Original Research

Investigating the Relationships between Managerial Abilities, Financial Distress and Auditing Fees in Companies Listed on the Tehran Stock Exchange

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ABSTRACT

The concept of management ability is one of the most important factors in determining and determining the audit fee. Management ability is a dimension of human capital in companies that is classified as intangible assets. Financial distress is also an important factor that may affect audit fees. The findings of this study contribute to the emerging literature on management ability and audit costs by showing whether auditing services pricing is a result of higher management ability in the ongoing financial crisis. In light of the above, this study seeks to examine the impact of managerial skills and auditing fees on the condition of financial distress. This research has been reviewed during a 10-year study from 2009 to 2018. The results of this study show that there is a negative and significant relationship between managerial ability and audit fees despite financial distress. There is also a significant inverse relationship between financial distress and management ability.

1 Introduction

Managers with high managerial ability use the weaknesses of the accounting system and the internal control system as a tool to implement opportunistic strategies, which increases the risk of the auditor handling the employer's statements. Financial distress is one of the factors that motivate management to opportunistic behavior. Therefore, it can be argued that in a situation where financial distress is high, managers will have a high incentive to manipulate accounting information, which increases the risk of the audit for the auditor, and as a result of this process, the scope of the audit and the audit fee also increase[7]. The inability of the management of companies with financial crisis and their poor performance reduces the auditor's trust; Therefore, in these companies, the possibility of increasing the audit fee is higher due to the increase in audit risk. Pricing of audit services is one of the topics of interest to many audit researchers and many studies have been done in this field. Although the research

methods used in these studies are somewhat different from each other, but most of them pursue a major goal and that is to identify the factors that affect the audit fee. Awareness of these factors is useful for both the employer and the auditor. For many homeowners, the cost of digital auditing is significant. Although it may be easy for large companies with high sales and liquidity or some state-owned companies to be able to pay this cost, for most small businesses or those that are not in a good financial position, the cost figure can be very high. It is important that companies have to pay for it. As a result, from the employer's point of view, by recognizing the factors affecting the amount of audit fees, both by negotiating and bargaining over them and by controlling these factors within the organization, it is possible to reduce such costs and bear them. It was easier [13]. By knowing these factors, auditors can also price their services appropriately. The importance of this issue is especially seen in our country in recent years and after the formation of the Iranian Society of Certified Public Accountants, because after the formation of the society, the monopoly of the auditing labor market was broken and intense competition between auditors was formed. It has happened in most developed countries. From the early 1970s to the early 2000s, most auditing firms focused on their own growth rather than on professional values [37]. In most of the researches that have been done so far with the aim of explaining the factors affecting the audit fee, the emphasis has been on the specific characteristics of the employer company and the auditing firm, while recent research has considered the personality traits of managers as one of the most important Examines the determinants of auditing fees [38]. The results of previous research [38] show that one of the factors influencing audit fees is the concept of management ability. Today, intangible assets have become a powerful resource for improving the performance of businesses. Iranian Accounting Standard No. 17 defines intangible assets as non-monetary assets of an objective nature that are held for use in the production or supply of goods and services or for rent to others or for other administrative purposes. Intangible assets can be divided into three categories. Intangible assets that the company clearly owns and have a buying and selling market. Intangible assets that are under the company's control, but are not properly defined and may not have legal ownership rights. Also, there is no market for them or they have an inactive and weak market. One of the human capitals, which plays an important role in turning the company's resources into income and creating wealth for shareholders, are the managers of commercial companies. Information related to the capabilities of company managers, such as their ability to use investment opportunities, provide resources, optimal allocation of resources, and their knowledge and experience, are considered one of the important and valuable dimensions of intangible assets of commercial companies. The findings of this research have several different and related achievements.

1. Intangible assets that the company clearly owns and has a market to buy and sell. 2. Intangible assets that are under the control of the company, but are not properly defined and may not have legal ownership. Also, they either do not have a market or have a passive and weak market, such as research and development costs. 3. One of the human resources, which plays an important role in converting company resources into revenue and creating wealth for shareholders, are business managers. Information related to the ability of company managers, such as their ability to use investment opportunities, provide resources, optimal allocation of resources, and their knowledge and experience, is one of the important and valuable dimensions of intangible assets of commercial companies [12].

2 Theoretical Foundations and Review of Research Background

Today, rapid technological advances and vast environmental changes have accelerated the economy,

increasing institutional competition has limited profitability and increased the likelihood of financial distress. Owners, managers, investors, business partners, and creditors are as interested in evaluating a company's financial position and its propensity for financial distress as they are in government institutions. Thus, financial decision-making has become more strategic than in the past. Owners, managers, investors, creditors, commercial companies as well as government institutions are interested in assessing the financial situation of companies because in case of financial helplessness, a lot of costs are imposed on them.

