_6, 12\}$	Government Fiscal policy		
$\{M_9, 29\}$	Like the mass behavior of the investors	Having a tendency towards mass behavior	2
$\{M_{11}, 19\}$	Lack of independent performance		
$\{M_1, 36\}$ $\{M_2, 13\}$ $\{M_6, 21\}$ $\{M_4, 15\}$	Conservatism		
$\{M_5, 17\}$ $\{M_4, 18\}$	Justification	Behavioral justifications	3
$\{M_4, 24\}$	Signing a contract considering the interests of shareholders		

Table 3: Dimensions, main and sub-categories of the research

Sub-category	Main category	Dimensions
The type of monetary and fiscal policies of the government	Law and regulation risk	Contextual conditions
Lack of tax and protection laws		
Reduce interest rates		
Lack of supervision by competent organizations		
Weakness in clarifying rules and regulations in the stock exchange market		

Categories of contextual conditions

Based on the results of the secondary coding, the indices of the monetary and fiscal policies of the government, the lack of tax and protection laws, the reduction of interest rates, the lack of supervision by competent organizations, the weakness in clarifying the rules and regulations in the stock exchange market were selected as contextual categories in presenting the identification model of shareholders' risk aversion components.

The following figure shows the output of MAXQDA software

Table 4: Categories of contextual conditions

| Sub-category	Main category	Dimensions
The type of monetary and fiscal policies of the government	Law and regulation risk	Contextual conditions
Lack of tax and protection laws		
Lower interest rates		
Lack of supervision by competent organizations		
Weakness in clarifying rules and regulations in the stock exchange market Building trust in shareholders	Government support for the capital market	Strategies and measures
Management and bank supervisor		
Improving the capital market		
Strengthening investment infrastructure		
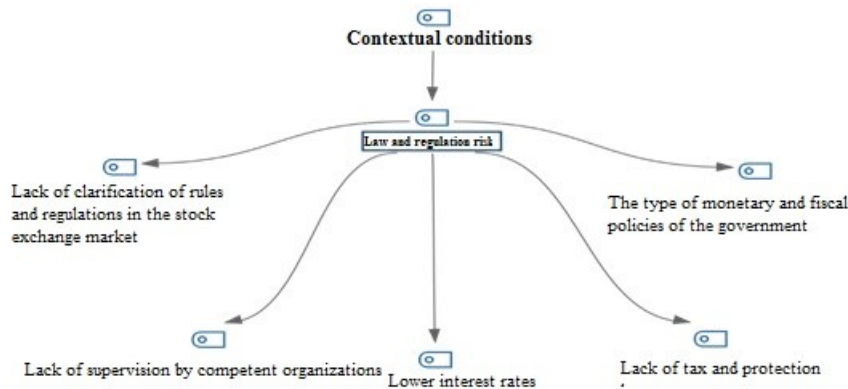
Figure 2: Output of MAXQDA software

11 Categories of causal conditions

Based on the results of the secondary coding of the research, the following indices were selected as categories of causal conditions in presenting the identification model of the risk aversion components of the shareholders: making a comparison between the stock exchange of different cities, having a tendency towards mass behavior, lack of specialized knowledge in making investment decisions, behavioral justifications, increase in shareholders' wealth, lack of financing sources, large financial contracts, liquidity forecast for future periods, reports on the weakness of liquidity management, arrears and claims, risk caused by human errors (innovation, software, and process), the risk relating to technical events and errors, management mistakes, deficiencies and shortcomings in the field of internal control, defects in information and transaction processing.

