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Board Compensation and Disclosure Quality: Does Ownership Really Matter in an Emerging Market?

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ABSTRACT

This paper investigates the effect of disclosure quality of financial information on board compensation in various ownership structures in an emerging market called Iran. We use a unique data set from a sample of 176 Iranian listed firms over the period 2010-2016 in order to answer the following questions: is there any relationship between the use of compensation as an incentive mechanism for managers and the disclosure quality of financial information in family firms? And how do institutional ownership can affect the relationship between compensation and disclosure quality? Along with these questions, we investigate whether inside ownership has an effect on the mentioned relationship. We find that disclosure quality is not associated with board compensation in family firms. This lends support to the conjecture that managers neglect the quality of information they provide in family firms, and consequently, adjust their rewards through other ways. Our findings illustrate that there is no relationship between board compensation and disclosure quality in firms with institutional ownership, but at a ten percent error level, the correlation is positive and significant. We also find that applying inside managers is not a reward-enhancing method by which high-quality information would be divulged. The current study is almost the first one on the subject which is conducted in Iran. The results of this research seem to be a bridge between studies in this field between developing and developed countries.

Keywords: *Board Compensation, Disclosure Quality, Family Ownership, Institutional Ownership, Managerial Ownership, and Iran.*

INTRODUCTION

This paper examines empirically the relationship between board compensation and disclosure quality in Iran. With the emergence of big corporations and the boom in economic activities, owners handed the duty of controlling companies' resources to practitioners. If these experts receive appropriate feedback for their exerted efforts, they will use their maximum capabilities in line with companies' activities. Consequently, in order to maximize their own interests, owners had to compensate managers' efforts (Duong & Evans, 2015). According to the agency theory and findings of Mirrlees (1976), and Duong & Evans (2015), if there is a conflict of interest, managers usually put a higher priority on their own interests and ignore the shareholders'. So shareholders face some difficulties here; how to provoke managers to perform better, and how to implement a comprehensive strategy to conduct these activities in line with the firm's benefits. In order to address these problems, suitable criteria should be established to gauge the managers' performances. Then, appropriate incentive schemes should become connected to the criteria to align the managers' benefits and the owners'. It is in a way that if we consider the manager's performances and owners' benefits, adequate compensation is paid to the managers based on their efforts, and finally, both groups' interests are augmented. To pay sufficient bonuses to managers, their performance and efforts should be evaluated (Hui & Matsunaga, 2015). Considering the financial resources which are given by owners to managers for firms' activities, and the financial statements of firms as the indicator of their performance results, Hui & Matsunaga (2015) state that financial statements and their quality are some

of the most vital-determinant factors for the users. Also, they are suitable measures by which managerial efforts could be compensated. As noted by Bouckova (2015), the main role of financial reporting is to transfer information to external users in an effective way; timeliness, reliability, transparency, and comparability of information are the main elements for informed economic decisions. As a consequence, a decision is effective which is based on correct predictions. In this regard, the quality and the quantity of information reported on financial statements or on the explanatory notes – which are used to help decision-makers – are considered as the disclosure quality of financial information. These data provide a detailed description of the financial condition and performance results of firms (Bouckova, 2015). As agency theory argues the separation of ownership and management leads to a conflict of interest, managers' compensation creates a balance between the managers' benefits and the shareholders' (Bouckova, 2015).

Although growing literature on board compensation and its impacts on different aspects of corporations is seen, there is hardly any evidence on the relationship between board compensation and disclosure quality in various ownership structures, especially in developing countries. We look through the argument using data from Iranian listed firms. Iran has some noticeable features to explore this research. First, there is an interesting method for classifying firms in Iran; all listed firms are scored and ranked according to the timeliness and reliability of the information. Second, the mechanism by which compensation is paid is somehow twisted. Third, the financial and economic situation of Iran in the Middle-East and especially among developing countries makes our sample truly engrossing. Among the many measures which are identified for paying bonuses all around the world, financial information quality is introduced and examined in this study. In the financial statements of Iranian firms, although many people tend to buy and sell shares based on the financial statements, some detailed information such as ownership structures are taken into account. However, for better disclosure of information, all specific data in every aspect should be considered. We aim to investigate the relationship between compensation and disclosure quality in family firms, and in firms with institutional ownership. Then, we will test if the inside managers have an impact on our examination.

The residual term of disclosure quality is calculated in our first model; afterward, it is put in the second regression along with other variables by using EFA (Exploratory Factor Analysis). We aim to conduct our main empirical analysis by regressing disclosure quality on compensation. The findings demonstrate that in family firms, disclosure quality of financial information is not associated with compensation. This lends support to the conjecture that in family firms, managers ignore the quality of information they provide, and consequently, their rewards may be adjusted through other ways. Our findings illustrate that there is no relationship between board compensation and disclosure quality in firms with institutional ownership, but at a 10% error level, the correlation is positive and significant. Finally, we find that applying inside managers is not a reward-enhancing method.

We contribute to the existing literature in a few ways. We add to the ownership structure, corporate governance, and disclosure quality literature. Common belief has considered the routine measures to compensate managers' efforts but has not considered disclosure quality as an important criterion, especially through different ownership structures. Also, in developing countries, no comprehensive research has been seen regarding the relationship between compensation and disclosure quality in family firms, institutional firms, and managerial firms. We try to fill these gaps in the literature. We also contribute to the compensation literature, documenting that disclosure quality is not a measure by which compensation is adjusted in various ownership structures. Finally, our study provides some policy implications with respect to legislators' focuses for disclosure quality, stating that not only the quality of information is not noticed by shareholders, but also firms do not pay rewards based on them. Some preliminary insight has been offered by our study into how disclosure quality is somehow neglected in developing countries .The remainder of the paper proceeds as follows: the following part reviews the existing literature and develops hypotheses. Then the research design, variable measurement, sample selection process and descriptive statistics are presented. The next part includes test results. And the last section concludes our paper.

