

Managerial Ability and Investors Protect: Test of Stimulating Decision-Making Functions by Devil's Advocate Theory

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Abstract

The efforts of the developers of capital market laws and regulations over the past years have been aimed at increasing the level of information transparency to create more symmetry between companies and shareholders so that they can be more attractive to investors to invest in the stock market. But given the interplay of individual characteristics of corporate decision-makers with the interests of shareholders and investors, it seems that focusing on behavioral functions in the area of promoting managerial ability can more effectively lead to increased protection of shareholder interests. The purpose of this study is to investigate the effect of management ability on the protection of investors based on the development of the theory of the devil's advocate. Therefore, the present study, using the structural equation modeling approach and partial least squares analysis (PLS), while fitting the model's desirability, examined the impact of management ability on protecting investors. In this study, in order to measure the in-field variable, ie protection of shareholders' interests, a researcher-made questionnaire was created through meta-analysis with the participation of 15 research experts. Then the criterion of Demirjan et al (2013) was used to measure managerial ability as an exogenous variable in partial least squares analysis. The researcher-made questionnaire was sent to 142 CEOs of companies listed on the Tehran Stock Exchange, and finally, after many follow-ups, 105 questionnaires were completed and returned and used as a final sample for analysis. After ensuring the acceptable fit of the measurement and structural models of the research, according to the theory of the devil's advocate, the results showed that the ability of management has a positive and significant effect on protecting the investors. Managerial ability, as one of the specialized decision-making capacities, puts the company on the path of effective interaction with stakeholders and provides the ground for investors to Protect in companies' priorities to gain their trust.

Keywords: Management Ability; Protection of investors; The Devil's Advocate Theory.

Introduction

The field of management in representative companies must be accompanied by special features and capabilities to have effective capacities to attract more investment to develop the plans and projects of the company, but also have the necessary capabilities to implement strategies, that the board of directors or the ownership of the company expect (Mehrani et al., 2020). However, these

characteristics have become known in the financial literature over the past few years with the beginning of research by Demerjian et al (2013) on the ability to manage. In fact, since capable managers have sufficient knowledge and their judgments and estimates are efficient, so they can use the resources of the organization in order to achieve the maximum goals of stakeholders properly (Nazaripour and Maghsoudpour, 2020).

In addition, the role of managerial ability can reduce the risk of poor performance and the risk of bankruptcy of the company. Managerial ability also has a confirmatory effect on the value of the company, which medians that regulatory bodies generally focus on companies without capable managers due to limited facilities and time. Therefore, the managerial ability is expected to reduce the likelihood of more detailed investigations and punishment by regulatory agencies (Chemmanur & Paeglis, 2005). On the other hand, according to signaling theory, capable managers not only do not want to obscure and complicate their desired performance but also publish more readable and comprehensible financial reports in order to inform investors and financial analysts of their desired performance and capabilities (Kharouf et al 2020; Hasan, 2017).

In a way, companies with capable managers are less likely than other companies to obscure the performance of their reality (Andreou et al., 2017) because they value preservation for stakeholders in the company's performance path is important and respected. But it is always assumed that do managers tend to expose their poor performance in decision making while exposing their positive performance points? Ambiguous management theory states that it is not far-fetched to assume that managers tend to communicate information to stakeholders in the event of poor performance while complicating the information analysis process, they delay reactions to poor performance of managers (Ajina et al., 2015). Thus, lower-performing managers are often too weak to protect the interests of shareholders through the vague and complex disclosure of information. In fact, stakeholders, including investors, shareholders and analysts, place great value on financial quality, transparency and reliability.

Under these circumstances, they receive management inability as a negative signal and with the occurrence of mass behaviors, they may face difficulties in attracting liquidity to advance the developed strategies (Bodaghi et al., 2020). In fact, the lack of managerial ability as one of the effective factors in reducing the protection of investors will reduce the trust of external stakeholders in the company, and pave the way for increased risk and asymmetry in information, in which case the competitive credibility of the

company is also questioned (Foroghi & Sakiani, 2016). Understanding the importance of managerial ability in protecting shareholders' interests, this study seeks to answer the question of how it can develop the level of managerial ability to protect shareholders' interests through regulatory and operational strategies, because, as mentioned, the protection of investors is the axis of effective development of companies' interaction with investors and shareholders, which can become a company's social brand against stakeholders in terms of disclosing the company's operating realities (Mirzayee et al., 2020). The theory of the devil's advocate is considered one of the emerging theories in the field of organizational behavior that is used by upstream monitoring units in companies to stimulate the interactive actions of managers as decision-makers at the top of an organizational pyramid.

According to this theory, the devil's advocate is an individual or a group of individuals who constantly make specific arguments about the decisions made. And by taking positions that do not necessarily conform to existing norms, they seek to motivate them to make more effective decisions in the short term and to develop managerial capabilities in the long term (Kreilkamp et al., 2020). In other words, the continuation of this process leads to the formation of a cycle in which managerial weaknesses are highlighted, and managers always try to turn these challenges into an opportunity to develop their managerial capabilities. Using this positive conflict-based technique can enhance the level of protection of investors by reducing the risks associated with doing business (London, 2010). Since the board of directors is responsible for selecting and supervising the actions of the CEOs of the companies, using this technique will be able to direct the management functions toward the protection of the investors. In other words, since the board of directors discusses the company's major decisions with the directors, the use of this technique can, while creating conflict, help the managers to increase their managerial capabilities in order to adhere to the protection of investors. Therefore, relying on the issues raised, the importance of this research in Iran can be discussed from both research and applied perspectives.

From a research perspective, it should be noted that most of the research conducted in the field of managerial ability, such as the research of Yan et al (2021); Bradley and Sun (2021); Chen and Chen (2020); Rashidi (2020) and Jabbarzadeh Kangarluie and Radi (2019), it has sought to quantitatively examine the relationship between this variable and other variables in the financial field, and less research has sought to link the relationship between quantitative and qualitative characteristics to the effect of managerial ability on protecting shareholders' interests to develop theories related to behavioral

sciences in accounting from a practical point of view, it should be noted that in Iran, over time, along with improving the level of operational transparency, many efforts have been made to improve the performance of the company and managers against stakeholders, including the Corporate Governance Law of 2007; Publication of internal control report in 2012; Establishment of an audit committee in 2011 and, most importantly, the ranking of companies in terms of the quality of disclosure in 2014.

