Corporate Ownership Structures and Audit Risk

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Abstract: The present study aimed to investigate the effects of corporate ownership structures on audit risk among firms listed on the Tehran Stock Exchange (TSE). The study population consists of 90 firms listed on TSE over an eight-year period between 2010 and 2017. Following Salehi *et al*. (2017), we classified corporate ownership structures into four groups including institutional, managerial, family, and family-management ownership. The statistical model used in this study is a multivariate regression model; besides, the statistical technique used to test the hypotheses is a panel data**.**Our findings show a negative association between institutional owners and audit risk. Iranian institutional owners actually because of their long-term investment tend to spend resources to oversee the management, which reduces agency problems. Contrary to convergence-of-interests theory, our result indicates there is a positive relationship between managerial ownership and audit risk. Finally, we find that family ownership due to the separation of ownership from its management results in increased audit risk, whereas firms with family-management owners management decrease the agency problems.

Keywords: Institutional ownership, Managerial ownership, Family ownership, Family-management ownership, Audit risk.

1. Introduction

Agency problems ariseeither as a result of conflicts of interest between managers and shareholders or conflict of interests between minority and controlling shareholders. These problems will ultimately cause the agency costs to be transferred to the company and its stakeholders (Jensen, 1986). Clearly, Shareholders are one of the main groups that use financial statements; it is therefore assumed that any type of ownership structure in corporations may lead to a different treatment in the presentation of financial reports. In fact, when the ownership level of the board members is such that they have the power to control, or majority shareholders gain influence on the board of directors, this conflict of interest will be created between these shareholders and minority shareholders (López de Foronda *et al*, 2007). In this case, controlling shareholders can have more power over the cash payments related

to minority shareholders or profits that are created unusually in the company (Ali & Lesage, 2013).Concentrated ownership may cause agency problems; the tight control that is used by a high owner concentration makes a position where selfish performance can go on unchallenged (Ask & Holm, 2013). In this regard, Fan & Wong (2005) suggest that as the proportion of voting rights rises for a controlling owner the more powerful the controlling owner's position within the firm becomes and therefore an agency problem arises.Hence, auditing as a credible monitoring mechanism can be implied by the controlling owner so as to decrease the consequences of the agency problem. Anyway,the issue of existing the controlling shareholders and the protection of minority shareholders has become very important because the conflict of interests between them will create uncertainty in the capital market. In this situation, auditing as an independent professional can ensure the beneficiaries from the accuracy of financial reporting through validating the financial statements of the board of directors (Walker, 2003).

Regarding Iran's market, it can be mentioned that Iran's country faced severe economic sanctions duringthe study period between 2010 and 2017, and most Iranian companies had financial distress. In such economic conditions, we argue that these firms are likely to involve in manipulating the accounting figures in order to mask their poor performances because they are not able to attract foreign funds. The question of this paper now is which type of corporate ownership structure has a tendency to manipulate the financial statements. Sincethe amount of audit fees is positively connected to the extent of audit firms' efforts and litigation risk (Simunic, 1980),It is foreseeable that the firms involved inmanipulating financial reportingwill higher audit risk. Thus, the purpose of our study is evaluating the effects of different corporate ownership structures such as institutional, managerial, family ownership, and family-managerial ownershipson audit risk.

The rest of the aforementioned paper is organized as follows: the next section frames the study into a theoreticalframework, hypotheses development, and literature. Section three shows the research design and outlines where data is obtained and the sample selection procedure. Section four then presents the main results and implications drawn from statistical analyses. Lastly, the last section presents the concluding remarks.

2. The theoretical framework, hypotheses development, and literature

In the complex business world of the 21st century, the need for the audit profession cannot be ignored, especially when economic crises and scandals have created an unsafe atmosphere around investors.With the bankruptcy of large companies such as Enron and WorldCom, the credibility of financial reporting has been deteriorated, and investors do not have trust in the financial statements provided by management.Not only shouldcompanies perform their business tasks, but also they have the responsibility of responding to people outside the company; as a consequence, the most effective form of