2.1 Managerial Ability

In the literature, it is often observed that the two categories of ability and skill in definition have much in common. In other words, the description of one dimension covers the other. Therefore, it is necessary to first provide a clear definition of each of these two words.Ability depicts a stable and broad trait that binds a person to achieve and ultimately perform in physical and personal occupations. Skill is a specific capacity for doing things physically. Given the definitions provided, it is clear that ability and skill are two categories that have overlapping conceptual themes, and therefore sufficient care must be taken in defining the boundaries between them. In distinguishing between these two issues, it can be noted that capability is a general and broad feature and can be extended beyond the boundaries of the organization. However, skill is a specific work and job characteristic that finds meaning in the profession and its conceptual scope is located within the organization. Determining the root causes of financial distress and bankruptcy is important. In many cases, multiple causes together lead to bankruptcy, so it is not easy to pinpoint them. However, these factors can be classified into two general groups of intra-organizational and extra-organizational reasons.Inefficiency and lack of management are among the most important intra-organizational reasons for this phenomenon.One of the reasons for business failure stems from managers not reacting in certain situations and not reacting inappropriately. Symptoms include a lack of a comprehensive and understandable business strategy and plan, failure to make timely decisions, a high turnover of qualified staff, limited knowledge of customers and market conditions, and insufficient managerial authority[39]. Lack of training, experience, ability and initiative by management makes it difficult for the business unit to survive in the field of competition and technology. The highest number of bankruptcies is due to the inefficiency of managers and also includes the lack of cooperation and effective communication between management and professionals [40]. Inability to keep up with market changes and rapid technological advances, inadequate operational control (including budget control, product costing, liability accounting, asset valuation, cash flow forecasting), overdevelopment, inadequate sales, Inadequate pricing of products, overhead and operating costs and the cost of excessive long-term debt, over-investment in non-current assets and inventories, insufficient working capital and poor liquidity, unbalanced capital structure, lack of insurance coverage Inadequate accounting methods and records are excessive growth and uncontrolled conditions due to inefficient management that cause financial crisis [2, 41]. Management ability can be defined as the efficiency of managers compared to competitors in converting company resources into revenue [28]. These sources of revenue generation in companies include cost of inventories, administrative costs and distribution and sales, fixed assets, operating leases, past R&D costs and intangible assets of the company [28]. Higher managerial ability can lead to more efficient management of the company's day-to-day operations, especially in critical periods of operations where managerial decisions have a major impact on firm performance. Capable managers are more likely to invest in projects with a higher positive net present value and are also abler to execute it properly. In addition, in times when the company is in crisis, more capable managers make better decisions in Are related to the

provision of needed resources[41]. In addition to having more knowledge and awareness about customers and macroeconomic conditions, more capable managers have a better understanding of more complex standards and are able to implement them properly [28]. The results of another research show that there a reverse (negative) relationship between institutional ownership level, managerial ownership level, and ownership concentration level with liquidity. Also there is a direct (positive) relationship between corporative ownership level and liquidity[48].

By promoting the use of resources, management can enable the company to undertake and perform appropriate tasks and processes, and to produce innovative products and services, thus creating value for the company. In fact, managers and the resources under their management have a common role in the success of companies [42]. In other words, the success of the company requires the effective and efficient use of its resources by the manager and if the company manager is successful in this work. Failure to do so will result in the company failing. Now, one of the important factors that have a great impact on all aspects of a company's performance is the company's management, whose high ability and better understanding of the internal and external conditions of the company, in addition to the quality estimates it makes, through recognition and its perceptive power identifies profitable projects and by investing in these projects, it also improves the operating cash flows and performance of the company [29]. Ability of managers to directly affect the performance of the company; It affects and consequently influences the decisions of users. Also, managers as stakeholders's managers should pursue activities that lead to the continuity of activity and profitability of the company, on the other hand, choosing the optimal capital structure and different methods of financing Finance is the main concern of company managers. Improper structure in any company, especially in small companies, affects different areas of the company and can indicate issues such as inefficiency in product marketing, inability to properly employ, financial helplessness and the like. In recent studies, there is evidence that liquidity problems are one of the effective factors in the financial crisis of companies.

2.2 Financial Distress

From an economic point of view, financial helplessness can be interpreted as the loss of the company, in which case the company has failed [43]. However, Odom [44] in his article entitled a neural network model for predicting financial distress considers mismanagement as the most important reason for financial distress [44]. One way to help investors is to provide predictive patterns about the company's overall outlook. The closer the predictions are to reality, the more correct decisions will be the basis [45]. Bankruptcy is a situation in which a company's cash flows are less than the sum of interest costs associated with long-term debt. From an economic point of view, bankruptcy can be interpreted as the loss of the company, in which case the company has failed [43]. There are non-discriminatory terms for bankruptcy in the financial literature. Unfavorable financial situation, failure, failure of the business unit, deterioration, inability to pay debts, etc. Of course, there are several definitions of bankruptcy. Webster culture defines failure as "lack of truth or inadequacy of funds in the short term". Dan and Bradstreet define the term bankrupt companies as business units that cease their operations due to the transfer or bankruptcy or cessation of current operations at a loss by creditors. In the Islamic Penal Code (Tazirat), bankruptcy is the state of a businessman or business Bankruptcy and its regulations only apply to merchants, and if ordinary people are unable to pay their debts, they are called insolvent . There are other definitions of bankruptcy: Gitman believes that bankruptcy occurs when the debts of a company exceed the value of the assets in the company. Legally, bankruptcy is the fact that the debtor is the total He relinquishes his property in favor of the creditor, but whenever he is acquitted of bankruptcy, he can

start working again.