THE THEORETICAL FRAMEWORK, HYPOTHESES DEVELOPMENT, AND LITERATURE

With the emergence of big companies between 1850 and 1925, factories grew and production

lines became extremely wide; firms decided to sign long-term contracts with employees and the need for information for planning and controlling firms seemed vital (Jensen & Meckling, 1976). Hence, for increasing a firm's value and performance, designing a motivational mechanism for managers to exercise their maximum efforts seemed essential (Jensen & Murphy, 1990). According to Mirrlees (1976), because of the intangibility of managers' efforts to shareholders, and managers' high desires to fulfill their own interests, they will not always try to maximize owners' interests. Therefore, some strategies should be formulated to evaluate and compensate managers' performance based on some visible criteria encompassing stock returns or profitability which make values elevating (Duong & Evans, 2015). Accordingly, the bottom line of financial statements would be an appropriate criterion for many users such as investors, analysts, creditors, and financiers. It is considered as one of the best indicators to assess managers' performance (Franciset al., 2004). Now with the growth in resources available for managers, the number of beneficiaries increased, resulting in a conflict of interest. Consequently, in order to align their own interests with others', or to minimize the impact of conflict of interest, beneficiaries have to suffer agency costs (Zubaidah et al., 2009). While managers who are in the limelight try to alleviate agency costs by publishing financial information, some managers use earnings management leverage to distort firms' actual operations and transfer shareholders' wealth to themselves in terms of tunneling (Bazrafshan et al., 2015). They do this either for receiving compensation or maintaining their niche (Biedleman, 1973).

The users need accurate-timely data to make proper investment decisions (Behrouzi et al., 2013), but when firms do not report transparent-acceptable information, they encounter credit risk and lose shareholders' faith. This situation substantially diminishes the reliability and liquidity of information in capital markets. Actually, the main reason behind the boom of capital markets in the long term is the transparency of information (Madhani, 2009). Adequate disclosure and transparency have positive effects like reducing information asymmetry (Barth et al., 2013), increasing stock liquidity (Goh et al., 2008), enhancement of firm values (Hassan et al., 2009), and reduction of earnings management. According to the Kohler dictionary, disclosure is a clear show of a fact or condition on financial statements, explanatory notes, and audit reports. It is the transfer and report of economic information such as financial, non-financial, quantitative, or other forms of information relative to firms' activities. If disclosure is required by law, it is called mandatory disclosure; otherwise, it is voluntary and reported on free wills (Owusu-Ansah, 1998).

Market participants are always looking for high-quality information because this information reduces the information asymmetry between managers and investors. Several studies in the accounting literature show that higher disclosure quality palliates the information asymmetry (Welker, 1995; Francis et al., 2004; Jo & Kim, 2007). Lang & Lundholm (1996), demonstrated that firms with informative disclosure policies are more followed by consistent analysts, have more accurate profit forecasts, and have fewer variances in analysts' forecasts. Also, Increase in disclosure transparency can aid investors to evaluate earnings management (Jo & Kim, 2007). The financial information disclosure may reduce agency costs – information thatis gathered by managers for their own use and had little costs for them (Jensen & Meckling, 1976). The mechanical theory introduced in the 1960s suggests that the users do not use another source of information except for the financial statements, and investors merely make their decisions based on the values reflected in the financial information. In this regard, Welker (1995) stated that financiers may be systematically misled by accounting methods and options. Rival of this theory is the efficient market theory which shows that all available information is fully reflected by the market values. In the semi-strong form of the efficient market theory, Welker (1995), argued that the market can detect fake accounting changes and managers cannot systematically mislead the market by using such changes. Kothari (2000), interpret the transparency as a combination of conservatism and timeliness features. Lang & Lundholm (1996) stated that higher disclosure quality through information asymmetry decreases the surprise about a firm's performance, diminishes stock price volatility, increases stock exchange rate, and enhances firms' performance. Bushman & Smith (2003) were also of the opinion that effective-reliable accounting information facilitates monitoring and law enforcement that protect shareholders' interests.

One of the most fundamental factors behind sustainable economic development in any country is the attraction of domestic and foreign investments through the provision of basic infrastructure. This is acquired by a healthy-competitive environment via timely-transparent information where the information is accessible for all the users (Billings & Capie, 2009). Nowadays, information transparency and quality are the main concerns of capital market participants in every country (World Bank, 1998). Barth & Schipper (2008) believed that transparent financial reporting is about the financial reports which reveal firms' main economic affairs in a way that is easily understandable for the users. Bushman et al. (2004), considered the transparency of information as the power of extensive access to relevant-reliable information pertaining to financial performance, investment opportunities, sovereignty, value, and risk-taking of firms in economies. Regarding the capital market of Iran, with the onset of the financial crisis in early 2004, investors have focused on information transparency. In this way, in addition to creating a balance between the national and international standards, the authority has done some efforts to improve disclosure procedures. Providing disclosure guidelines and creating a disclosure ranking system stand as a paradigm for these efforts.