accountability is financial reporting.Auditing actually a monitoring mechanism is aimed to create confidence in the financial statements issued towards stakeholder and to act as an insurance against material misstatements (Ask & Holm, 2013).It should be stressed that audit risk is the risk that an auditor may issue an unqualified report because of the auditor's failure to detect material misstatement either due to error or fraud. Obviously,the audit risk of Iranian firms these days is high owing to their poor economic conditions.Due to severe economic sanctions against Iran over the past few years, Iranian companies have many financial problems; accordingly, these firms are expected to manipulate accounting reporting so that they can show a better picture of their financial situation to investors and other users of financial statements (Salehi *et al*, 2018). Needless to say, when the audit risk is high, auditors are expected to make more effort (Simunic, 1980; Jha& Chen, 2014). Understandably, in an insecure auditing environment, audit firms try to conduct more audit testing or allocate more time of experienced auditors; moreover, they probably charge a risk premium to shield increased audit risk (Bedard & Johnstone, 2004; Lu *et al*, 2017). You might first want to know what factors can increase the audit risk. Understanding some of the important information in this field can surely give you a deeper insight into the fundamental research questions of this paper.

According to the agency theory, because managers behave in accordance with their personal interests and the interests of shareholders will not be themain concern, there is a conûict of interest between the manager and owner (Salehi *et al*, 2017).Rewards actually can trigger managers to manipulate company profits. Bryan & Mason (2016) suggested that by increasing the amount of remuneration paid to managers, their incentive to manipulate profits is greater than before, which will require a higher quality audit. Similarly, Sajadi *et al*. (2015) found that there is a positive connection between board compensation and audit fees in the Iran market between 2005 and 2009. In addition, Salehi, Tarighi, and Safdari (2018) in Iran's inflationary economy concluded that those companies that pay more rewards, their directors are likely to have more incentive to manage their profits, and the audit risk of this kind of firms is higher in comparison with others.In the meantime, some companies may reduce their directors' rewardsseverely due to reduce costs or penalize managers for their poor performance, which this policy ultimately will aggravate the agency problems between them (Bryan & Mason, 2016). In an interesting study, Zhang*et al*. (2018) realized that Merger and Acquisitions (M&A) have a positive role in improving firm performance in emerging markets. Logically, all shareholders of a company expect managers to have a perfect mergers and acquisitions investment. Managers surely owing to keep their job security are more likely to misstate financial statements; as a result, firms under such investment-related pressure witnessed larger increases in audit fees (Lu *et al*, 2017). Another important factor in increasing audit risk is the weakness of the company's internal control. Various researchers likeLuikko

(2017), and Ji *et al.* (2018) came to the conclusion that weakness in internal control can increase the extent of auditor effort, which is reflected both in the audit pricing and the length of an audit.Malekian *et al.* (2012) also proved thatauditors consider CEO duality as one of the most important factors in increasing the audit risk.In general, in addition to the above, many other factors, such as company size, and audit firm size, financial leverage, auditor's perception of client business viability, and client restatement is significantly associated with audit fees and audit lags (Hay *et al*, 2006; Venkataraman *et al*, 2008;Malekian *et al*, 2012; Lu *et al*, 2018).

Determining the composition of the shareholders of a company is defined as the corporate ownership structure (Salehi *et al.*, 2017). One of the effective mechanisms of corporate governance is the existence of institutional investors. Institutional ownership refers to the ownership stake in a company that is held by large financial organizations, pension funds or endowments. Institutions generally purchase large blocks of a company's outstanding shares and can exert considerable influence upon its management. The role of institutional stakeholders in companies has been the subject of most of the discussions in recent years; in this context, short-term institutional stakeholders focus on increasing corporate current earnings, whereas long-term institutional stakeholders as a corporate governance mechanism reduce the incentives for earnings management by management. For this reason, institutional ownership is like a double-edged sword, and there are different opinions about the role of institutional shareholders.On the one hand, Institutional investors tend to have short-term profitability and put pressure on managers to achieve short-term goals, although achieving short-term profitability goals can be detrimental to the value of shareholders' equity in the long run (Ali & Lesage, 2013).So far, much research has been done that is consistent with this view; for instance, Ben Ali (2011) experienced a positive and significant relationship between institutional ownership and audit fee. Ali & Lesage (2013) realized that institutional owners are positively linked to higher audit fees in France as well.On the other hand, due to the volume of investment wealth, institutional investors are likely to actively manage their investment (Khodadadi *et al*, 2014). Based on this view, institutional investors can be considered as experienced investors who have a comparative advantage in collecting and processing information. It can dare be admitted that these shareholders have become one of the most important components of the Iran capital market in recent decades. In fact, due to long-term investment, institutional stakeholders in the companies tend to spend resources to oversee the management sector, which reduces the agency problems.(Khodadadi *et al*, 2014).Owing to the institutional investors' influence, the quality of financial reporting improves as they act a monitoring role and pay more attention to the management decisions regarding the accounting process (Yin, 2011). Khan *et al.* (2011) came to the conclusion that audit fees have a significant negative relationship with institutional ownership concentration; Bangladeshi companies actually pay