2.3 Audit Fee

According to auditing standards, the auditor should gain an understanding of the control environment, including management attitudes and practices, when assessing audit risk. A proper assessment of the overall situation in order to identify and estimate the company's audit risk is of particular importance. This recognition and evaluation of the maximum and culture is also affected [27]. Recent research suggests that auditing fees are associated with reward plans for managers. These schemes change risk-taking [46, 47]. A study of the thematic literature shows that there is a positive relationship between some of the concepts of risk and audit fees. Therefore, in determining the audit fee, the auditors consider the risk characteristics of their client and offset the related risks through higher fees. Also, the results show that auditors should not only focus on risk related to financial statements, but also have a broader view of the client's business behavior. The growing literature on audit pricing determinants has proven that audit fees relate to risk factors associated with client characteristics such as client size and complexity [32], quality of internal control. Business risk [19] and corporate governance. Further evidence suggests that audit fees were more sensitive to risk factors in the post-Sarbens Axel era. However, few studies have examined how auditors respond to the risk factors associated with their client's senior management. Chen et al. [25] argue that auditors receive higher fees from companies with risky managers[38]. Extended previous studies to examine whether auditors respond to risk factors associated with business managers. They concluded that the ability of managers has a significant effect on the pricing of audit services. Audit fees are determined based on the auditor's estimated risk to the client, competition in the audit market, and negotiations between the auditor and the client. The auditor should identify and assess the risk of material misstatement (including the assessment of management competence, the ethical climate of the organization, the capabilities of the accounts, and the disclosure of material misstatement) when planning the audit. These factors affect the auditor's ability to detect material misstatement at the level of the financial statements, which is a significant risk to the audit firm. Auditors typically gather significant evidence to reduce the risk of non-detection of misstatement, which increases the cost of the audit. This increased cost can be imposed on the owners, which of course is a bargaining chip between the auditor and the client. Simonick states that when auditing risk increases, auditors demand more remuneration[38]. Financial reporting risk is one of the most important risk factors affecting the pricing of auditing services. Previous research has shown that as risk management earnings increase, planned audit efforts and audit invoice rates increase, and there is a positive relationship between earnings management risk, scheduled hours, and auditing fees. And Johnston[18] Charles et al. [23] also found choosing an auditor is an economic decision. "The client buys the auditor's services at the level of quality he expects from the seller (auditor) at the lowest cost, and the change of auditor is a response to a change in the amount and type of services required by the client." In addition, the results of previous research show that remuneration schemes for managers have a significant effect on financial reporting risk, and also with increasing the risk of these schemes, the audit fee also increases [46, 47].

3 Methodology

The research is applied research because its results are used by legislative bodies in the accounting profession (such as the auditing organization and Tehran Stock Exchange Organization). The present research is also a correlational descriptive research. In this research, in order to collect information, the documents related to the sample members, including: their financial statements (basic financial

statements and explanatory notes) have been used. It is also necessary to explain that this information was also extracted through the website of the Tehran Stock Exchange and the CODAL system.

The first model:

$$
\begin{aligned}
InAF_{i.t=}\alpha_0 &+ \beta_1\text{MGR} - \text{ABILITY}_{i.t} + \beta_2\text{LN SIZE}_{i.t} + \beta_3\text{FOREIGN}_{i.t} + \beta_4ROA_{i.t} \\
&+ \beta_5LOSS_{i.t} + \beta_6LEV_{i.t} + \beta_7QUICK_{i.t} + \beta_8\text{SGROWTH}_{i.t} + \beta_9EQ_{i.t} \\
&+ \beta_{10}BING_{i.t} + \beta_{11}SPECIALIST_{i.t} + \beta_{12}LN\ NAF_{i.t}
\end{aligned}
\tag{1}
$$

$$
\begin{aligned}
MGR - ABILITY_{i.t} \\
&= \alpha_0 + \beta_1\text{DISTRS}_{i.t} + \beta_2\text{LN Size}_{i.t} + \beta_3\text{FOREIGN}_{i.t} + \beta_4ROA_{i.t} \\
&+ \beta_5LOSS_{i.t} + \beta_6LEV_{i.t} + \beta_7QUICK_{i.t} + \beta_8\text{SGROWTH}_{i.t} + \beta_9EQ_{i.t} \\
&+ \beta_{10}BING_{i.t} + \beta_{11}SPECIALIST_{i.t} + \beta_{12}LN\ NAF_{i.t}
\end{aligned}
\tag{2}
$$

In the hypotheses, audit fees are dependent variables and managerial capabilities are independent variables and financial distress are independent and moderating variables.

In this study, lnAF is the audit fee. The audit fee is extracted from the notes accompanying the financial statements of the administrative and general expenses section or other expenses, and the natural logarithm of the audit fee is used to calculate it. And MGR-ABILITY demonstrates management ability. To evaluate relative efficiency (DEA), Demerjian et al. [28] used data envelopment analysis of certain inputs (labor, capital, etc. (towards outputs), revenue, income, etc. Revenues are considered: property, plant and equipment, operating leases; R&D costs; Goodwill purchased; Other intangible assets; cost of inventory and administrative and sales expenses. Because each input is subject to the managerial discretion, they are affected by the managerial ability.In fact, the sales residue is not due to the six features in the model that are due to the ability and presence of the manager. The size of the firm is the size of the firm, the market share of the firm, the availability of cash, the life cycle, the complexity of operations and external operations.The remaining term derived from this regression is a component that reflects managerial ability.

Efficiency represents the efficiency of the company, which is calculated using the data envelopment analysis method.

$$
\text{MAX}_v\theta = \frac{\text{sales}}{v_1\text{cogs} + v_2\text{SG\&A} + v_3\text{PPE} + v_4\text{OPSLease} + v_5\text{R\&D} + v_6\text{Good will} + v_7\text{other intan}}
\tag{3}
$$

Sales: revenue

Cogs: The cost of goods sold by Company i in year t

SG & A: General, administrative and sales expenses of company i in year t

PPE: Property, plant and equipment

OPSLease: Company's operating lease cost in year t

R&D: R&D costs of company i in year t

Good will: Goodwill purchased by Company i at the beginning of year t

Other intan: Other intangible assets of Company i at the beginning of year t

In this model, a specific coefficient (v) is considered for each of the input variables, because the effect of all input variables on the output (sales) is not the same.