On the one hand, information transparency and quality assure minority shareholders of receiving reliable information, ensuring that major shareholders do not violate their rights. On the other hand, they encourage managers to attempt to increase corporate value instead of their short-term self-interests. If managers seize private information for themselves, this will result in information asymmetry and moral hazards (Barnea et al., 1985). Healy & Palepu (2001) believed that firms can alleviate agency conflicts and information asymmetry through financial reporting and disclosure. Therefore, disclosure quality has an impact on investment decision quality. The potential benefits of disclosure and transparency include lower capital expenditure (Diamond & Verrocchia, 1991), reduction in agency costs (Leftwich et al., 1981), stock price augmentation (Gelb & Zarowin, 2002) and firms' value enhancement. Sufficient disclosures by firms assist users in finding suitable investment opportunities, giving birth to capital flowing to the most productive firms. Navissi et al. (2016) probed the effect of various business strategies on investment decisions and managers' compensation. They stated that active or defensive policies lead to different kinds of decisions, monitoring and investment level which affect the managers' decisions and their bonuses. The results showed that firms with active (defensive) strategies have a high (low) investment level. Choi (2014) showed that labor market competitiveness causes compensation contracts to be adjusted. He concluded that bonus offers create confidence in employees and augment their efforts. He also stated that the initial effects of rewards are immense, and with the passage of time, these effects and the level of mutual trust will be adjusted. Chen et al. (2015) targeted managers' concerns about their future compensations and concluded that since managers can exert more efforts to prove their abilities, they are able to affect compensation. Cadman & Sunder (2014) conceded that when shareholders want to sell their shares, they trigger short-term motivations in managers to maximize current share values. Bushman et al. (2016) illustrated that when the dispersion of compensation is very low (high), performance is increasing (decreasing). Pfeiffer & Shields (2015) investigated the stock price reaction to compensation contracts and found that managers choose contracts based on private information, where these choices have an impact on stock prices. Hogan & Jonas (2016) investigated the bonus payment structure and transparency of financial statements restatement. The results demonstrated that the growth in compensation paid to the managers in the form of stocks decreases disclosure quality transparency. Brown & Popova (2016) examined the interaction between managers' incentives and audit committee connections and their effect on auditors' decisions. They declared that the more managers' compensation is, the more there will be additional-unconventional relationships of the audit committee, having greater effects on auditors' decisions.

Board Compensation & Disclosure Quality

Since stock-based benefits given to the manager act as some motivational factors to enhance a firm's value (Core & Guay, 1999), agency theory (Holmstorm, 1982) illustrates that efficient compensation contracts which are based on firm performance measures diminish the risk cost. Efficacious performance criteria show the appropriateness of the managers' activities; activities that are related to the given bonuses. Traditional agency theory assumes that an efficient market is active under the condition

in which managers earn salaries based on the final output of their firms' activities. The labor market takes managers' abilities into account to determine their salaries. If firms consider their final output – products – as a managers' performance criterion, salaries are adjusted based on that measure. If the preparation and dissemination of financial information are costly for firms, managers' compensation should be based on the disclosure quality of financial information. Moreover, all internal and external firms' forces can aid managers in boosting financial information disclosure quality.

Prior studies suggest that high disclosure quality causes an increase in firms' values through capital cost reduction (Botoson, 1997), litigation risks reduction (Franciset al., 1994) and investment improvement (Biddle & Hilary, 2006). Diamond & Verrocchia (1991) stated that based on the relationship between disclosure quality and firm value, higher disclosure quality via stock liquidity augmentation leads to capital cost reduction. Botoson (1997) provided some evidence that shows that high-quality disclosure – through annual financial statements – reduces the cost of capital. There is also some more evidence provided by Franciset al. (2004), stating that there is a negative correlation between the quality of discretionary accruals and capital cost. Moreover, high-quality disclosure leads to an increase in cash flows via efficient investing augmentation (Biddle & Hilary, 2006). This has happened due to the additional transparency provided for external users which causesa better understanding of investments. Furthermore, monitoring activities can result in agency costs reduction and encourage managers to invest better.

The provision of high-quality information depends on the managers' high understanding of the economy, environment, competitiveness among industries and firms, and the upcoming which firms need to succeed. Due to the high importance of managers' abilities in designing policies, the disclosure quality of financial information would be a demonstrative factor of administrative abilities in enhancing firm value (Chang et al., 2010). Actually, disclosure quality of financial information makes managers' salaries adjusted in the labor market which represents a positive relationship between the mentioned variables. Cheng & Courtenay (2006) found a positive correlation between voluntary disclosure and board compensation, but a negative relationship was seen by Abdelsalam & Street (2007). Since the provision of high-quality information is costly for managers, and in case of not having enough motivation, they will not make an adequate effort in order to increase the information quality. Consequently, it will result in producing poor quality information. Higher disclosure quality causes managers to be close to each other through transparency augmentation; as a result, they spontaneously adjust the provision of information. For instance, high-quality disclosure lessens managers' eagerness about pursuing self-interest strategies through disclosing adjusted information (Aboody & Kasznik, 2000). Hence, higher disclosure quality decreases managers' opportunistic behavior in financial reporting and in the expropriation of wealth to themselves.

From the past to the present, researchers had difficulties in identifying important-effective factors in financial information transparency and quality. Hui & Matsunaga (2015) conceded a significantpositive correlation between compensation and disclosure quality, stating that the relationship is stronger in firms with a strong governance structure. Michelon et al. (2015) probed different ways of disclosure does not affect its quality. Elzahar et al. (2015) investigated the economic impacts of disclosing financial and non-financial information and emphasized on the importance of disclosing such factors. Yekini et al. (2015) studied board independence and disclosure quality of financial statements. They found that the more non-executives are, the higher the disclosure quality is. Barron & Qu (2014) found that share values are affected by disclosure. Hassanein & Hussainey (2015) found a significantpositive correlation between changes in firms' performance and forthcoming disclosures. In another study of the relationship between disclosing non-financial information and analysts' forecast accuracy, Dhaliwal et al. (2012) found that a higher rate of disclosure lowers the error of analysts' forecast accuracy. Bazrafshan et al. (2015) showed a positive relationship between firms' performance and financial disclosure, stating that there will be counterproductive effects if extra information is disclosed. Bertomeu & Magee (2015) investigated the demands for disclosure rules by managers who are eager to enhance firm values. They came up with proving that most of the managers chose procedures in which all firms are required to follow. Richardsona et al. (2016) investigated the relationship between ownership structure and tax aversion. They came to the

conclusion that there is a significant non-linear relationship between the variables.