lower audit fees when these are dominated by institutional shareholders. In an emerging country called Iran, Rajabi and Mohammadi (2009) investigated the association of audit services pricing with agency costs and found that institutional ownership can decrease the agency problems and audit risk. Therefore, according to the research literature, the first hypothesis of this research is expected to be as follows:

Hypothesis 1 : There is a significant relationship between institutional ownership and audit risk

As stated by Salehi *et al*. (2017), managerial ownership decreases agency problems between shareholders and executives due to aligning managers' and stakeholders' interests. In other words, managerial ownership can be a mechanism for resolving agency conflicts and reducing agency costs (Desender *et al*., 2013; Shan *et al*, 2019). It should be highlighted that Morck *et al*. (1988) provided the convergence-of-interests theory which talks about the alignment of interests between executives and stockholders. Apparently, managers who invest under the management of themselves avoid high-risk decisions compared to other managers, which will reduceInformation asymmetry and audit fees (Jensen, 1986;Salehi *et al*. 2017).Based on convergence-of-interests' theory, when managers gain greater stock shares, they share their interest as a shareholder and will be worried about the shareholders' interests (Yin, 2011; Shan *et al*, 2019).Niemi (2005) also in Finland's market proved that audit hour and fees are lower for firms are majority-owned by management.Furthermore, Nikkinen *et al*. (2004)realized that there is a negative association between managerial ownership and audit fees. Contrary to the convergence-of-interest hypothesis, the management entrenchment hypothesis suggests that at certain levels of managerial ownership, managers can be so powerful that they can dominate the board so that even when their financial performance is not good, they cannot be seriously criticized (Shan *et al*, 2019).Morck *et al*. (1988), Himmelberg *et al*. (1999), and Yongtae *et al*. (2011) firmly believed that increased managerial ownership is likely to be a serious warning to enhance management's personal wealth through the expropriation of minority shareholders. In the economic situation of Iran market, which faces severe sanctions and most of its companies are facing a lot of financial problems, it is far from beyond the imagination that when managers have more power in making large decisions, they are more interested in participating in profit management so that they can better cover their poor corporate financial performance. According to the research background, we expect that managerial ownership is linked to audit risk.

Hypothesis 2 : There is a significant relationship between managerial ownership and audit risk

In 1999, Chua *et al*. examined more than 250 papers regarding family firms in order to introduce a clear definition of them, and finally suggested that the

description of family firms is not completely clear (Salehi *et al.*, 2017).Salehi *et al.* (2017) suggested that if one of the following criteria is met, then one can identify a company as a family firm: **A)**Ownership and management of the company are in the hands of the family; **B)**The family members are the owners of the company without the company is managed by them; **C)**The family members are the managers of the company without the company being owned by them. Another interesting point is that from Chakrabarty's view (2009), in order for a family firm to be considered, ownership of at least twenty percent of the company's stock is necessary; in addition, membership in the board of directors is not defined as a condition.