. The calculated value for the company's performance is in the range of zero to 1. Companies with an efficiency score of one are companies that are highly efficient, and companies with an efficiency score of less than one are below the efficiency threshold and must reach the efficiency threshold by reducing

costs or increasing revenues.

Distress is also a symbol of financial distress, calculated by Olsen .

$$\acute{P} = \frac{1}{1 + \hat{\gamma}_{i.t}}$$

$\hat{\gamma}_{i.t} = -1.32 - 0.407 * SIZE + 6.03 * TLTA$ -1.43*WCTA+0.0757* CLCA - 2.37*NITA -1.83*FUTL+0.285*INTWO -1.72*OENEG -0.521*CHIN   (4)

In which:

$$\frac{Current\ debt}{Current\ Assets} = CLCA \qquad\qquad LOG\frac{Total\ assets}{GNP} = SIZE$$

$$\frac{Capital\ turnover}{total\ assets} = WCTA \qquad\qquad \frac{Current\ debt}{Current\ Assets} = TLTA$$

$$\frac{Operational\ budget}{Total\ debt} = FUTL \qquad\qquad \frac{Net\ income}{total\ assets} = NITA$$

INTWO: If the net income in the previous two years is negative, this amount is equal to 1, otherwise it is equal to zero.

OENEG: if the total debt is more than the total assets is 1 and otherwise it is zero.

CHIN NI: Net income $(NI_t| - |NI_{t-1})(NI_{t-1} - NI_t)$

3.1 Control Variables

In the present study, according to the proposed model, the research variables are as follows:

SIZE: Company size

FOREIGN: External operations of the company (Export)

ROA: Return on Assets

LOSS: Company losses

LEV: financial leverage

QUICK: Instant Ratio

SGROWTH: Sales growth

EQ: Quality of Profitability

BIGN: Audit firm size

SPECIALIST: Auditor specialization in industry

lnNAF: Non-audit costs

Foreign = Indicates the non-oil export index of companies

EQ (profit quality):

In the present study, the quality of profits through the Penman index (2011) has been investigated, which is as follows:

$$EQ_{i,t} = \frac{CFO_{i,t}}{OI_{i,t}}$$

Where $CFO_{i,t}$ is the operating cash of Company i in year t and $OI_{i,t}$ is the operating profit of Company i in year t.

3.2 Auditor Specialization in the Industry

The auditor's specialty is the ratio of the firm's share to the total market share, which is calculated using the Herfindahl-Hirschman index (HHI). One of the most important and practical indicators for expressing the concept of focus is the Herfindahl-Hirschman index. This index uses the information of all industry companies. To obtain this index, the total square footage of production, sales, labor, and the like of all firms in industry or market is used. In fact, this index weighs on each firm as much as its market share. The Herfindahl-Hirschman index (HHI) is defined as follows:

$$HHI = \sum_{i=1}^{N} S_i^2$$

N: The number of firms in the industry or market

S_i^2: Firm Market Square i.

According to the above, the research hypotheses are as follows:

1- There is a relationship between managerial ability and auditing fee with the condition of helplessness.

2- There is a negative and significant relationship between financial distress and managerial ability.

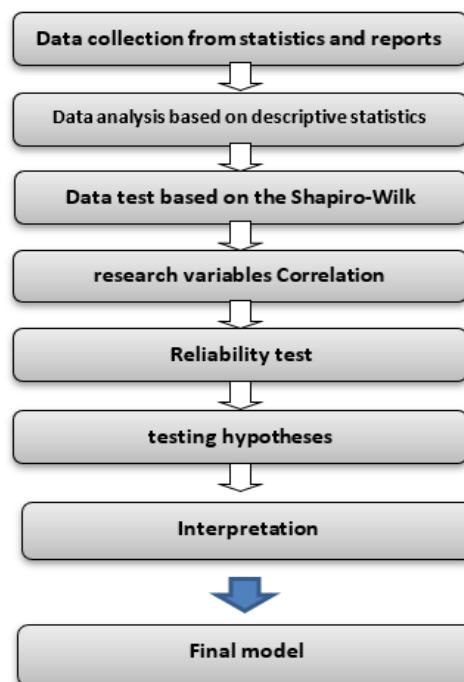The following flowchart shows the research steps.

Fig. 1: Flowchart of Research Step

4 Findings

4.1 Descriptive Statistics

Descriptive statistics related to the variables used in this study are summarized in Table (1). In this table, the values of mean, mean, maximum, minimum, standard deviation of data, Kurtosis, skewness and statistics and probability of Jarque-Bera Test are shown, respectively.

Table 1: Descriptive Statistics Related to Research Variables

	Audit fee	managerial ability	financial distress	Company size	profit quality	Export	Sales growth	Financial leverage	Company losses	Instant ratio	return on assets
Middle	3.775	0.829	5.835	32032.50	0.572	977030.0	-53.178	1.359	0.831	6730823.	723962.3
Average	3.673	1.000	5.805	34122.55	1.000	0.000	0.067	1.026	0.654	393784.0	39662.00
Maximum	7.072	1.000	8.359	40201.86	1.000	50961796	2757.066	43.811	5.598	2.5108	33491156
At least	0.000	0.000	4.018	18886.30	0.000	-2.307	-18494.4	0.000	0.012	-1	-4903144
Standard deviation	1.384	0.376	0.825	6665.048	0.495	5126956.	900.020	2.341	0.760	24810345	3174916.
skewness	-0.141	-1.755	0.485	-0.737	-0.29	6.663	-17.326	13.352	2.774	5.613	7.054
Kurtosis	2.803	4.080	2.980	2.366	1.085	60.803	346.716	224.657	12.380	39.658	59.483
Jarque-Bera	2.552	290.536	20.296	55.542	86.32	75801.14	2570820	1073744	2558.930	31664.36	73015.01
Possibility	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