The Relation between Compensation and Disclosure Quality in Family Firms

Family firms can be defined from various aspects: family members being on board, shares percentage owned by family members, and substantial influence or control towards a firm. For instance, Ehrhardt & Nowak (2003) described family firms like the ones in which one or more members of one or more families at least own 50% of the equities. Anderson & Reeb (2003) stated that if 18% of common shares are owned by a family, it is a family firm. Villalonga & Amit (2006) contended that firms whose founder or his/her family members own at least 5% of shares can be considered as family firms. In 2010, DaxPlus Family Index was introduced, listing two criteria by which a firm is considered familial if it has at least one of them: A) the founder family hasa minimum of 25% of shares. B) One of the family members participates on board, and at least has 5% of shares.

In Iran, according to Article 107 of Iran Commercial Code, all publicly owned corporations are obliged to form a board out of shareholders which have at least 5 members. Noted by the Iranian Accounting Standards Committee, if shareholders have a minimum of 20% of the voting power, they actually have considerable influence on that firm. Therefore, it can be reasonably inferred that if a shareholder owns 20% of shares, he/she is able to establish controls in the firm. Based on the mentioned contents and analyzing Iranian listed firms, we describe two criteria by which firms can be put in family category: A) a real shareholder owns a minimum of 20% of a firm's common shares. B) one of the board members owns at least 5% of common shares, or the total amount of shares owned by real board members – including their family members – reaches to a proportion of 5% of total shares.

Due to the unique characteristics of family owners encompassing the willingness towards putting family members in high managerial positions and long-term investment attitudes, they can have various effects on different issues including performance, earnings management, agency costs, etc. Recent studies on the impact of family ownership and control on performance concluded that this kind of firm performs better compared to the non-families. In this regard, long-term horizons and reputation could be mentioned. In fact, they focus on survival and consider survivorship more than major shareholders do (Lee, 2006). Simultaneously, this can reduce hiring managers with short-term views, and can benefit a firm by establishing long-lasting connections with beneficiaries (Anderson & Reeb, 2003). But sometimes, family firms may poorly perform. For instance, there may be a conflict of interest between minor shareholders and family owners, intensifying agency conflicts. Families as owners may utilize governance systems in favor of themselves, and sacrifice efficiency for higher ownership benefits which results in damaging shareholders' interests (Lee, 2006). Mc Conaughy et al. (2001) considered agency theory and stated that capital market value is higher than book value in family firms, and operating ratios are more favorable. Also, there is higher efficiency, lower risks, and far more value. Anderson & Reeb (2003) found a non-linear relationship between performance and family ownership percentage, demonstrating that if family members are board members, that firm performs better. Wong (2006) showed that concentrated ownership makes information flow slower for outside users, information asymmetry decreases disclosure and family members would have the opportunity to manipulate profits, leading to lower earnings quality. Abdolmohammadi & Krall (2010 demonstrated that income smoothing prevails more in family firms. Also, family firms with high financial leverage are more eager to manage earnings. We argue that family firms have deep concerns about their reputation and consider survivorship; they have long term horizons and perform better. Consequently, their managers show eagerness to divulge high-quality information so as to receive more bonuses. Thus, according to the expressed content and the results extracted from the previous studies, we have our 1st hypotheses:

H1: There is a relationship between board compensation and disclosure quality in family firms

The Relation between Compensation and Disclosure Quality in Firms with Institutional Ownership

As noted by Earnhart & Lizal (2006) Institutional ownership is considered as the total percentage of shares owned by governmental and public firms. It includes insurance firms, financial firms, banks, state firms, etc. Considering the need for corporate governance

resulted from conflict of interests, Berle & Means (1932) believed that the lack of an appropriate corporate governance mechanism enables managers to take steps for their own interests and ignore the shareholders'. One of the most efficacious mechanisms in corporate governance is the emergence of institutional investors. According to Gillan & Starks (2003), institutional investors play an important role in the formation of many changes in corporate governance systems. Bratten & Xue (2016) stated that firms with high institutional ownership that have high (low) abnormal incentives experience great bonus reduction (increase). Bratten & Xue (2016) declared that institutional investors are a dominant force in capital markets and play an increasingly important monitoring role in corporate governance. Because it is well recognized that CEO equity incentives play an important role in helping align CEOs' interests with shareholders' (Jensen & Murphy 1990), it is natural to expect that institutional financiers influence the compensation contracting process in order to help align these incentives. Hartzel & Starks (2003) found that higher institutional ownership leads to higher pay-for-performance sensitivity of the CEO bonus. Maug (1998) came to the conclusion that the more the institutional ownership is, the higher the observations are.