But despite these regulatory and institutional changes, there are still frequent reports of financial misconduct; Fraud and corruption in capital market companies bring to mind the lack of oversight in protecting the investors. A point that may require focusing on the structural and managerial dimension of companies, in order to enhance the level of operational transparency by encouraging managers to move in the direction of adhering to the protection of the interests of shareholders and investors. Therefore, the purpose of this study is to investigate the ability to manage and protect the interests of shareholders based on the development of the theory of devil's advocate in the Iranian capital market.

Literature Review

In this section, in line with the research variables, an attempt is made to present the theories related to them and then to develop the research hypothesis in order to strengthen the theoretical support for testing the research hypothesis.

Managerial Ability

For many years, business research has focused on the abilities of managers and how well-qualified individuals can improve the quality of companies' decisions and operations in an economic market and have favorable economic consequences for shareholders (Gan and Park, 2018). A number of past studies have believed that managers' past experiences and assessing the level of their past performance, along with receiving their rewards, can be considered appropriate criteria for assessing managerial competence (Krishnan and Wang, 2015). Theoretical arguments in line with empirical evidence present a set of factors as a background for managerial ability, which can play a decisive role in creating a positive relationship between the individual characteristics of the manager and the company's performance (Baik et al 2011; Banker et al 2013; Carter et al 2010; Chang et al 2010; Rajgopal et al 2006). The three factors underlying the framework are the common denominator of the above research in terms of managerial ability.



Figure 1. Adaptation framework of the background of managerial ability

For example, using firm performance and rewards as an indicator of managerial ability, Chang et al (2010) showed that the stock market reacts negatively to the firm's past performance and managerial salary, and the firm's good performance in the past and payments. The above leads to a better job market for the manager. Reputation is another indicator that can be a good measure of a manager's ability and competence (Baik et al., 2011; Francis et al., 2008; Milbourn, 2003). The reputation of the manager not only in the field of performance but also in terms of professional knowledge such as research and scientific activities can be a criterion for better understanding the performance of managers. For example, Milbourn (2003) found that there is a positive relationship between CEO reputation and stock-based payments through the presentation of a model and experimental tests. Capable managers provide not only information but also high-quality information to the market. Proportion is another important part of the background of managerial ability, which refers to the proportionality of individual characteristics with managerial characteristics.

The point is that Setayesh and Karimipoor (2020) considered the existence of proportionality between the individual characteristics of the manager and specialized areas as a basis for improving the profit-sharing policy. Goodman et al (2013) cited the quality of reported earnings forecasts as a consequence of managerial competence. The results of their research showed that there is a positive relationship between managerial ability and the quality of investment decisions. While the above indicators or other indicators used to identify the characteristics of managerial ability are usually selected according to the objectives of the research, the question remains whether these measurements are comprehensive or not, whether they fully examine the specific effects of management? Is the evaluation of the specific effects of management

influenced by the specific effects of the company or not? In response to these questions, Demerjian et al (2012) developed a method for a more comprehensive calculation of management capability, by dividing total effectiveness into firm-level effectiveness and manager-level effectiveness. Measuring the ability of managers using the Demerjian model shows the efficiency of managers compared to the efficiency of managers in other industries that convert resources into income. Demerjian et al (2012) confirmed the validity of this measurement method and showed that this method leads to better measurement of managers' competency components. The method presented by Demerjian et al In measuring the ability of managers (2012) has been used in other research.

For example, Demerjian et al (2013) showed that there is a positive relationship between earnings quality and managerial competence using the measurement method developed by Demerjian. Baik et al (2011), using the same measurement method, found that the results are similar to the three methods of measuring managerial competence. Krishnan and Wang acknowledged that audit costs and the likelihood of issuance would reduce managerial capacity. Finally, Gan and Park (2018) showed that equity-based rewards significantly increase the ability of the manager.

Investors Protect

Many studies have been conducted on the positive impact of investor protection on companies' financial performance. Proper legal protection of investors increases their desire to buy more financial assets such as capital and debt because most of a company's profits flow to them instead of being confiscated by people inside the company (Zivari, Kamran and Fakhari, 2019). Instead, protecting the rights of shareholders and reducing the abuses of individuals inside the company facilitates the process of financial investment of companies outside the company and thus the development of financial markets (Ebrahimi et al., 2017). Investor protection is a vital issue, as abuse of minority shareholders by major shareholders is common in many countries. The extent of abuse can take different forms due to the weakness of corporate governance, such as the sale of assets at lower prices to major shareholders or the appointment of relatives and overpayments to them by order of major shareholders (Altaf and Shah, 2018). The Organization for Economic Co-operation and Development (OECD) has defined shareholder rights as a set of seven components (Haidar, 2009):

The basic rights of investors, the most important of which include the transfer of shares, receiving relevant and important information about the

company on a regular and timely basis, attending and voting in general meetings, appointing and dismissing board members, and sharing in the company's profits.

- The right to participate in decisions concerning fundamental changes in companies, including amendments to the articles of association or other similar governing documents, approval of the issuance of additional shares, and abnormal exchanges involving the transfer of all or most of the assets, leading to the sale (transfer) of the company.
- The right to participate effectively and to vote in the general assembly, the most important of which is to have sufficient and timely information about the time, place and agenda of the general assembly, to provide a good opportunity for investors to ask questions and requests from the board and effective participation of investors. Facilitate key corporate governance decisions, such as the nomination and election of board members.

Disclosure of capital structures that allow certain investors to achieve disproportionate control over ownership.

Efficiency and transparency, and governing the performance of major transactions (control blocks) of companies' shares on the stock exchange

Facilitate the conditions for exercising the property rights of shareholders, including institutional investors

Possibility of consulting shareholders on issues related to their basic shareholding rights (Jalili and Masoumpour, 2018).

Strategies for Investors Protect by Leading Countries and Iran

In its 2015 report, the World Bank Business Project, in addition to the indicators previously used to assess the status of laws and regulations in the field of micro-investors protection, provides tools for assessing aspects of corporate governance. It is important to examine the status of micro-investors support (World Bank, 2015). Previously, the micro-shareholder protection index, in line with changes in the World Bank in countries with high levels of shareholder protection, had 18 components that measured the quality of the rules. With the new changes, 20 more components were added to the previous components, which measure the strength of investors' rights by three indicators.