According to the observations of Table (1), the specified standard deviation is high among the variables of export, asset return, instant ratio, company size and sales growth, respectively, and indicates that these variables have many fluctuations. Also among the variables of export, sales growth, financial leverage, instantaneous ratio and return on skewed assets, and among all variables except for audit fees and financial distress, company size and quality of profit, Jarque-Bera test statistics for the normality of variables, does not confirm the research. Since the p-value of the variable of the producer price index is less than 0.05, it indicates that the data of this variable is not normal. But the audit fee variable has a normal distribution.

4.2 Shapiro-Wilk Normality Test

The philosophy of the Shapiro-Wilk test is similar to that of a few.

Table 2: Shapiro-Wilk Normality Test Table

Variables	Statistics	Degrees of freedom	Sig
Audit fee	2.98	516	.000
Managerial ability	4.45	516	.000
financial distress	9.07	516	0.00
Company size	0.819	516	0.00
Export	0.588	516	0.00
Return on assets	0.652	516	0.00
Company losses	0.562	516	0.00
Financial Leverage	0.037	516	0.00
Instant ratio	0.762	516	0.00
Sales growth	0.882	516	0.00
Profit Quality	0.68	516	0.00
The size of the auditing firm	6.92	516	0.00
Auditor specialization in the industry	6.83	516	0.00
Non-audit fees	2.72	516	0.00

In this test, a regression relationship is considered between the sequential statistics of the data and the expected values of the ordinal statistics of the normal distribution, and the test statistic is something like a coefficient of determination in regression that the higher it is, the closer the data distribution is to The

distribution is normal and small values of test statistics refute the null hypothesis (normal data distribution).The Shapiro-Wilk test is based on a regression relationship or correlation analysis between sequential statistics and their desired values.

4.3 Spearmans correlation

Usually if the significance level in the Shapiro-Wilk test is shown in this table with sig.

Table 3: Spearman's correlation

		Audit fee	Ability to manage	financial distress	Company size	Export	profit quality	Sales growth	Financial leverage	Instant ratio	Sales growth	Profit Quality	The size of the auditing firm
Audit fee	Statistics	1											
	Possibility												
Ability to manage	Statistics	.192**	1										
	Possibility	0											
financial distress	Statistics	0.001	-0.014	1									
	Possibility	0.987	0.624										
Company size	Statistics	.141**	.077**	0.023	1								
	Possibility	0.001	0.008	0.433									
Export	Statistics	-0.001	-0.003	0.031	.134**	1							
	Possibility	0.982	0.912	0.291	0								
profit quality	Statistics	-0.07	-0.027	-0.031	0	.090**	1						
	Possibility	0.106	0.362	0.293	0.989	0.002							
Sales growth	Statistics	-.093*	-0.011	0.016	0.027	.095**	.687**	1					
	Possibility	0.032	0.698	0.578	0.346	0.001	0						
Financial leverage	Statistics	-0.01	0.015	0.008	-.235*	-0.015	-0.009	-0.014	1				
	Possibility	0.825	0.612	0.774	0	0.617	0.751	0.634					
Company losses	Statistics	0.023	0.03	0.009	.101**	.063*	-0.007	-0.02	-.087**	1			
	Possibility	0.594	0.308	0.768	0	0.03	0.798	0.485	0.003				
Sale growth	Statistics	-0.043	-0.01	0.022	.126**	.086**	.572**	.760*	-0.016	-0.016	1		
	Possibility	0.331	0.739	0.459	0	0.003	0	0	0.597	0.579			
Profit Quality	Statistics	-0.025	.164**	0.002	.088**	-0.037	0.014	0.017	0.004	-0.01	0.012	1	
	Possibility	0.566	0	0.956	0.003	0.208	0.632	0.57	0.884	0.729	0.689		
The size of the auditing firm	Statistics	.121**	.100**	-0.01	.134**	-0.026	-.088**	-.083*	-.12**	0.055	-0.033	-0.051	1
	Possibility	0.005	0.001	0.723	0	0.372	0.002	0.004	0	0.056	0.258	0.08	

The display is greater than 0.05. The data can be assumed to be normal with high confidence. Otherwise, it can not be said that the data distribution is normal.Therefore, the hypothesis that the distribution of these variables is normal at the 95% confidence level is rejected and indicates that the dependent variables do not have a normal distribution and we must use non-parametric test to examine the correlation between variables. According to the results of the Spearman test, audit fees are positively correlated with management ability, company size, and the size of the audit firm, and negatively correlated with the auditor's expertise in the industry. Management ability is also positively correlated with firm size, profit quality, and the size of the audit firm. The size of the company is positively correlated with the amount of exports, instantaneous ratio, sales growth, profit quality and the size of the auditing firm and negatively correlated with financial leverage. The results regarding the correlation between exports and other variables show that exports are positively correlated with return on assets, immediate ratio and sales growth, and positively correlated with return on assets, company losses, sales growth and non-audit costs and the size of the audit firm. It has a negative correlation. The company's losses are positively correlated with sales growth and non-audit costs and negatively correlated with the size of the audit firm. Also, financial leverage has a negative correlation with the immediate ratio and size of the audit firm, and also sales growth has a positive correlation with non-audit costs and the auditor's expertise in the industry has a negative correlation with the size of the audit firm.