Based on the recently-conducted studies such as Cornett et al. (2007), the impact of institutional investors on pursuing strategies is various in every firm, and incentives behind monitoring these strategies are not the same. Accordingly, institutional investors can be divided into two categories: passive and active. The passive ones are the temporary investors who consider short-term returns, their portfolio turnover is high, and follow instantaneous trading policies (Bushee, 1998). Hence, because monitoring has no short-term advantages for them, they are reluctant to have board members (Potter, 1992). On the other hand, active institutional investors have a long-term standpoint with having a strong stimulus to have representatives on board. Their low portfolio turnover demonstrates their motivation for stock maintenance, encouraging managers to improve firm performance and wealth. Almazan et al. (2005) found that the more there are active institutional shareholders, the higher the monitoring level imposed on managers is.

Institutional shareholders have a controlling role that forces managers to act in a way that is not detrimental to a firm (Bushee, 1998). Theoretically, institutional shareholders have a special place in corporate governance because they are able to observe managers' activities and align owners' and managers' interests. However, it is expected that institutional investors use their power to observe and control managers and this leverage shows its importance in a firm's value making process (Claessens et al., 1999). Berle et al. (1932) declared that the more ownership dispersion is, the lower the power of shareholders will be. Zouari & Rebai (2009) found that a reduction in institutional ownership increases earnings management. In another examination done by Ajinkya et al. (2005) they contended when institutional ownership is high, conservatism in profit forecast is augmented. Also, the more there are non-executives on board, the stronger the conservative view is. Velury & Jenkins (2006) were of this conviction that because institutional owners have access to relevant and timely information, it enables them to have more power for detecting earnings management. Almazan et al. (2005) found that if the level of active institutional ownership is higher, the observation procedures implemented on managers will be stronger.

Institutional investors differ from individual investors in several important ways. First, institutions generally manage larger amounts of funds and have larger equity holdings in their investee firms. Second, they are more informed and sophisticated than individual investors (Ramalingegowda, 2014). Relative to individual investors, institutions have more resources and higher abilities to gather and process information and often have better access to the board of managers and management. These differences give institutions both stronger positions and higher abilities to monitor managers, influencing board decisions such as compensation contracts (Shleifer &Vishny, 1986). Prior researches found evidence consistent with institutional investors' influence over corporate decisions including R&D investment and CEO compensation (Cadman et al. 2010). Because executive compensation contracts are a crucial mechanism that shareholders can use to incentivize managers to act in the best interests of shareholders, it is natural to expect a relation between institutional ownership and executive compensation contracts. Indeed, Hartzel & Starks (2003) find that higher institutional ownership is associated with higher pay-for-performance sensitivity of CEO compensation. Cadman et al. (2010) document that because the quality of stock price

as a performance measure varies with firm characteristics; institutional investors make adjustments to their use of equity incentives in CEO compensation contracts accordingly. Balachandran & Mohanram (2010) examined the sensitivity of CEO compensation to earnings growth. They found that institutional investors improve contracting efficiency in CEO compensation contracts. Lina et al. (2016) studied the relationship between information asymmetry, dividend policies, and ownership structure. They showed that firms with state ownership and high information asymmetry pay more dividends. In keeping with what was stated in the research literature, we are of this conviction that strict monitoring is implemented in institutional firms, managers being less eager to deviate from the proper path. Actually, they try to do their best by divulging high-quality information and achieve the highest amount of bonuses. Accordingly, the second hypothesis of this paper is expected to be as follows:

H2: There is a relationship between board compensation and disclosure quality in firms with institutional ownership.

The Relation between Compensation and Disclosure Quality in Firms with Managerial Ownership

Managerial ownership is one of the corporate governance mechanisms decreasing conflict of interests and increasing firm value. As noted by Jensen & Meckling (1976), if managers own stocks, they are reluctant to deviate from maximizing shareholders' wealth. Many studies are conducted in this regard, showing that managerial ownership plays a vital role in firm performance; the amount of shares managers have at disposal can adjust their standpoint towards various decisions they make (Miguel et al., 2004). Jensen & Meckling (1976) suggested that by the time managers participate in firms' ownership, agency conflict is alleviated.

Abor & Biekpe (2007) showed a positive relationship between managerial ownership and firm performance, but Demsetz & Villalonga (2001) showed no relationship, while Stepanova & Suvorov (2017) demonstrated a negative relationship. Ozkan & Ozkan (2004) conducted a study and concluded that managerial ownership has a significant relationship with firm liquidity. Lasfer (2006) illustrated that although managers have a high amount of shares, they prefer a board with low monitoring concerns. In an examination of the relationship between managerial ownership, governance, and risk, Kim & Lu (2011) found that in low ownership levels, managerial ownership increases the firm value and decreases agency cost and risk. But in high ownership levels, reverse impacts are seen. Paligorova (2010) concluded that there is a positive relationship between the ownership of major shareholder and institutional ownership with investment risk. Bova et al. (2015) found a negative relationship between the non-executives' stock maintenance and firm risk. Suna et al. (2016) conceded no significant relationship between managerial ownership and financial ratios. Sepasi et al. (2016) demonstrated a negative relationship between managerial ownership and disclosure quality. But they found no significant relationship between state ownership and the quality of financial disclosure, meaning that governmental firms do not care very much about the quality of financial information they disclose. In general, we are of the opinion that as far as a conflict of interest is alleviated in managerial firms, deviation of managers is mitigated; they perform in line with firm strategies, exerting strenuous efforts to achieve as much compensation as possible by divulging high-quality information.

H3: There is a relationship between board compensation and disclosure quality in firms with managerial ownership.