- The extent of the Shareholder Rights Index

The extent of Ownership and Control Index

The extent of the Corporate Transparency Index

These three indicators together form another general indicator called the "extend of shareholder governance index". In addition, another component on the distribution of legal costs related to shareholder litigation was added to the index of ease of judicial action against directors. Iran's rank in the index of small shareholder support has decreased by 11 steps compared to 2014 and in 2015 it has gained 154 ranks. This index is measured based on three criteria:

Range of Conflict of Interest Regulations: Iran has a score of 4 out of 10 in this area.

- Range of shareholder rule: Iran's score in this index has been 4.3 out of 10.

Power of supporting small shareholders: Iran's score in this sub-index is 2.2 out of 10.

In general, Iran's score in the micro-shareholder support index is 41.67 out of 100 and the situation is not considered good. Table (1) shows the status of the micro-shareholder support index in 2015.

Table 1. The situation of Iran in the shareholder protection index

Index	2014	Review 2014	2015	Mean of other developed countries
Rank	147	143	154	115
Points the distance to the leading economy	-	41.67	41.67	46.71
Extensive conflict of interest regulations	-	4	4	4.8
Extend shareholder sovereignty	-	4.3	4.3	4.6
The power to protect the rights of shareholders	-	4.2	4.2	4.7

Based on the current laws and regulations of the country, the accuracy of the concessions allocated to the Islamic Republic of Iran in the 2015 World Bank Doing Business report is evaluated. In the first and second columns of the table, the criteria of the World Bank for gaining countries 'scores in support of shareholders' rights as well as the scores stated in the World Bank report for Iran are presented based on these criteria. The third column of the table shows the real score of the country in the framework of the World Bank methodology along with providing legal reasons and documents in response to the World Bank questions and the fourth column contains suggestions appropriate to the country's legal system to improve Iran's ranking (Porseyed & Sohrabi, 2016).

Theory of the Devil's Advocate to Examine the Managerial Ability and Investors Protect

Interests in the capital market are always conflicted due to lack of transparency and specific oversight, because corporate governors, according to agency theory, may consider their own interests more important than the interests of others, and therefore shareholders' rights as an external stakeholders due to performance. Opportunism and utilitarianism should be wasted on them (Gholmohammadi et al, 2016). Protecting the investors, although the most basic, the main, which should be considered in the theory of representation, but always the managers of companies in various ways, while ignoring the interests of shareholders, seek to achieve the demands and interests of a minority of those in power, CEOs help managers in this way (Parisi et al., 2014).

Therefore, lack of transparency and lack of comprehensive oversight is considered to be the basis for focusing on the theory of protection of shareholders' rights due to the priority of the personal interests of those in power over the interests of the majority of external shareholders, it has been of great importance, especially in recent years due to the increasing level of financial fraud and violations (Komijani & Habibsoheily, 2012). The efficient contracting theory is one of the theoretical approaches to the presupposition of agency theory, which seeks to by injecting individual incentives into managers based on rewards, strengthen the level of individual capabilities and thereby increase the protection of investors. This theory is considered as a part of governance oversight processes that if implemented properly, while having effective motivation in managers, one can expect the level of managerial capabilities to be implemented. But this may not be the whole story, because management ability based on theories of organizational behavior is not necessarily effective by focusing solely on the motivations of the material sector (Suzuki, 2019).

For example, cognitive appraisal theory, which is based on the functions of the field of motivation in organizational behavior, is a good example of the existence of spiritual motivation in the individual to improve the level of managerial abilities. This theory not only does not consider the existence of external rewards as motivating but also states that it can cause individual frustration in the functional field. Therefore, cognitive appraisal theory can strengthen individual actions based on the development of two dimensions of individual awareness level of controlling their behavior and informing the individual of their competency level and cause him to distance himself from

personal interests in order to achieve greater success in his profession, and this effort is likely to be accompanied by the satisfaction of stakeholders (Valeau & Paillé, 2019). Therefore, corporate governance, as an upstream part of the managers of corporate agencies, by creating competition or admiration and offering rewards to the managers under their supervision, In the first step, strengthen the manager's personal awareness in controlling behavior and emotions, and then, by encouraging the manager's individual competencies, improve the level of his abilities to have the desired performance (Aghaei and Hassani, 2014). In this situation, the capable manager will be able to protect the interests of shareholders, while consolidating his managerial position based on efficiency characteristics, to work towards the active development of future returns of the company and shareholders in parallel.

But the critique of cognitive appraisal theory is that it ignores a person's level of interest in the profession and position he holds. Cognitive appraisal theory is effective when a person accepts managerial responsibilities out of interest because otherwise focusing on spiritual motivation can not necessarily increase the level of individual abilities (Junker et al., 2020). Consistent with the theory of the devil's advocate, as a technique of motivational functions in the individual, the pillars of corporate governance can increase decision-making capabilities in the management of the company based on interpersonal and intra-team discussions (Schwenk, 1984).

A function that, if properly considered, can contribute more than any other stimulus to the dynamics of management capabilities, moving towards transparency and thus protecting the investors. Because as studies similar to Martins (2019); Hermalin and Weisbach (2017); Ge and Kim (2014) and Badavar Nahandi and Heshmat (2018) argued that managerial ability is a factor in strengthening the protection of shareholders' interests. Devil advocate Theory is considered a stimulus technique in individual and team functional functions. By stating negative reasons for decision-making by others, it seeks to create more constructive solutions and develop managerial capabilities. As the board discusses the company's macro-decisions with executives, the presence of this technique can, as a positive conflict, motivate management functions and help increase managerial competencies in decision-making to protect investors. Martins (2019), on the other hand, surveyed more than 6,000 companies in 29 countries between 2010 and 2013 to examine investor's shareholder protection and managerial entrenchment. The results showed that with increasing managerial entrenchment, the level of protection of investors decreases. This researcher stated that the reason for entrenchment is the lack of

effective supervision and managerial incompetence in advancing the goals and expectations of stakeholders. On the other hand, Badavar Nahandi and Heshmat (2018) by examining 124 companies listed on the Tehran Stock Exchange from the period 2006-to 2015, found that the ability to manage the value created for shareholders is positively related.

In other words, in companies with a higher corporate governance rating, the managerial ability is more focused on increasing shareholder value. Therefore, reliance on theoretical and empirical backgrounds shows that the existence of strong incentives such as the theory of the devil's advocate in the development of managerial capabilities can be an important factor in protecting investors. Therefore, the research hypothesis is presented in the following order:

- **Research Hypothesis:** Management ability has an effect on protecting the investors of Iranian companies in the capital market.