On the other hand, from the viewpoint of Anderson *et al.* (2003), ownership of at least eighteen percent of the company's stock is necessary and the family members must be at the management position. Moreover, according to Wang (2006), a large percentage of the profits are in the hands of family members and these people are actively involved in the board of directors, and management of firms are family businesses. Generally speaking, following Salehi *et al.* (2017), we classify the family ownership structure into two distinct categories. In this study, we design the third hypothesis based on Chakrabarty's attitude towards the definition of the family firm, commonly known as "family ownership"; however, we construct the fourth hypothesis of this paper building on Anderson *et al.* (2003), and Wang (2006), commonly known as "family-management ownership". In this paper, we argue that based onthe definition of familyownership, there is a conflict of interestbetween owners and managers because family owners do not engage in corporate management. However, in firms with family-management ownership due to the lack of separation of management from the company's shareholders, it is expected that there are lower agency problems.In fact, there is an argument that due to the ownership of family members in the company and their managerial role, there will be a balance between the interests of managers and shareholders, which reduces information asymmetry (Lei & Lam, 2013; Ali and Lesage, 2014; Khodadadi *et al.*, 2014). For example, Ho & Kang (2013) concluded that compared to non-family firms, family companies are less likely to hire top-tier auditors because of the less severe agency problems between owners and executives. Their outcomes also displayed that family firms, on average, incur lower audit fees than non-family firms, which is driven by family firms' lower demand for external auditing services and auditors' perceived lower audit risk for family companies. In addition, they found that the propensity of family companies to hire non-top-tier auditors and to pay lower audit fees is stronger when family owners actively monitor their firms. Based on a sample of 3,291 firm-year observations of major U.S. listed firms during the years between 2006 and 2008, Ali and Lesage (2014) demonstrate that audit riskis negatively associated with family shareholding. Consistent with the signaling hypothesis, Lei & Lam (2013) in Hong Kong discovered that family firms tend to more

likely to choose bigger auditors and pay higher audit fees.

On the other hand, the existence of family-management ownership increases the risk of conflict of interests (Ali & Lesage, 2013).Therefore, there is a concern that members of the family who are members of the board of directors act to maximize their profits contrary to the interests of other shareholders (Fama& Jensen, 1983). In actual fact, this conflict of interest will increase the regulatory costs like audit risk.Since the audit risk of family firms is high, audit firms are likely to increase the number of audit hours (Shleifer &Vishny, 1997). Wang (2006), and Ali *et al.* (2007) showed that family-management ownership is positively connected with quality earnings in the USA market.Building on the research literature, we envisage that the third andfourth hypotheses of this study are as follows:

Hypothesis 3 : There is a significant relationship between family ownership and audit risk

Hypothesis 4 : There is a significant relationship between family-management ownership and audit risk

3. Research Methodology

Since the results can be used in the decision-making process, this research is applied research. The statistical model used in this study was a multivariate regression; the time range of the study was (2010-2017) as long as eight years. The total data needed to test the hypotheses in this study are collected directly from the financial statements on the Tehran Stock Exchange website.

3.1. Population and statistical sample

The target population included all companies listed on TSE, during the period 2010 to 2017. Common features of the companies to determine the population are as follow:

1. The type of the company activity is productive and therefore investment companies, leasing, credit, and financial institutions and banks are not included in the sample because of their different natures. In the Tehran Stock Exchange, these companies have quite different natures in terms of reporting; thus, such companies cannot be examined.
2. According to the research time period (2010-2017), the firm is listed on the TSE before the year 2010 and its name is not removed from the companies mentioned by the end of 2017.
3. The activity of the selected companies has not stopped and their financial period from 2010 to 2017 has not changed.

Taking account of the above conditions, a sample size of 90 firms on TSE has been selected.

3.2. Empirical models

In this study, we design the two first models to analyze the impacts of institutional and managerial ownership on audit risk.

LN AUDIT-FEES = $\beta 0$ + β**1INSTITUTIONAL OWNERSHIP** + β**2 MANAGERIAL OWNERSHIP**+ $\beta 3$ PAYCUT + $\beta 4$ TDC + $\beta 5$ ACCRUALS + $\beta 6$ CEO-DUALITY + $\beta 7$ BOARD-INDEPENDENCE + $\beta 8$ MATWEAK + $\beta 9$ GCO + $\beta 10$ M&A + $\beta 11$RESTATEMENT + $\beta 12$ CA + $\beta 13$ FIRM SIZE + $\beta 14$ FIRM AGE + $\beta 15$ ROA + $\beta 16$ LEV + $\beta 17$ LOSS + $\beta 18$ TENURE + $\beta 19$ SPEC + $\beta 20$ BIG1 + ϵ. *(Model 1)*