4.4 Reliability Test

In this section, the static or reliability of research variables was first investigated. Hadri test was used to evaluate the reliability. The results of this test are shown in Table 4.

Table 4: Hadri Test

Variable	T Statistics	P-value	Variable	T Statistics	P-value
Audit fee	8.581	0.00	Financial leverage	17.114	0.00
Managerial ability	8.168	0.00	Company losses	10.566	0.00
Financial Distress	14.101	0.00	Instant ratio	12.265	0.00
company size	9.014	0.00	Return on assets	12.399	0.00
profit quality	12.380	0.00	Auditor specialization in the industry	16.203	0.00
Export	7.567	0.00	Non-audit fees	16.203	0.00
Sales growth	14.239	0.00	The size of the auditing firm	7.952	0.00

According to the results of Table (4) of this test, because the P value is less than 0.05, all variables are stable at the research period. This means that the mean and variance of the variables have been constant over time and the variance of the variables has been constant between different years. As a result, the use of these variables in the model does not cause false regression.

4.5 Chow Test

To properly determine the estimation of the regression model, one must first examine whether there are heterogeneities or individual differences. If there is heterogeneity, the panel data method is used, otherwise the combined method is used. Therefore, the Chow test to determine the application of the fixed effects model versus the integration of total data (integrated Done) is done. The hypotheses of this test are as follows:

H₀: Pooled Model
H₁: panel Model

Table 5: Chow Test Results

	Test result	Prob.	D.F.	Statistics value	effects Test
The first hypothesis	Panel data model	0.000 0.000	(85,410) 85	22.274302 457.393	period F chi 2
The second hypothesis	Panel data model	0.000 0.000	(117,999) 117	11.595661 975.358599	period F chi 2

The results of the Chow test show that the p value in the model is less than 0.05, so the H_0 hypothesis is rejected and the H_1 hypothesis is confirmed, so it can be concluded that individual heterogeneity (invisible individual effects). There is and should be a panel data method to estimate the model. As a result, the Hausman test is performed to determine the use of the fixed effect model versus the random effect model in the next step.

4.6 Hausman Test
The Hausmann test is based on the presence or absence of an association between regression error and independent model variables. The hypotheses of this test are:
H0: Random Effect
H1: Fixed Effect

Table 6: Hausman Test Result

Hypothesis	Test result	P-value	Degrees of freedom	K2 statistics
The first hypothesis	Stochastic effects model	0.0987	12	18.598
The second hypothesis	Fixed effects model	0.0398	11	20.425

As Table 4-7 shows, the value of P is less than 0.05, which means that there is a relationship between the estimated regression error and the independent variables, so Hypothesis H0 is rejected and Hypothesis H1 is accepted. According to the results of Chow test and Hausman test, the most appropriate method for estimating the hypothesis test is the fixed effects model.

$$MGR - ABILITY_{i.t} = \alpha_0 + \beta_1 DISTRS_{i.t} + \beta_2 LN\ Size_{i.t} + \beta_3 FOREIGN_{i.t} + \beta_4 ROA_{i.t} + \beta_5 LOSS_{i.t} + \beta_6 LEV_{i.t} \quad (5)$$
$$+ \beta_7 QUICK_{i.t} + \beta_8 SGROWTH_{i.t} + \beta_9 EQ_{i.t} + \beta_{10} BING_{i.t} + \beta_{11} SPECIALIST_{i.t}$$
$$+ \beta_{12} LN\ NAF_{i.t}$$

4.7 Test Results of the First Research Hypothesis
The first hypothesis of this research is the existence of a relationship between managerial ability and audit fees with the condition of helplessness. This hypothesis is estimated using model (6) in the form of panel data as follows:

$$lnAF_{i.t=\alpha+\beta_1 lMGR-ABILITY+\beta_2 DISTRS_{i.t}+\beta_3 LN\ SIZE+\beta_4 FOREIGN+\beta_5 ROA+\beta_6 LOSS+\beta_7 LEV+}$$
$$\beta_8 QUICK+\beta_9 SGROWTH+\beta_{10} EQ+\beta_{11} BIGN+\beta_{12} SPECIALIST+\beta_{13} APINION+\beta_{14} LN\ NAF \quad (6)$$

According to the results of Table 7, the amount of F statistic and its significance level is less than 0.05, so the null hypothesis is 95% reliable and based on the available data is well able to express the dependent variable. Also, according to the coefficient of determination, about 84% of the changes of the dependent variable are expressed by independent and control variables. Watson camera statistic with a value of 1.72 shows that the residuals in the regression are not autocorrelated. According to t-statistic, the ability to manage with a value of -2.088 and the significance level of this test, which is less than 0.05 and is equal to 0.037, the existence of a significant inverse relationship between management

ability and audit fee has been confirmed and The first hypothesis is accepted. Also, considering the t-statistic of financial distress with the value of -2.697 and the significance level of this test, which is less than 0.05 and is equal to 0.007, the existence of an inverse and significant relationship between financial distress and auditing fee is confirmed. . In the first model of this research, among the control variables, only the quality of profit with a statistical value of 2.410 t and a significance level of less than 5% with a value of 0.016 has a direct and significant relationship with audit fees. But other control variables in this model have no significant relationship with audit fee due to having a p-value greater than 0.05.