Research Methodology

The present study is applied in terms of research purpose and descriptive-correlational research in terms of data collection. Also, in terms of the reasoning method, it is deductive-inductive and due to the study of data related to a specific time period, the data analysis method is cross-sectional and based on the path analysis method. Research data from compact discs of statistical and video archives of Tehran Stock Exchange Organization, Tehran Stock Exchange website, new entry software and data related to the protection of shareholders' interests through meta-synthesis, Delphi analysis with the participation of 15 accounting experts Finally, a researcher-made questionnaire was sent to the sample companies for data collection. The statistical population studied in this study includes all companies listed on the Tehran Stock Exchange in 2020. Selected examples of research are companies that meet the following conditions:

1. Companies that are members of the stock exchange from the beginning to the end of 2020.
2. In order to increase the comparability, their fiscal year should end in March.
3. They have not changed their activity or changed the financial year during the mentioned year.
4. They are not part of investment and financial intermediation companies (investment companies were not included in the statistical community due to the difference in the nature of their activity with other companies).

After applying the above restrictions, 142 companies listed on the Tehran Stock Exchange were selected as a research sample and the questionnaire was sent to the managers of these companies. Finally, after many follow-ups, 105 questionnaires were completed and returned, and were used as a final sample for analysis. The final analysis of the collected data was performed using the structural equation modeling method and the partial least squares analysis method using PLS software. The steps of modeling structural equations are as follows: first, model fit (including measurement model fit, structural model fit, and general model fit) and then test the research hypotheses.

The theoretical framework of research

According to the theoretical foundations of the research, the conceptual model framework of the present study based on the structural equation modeling approach is drawn in Figure (2):

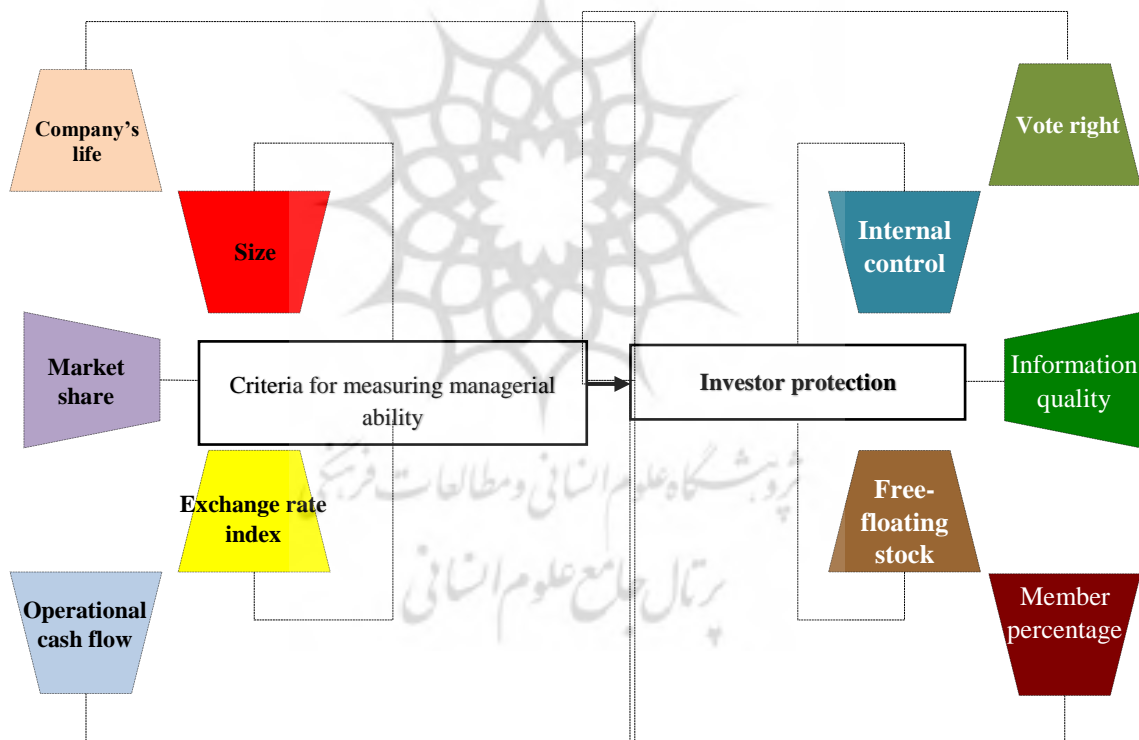


Figure 2. Theoretical framework of the research

Based on the above theoretical framework, in this section, the operational definition of research variables is defined.

Independent variable

Ability to manage

In order to measure the management ability, the model presented by Demerjian et al (2013) will be used. In this model, by measuring the efficiency of the company and then entering it in multivariate linear regression as a dependent variable and controlling the intrinsic characteristics of the company, the ability of management is calculated. Data envelopment analysis (DEA) is used to measure company performance. The data envelopment analysis Model is a statistical model that is used to measure system performance using input and output data.

$$\max_{it} \theta = \frac{\text{Sales}_{it}}{(\delta_1 \text{CGS}_{it} + \delta_2 \text{SG\&A}_{it} + \delta_3 \text{PPE}_{it} + \delta_4 \text{Intan}_{it})} \quad (1)$$

Considering the cost of goods sold (CGS), general administrative expenses and sales (SG&A), tangible fixed assets (PPE), and intangible assets (Intan) as input variables and sales as output variables will be measured.

In this model, a specific coefficient (δ) is considered for each of the input variables. Because the effect of all input variables on output (sales) is not the same. The calculated value for the efficiency of the company is in the range of zero to 1. Companies with an efficiency score of one are highly efficient companies, and companies with an efficiency score of less than one are below the efficiency threshold. And they must reach the efficiency limit by reducing costs or increasing revenues.

The purpose of calculating the efficiency of the company is to measure the ability of management, and since the intrinsic characteristics of the company are also involved in performance-related calculations, it is not possible to measure the ability of management correctly. Because affected by these properties, more or less than the actual value is calculated. To control the effect of intrinsic characteristics of the company in its model, Demerjian et al (2012) have divided the company's efficiency into two separate parts, namely

efficiency based on intrinsic characteristics of the company and management ability. They did this by controlling the five intrinsic characteristics of the company (company size, company market share, free cash flow, stock exchange life, and foreign exchange sales). Each of these variables, as an inherent characteristic of the company, can help management to make better decisions or act in the opposite direction and limit management ability. In the following model presented by Demerjian et al (2012), these features are controlled:

$$\text{Firm Efficiency}_{it} = \alpha_0 + a_1 \text{Size}_{it} + \alpha_2 \text{Market Share}_{it} + \alpha_3 \text{Foreign Currency Indicator}_{it} + \alpha_4 \text{AGE}_{it} + a_5 \text{Operating Cash Flow Indicator}_{it} + \varepsilon_{it} \quad (2)$$

Firm Efficiency_{it} Company efficiency i at time t

Size_{it} Company size i at time t

Market Share_{it} Company's market share at time t (calculated from the ratio of company sales to total industry sales).