AUDIT DELAYS = $\beta 0$ + β**1INSTITUTIONAL OWNERSHIP** + β**2 MANAGERIAL OWNERSHIP** + $\beta 3$ PAYCUT + $\beta 4$ TDC + $\beta 5$ ACCRUALS + $\beta 6$ CEO-DUALITY + $\beta 7$ BOARD-INDEPENDENCE + $\beta 8$ MATWEAK + $\beta 9$ GCO + $\beta 10$ M&A + $\beta 11$ RESTATEMENT + $\beta 12$ CA + $\beta 13$ FIRM SIZE + $\beta 14$ FIRM AGE + $\beta 15$ ROA + $\beta 16$ LEV + $\beta 17$ LOSS + $\beta 18$ TENURE + $\beta 19$ SPEC + $\beta 20$ BIG1 + ϵ. *(Model 2)*

So far, in a variety of studies, two variables (Audit Fees) and (Audit Delays) have been used as a tool for assessing audit risk (Masli *et al*, 2010; Jha & Chen, 2014;Lu *et al*, 2017). That is becauseaudit fees are likely to be increased owing to more audit work or more predictable losses (Simunic, 1980). In other words, the extent of audit fees is surely linked to the extent of the auditor's effort and litigation risk; accordingly, the natural logarithm of audit fees received by external auditors is defined as a proxy for audit riskin the first model. In the second research model, we also use the lag between the auditor's signature date and the date of the fiscal year-end (Audit Delays) as a measure of the audit risk, which leads to more auditor's effort. With respect to independent variables, it can be stressed that institutional ownership represents the percentage of shares held by insurance firms, financial and investment institutions, banks, governmental corporations and other parts of the state which is calculated by dividing the institutional ownership stake by the total number of ordinary shares at the end of the period (Salehi *et al*., 2017). In addition, managerial ownership as another independent variable is calculated by dividing the maintained stock by the board of directors by total shares of the firm (Salehi *et al*., 2017).

PAYCUT is an indicator variable that takes 1 if there is an extreme CEO pay cut, and 0 otherwise. Following Gao *et al*. (2012), and Bryan *et al*. (2016), we recognize extreme CEO pay cuts when the CEO total compensation declines at least 25% in the current year. TDC is defined as total CEO compensation. ACCRUALS is the absolute value of total accruals scaled by total assets. CEO duality is a kind of indicator variable which equals 1 if the managing director of a company is simultaneously the chairman of its board, and 0 otherwise; furthermore, Board independence shows the proportion of independent members of the board over the total number of the board

members (Salehi *et al*, 2018). MATWEAK is an indicator variable that takes the value of 1 if a firm reports a material weakness in internal control over financial reporting, and 0 otherwise; besides, GCO is an indicator variable that takes the value of 1 if a firm received a going-concern audit opinion, and 0 otherwise (Bryan *et al*, 2016). Furthermore, M&A is an indicator variable that takes 1 if a firm is involved in a Merger and Acquisitions activity, and 0 otherwise. RESTATEMENT is another indicator variable that takes a value of 1 if the firm reported a restatement, 0 otherwise (Lu *et al*, 2017). CA is current assets scaled by total assets, and LEV is total liabilities divided by total assets. LOSS is an indicator variable that takes the value of 1 if income before extraordinary items is negative, and 0 otherwise. FIRM SIZE is the natural logarithm of total assets, and FIRM AGE is the number of years since the company has been listed on the Stock Exchange. ROA is the ratio of net income to total assets; besides, TENURE is the number of years the auditor has audited a firm (Bryan *et al*, 2016). SPEC is an indicator variable that takes the value of 1 if a firm is audited by an industry specialist auditor, using the approach used by Francis *et al*. (2005), and 0 otherwise (Bryan & Mason, 2017). Finally, BIG1 is defined as an indicator variable that takes the value of one if a firm is audited by an Iranian audit organization, and zero otherwise.