Table 7: Results Related to the Estimation of the First Research Model

	Variables	Coefficient	standard error	T statistics	Possibility	Result
vertical intercept	C	5.182	0.506	10.237	0.000	
Ability to manage	$lMGR - ABILITY_{i.t}$	-0.274	0.131	-2.087	0.037	Accept
Financial Distress	$DISTRS_{i.t}$	-0.231	0.086	-2.087	0.007	Accept
company size	SIZE	0.000	0.000	-0.013	0.990	Reject
Return on assets	ROA	0.000	0.000	0.015	0.988	Reject
Financial Leverage	LEV	0.012	0.016	0.714	0.476	Reject
Company losses	LOSS	-0.067	0.053	-.1.270	0.205	Reject
Sales growth	GROWTH	0.000	0.000	-1.075	0.283	Reject
Profit Quality	EQ	0.346	0.143	2.410	0.016	Accept
Export	FOREGHN	0.000	0.000	-0.104	0.917	Reject
Instant ratio	QUICK	0.000	0.000	0.465	0.642	Reject
The size of the auditing firm	SPCIALIST	0.000	0.000	-1.433	0.153	Reject
Industry specialists	BIGN	0.095	0.370	0.256	0.798	Reject
Non-audit fees	NAF	0.000	0.000	-1.592	0.112	Reject
Test F: 20.936 Probability: 0.000			The coefficient of determination 0.844			
Watson Camera 1.721			Modified coefficient of determination 0.803			

According to the findings of the table above, the estimated regression model of the first hypothesis is as follows:

$$LNFA = 5.182 - 0.274*lMGR - ABILITY_{i.t}- 0.230*DISTRS_{i.t} - 0.000*SIZE + 0.000*ROA + 0.012*LEV - 0.067*LOSS - 0.000*GROWTH \ 0.346*EQ - 0.000*FOREGHN + 0.000*QUICK \ 0.000*SPCIALIST + 0.094*BIGN -0.000* NAF + \varepsilon_i \quad (7)$$

4.8 Test Results of the Second Research Hypothesis

The second hypothesis of the research is stated with the aim that there is a negative and significant relationship between financial helplessness and managerial ability.

This hypothesis is estimated using model (8) as panel data:

$$lMGR - ABILITY_{i.t} = \alpha + \beta_1 DISTRS_{i.t} + \beta_2 LN\ SIZE + \beta_3 FOREIGN + \beta_4 ROA + \beta_5 LOSS + \beta_6 LEV + \beta_7 QUICK + \beta_8 SGROWTH + \beta_9 EQ + \beta_{10} BIGN + \beta_{11} SPECIALIST + \beta_{12} LN\ NAF + \varepsilon i \tag{8}$$

Table 8: Results Related to the Estimation of the Second Research Model

	Variables	Coefficient	standard error	T statistics	Possibility	Result
vertical intercept	C	1.067	0.122	8.724	0.000	
Financial Distress	$DISTRS_{i.t}$	-0.049	0.021	-2.309	0.021	Accept
company size	SIZE	0.000	0.000	0.041	0.967	Reject
Return on assets	ROA	0.000	0.000	0.649	0.517	Reject
Financial Leverage	QUICK	0.000	0.000	1.370	0.171	Reject
Company losses	LOSS	-0.014	0.012	-1.163	0.245	Reject
Sales growth	LEV	0.002	0.004	0.430	0.668	Reject
Profit Quality	GROWTH	0.000	0.000	2.355	0.019	Accept
Export	FOREGHN	0.000	0.000	-0.495	0.621	Reject
Instant ratio	EQ	0.0122	0.034	3.561	0.000	Accept
The size of the auditing firm	BIGN	0.056	0.082	0.682	0.496	Reject
Industry specialists	SPCIALIST	0.000	0.000	-0.803	0.422	Reject
Non-audit fees	NAF	0.000	0.000	0.212	0.833	Reject
Test F: 11.447 Probability: 0.000			The coefficient of determination 0.592			
Watson Camera 1.632			Modified coefficient of determination 0.540			

According to the results of Table 8, the amount of F statistic and its significance level is less than 0.05, so the null hypothesis is 95% reliable and based on the available data is well able to express the dependent variable. Also according to the coefficient of determination which is equal to 0.59. Watson's camera statistic of 1.632 also shows that the residuals in the regression are not correlated. According to the t-statistic of financial distress with a value of -2.309 and the significance level of this test which is equal to 0.021, the assumption of a significant inverse relationship between financial distress and profit management ability is confirmed. Thus, financial helplessness can have the opposite effect on managerial ability, and the more managerial ability increases, the less likely it is that financial helplessness will occur. Also, the growth in sales, considering the amount of t-statistic which is equal

to 2.355 and its P-value which is equal to 0.019 and is less than 0.05, it can be 95% probable that the growth in sales is related to Direct and meaningful with the ability to manage as much as it can increase the ability to manage. On the other hand, the quality of profit with a value of 3.561 t and a p-value of less than 0.05 has a 95% probability of a direct and significant relationship with the ability to manage. In examining the relationships between other control variables with management ability due to having a p-value greater than 0.05 have no significant relationship with management ability