Operating Cash Flow Indicator_{it} Company's operating cash flow index i at time t (0 and 1 are used to calculate this variable so that if the operating cash flow is positive, the number 1 is otherwise 0).

AGE_{it} Company life i at time t

Foreign Currency Indicator_{it} Foreign currency sales index of the company i at time t (0 and 1 are used to calculate this variable, so that if the company exports or sells foreign currency, the number 1 is otherwise considered the number 0).

E_{it} residual regression as management ability

The dependent variable

Investor protection

In this study, considering that there is no tool to measure the endogenous (dependent) variable of this research at the level of the capital market, meta-synthesis is used to compile a questionnaire. This analysis provides the basis

for a process to formulate effective components in line with the protection of the investors. To this end, and relying on the process of meta-synthesis and Delphi analysis, this study seeks to develop a tool to measure the protection of investors at the capital market level. Based on this, first, similar research related to the research subject is extracted through the following databases and research references. A number of valid and reliable researches in the period 2018 to 2021 were identified according to the protocol and the process of overestimation evaluation. In other words, to find similar articles and research and using the above research bases and references, the researches related to the research goal were identified.

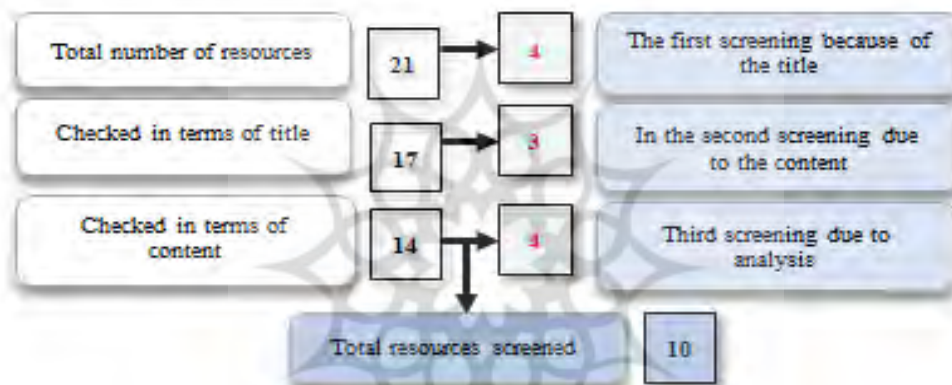


Figure 3. Research screening analysis process tailored to the purpose of the research

Based on research screening in three aspects of title, content and analysis, it was determined that 10 pieces of research can be used as a basis for evaluation to determine the components of protection of investors. After this stage, in the next step, the topics are categorized and separated in the form of components to protect the interests of capital market shareholders. According to this method, the first 10 types of research are approved through 10 criteria of critical evaluation method including research objectives, the logic of research method, research design, sampling, data collection, reflectivity, the accuracy of analysis, theoretical and transparent expression of findings and research value with the help of 15 research experts, Are fitted to achieve a more coherent understanding of the nature of the research. Table (2) evaluates how to evaluate the components based on a 50-point index in the form of scores from 1 to 5 based on the 10 criteria described.

Table 2. the process of critical analysis of screened research

Evaluation criteria	Research purpose	The logic of the research method	Research plan	Sampling	Collecting data	Reflexivity	Ethical considerations	Accuracy of analysis	Theoretical and clear expression	Research value	Total	
Approved researches	Akhtar et al (2021)	2	3	2	3	2	2	3	3	3	3	26
	Huang et al (2020)	3	5	4	3	3	3	4	5	4	4	38
	Ortiz et al (2021)	3	4	4	4	3	4	4	4	3	3	36
	Brada et al (2020)	4	3	4	5	4	5	4	4	3	4	40
	Su and Alexiou (2019)	3	4	4	4	3	4	4	4	3	4	37
	Altaf and Shah (2018)	1	2	1	2	2	3	2	3	2	2	20
	Garcia-Sanchez et al (2018)	4	2	3	2	3	2	2	2	2	3	24
	Mirzayee et al (2020)	4	4	4	4	4	3	3	3	4	4	36
	Ghelich (2020)	2	2	2	1	2	2	2	3	3	3	23
	Shafizadeh et al (2018)	5	3	4	4	3	4	4	3	4	4	37

The scores presented based on the mode index showed that four studies, considering that they received less than 30 out of 50 points, and according to the guidelines of the adequacy score of this analysis, the researches that have a score of 30 and above are approved, were eliminated and For this reason, they were excluded from the investigation. Next, the components of protection of shareholders' interests are extracted. Accordingly, the following scoring method is used to determine the mentioned components. Based on this method, all sub-criteria extracted from the text of approved articles are written in the column of the table and then in the row of each table, the names of the approved research researchers are given. Based on each researcher's use of the sub-criteria written in the table column, the symbol "☑" is inserted, then the scores of each ☑ are added together in the sub-criteria column, and the scores above the mean of the research are selected as research components.

Table 3. the process of determining the main components of research

Research status	Researchers	Concentration of ownership	Audit Committee Dynamics	Effectiveness of internal control	Board composition	Shareholders' voting rights	Independence of the board	Quality of accounting information	Free-floating stock	Percentage of non-executive board members
International researches	Huang et al (2020)	-	-	☑	✓	-	-	☑	☑	☑
	Ortiz et al (2021)	-	✓	-	-	☑	✓	-	☑	☑
	Brada et al (2020)	✓	-	☑	✓	☑	-	☑	☑	-
	Su and Alexiou (2019)	-	-	☑	-	☑	-	-	☑	☑
Internal	Mirzayee et al (2020)	✓	-	☑	-	☑	-	☑	-	-
	Shafizadeh et al (2018)	-	-	-	-	-	✓	☑	-	☑
Total		222	1	4	2	4	2	4	4	4

Based on this analysis, it was found that five components have the highest frequency and therefore in this study are examined as criteria for protecting the interests of shareholders. In this section, after analyzing the theoretical foundations of the approved research, each of the identified components has been defined according to Table (4).