Research Methodology

Since the results can be used in the decision-making process, this research is applied research. The time range of the study is from 2010 to 2016. The total data needed to test the hypotheses in this study are collected directly from the financial statements on the Tehran Stock Exchange website. To test our hypotheses, we employ 2 sets of a regression model with disclosure quality as the independent variable and compensation as the dependent variable, including a relevant set of control variables along with some mediators. We apply panel data in our analyses and present results across Table 3-5. By using the EFA, the independent variable "Disclosure" is kept constant, and step-by-step, other insignificant-independent variables are omitted from the test. In each step, we exclude the independent variable with the highest P-value, then, the significance of the other variables is evaluated. First, we calculated the residual term of disclosure quality in regression one – for sake of brevity, we exclude reporting the regression – and then we put it in the second regression along

with the other variables. Table 3 presents our first test result which includes the first hypothesis (H1) in three columns. It involves disclosure quality in family firms along with the control variables. Table 4 presents the second hypothesis (H2) including the moderating variable of institutional firms. We calculate the relationship between compensation and disclosure quality with the presence of this variable. Table 5 presents the last and third hypothesis (H3) including moderating variable of managerial ownership.

Sample Selection

Our sample is based on all available data of listed firms on the Tehran Stock Exchange Market during the examination period. Because we aim to help the literature on the compensation and disclosure quality along with the presence of various ownership structures of the developing countries in recent years, the sample period is from 2010 to 2016. We also eliminate firms that joined the market during the period, or the ones that are delisted; firms which their fiscal year – according to the solar calendar – do not end in March; firms that adjusted their fiscal year during the covered span; and investment, bank, and insurance industries due to their particular nature. All in all, this results in 1232 firm-year observations (Table 1). The distribution of sample among industries is presented in Table 1, revealing that the minerals & mining and the automotive & parts manufacturing industries accounts for 23.86% and 17.05% of the whole sample observations, followed by the machinery & equipment, the chemical, the pharmaceutical, the food & beverage, and the metal industries with 14.2%, 12.5%, 11.93%, 10.23%, and 10.23% of observations, respectively.

Table1. *Industry Distribution*

Industry Name	Firms	Firm-year observation	% of the sample
Pharmaceutical	21	147	11.93
Machinery & Equipment	25	175	14.20
Automotive & Parts Manufacturing	30	210	17.05
Minerals & Mining	42	294	23.86
Chemical	22	154	12.50
Food & Beverage	18	126	10.23
Metal	18	126	10.23
Total	176	1232	100

First Regression Model

Our first model focuses on the financial information disclosure quality and turns it into a quantitative variable. We employ the following equation to examine this model:

$$Disclosure\ Quality_{it} = \beta_0 + \beta_1 LnAsset_{it} + \beta_2 Market\text{-}to\text{-}Book_{it} + \beta_3 ROA_{it} + \beta_4 InstitutionalOwn_{it} + \beta_5 Leverage_{it} + \beta_6 Loss_{it} + \beta_7 ROA\text{-}Volatility_{it} + \beta_8 Earn_{it} + \beta_9 ForeignSales_{it} + \beta_{10} InsiderOwn_{it} + \beta_{12} Segments_{it} + Industry\ Dummies + Year\ Dummies + \varepsilon.$$

Disclosure Quality of financial information represents the ranking of Iranian listed firms distributed by Tehran Securities and Exchange Organization; *Ln Asset* represents the natural log of total assets; *Market-to-Book* represents the market value of equity divided by the book value of equity; *ROA* represents net income divided by total assets; *Institutional Ownership* represents the total percentage of shares owned by banks, investment, governmental and insurance firms; *Leverage* represents total liabilities divided by total assets; *Loss* is set equal to one if a firm recorded loss and zero otherwise; *ROA-Volatility* represents the standard deviation of the annual return on assets for a four-year period immediately prior to the current year; *Earn* (earnings sustainability) is derived from the model of Dechow & Dichev (2002); *Foreign Sales* represents the number of exports divided by total assets; *Insider Ownership* represents the total percentage of shares owned by board members; *and Segments* represent the total number of subsidiaries that a mother firm owns at least 50% of their shares. The residual term of this model is the quantitative measure for disclosure quality which will be used in the next regression model.

Second Regression Model

Our second regression model focuses on the relationship between compensation and disclosure quality. We employ the following equation to examine the mentioned relationship:

$$\Delta Compensation_{it} = \beta_0 + \beta_1 Disclosure_{it} + \beta_2 (Hi\ Quality_{it} * \Delta ROA_{it}) + \beta_3 \Delta ROA_{it} + \beta_4 (Hi\ Quality_{it} * Return_{it}) + \beta_5 Return_{it} + \beta_6 (HiQuality_{it} * \Delta Misses_{it}) + \beta_7 \Delta Misses_{it} + \beta_8 (Hi$$

$Quality_{it}$ * $\Delta Declines_{it}$) + $\beta_9 \Delta Declines_{it}$ + $\beta_{10} \Delta FamilyOwn_{it}$ + β_{11} (ΔFamily Own_{it} * $HiQuality_{it}$) + $\beta_{12} InstitutionalOwn_{it}$ + β_{13} (Institutional Own_{it} * Hi $Quality_{it}$) + $\beta_{14} InsiderOwn_{it}$ + β_{15} (Insider Own_{it} * Hi $Quality_{it}$) + Industry Dummies + Year Dummies + ε.

$\Delta Compensation$ (bonus growth) is measured by the natural log of total compensation of year t minus the year t-1; *Disclosure* represents the residual of the first model; *Hi Quality* represents that if the residual from the first model for year t is above the sample median, it is one, zero otherwise; ΔROA is the return on assets for year t less return on assets for year t-1; *Return* is the annualized stock return for year t; $\Delta Misses$ is the deviation between the management forecast and realized earnings; Δ *Declines* is the earnings-per-share for year t less the earnings-per-share for year t-1; *Family Own* represents the total percentage of stocks owned by real people having at least 20% of a firm's shares, or total percentage of real people on board having at least 5% of a firm's shares; *Insider Own* represents the total percentage of shares owned by board members.