Table 5: Components of causal conditions

Sub-category	Main category	Dimensions
Making a comparison between the stock exchanges of different cities	Behavioral risk	Causal conditions
Having a tendency towards mass behavior		
Weakness of specialized knowledge in investment decision making		
Behavioral justifications		
Increase shareholder wealth		

MAXQDA-Categories of strategies and measures

The following figure shows the output of MAXQDA software:

Table 6: Categories of strategies and measures

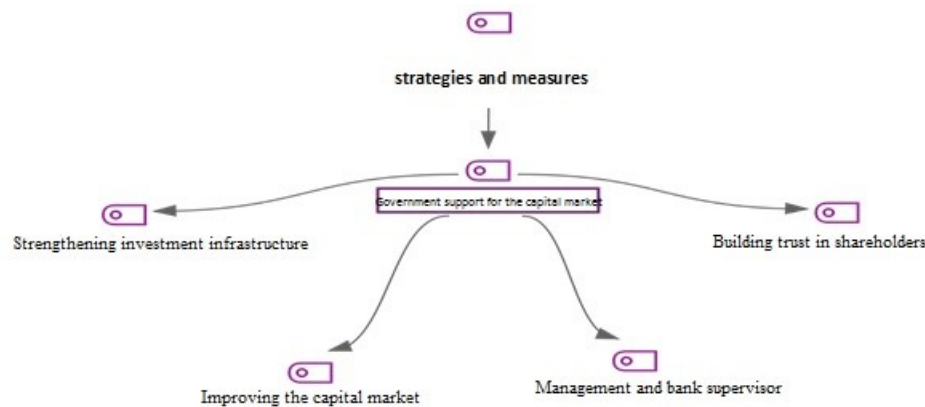| Sub-category	Main category	Dimensions
Building trust in shareholders	Government support for the capital market	Strategies and measures
Management and bank supervisor		
Improving the capital market		
Strengthening investment infrastructure		

Figure 3: Output of MAXQDA software

12 External model (measurement model)

External or measurement models are equivalent to confirmatory factor analysis in Lisrel or Emos software. This part of the model indicates that the items intended to measure each main factor have sufficient validity. In this connection, the T-Test test was used for independent groups and at a significant level of $\alpha = 0.05$, and the results of the analysis are shown in the following tables and explanations.

$$T = \frac{\bar{X} - \mu}{\frac{S}{\sqrt{N}}}$$

Table 7: Results of the external model (measurement model)

t	Factor loading	Items	Main categories
17.198	0.733	making a comparison between the stock exchange of different cities (Q06)	Behavioral risk
22.997	0.777	Having a tendency towards mass behavior (Q07)	
36.925	0.814	lack of specialized knowledge in making investment decision (Q08)	
10.942	0.673	Behavioral justifications (Q09)	
15.507	0.706	Increase in shareholders' wealth (Q10)	
15.122	0.702	Building trust in shareholders (Q26)	
21.706	0.811	Management and bank supervisor (Q27)	
17.78	0.747	Improving the capital market (Q28)	
6.577	0.512	Strengthening investment infrastructure (Q29)	Government support for the capital market

The values of observed factor loadings are greater than 0.5, and the t-statistic is greater than 1.96. Therefore, the external model (measurement) is approved.

13 Internal model (structural part)

The relationships between the main constructs of the research have been investigated in the structural part. Based on the observed path coefficient and the value of the t-statistic (bootstrapping), the relationships between the variables

can be interpreted as follows:

The effect coefficient of behavioral risk on individual and personality risk has been obtained as 0.369. In addition, the value of the t-statistic is 5.580. Therefore, at the 95% confidence interval, it can be claimed that Behavioral risk significantly positively affects individual and personality risk.

The impact factor of liquidity risk on individual and personality risk has been obtained as 0.349. Furthermore, the value of the t-statistic is 324.5. Thus, at the 95% confidence interval, liquidity risk significantly positively affects individual and personality risk.

The impact factor of operational risk on individual and personality risk has been obtained as 0.372. Furthermore, the value of the t-statistic is 5.994. Therefore, it can be claimed at the 95% confidence interval that operational risk has a significant positive effect on individual and personality risk.

The impact factor of individual and personality risk on the government support for the capital market has been obtained as 0.485. Also, the value of the t-statistic is 6.488. Therefore, at 95% confidence, we can claim that personal risk positively and significantly affects government support for the capital market.The impact factor of the law and regulation risk on the government support for the capital market has been obtained as 0.373. Besides, the value of the t-statistic is 5.098. As such, at 95% confidence, the law and regulation risk has a positive and significant effect on the government support for the capital market.The impact factor of the competitiveness risk on the government support for the capital market has been obtained as 0.244. In addition, the value of the t-statistic is 4.310. Thus, it can be claimed with 95% confidence that competitiveness risk has a positive and significant effect on government support for the capital market.