Table 4. Components of protection of investors

Components	Symbol	Definitions
Effectiveness of internal control	E1	Based on covering their weaknesses, companies seek to increase the effectiveness of their internal controls so that they can better align their financial performance with auditing standards. This issue can help increase the level of confidence and trust of shareholders in the company's performance (Huang et al, 2020).
Shareholders' voting rights	E2	If companies consult shareholders' representatives in public decisions, this issue can increase the level of company interaction with shareholders and while reducing agency costs, they can also declare their commitment to conserving shareholders' resources (Setayesh and Ebrahimi, 2014).
Quality of accounting information	E3	The higher the accounting information based on the disclosure of the quality of accruals, the higher the level of protection of shareholders' rights can be inferred because the company seeks to increase shareholder decision-making power by reducing information asymmetry (Su and Alexiou, 2019).
Free-floating stock	E4	The higher the free float in companies, the more this can be inferred as the ability of the stock to be traded in the markets, indicating that the holders of those shares are not seeking ownership and that a large percentage of the stock is held by shareholders (Huang et al, 2020).
Percentage of non-executive board members	E5	The higher the percentage of non-executive board members, the wider the scope of oversight of the CEO's performance, and the stronger the protection of institutional shareholder rights (Brada et al, 2020).

Based on this analysis, 5 components of internal control effectiveness were identified; Shareholders' voting rights; quality of accounting information; free-floating stocks and the percentage of non-executive board members have the highest frequency and therefore in this study are examined as criteria for measuring the protection of shareholders' interests.

Table 5. Components of measuring the protection of shareholders' interests

Variable	Components	7	6	5	4	3	2	1
Protection of investors	Effectiveness of internal control							
	Shareholders' voting rights							
	Quality of accounting information							
	Free-floating stock							
	Percentage of non-executive board members							

Delphi analysis was then used to reach the theoretical saturation point to ensure the identified components. For this purpose, these indicators were provided to experts for the survey in the form of a checklist of 7 options, in which table (6) shows the results of the Delphi analysis.

Table 6. Delphi analysis for the reliability of the components of measuring the protection of shareholders'

Variable	Components	The first round of Delphi		The second round of Delphi		Confirm	Delete	Result
		Mean	Coefficient of agreement	Mean	Coefficient of agreement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Protection of investors	Effectiveness of internal control	5.20	0.82	6	0.90	<input checked="" type="checkbox"/>	-	Confirm
	Shareholders' voting rights	5	0.70	5.10	0.75	<input checked="" type="checkbox"/>	-	Confirm
	Quality of accounting information	5	0.55	6	0.90	<input checked="" type="checkbox"/>	-	Confirm
	Free-floating stock	5.10	0.75	5.20	0.80	<input checked="" type="checkbox"/>	-	Confirm
	Percentage of non-executive board members	5.20	0.82	5.40	0.85	<input checked="" type="checkbox"/>	-	Confirm

After the final approval of these statements, in order to assess the protection of shareholders' interests, the following questionnaire is determined according to the research components in the following order.

Table 7. Questionnaire for protection of shareholders' interests

Variable	Components	5	4	3	2	1
Protecting investors	To what extent do you consider the effectiveness of internal control to be an important factor in assessing the protection of investors?					
	Does shareholder suffrage help increase the level of protection of investors?					
	To what extent does the quality of accounting information protect the investors?					
	Does free float play an important role in increasing the level of protection of investors?					
	Can the percentage of non-executive board members help further protect the investors?					

As can be seen, this questionnaire consists of 5 questions. The scoring of the questionnaire was based on a five-point Likert scale (strongly agree = 5, agree = 4, have no opinion = 3, disagree = 2 and strongly disagree = 1). Thus, the ratio of the total score of each questionnaire to the total achievable score (25) is considered an indicator of protection of the investors of capital market companies.

Research Findings

Demographic Research

In order to get acquainted with the characteristics of the statistical sample, demographic information of the research is presented in Table (8).

Table 8. Demographic Research

Variable	Qualitative part			Quantitative part		
	Percentage	Number	Percentage	Criteria	Number	Percentage
Gender	Man	11	73.34%	Man	98	93.34%
	Woman	4	26.66%	Woman	7	6.66%
Total		15	100 %	Total	105	100%
Age	Less than 40 years	3	2%	Less than 40 years	33	31.42%
	Between 40 and 50 years	8	53.34%	Between 40 and 50 years	45	42.85%
	More than 50 years	4	44.66%	More than 50 years	27	25.73%
Total		15	100%	Total	105	100%
Work Experience	Less than 10 years	5	33.34%	Less than 20 years	55	52.38%
	More than 10 years	10	66.66%	More than 20 years	50	47.62%
Total		15	100%	Total	105	100%

As the results of demographic statistics show, out of 15 research experts, 11 men and 4 women participated. It was also found that 2% of the participants in the quality sector were less than 40 years old and the highest frequency was related to the range of 40 to 50 years, which shows 53.34% of the age of the participants. Finally, it was found that 33.34% of the participants had less than 10 years of work experience and 66.66% of them had more than 10 years of work experience. Demographic statistics in a small section conducted with the participation of 105 directors of the Tehran Stock Exchange showed that out of a total of 105 directors of the Tehran Stock Exchange in different layers of the companies surveyed, 93.34% of participants were male and 6.66% were female. It was also found that the highest frequency was related to age equal to 42.85% for the period of 40 to 50 years. Finally, 52.38% of the participants had under 20 years of experience and 47.62% of the participants had more than 20 years of experience.

Descriptive Statistics

Table (9) shows the descriptive statistics of the tested variables, which include some central indicators and dispersion. As can be seen in this table, the mean and median values related to the protection of stakeholders' interests at the capital market level are 2.664 and 3, respectively, which indicates the impact of the low level of protection of shareholders' interests. Also, the mean and median managerial ability is 0.0002 and -0.001. On the other hand, it was found that the mean quality of accounting information is equal to 2.904, which medians that the quality of accounting information as one of the criteria for protecting the interests of shareholders is a more effective factor in the Iranian capital market. On the other hand, the highest rate of standard deviation is related to the free float stock variable (1.579). This result indicates that the level of dispersion in terms of the effectiveness of this component in increasing the protection of the interests of stakeholders in the Iranian capital market is higher than other criteria similar to this variable.