RESULTS

Descriptive Statistics

In summary, the features of a set of information may be declared by using appropriate descriptive statistics and facilitate the comparison of the test with other tests. To analyze the data, the descriptive statistics including minimum, maximum, mean, median, and standard deviation are presented in table 2.

Table2. *Descriptive Statistics*

Variables	Mean	Median	SD	Max	Min
Δ Compensation	0.3391	0.0000	1.5894	8.0064	-1.0000
Disclosure	166.7970	65.2626	401.0160	3291.4181	-214.7653
ΔROA	-0.0113	-0.0094	0.1049	0.5305	-1.9433
Return	0.5465	0.2077	1.0643	8.5950	-0.6573
Δ Misses	-76.0883	-22.6575	1068.2767	23270.9881	-7432.6000
Δ Declines	-31.9763	-6.0420	1042.1779	13506.0000	-6635.8600
Family Own	0.0743	0.0000	0.1838	0.9505	0.0000
Insitutional Own	0.5908	0.6712	0.3011	0.9945	0.0000
Insider Own	0.5361	0.5990	0.2848	1.0000	0.0000

Turning to the details, it can be briefly noted that less than a tenth of the corporate ownership structure in the Iranian market is consisted of family owners, while more than half of them have institutional and managerial structures. In addition, given the negative value of Return On Assets (ROA), it can be seen that the average financial performance of companies is not favorable. Of course, the Δ Misses variable also shows that the overall economic conditions of the country are very tumultuous, so that the range of changes between earnings prediction by management and real profits is not very reasonable.

The Results of the Research Models

Table 3 presents our first model results, where we include family ownership (Family Own) as the moderator variable.

Table3. *Compensation and disclosure quality in family firms*

Variables	*H1*		
	Coefficient	*(t-statistic)*	*Estimate*
(Intercept)	0.0000***	7.6150	1.1890
Disclosure	0.6809	0.4110	0.0001
ΔROA	0.0638*	1.8550	1.1410
Return	0.0030***	2.9700	0.1995
ΔMisses	0.4295	-0.7900	0.0000
ΔDeclines	0.0811*	1.7460	0.0001
FamilyOwn	0.0728*	1.7960	0.6789
Factor(ind)2	0.2814	-1.0780	-0.1815
Factor(ind)3	0.8737	-0.1590	-0.0263
Factor(ind)4	0.8991	0.1270	0.0219
Factor(ind)5	0.6846	-0.4060	-0.0704
Factor(ind)6	0.1384	-1.4830	-0.2071
Factor(ind)7	0.2185	-1.2310	-0.1926

Factor(year)2011	0.0000***	-5.6040	-0.9081
Factor(year)2012	0.0000***	-5.9240	-0.9650
Factor(year)2013	0.0000***	-6.2000	-1.0180
Factor(year)2014	0.0000***	-5.5800	-0.9786
Factor(year)2015	0.0000***	-5.7990	-0.9585
Factor(year)2016	0.0000***	-6.4770	-1.0660
Factor(H)1:ROA	0.0252**	2.2410	2.2950
Factor(H)1:Return	0.1571	-1.4160	-0.1118
Factor(H)1: Δ Declines	0.1875	-1.3190	-0.0001
Factor(H)1:FamilyOwn	0.5161	-0.6500	-0.3013

**Significant at the 0.10 level.*

***Significant at the 0.05 level.*

****Significant at the 0.01 level.*

Unlike what we expected, we find that the coefficient on (Factor(H)1: Family Own) is 0.5161, and disclosure quality has no significant relationship with compensation in firms with family ownership structure, meaning that when the bonuses are going to be paid, Iranian family firms do not consider the quality of financial information reported by the managers.

Table4. *Compensation and disclosure quality in institutional firms*

Variables	***H2***		
	Coefficient	***(t-statistic)***	***Estimate***
(Intercept)	0.0000***	7.7270	1.3440
Disclosure	0.5826	-0.5500	-0.0001
ΔROA	0.1210	1.5520	0.9634
Return	0.0005***	3.4830	0.2388
Δ Misses	0.4155	-0.8140	0.0000
Δ Declines	0.0636*	1.8570	0.0001
Institutional Own	0.0242**	-2.2560	-0.3771
Factor(ind)2	0.4945	-0.6830	-0.1171
Factor(ind)3	0.9019	-0.1230	-0.0204
Factor(ind)4	0.8365	0.2060	0.0356
Factor(ind)5	0.8581	-0.1790	-0.0310
Factor(ind)6	0.1936	-1.3010	-0.1826
Factor(ind)7	0.3005	-1.0360	-0.1613
Factor(year)2011	0.0000***	-5.6310	-0.9120
Factor(year)2012	0.0000***	-5.8490	-0.9534
Factor(year)2013	0.0000***	-6.0690	-0.9979
Factor(year)2014	0.0000***	-5.4960	-0.9624
Factor(year)2015	0.0000***	-5.5960	-0.9236
Factor(year)2016	0.0000***	-6.2860	-1.0320
Factor(H)1:ROA	0.0118**	2.5220	2.6040
Factor(H)1:Return	0.0336**	-2.1270	-0.1780
Factor(H)1: ΔDeclines	0.1614	-1.4010	-0.0001
Factor(H)1:InsitutionalOwn	0.0668*	1.8350	0.2992

**Significant at the 0.10 level.*

***Significant at the 0.05 level.*

****Significant at the 0.01 level.*

In Table 4, we predict that if institutional ownership is moderated, we would expect higher bonuses are paid when high-quality information is divulged. We test this conjecture and expect the coefficient (Factor(H)1: Institutional Own) to be significant-positive if the presence of institutional curbs poor quality reporting and heightens compensations; but the table demonstrates that the coefficient is insignificant-positive with the amount of 0.0668, meaning that only in 10% error level, board compensation, and disclosure quality are correlated in institutional firms.