According to the findings of the second hypothesis in the table above, its estimated regression model is as follows:

$$lMGR - ABILITY_{i.t}I = 1.066 - 0.049*DISTRS_{i.t} + 0.000*SIZE\ 0.000*ROA + 0.000*QUICK \qquad (9)$$
$$- -0.014*LOSS + 0.002*LEV + 0.000*GROWTH - 0.000*FOREGHN + 0.122*EQ +$$
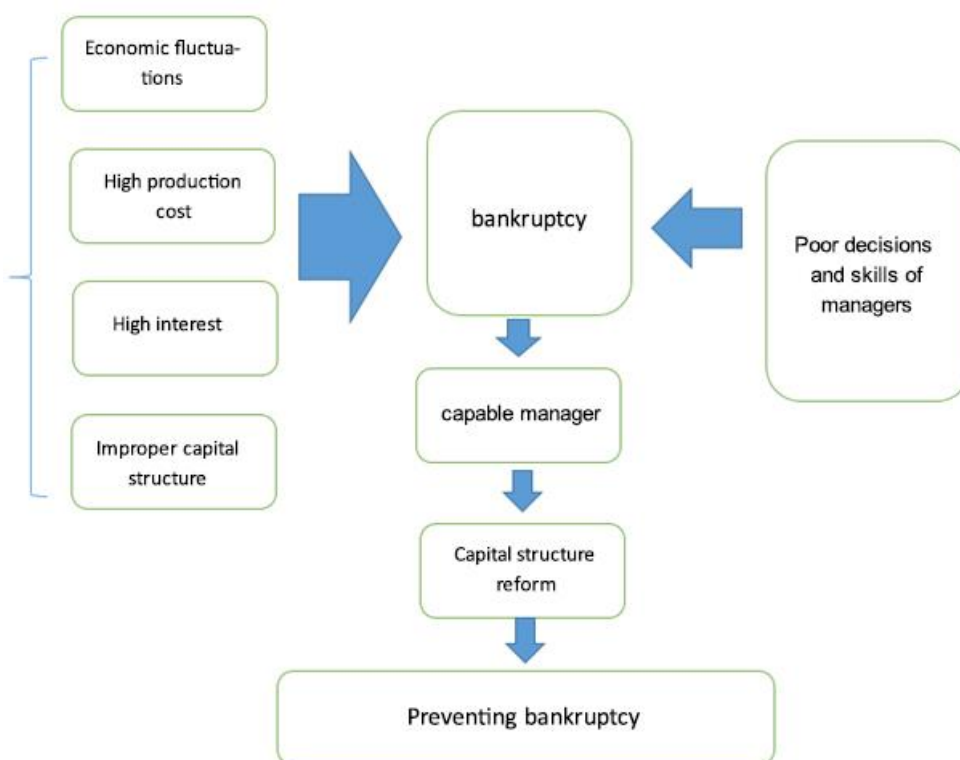$$0.056*BIGN - 0.000*SPCIALIST-0.000*\ NAF +\varepsilon_i$$

Fig. 2: Final Model

5 Discussion and Conclusions

The aim of this study was to investigate the relationships between managerial abilities, financial distress and auditing fees in companies listed on the Tehran Stock Exchange. According to t-statistic of management ability with the value of -2.088 and the level of significance of this test, which is less than 0.05 and is equal to 0.037, there is an inverse and significant relationship between management ability and auditing fee with the condition of helplessness. Finance is confirmed and the first hypothesis is accepted. Therefore, it can be said that with increasing managerial capabilities, auditing fees are reduced. In other words, the more capable the manager is, the less he has to pay for the audit. The findings of the first hypothesis of the present study are in line with the results of the studies of Blankley et al. [22] and Anmol et al. [16] and are contrary to the researches of Krishnan and Wang[38]. Also, in

the second hypothesis of the research, according to the financial helplessness t-statistic with the value of -2.309 and the significance level of this test, which is equal to 0.021, the inverse and significant relationship between financial distress and managerial ability is confirmed. Thus, financial distress has the opposite effect on managerial ability, and the more managerial ability increases, the less likely it is that financial distress will exist. Also, since one of the most important reasons for bankruptcy of companies in Iran, economic fluctuations as an external factor and higher production costs, interest costs and inadequate determination of capital structure as internal factors. Poor decisions and low managerial skills can lead a company to bankruptcy. Therefore, capable managers with high knowledge and awareness of macroeconomic conditions, customers, investors and the market, as well as one of the most influential variables of financial performance of enterprises, can determine the appropriate capital structures and thus increase flexibility. Financial acceptability as the most important component of the capital structure, enable the company to deal with financial and economic recessions, negative and unpleasant shocks, and by reducing liquidity problems and creating sufficient cash flows in the company as one of the undeniable requirements in competition and Also, increase profitability, increase growth opportunities, reduce external costs, meet maturity obligations and invest more easily, prevent helplessness and subsequent financial bankruptcy in companies and enterprises and ensure the continuity of the company.The findings of the second hypothesis test show that the dummy variable of financial distress moderates the inverse relationship between managerial ability and audit fees. According to the findings of the test of this hypothesis, it can be concluded that the role of managerial ability in reducing audit fees is less in companies that are financially distress. Because the existence of financial distress causes the tendency of the company and the company's accounting system to manipulate accounting information, which increases the volume and duration of the independent auditor's proceedings and, as a result, increases the independent auditor's fee. Therefore, in such a situation, the high level of managerial ability cannot be used as a useful tool to increasingly reduce the amount of audit fee. Also, based on the theoretical foundations of the research, it is suggested to the editors of the regulations governing the stock exchange, as well as investors and auditors, to use the managerial ability score in order to identify accepted companies with higher audit risk. It is suggested to the stock exchange organization of the country to design and implement a system called the rating system of the country's managers in order to rank the managers based on the criteria of their talents and individual abilities, so that the companies active in the capital market can evaluate the ability of their managers.. It is also suggested to the Tehran Stock Exchange Organization to use the Data envelopment analysis technique in order to design the managers' rating system.

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