LN AUDIT-FEES = $\beta 0$ + $\beta 1$**FAMILY OWNERSHIP** + $\beta 2$ **FAMILY-MANAGEMENT OWNERSHIP** + $\beta 3$ PAYCUT + $\beta 4$ TDC + $\beta 5$ ACCRUALS + $\beta 6$ CEO-DUALITY + $\beta 7$ MATWEAK + $\beta 8$ GCO + $\beta 9$ M&A + $\beta 10$ RESTATEMENT + $\beta 11$ CA + $\beta 12$ FIRM SIZE + $\beta 13$ FIRM AGE + $\beta 14$ ROA + $\beta 15$ LEV + $\beta 16$ LOSS + $\beta 17$ TENURE + $\beta 18$ SPEC + $\beta 19$ BIG1 + ε. *(Model 3)*

AUDIT DELAYS = $\beta 0$ + $\beta 1$**FAMILY OWNERSHIP** + $\beta 2$ **FAMILY-MANAGEMENT OWNERSHIP** + $\beta 3$ PAYCUT + $\beta 4$ TDC + $\beta 5$ ACCRUALS + $\beta 6$ CEO-DUALITY + $\beta 7$ MATWEAK + $\beta 8$ GCO + $\beta 9$ M&A + $\beta 10$ RESTATEMENT + $\beta 11$ CA + $\beta 12$ FIRM SIZE + $\beta 13$ FIRM AGE + $\beta 14$ ROA + $\beta 15$ LEV + $\beta 16$ LOSS + $\beta 17$ TENURE + $\beta 18$ SPEC + $\beta 19$ BIG1 + ε. *(Model 4)*

Because only 20 firms out of the 90 firms are owned by family members and there are 14 companies in which family owners are members of the board, the third and fourth regression modelsareemployed to investigate the influence of family ownership and family-management ownership on audit risk. Obviously, family & family-management ownerships are considered asindependent variables. We can say that there is family ownership when a part of the corporate ownership structure is formed by family members or their relatives.Further, it is argued that there is family-management ownership when a part of corporate ownership structure is formed by family members or their relatives who areboard membersas well (Salehi *et al*., 2017). The rest of the research model variables also are a kind of control variable that each of them previously has been described in detail.

4.   Results

4.1. Descriptive statistics

Descriptive statistics are used to describe the basic features of the data in a study.

Turning to the details, it can be seen in table one that on average, between the end of the fiscal year and the audit report has taken almost two and a half months, which is not relatively short.Approximately 85% of the shares of the companies are owned by institutional investors which indicates the strong influence of the government on the structure of Iranian companies.The outcomes also show the lifetime of the sample companies of this research reaches over 16 years, which shows that they have fairly high experience in the Tehran Stock Exchange (TSE); moreover, just over three-fifths of the board of directors of these companies have sufficient independence.

4.2. The results of the firstand second research models

Using the method of panel EGLS (Period random effects) in model one,our aim is to know whether Iranian firms with institutional & managerial ownership are significantly associated with audit fees.Afterward, by applying the method of Ordinary Least Squares (OLS), the second research model evaluates the association between these two structure ownership and audit lags.

Building oneconometrics science, In the initial step, the F-Limer (Chow) test is used to identify whether a model is fitted to the Ordinary Least Squares (OLS) or panel data method. Regarding the results of Chow test in thefirst research model, it can be highlighted that since the probability value of the H0 test that is 0.000 and less than 0.05, the preference of the Ordinary Least Squares method is rejected for the first model, while the panel data method is accepted. Another important point is that after confirming the use of the panel data method, the Hausman test is used to determine if a panel data with fixed effects should be used or a panel data with random effect. In this regard, the outcomes of Hausman test show that because the probability value of H_0 which is bigger than 0.05, the preference of the fixed effects model is rejected and the random-effects model is accepted for our first model. However, since the amount of P-value of Chow test in the second model is 0.7398 and more than five percent, the preference of the Ordinary Least Squares method is accepted and there is no need for carrying out Hausman test.With respect to Model Summary, it can be also concludedthatsince F-statistic describes the overall validity of the research model and the amount of P-value of both models is less than 5%, they are statistically significant. In statistics, the Durbin–Watson statistic also is a test statistic used to detect the presence of autocorrelation in the residuals. Thus, because the amount of Durbin-Watson state is between 1.5 & 2.5, this provides strong evidence of the lack of

autocorrelation in the residuals of bothresearch models. Finally, the high value of R-squared indicates the study models will fit better our data.