Table5. *Compensation and disclosure quality in firms with insider ownership*

Variables	H3		
	Coefficient	(t-statistic)	Estimate
(Intercept)	0.0000***	7.4800	1.3020
Disclosure	0.7076	-0.3750	-0.0001
ΔROA	0.0925*	1.6840	1.0450
Return	0.0010***	3.3100	0.2276
ΔMisses	0.4618	-0.7360	0.0000
ΔDeclines	0.0714*	1.8040	0.0001
InsiderOwn	0.1145	-1.5790	-0.2853
Factor(ind)2	0.3920	-0.8560	-0.1467
Factor(ind)3	0.8945	-0.1330	-0.0219
Factor(ind)4	0.7958	0.2590	0.0448
Factor(ind)5	0.8320	-0.2120	-0.0369
Factor(ind)6	0.1601	-1.4060	-0.1970
Factor(ind)7	0.3346	-0.9650	-0.1507
Factor(year)2011	0.0000***	-5.6090	-0.9099
Factor(year)2012	0.0000***	-5.8170	-0.9521
Factor(year)2013	0.0000***	-6.0390	-0.9970
Factor(year)2014	0.0000***	-5.4490	-0.9601
Factor(year)2015	0.0000***	-5.5870	-0.9266
Factor(year)2016	0.0000***	-6.2850	-1.0350
Factor(H)1:ROA	0.0172**	2.3850	2.4640
Factor(H)1:Return	0.0589*	-1.8910	-0.1585
Factor(H)1: ΔDeclines	0.1751	-1.3570	-0.0001
Factor(H)1:InsiderOwn	0.1903	1.3110	0.2262

**Significant at the 0.10 level.*

***Significant at the 0.05 level.*

****Significant at the 0.01 level.*

In Table 5, we estimate compensation disclosure regression with the presence of a moderating variable of insider ownership (Factor (H)1: Insider Own). As expected, we believe that insiders mitigate conflict of interest, leading to fewer managers' deviation. Consequently, we argue that they have an inclination to distribute high-quality information and receive a high amount of bonuses. Conversely, we find that the coefficients on insider ownership are 0.1903, and in firms using insiders, disclosure quality has no significant relationship with compensation.

CONCLUSIONS

Abundant evidence has been provided by existing literature on the outcome of disclosure quality on firm performance, earning management, earning quality, corporate governance, etc. However, we aimed to investigate the relationship between disclosure quality and board compensation in various ownership structures; and the lack of research evidence in this field has limited our understanding of the paid rewards based on disclosure quality, specifically when ownership moderators are involved. We tried to develop this topic by focusing on financial information disclosure quality of Iranian listed firms because the reported information is a vital-determinant measure by which many people exchange shares, and especially, managers' compensations are paid based on them, not only in Iran but also in the most developing and developed countries. In this regard, we considered the ownership structures including family, institutional and insider ownership. With the economic and financial situation in the Middle-East in recent years, Iran would be a desirable sample for the study as a major-determinant developing country in the region.

We conducted our first empirical analysis by regressing disclosure quality on compensation in family firms. The findings show that disclosure quality is not associated with compensation, supporting the conjecture that in family firms, information asymmetry is intensified, managers disclose as less as they are able to, and bonuses are not paid based on the suitable criterion of the quality of financial information. In this regard, one of the most significant reasons behind this fact is that unlike in developed countries that disclosure quality is the priority in every single firm –no matter what ownership structure they

have implemented, some other measures are priorities for paying bonuses in developing countries like Iran. One leading cause of this could be the legislation on disclosure quality where legislators should enact stricter laws to address this issue. Along with this, another significant reason in comparison to the other international markets throughout the world could be the emerging non-transparent market of Iran. In the Iranian stock and exchange market, connections and access to confidential-private information act as a key role in the success of shareholders in making strategic decisions. Next, we probed into the relationship between disclosure quality and board compensation in institutional firms. We argue that monitoring procedures are deeply intensified in institutional firms, and as much as institutional have access to private information, the divulgence is lower, but the bonuses are paid based on disclosures. We find that there is no relationship between the variables, but in a 10% error level, a positive relationship is seen. We are of the opinion that Iranian firms are mostly dependent on the authority, and most parts of the economic cycle are rooted in this fact. The reason behind is that these firms are struggling in a cut-throat world and are not able to fend and survive by themselves. As a result, they are intensively supported and monitored to distribute high-quality information for the users, giving birth to high compensation acquisition. As for the moderator variable of insider ownership. We argue that the conflict of interests is mitigated in this kind of firm, and managers' deviation is alleviated. We are of this conviction that as long as managers are sharers in duties and outcomes, they exert strenuous efforts to divulge high-quality information, and consequently, get higher compensation. But the results demonstrate that inside ownership is a factor that could not heighten the compensation. We lend support to the fact those managers who have shared at disposal, have access to private information and by ignoring disclosure concerns, try to compensate their own efforts through other different ways of tunneling.

Some policy implications are provided by our study with respect to legislators' focuses on disclosure quality. We document that not only the quality of reported information is not noticed by shareholders, but also firms do not pay bonuses based on them. Our study offers some preliminary insight into how disclosure quality and ownership structures are somehow neglected in developing countries.

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