Table 8: The summary table of the results of the structural part of the model (relationships of model variables)

Result	t	impact factor	Relationship
Confirmed	5.580	0.369	Behavioral risk → individual and personality risk
Confirmed	5.324	0.349	Liquidity risk → individual and personality risk
Confirmed	5.994	0.372	Operational risk → individual and personality risk
Confirmed	6.488	0.485	Individual and personality risk → government support for the capital market
Confirmed	5.098	0.373	Law and regulation risk → government support for the capital market
Confirmed	4.310	0.244	Competitiveness risk → government support for the capital market

Predictive power of the model

Table 9: The predictive power of the model table

Q2	coefficient of determination	Main constructs
0.352	0.772	Government support for the capital market
0.332	0.712	Individual and personality risk

According to the results of Table 10, the coefficient of determination of the endogenous constructs of the research model is good. The coefficient of determination of mobile learning has been reported as 0.536, which is an acceptable value. This indicates that the model's variables have explained 54% of the changes in mobile learning. The index (Q2) is also positive in all cases, so the model has a good predictive ability.

Effect size

Table 10: Effect size of research constructs

Impact factor	Relationship
0.158	Behavioral risk → individual and personality risk
0.139	Liquidity risk → individual and personality risk
0.161	Operational risk → individual and personality risk
0.308	Individual and personality risk → government support for the capital market
0.162	Law and regulation risk → government support for the capital market
0.063	Competitiveness risk → government support for the capital market

The effect size of "Government support for the capital market on the financial performance of the company" and "Government support for the capital market on the financial performance of the company" has been estimated to be strong. In other cases, the effect size is moderate. The effect size of none of the variables is weak (less than 0.02).

14 Conclusion

Regarding the current research results, the following suggestions have been considered for the institutions, National Tax Administration, and stock exchange: It is suggested that managers give themselves a chance to choose all strategies. Considering all aspects, every manager should adopt a different strategy according to the requirements of the market, competitors, shareholders, and investors. In other words, company managers should benefit from all decision-making strategies. The momentum strategy based on technical analysis can not meet the needs of companies. Strategies such as reverse strategy, buy and hold, set forth., according to the market situation, should be among the strategic priorities of a manager. Choosing in the opposite direction of all investors or buying valuable shares and selling them at the appropriate time are among the other suggestions given to the managers so that they do not choose the acceleration strategy for precautionary reasons. In the next step, it is suggested that the lever of pressure, like the tournament effect, be removed from the managers, and the managers be assured that the only basis for judging them is not the end of the evaluation period. In other words, the adopted strategies, fundamental analyses, and road maps are the managers' performance evaluation priorities. This approach makes it possible to prevent sudden and imprudent decisions in addition to staged estimation of goals. In this case, the manager does not consider himself in the tournament's effect or analyze the historical process near the evaluation period. It is suggested that incentives be given to the managers during the period for innovative methods, research and development, and using different strategies and fundamental analysis. They should be supported during their management period so that they do not move toward adopting such behaviors at the end of the period. Finally, it is suggested that the managers of investment companies follow an approach that is far from the trend of other investors by increasing their efforts to increase the satisfaction of the shareholders to boost their portfolio return. To put it in another way, instead of postulating the technical analysis and absolute momentum strategy, the managers should use all strategies including buy-and-hold strategy and reverse strategy; review their policies; hold a special place for fundamental analysis in their decision-making; do not make the available sources of information the only basis for their decision making; get rid of the constraints of the tournament and the short-term time horizon, which are among the factors influencing mass behavior; do not consider a short time for their goals; do not take emotional decisions in order to cope up with the deadline for performance evaluation and investment portfolio under their management, diversify their strategies based on time and increase their leadership power against competitors though using long-term strategies and fundamental analysis upon research, development, and technology; and do not just surrender to the decision of other managers and investors and the historical chart of stocks. Following such behavior frees managers from mass behavior and blind following. They can take higher risks by reasonable risk acceptance, taking advantage of the mentioned strategies, resorting to fundamental analysis with the help of considered incentives, expanding information resources, and increasing efforts.