In terms of the criterion of audit delays, the evidence witnessed a negative relationship between institutional owners and audit risk, whereas the existence of managerial owners increases the agency problems and therefore audit risk. It seems that the existence of institutional owners in the Iran market has enabled the company's management to focus on economic performance and avoid opportunistic behaviors. Therefore, one result of the institutional owners' presence in Iranian companies is the high quality of accounting information, especially when companies do not have good financial conditions due to economic sanctions and more than ever have the incentive for fraudulent financial reporting.

4.3. *The results of the third and fourth research models*

The purpose of model two is to investigatethe impacts of family & family-management ownership on audit pricing. In the last research model, we want to survey the relation between family & family-management owners and audit delays.

What stands out from table three is thatthe third and fourth hypotheses of this research are accepted. Because the amount of P-value for family owners' variable is 0.040 in the fourth model and the coefficient on this variable equals 0.196, the firms with family ownershipincrease audit delays. Building on the agency theory, when management and ownership are not in common, the likelihood of increasing the conflict of interests will be high. For this reason, the firms with family ownership due tothe separation of ownership from management lead to increased audit risk. Consistent with our expectation, the results also show that the companies with family-management owners owing to aligning the ownership and management decrease the agency problems and consequently audit risk. Another interesting point is that older companies often try to hire larger auditors because of their high credit standing in the market, which increases their audit costs.

5. Conclusion

From the point of view of the criterion of audit delays, our findings saw a negative linkage between institutional owners and audit risk. It seems that the existence of institutional owners in the Iran market has enabled the company's management to focus on economic performance and avoid opportunistic behaviors. Indeed, institutional owners due to their long-term investment in the companies have a tendency to spend resources to oversee the management, which reduces the agency problems. This result is similar to the studies ofRajabi and Mohammadi (2009), Yin (2011), Khan *et al*. (2011), and Khodadadi *et al*. (2014), while is not similar to Ben Ali (2011), Ali & Lesage (2013). In addition, according to management entrenchment' theory, our results

showed that the existence of managerial owners increases agency problems and therefore audit risk in Iran setting. This means that if Iranian directors have more power in making big decisions, they are more keen on taking part in manipulating accounting figures since they can better show their corporate financial performance to investors. The evidence also suggests that Iranian firms with family ownership due to the separation of ownership from its management led to increased audit risk, while companies with family-management owners owing to aligning the ownership and its management decrease the agency problems and consequently audit risk.

What really will fascinate other researchers about our study is that the time period under study is unique because of the many financial problems experienced by Iranian companies. Without any exaggeration, the results of this research will provide important information to investors and creditors about the severity of the agency problem of companies with different ownership structures, particularly those firms that are active in markets facing financial sanctions, like Iran.By identifying these factors, auditors can also properly value their services.

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Table 1: Descriptive statistics

Variable	OBSV	Mean	Std. D	Max	Min
Ln audit fee	720	8.7645	0.4091	10.2847	7.6434
Audit delays	720	75.3224	27.6293	178	19
Institutional ownership	720	85.4286	303.7890	100	0
Managerial ownership	720	0.6092	0.2840	0.99	0
Family ownership	160	30.320	27.786	95.07	0
Family-manage ownership	112	16.196	25.172	95.08	0
TDC	720	8.2512	0.9656	10.5407	2.4393
Accruals	720	0.2131	0.2063	3.1840	0
Board independence	720	0.6128	0.2371	8	0
CA	720	0.6649	0.2098	0.9826	0.1048
Firm size	720	5.7922	0.6441	8.1539	4.3884
Firm age	720	16.2277	7.2328	47	5
ROA	720	12.1022	39.0951	806	-50.87
Lev	720	0.6870	0.3599	3.0604	0.0657
Audit tenure	720	3.7185	2.4324	7	1