Table 9. Descriptive statistics related to research variables

	Variable symbol	Mean	Median	Minimum	Maximum	Standard deviation
Protecting investors	SP	2.664	3	1	5	1.412
Effectiveness of internal control	ICE	2.504	3	1	5	1.408
Shareholders' voting rights	SVR	2.523	2	1	5	1.468
Quality of accounting information	AIQ	2.904	3	1	5	1.149
Free-floating stock	FFS	2.790	3	1	5	1.579
Percentage of non-executive board members	Non-BM	2.6	3	1	5	1.497
Managerial ability	MA	0.0002	-0.001	-0.159	0.276	0.066

Inferential analysis

In the present study, Cronbach's alpha method, which is a kind of internal consistency, was used to assess the reliability of the questionnaires. Typically, the range of Cronbach's alpha coefficient ranges from zero (mediating no positive correlation) to one (mediating complete correlation), and the closer the number is to one, the greater the social pressure anomie questionnaire. As shown in Table (10), an alpha value above 0.7 for the endogenous variable questionnaire, namely social stress anomie, indicates the appropriate reliability used in this study.

Table 10. Cronbach's alpha coefficient

Endogenous variables	Cronbach's alpha coefficients
Effectiveness of internal control	1.00
Shareholders' voting rights	1.00
Quality of accounting information	1.00
Free-floating stock	1.00
Percentage of non-executive board members	1.00
Protecting investors	0.94

Fitting of measurement models

Index reliability, convergent validity and divergent validity were used to measure the fit of the measurement model. They also introduced three criteria to evaluate the validity of structures, which include the validity of each item, the combined reliability (CR) of each structure, and the mean-variance extracted (AVE). Values greater than 0.4 for factor load coefficients, greater than 0.5 for mean-variance extracted (AVE), and greater than 0.7 for combined reliability (CR) indicate appropriate fit of measurement models. The results of these indicators are shown in Table (11).

Table 11. Descriptive Statistics and Results of Confirmatory Factor Analysis (CFA)

Concealed variable	Obvious variables	Mean	Standard deviation	Operating load (FL)	AVE	C. R
Protecting investors	ICE	2.66	1.41	0.91	0.86	0.97
	SVR			0.93		
	AIQ			0.95		
	FFS			0.94		
	Non-BM			0.91		
Managerial ability	ADA1	0.40	0.46	0.85	1.00	1.00

After performing the confirmatory factor analysis, the results were shown in Table (11). It was found that all items have a factor load above the criterion of 0.4, the mean-variance extracted above 0.7 and the composite reliability above 0.5, which indicates the appropriateness of this criterion and the appropriate reliability of the measurement models. The acceptable divergence validity of a model indicates that one structure in the model has more interaction with its characteristics than other structures. Divergent validity is at an acceptable level when the AVE for each structure is greater than the common variance between that structure and the other structures in the model. This is checked by a matrix in which the cells of this matrix contain the values of the correlation coefficients between the structures and the square root of the AVE values for each structure. Based on the results of the correlations and the square root of which was placed on the diameter of Table (12), the divergent validity of the model at the structural level can be deduced from the Fornell-Larcker criterion.

Table 12. Correlations between latent variables and AVE values

	Effectiveness of internal control	Shareholders' voting rights	Quality of accounting information	Free float stock	Percentage of non-executive board members	Managerial ability
Effectiveness of internal control	1.00					
Shareholders' voting rights	0.80	1.00				
Quality of accounting information	0.85	0.83	1.00			
Free float stock	0.83	0.85	0.90	1.00		
Percentage of non-executive board members	0.77	0.83	0.83	0.80	1.00	
Managerial ability	0.82	0.80	0.88	0.85	0.81	1.00

Structural model evaluation

After measuring the validity and reliability of the measurement model, the structural model was evaluated through the relationships between latent variables. In the present study, two criteria of coefficient of determination (R^2) and coefficient of predictive power (Q^2) have been used.

Determination factor (R^2) and forecast power factor (Q^2)

R^2 is a measure of the effect of an exogenous variable on an endogenous variable. According to Figure (2), the value of R^2 has been calculated for the endogenous structures of the study, which can confirm the suitability of the structural model. Also, in order to evaluate the predictive power of the model, a criterion called Q^2 was used. According to the results of this criterion in Table (13), it can be concluded that the model has a "strong" predictive power.

Table 13. the values of coefficient of determination (R^2) and coefficient of predictive power (Q^2)

	R^2	Q^2
Quality of accounting information	0.90	0.00
Free float stock	0.89	0.00
Effectiveness of internal control	0.83	0.00
Percentage of non-executive board members	0.82	0.00
Protecting investors	0.80	0.00
Shareholders' voting rights	0.86	0.00

The total fit of the model

After fitting the measurement and structural part of the present study, in order to control the overall fit of the model, a criterion called Goodness of Fit (GOF) was used. Three values of 0.01, 0.25 and 0.36 were introduced as weak, medium and strong values. This criterion is calculated through Equation (3):

$$GOF = \sqrt{\overline{\text{Communalities}} \times R^2} \quad (3)$$

(Communalities) is obtained from the mean of the common values of the latent variables of the research.

Table 14. Results of fitting the general model of research variables

Concealed variables	Communality	R^2	$\overline{\text{Community}}$	$\overline{R^2}$	GOF
Quality of accounting information	1.00	0.90	0.98	0.85	0.91
Free float stock	1.00	0.89			
Effectiveness of internal control	1.00	0.83			
Managerial ability	1.00				
Percentage of non-executive board members	1.00	0.82			
Protecting investors	1.00	0.80			
Shareholders' voting rights	1.00	0.86			

Given that the GOF criterion is 0.91, the overall fit of the model is confirmed as "strong".

Research hypothesis test results

After examining the fit of the measurement models and the structural model and having a suitable fit of the models and according to Figures (2) and (3), the research hypotheses were examined and tested. In the following, the results of significant coefficients for each hypothesis, standardized coefficients of paths related to each hypothesis and the results of hypothesis testing at the 95% confidence level are presented in Table (15).