References

[1] M. Amini Rad, N. Mehrgan, A. Shahabadi, and D. Jafari Sarasht, *Modeling the explainers of risk aversion in Iran's economy*, Economet. Model. **7** (2022), 97–121.

[2] Gh. Asadi and M. Soleymani, *Investigating the effect of capital and liquidity measures on the probability of financial distress in banks*, Financ. Manag. Strategy **8** (2020), no. 3, 147–174.

[3] M. Ashouri Roudpashti, *The relationship between internal managers, risk aversion, and financial performance of companies listed in Tehran Stock Exchange*, Nat. Conf. Bus. Manag. (2018).

[4] N. Barberis and R. Thaler, *A survey of behavioral finance*, Handbook Econ. Finance **1** (2003), 1053–1128.

[5] P. Dahmen, *Organizational resilience as a key property of enterprise risk management in response to novel and severe crisis events*, Risk Manag. Insurance Rev. **26** (1988), no. 2, 203–245.

[6] M. Dahmene, A. Boughrara, and S. Slim, *Nonlinearity in stock returns: Do risk aversion, investor sentiment and, monetary policy shocks matter?*, Int. Rev. Econ. Finance **71** (2021), 676–699.

[7] K. Daniel, M. Grinblatt, S. Titman, and R. Wermers, *Measuring mutual fund performance with characteristic-based benchmarks*, J. Finance **52** (1997), no. 3, 1035–1058.

[8] A.L. de Ávila, E. Davel, and S.R. Elias, *Emotion in entrepreneurship education: Passion in Artistic entrepreneurship practice*, Entrepreneur. Educ. Pedag. **6** (2023), no. 3, 502–533.

[9] H. Fang, M. P. Keane, and D. Silverman, *Sources of advantageous selection: Evidence from the Medigap insurance market*, J. Politic. Econ. **116** (2008), no. 2, 303–350.

[10] K. Islamluiyan, H. Yazdan Panah, and Z. Khalilnejad, *Investigating the existence of monetary policy risk taking channel in Iran's banking system*, Econ. Model. Res. Spring **31** (2017), 7–40.

[11] J.G. March and Z. Shapira, *Managerial perspectives on risk and risk taking*, Manag. Sci. **33** (1987), no. 11, 1404–1418.

[12] K.D. Miller and W.-R. Chen, *Variable organizational risk preferences: Tests of the March-Shapira model*, Acad. Manag. J. **47** (2004), no. 1, 105–115.

[13] S. Rafiei Qara Shiran, K. Emami, and F. Ghaffari, *Identifying the influencing factors of monetary policies on the banking system*, Quart. J. Econ. Model. Azad Univer. **46** (2018), 1–24.

[14] H. Sharifi Renani, N. Honarvar, S. Daie Karimzadeh, and F. Amrollahi Pourshirazi, *Investigating the effects of monetary policy on gross domestic product through the lending channel of the banking system in Iran*, Econ. Model. J. **4** (2009), 27–48.

[15] M.Z. Tauni, H.X. Fang, and S. Yousaf, *The influence of investor personality traits on information acquisition and trading behavior: Evidence from Chinese futures exchange*, Person. Indiv. Differ. **87** (2015), 248–255.

[16] D. Watson, L.A. Clark, and A. Tellegen, *Development and validation of brief measures of positive and negative affect: The panas scales*, J. Person. Soc. Psycho. **54** (1988), no. 6, 1063.

[17] H. Zare, Z. Rasaie Sakha, and M. Zare, *Risk aversion and value at risk in macroeconomic assets portfolio: An approach of econophysics*, Deve. Capital J. Shahid Bahonar Univ. Tehran **5** (2019), 17–30.

[18] D. Zhou, *Risk aversion, informative noise trading, and long-lived information*, J. Econ. Model. **97** (2021), 247–254.