Table 2: The results of the first and second models

Variable	First model		Second model	
	Coefficient	P-value	Coefficient	P-value
C	6.6961	0.0000***	95.6798	0.0000***
INSTITUTIONAL OWNERS	-0.0007	0.2853	-0.2671	0.0000***
MANEGERIAL OWNERS	0.0392	0.4349	9.5438	0.0256*
PAYCUT	0.0491	0.0498*	0.2767	0.9257
TDC	0.0021	0.9191	-4.6624	0.0076***
ACCRUALS	0.1769	0.0636	7.3605	0.3602
CEO DUALITY	36.2983	0.0024***	27.0019	0.0002***
BOARD INDEPENDENCE	-112.2945	0.0004***	-97.0067	0.0001***
MATWEAK	-0.0606	0.1342	3.5489	0.2819
GCO	0.0895	0.3300	-24.1240	0.0020***
M&A	0.0971	0.0040***	5.6856	0.0469*
RESTATEMENT	-3.15E-05	0.9992	3.7366	0.1779
CA	0.1765	0.0212*	-2.7721	0.6672
FIRM SIZE	0.2809	0.0000***	8.0899	0.0010***
FIRM AGE	0.0011	0.5703	-0.1078	0.4997
ROA	0.0012	0.0002***	-0.0249	0.3867
LEV	-0.0193	0.6184	13.1395	0.0001***
LOSS	0.0697	0.0078***	-5.7991	0.0088***
TENURE	0.0079	0.1868	0.8880	0.0777
SPEC	0.0716	0.0143**	-3.0195	0.3179
BIG1	0.1602	0.0001***	2.6714	0.1482

First Model Summary		
(Chow Test):	Period Chi-square' Statistic (124.280)	Probability (0.0000)
(Hausman Test):	Period random Statistic (0.0000)	Probability (1.0000)
R-squared: 0.5439	Adjusted R-squared: 0.5243	
F-statistic: 25.8403	Prob (F-statistic): 0.0000	Durbin-Watson:1.9442
Second Model Summary		
(Chow Test):	Period Chi-square' Statistic (2.7414)	Probability (0.7398)
R-squared: 0.5921	Adjusted R-squared: 0.5704	
F-statistic: 8.2256	Prob (F-statistic): 0.0000	Durbin-Watson:1.5569

Table 3: The results of the third and fourth models

Variable	Third model		Fourth model	
	Coefficient	P-value	Coefficient	P-value
C	7.0478	0.0000***	182.3667	0.0001***
FAMILY OWNERS	0.0008	0.4166	0.1964	0.0403*
FAMILY-MANAGE OWNERS	-0.3458	0.0467*	-0.6910	0.0035***
PAYCUT	0.0636	0.2890	4.7657	0.3908
TDC	0.0196	0.5442	1.2145	0.6919
ACCRUALS	0.3356	0.1193	77.6091	0.0002***
CEO DUALITY	19.0003	0.0005***	22.8311	0.0017***
MATWEAK	0.0284	0.6960	-2.7113	0.6849
GCO	0.3211	0.02941	-50.4713	0.0005***
M&A	0.0729	0.4629	4.7829	0.6147
RESTATEMENT	0.1058	0.0558	5.4032	0.3059
CA	0.0998	0.6354	7.3362	0.7138
FIRM SIZE	0.2212	0.0054***	-10.3669	0.1596
FIRM AGE	-0.0193	0.0085***	-0.5480	0.4063
ROA	0.0033	0.2736	0.3174	0.2783
LEV	-1.81E-05	0.9999	-2.0806	0.8436
LOSS	-0.0748	0.1982	-2.1161	0.6968
TENURE	-0.0016	0.8849	2.0876	0.0558
SPEC	0.0876	0.1410	3.5601	0.5287
BIG1	0.1092	0.3775	-20.3569	0.0863

Third Model Summary		
(Chow Test):	Period Chi-square' Statistic (17.8152)	Probability (0.0032)
(Hausman Test):	Period random Statistic (0.0000)	Probability (1.0000)
R-squared: 0.4508	Adjusted R-squared: 0.4164	
F-statistic: 25.8403	Prob (F-statistic): 0.0000	Durbin-Watson:1.9442
Fourth Model Summary		
(Chow Test):	Period Chi-square' Statistic (5.3774)	Probability (0.3716)
R-squared:0.4259	Adjusted R-squared: 0.4021	
F-statistic: 3.8851	Prob (F-statistic): 0.0000	Durbin-Watson:1.5104