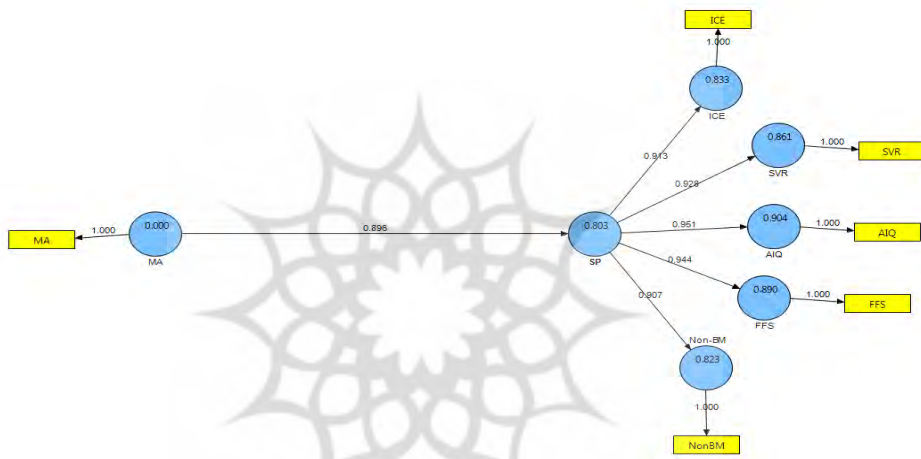


Figure 4. Conceptual model of research in standard mode

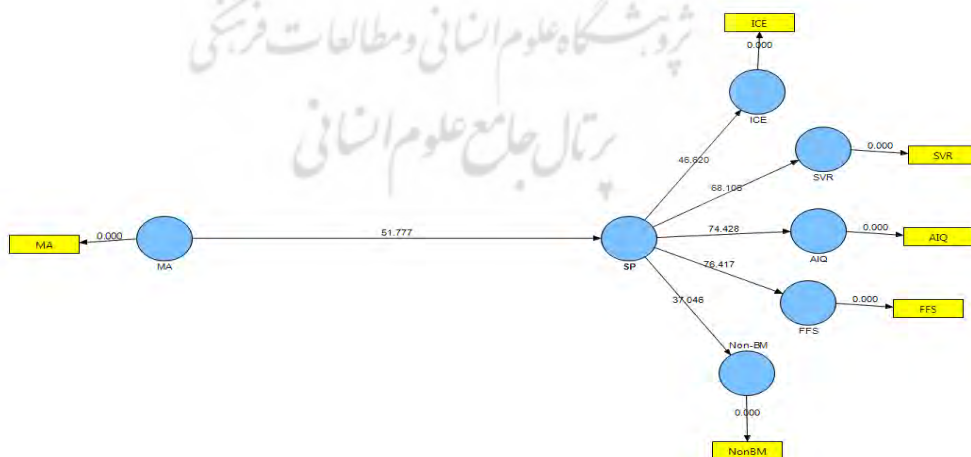


Figure 5. Conceptual model of research with significant coefficients (T-values)

Table 15. Test of research hypotheses

Route	Path coefficient	t statistic	Hypothesis test result
Managerial ability → Protecting the investors	0.89	51.77	Accept the hypothesis

The significance coefficients of the variables are expressed in Figure (5) and Table (15). Given that the significant coefficients of the variables are greater than the absolute value of 1.96, the hypotheses are confirmed.

Conclusion

Since organizations will face increasingly competitive challenges in the future and to manage these challenges need more competent and effective managers, more talented managers will be more important in organizations day by day (Moazeni and Badavar Nahandi, 2016). Organizations today are well aware that to succeed in a complex global economy as well as to survive in the business environment, need to have the best managerial talents to increase the level of trust and confidence of shareholders and investors. On the other hand, highly capable managers have a better understanding of the internal and external situation of the company, and this, in addition to better quality estimates created by their knowledge and understanding, helps companies to identify profitable projects by investing in them, they also improve operating cash flows and ultimately the final value of cash (Chang et al., 2010).

The purpose of this study is to examine the ability to manage and protect the interests of shareholders based on the development of the theory of the devil's lawyer. Based on the research results, it was found that managerial ability has a positive effect on protecting the interests of shareholders. In fact, the existence of managerial competencies because it develops functions based on managerial competence and managers based on performance characteristics try to achieve the best result for the company, will increase the level of protection of shareholders' interests, and in this case, by reducing the representation cost gap between the company and shareholders, the disclosed information from higher information symmetry for decision making Have shareholders.

The strategic structure of companies is able to use the technique of the devil's advocate as one of the effective approaches in organizational decision making to stimulate managerial ability to respond to each decision made and to

promote a level of accountability for its actions, by providing incentives for conflicting debates to reach an effective decision, due to the existence of information transparency and coherent structures. Transparent performance characteristics of companies increase the protection of shareholders' interests. In fact, the devil's advocate technique helps to create positive conflicts in decision-making processes and achieve priorities. Because managers, in an effort to defend their performance, submit their estimates and estimates for investment plans or profit-sharing policies, etc. to the board as an upstream regulatory body, so that shareholders can understand the transparent characteristics of the company in financial operations.

And decision-makers, have more pervasive trust in the company and are more willing to invest in such companies. In other words, the high ability created in managers due to creating positive conflicts based on the technique of defending the devil will lead to reducing the ambiguity of companies in disclosure and financial performance, because the existence of managers' sensitivities to create information symmetry and increase agency costs under the influence of corporate governance oversight, increase and try to use the capabilities of shareholder and investor decision-making capabilities. Increase the protection of shareholders' interests. The result obtained by Martins's research (2019); Hermalin and Weisbach (2017); Ge and Kim (2014) and Badavar Nhandi and Heshmat (2018) correspond. Based on the obtained results, it is suggested that, firstly, to improve the level of financial transparency, by supporting research in this field, the criteria affecting non-disclosure of financial statements are identified both from the internal and psychological characteristics of managers and from the structural dimension of companies.

Help reduce information asymmetry and agency costs by implementing policies and programs and formulating comprehensive oversight strategies. In this regard, companies should rely on legal requirements to require companies to disclose in a timely manner in order to increase social responsibilities to the market and shareholders in order to strengthen their decision-making capabilities. In fact, reducing company ambiguity in order to promote the protection of shareholders' interests due to the good performance of managers, helps shareholders and financial analysts to have a better valuation of the company than other companies. And increase the stock prices of companies by efficiently providing information. Finally, it is suggested that companies use theoretical methods to promote behaviors that play a positive role in managerial functions, such as the technique of the Devil's Advocate, to pursue

further development practices for the future, and by investing in projects with net present positive value help develop more companies and reduce financial constraints, in this way, the value of cash for shareholders is strengthened. Therefore, the structure of the corporate governance system should try to hire more qualified managers by setting appropriate criteria. Because the CEO's capabilities, while reducing agency costs, will lead to the development of companies' future policies and strategies in line with the goal of maximizing shareholder wealth

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