

Disclosure Quality, the Board Features and Information Asymmetry between Directors (Shareholders) and the Creditors in Listed Companies in Tehran Stock Exchange

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ABSTRACT: The managers to gain to benefits of information symmetry reduction choose various policies. In line with the disclosure quality and features of the board, this research investigates the disclosure quality and features of board relationship and information asymmetry between managers and creditors. In order to evaluate information asymmetry the cost of debt factor was used and variables related to board features have been extracted from financial statements and annual reports of board to the convention. Also, the quality of disclosure variable was measured using ratings of corporative disclosure released by the Tehran stock exchange. Results of survey 71 company in the period 2003 till 2011 indicated that there is a significant negative relationship between disclosure quality and the cost of debt. Also, there is a significant relationship among the effective features of the board, the cost of debt and the quality of the disclosure, respectively, and indicates that the board composition influence on reducing of information asymmetry and the quality of disclosure increase.

Key words: Quality of Disclosure, Board Independence, Board Size, Institutional Ownership, The Cost of Debt.

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INTRODUCTION

Capital structure of corporations is composed of two parts of the debt and equity, generally, that both of these sources of funding cause to create conflicts of interests and conflicts among managers and the creditors and shareholders. When stakeholders devolve the power of decision making to managers due to a conflict of interest is created the agency relationship. A part of the agency issues are achieved by the lack of timely and adequate financial information available to investors and so, the companies that have appropriate disclosure quality improve goodness of collaborative relationships between agent and broker. Corporate governance as well, includes various activities that can reduce agency costs and reduce information asymmetry.

Literature linked with conflict of interests has developed in the commercial units at recent year, largely. Most researches conducted about conflict of interests between the stakeholders and a commercial unit have focus on two separate area: the conflict of interests between owners and managers and also the conflict of interests between owners and other stakeholders (creditors, government etc.) (Douglas, 2004). Always, there is a conflict of interests between shareholders and creditors. This conflict is due to first, each of the stakeholders has different desirability, information and commitments towards each other (Watts, 2002). Second, while creditors have fixed rights than the net assets of the entity, the shareholders have unlimited rights than the remaining net assets

(Jensen, 1976). Shareholders and managers may be willing to apply resources received from creditors in the more risky investments to gain greater benefits but this action may jeopardize the interests of the creditors and cause the loss of their investment, so, the creditors increase interest rates or refuse to grant credit to a business unit (Dangmy, 2006).

The debt ratio in companies and institutes has increased dramatically in recent years. It can be concluded there is a high level of information asymmetry between creditors and managers (shareholders), now. In fact, these agency problems focus on conflicts between lenders and borrowers and returning investment of creditor. To reduce conflicts of interest of management (shareholders) and creditors often the contracts debts that limit distribution of profit according to output of accounting system and financial ratios are used. Here, role of accounting information and its output is critical and the adequate and appropriate quality of disclosure can help to reduce these fees and conflicts. However, in this context, should not ignore the role of corporate governance on the quality of disclosure improvement and reduction of the cost of agency. The effect of special features of board and optimal structures of corporate governance on enhancement of the quality of disclosure and financial reporting is a topic that has been taken into account in the admission requirements of the world's major stock. Indeed, there is a hypothesis that is established a direct relationship between this mechanism and the quality that have been accepted it, implicitly (Pisano, 2012).

According to definition, corporate governance is including the arrangements of legal, cultural and institutional that determines the direction of the company's performance. The main features of corporate governance are including the number of board meetings, duality of responsibilities chairman of chairman and CEO and independence of board (Bear and Cohen, 2010).

According to the presented material and the importance of variables for capital market participants, in this study examine the association among disclosure quality, features of board and information asymmetry between directors (shareholders) and creditors. In continuation this article first are mentioned theoretical basics and available literature and with attention to question of the research, the hypothesis has codified. At third section also, are offered methods of information collection and the hypothesis tests and at section fourth and fifth, results of the research and results of findings will be offered, respectively.

The theoretical literature

Agency theory provides a useful framework to explain the capital structure. Equity and debt create agency costs due information asymmetry between managers and shareholders- directors and creditors, respectively. Kim and Sorensen have been analyze behavior of corporate finance and results showed that the companies which has more institutional ownership have been use a higher level of debt in the capital structure to reduce the cost of agency due issuance of shares. As well, in perspective of creditors, when this property of the company be more, terms of the loan contracts is more effective in practice and can be sure that the interests of all beneficiaries (shareholders, and creditors) has been considered (Jensen and Mcling, 1976).

If the interests of creditors conflict with the interests of managers (shareholders), a high debt levels lead to increased agency costs between managers and creditors due information asymmetry. This type of problem related to the creditors 'problems is in relation to return on investment and the desired efficiency of them. Adventure capital of a company, if success is achieved shareholders earn the excess return while the creditors gain a return based on agreed interest rate. If managers do not work properly in regard to the investment of sources received from creditors, impose the risk of loss of capital to creditors (Armstrong et al, 2010). Liabilities as a mechanism have been considered to control the information asymmetry between shareholders and managers, but increase the high level of costs debt of agency between managers (the shareholders) and creditors (Agarwal and Ang, 2009). For reduction the

cost of information asymmetry have been considered two main strategies; first, disclosure quality of accounting information and second, corporate governance guidelines. One of the most important topics raised in the corporate governance discussion is issues related to the board. Effects of board structure on disclosure quality and information asymmetry is obvious and pervasive. Moreover, these two controller mechanism can act as complementary to each other in reducing information asymmetry (Bear and Cohen, 2010). Most of study results indicate a role of complementary for the specific board's features in the adequacy of information disclosure (Patel and principle, 2007).

Drafters of the accounting principles and criteria and those who ordain the capital market regulators to protect the interests of investors, are obliged the companies to disclose information. According to economic theory of asymmetry, disclosure of information reduces asymmetry and the cost of debt (Amiod and Mendelsohn, 1986; Diamond and Vershia, 1991; Ezli et al., 2002). Disclosures made by the company are a useful mechanism to reduce the information asymmetry between managers and creditors (Armstrong et al, 2010). Creditor for a less risk can trust to the companies that publish the on-time and qualitative financial reports and a higher quality of information disclosure cause to the company having less debt (Skayof et al., 2006; Sangupta, 1998).

In order for the Board to perform its task efficiently, is proposed several features at corporate governance. Some of the features are: size of the board, independence of the board, financial knowledge of the board, number of meetings of the board and duality of the role of CEO and chairman.

Size of the board of directors is a number of board members and one of board features of company. There are different views about size of board. Given that managers have a regulatory role, whatever the number of persons be more the role of regulatory increases that will leads to reducing the information asymmetry between creditors and credit recipients and on the other hand reduce concentration of power in one person cause to the costs of debt agency (Pisano and LiPuri, 2012). Independence of board is referred to the number of non-bound members at board of company. Some of previous researches have shown there is a positive relationship between the number of bound non-bound members and effectiveness of supervisor managers in the preparation of financial statements (Bikz et al., 2004). Presence of independent managers in the board may be useful as a control mechanism to reduce the information asymmetry between lenders and borrowers. Although the role of independent

directors in defense of shareholder interests are well represented, but they keep their reputation act in direction of the interests of all stakeholders (Fama and Jensen, 1983; Armstrong et al., 2010). The companies with above levels of the independent managers have a lower level of information asymmetry between managers and creditors (Anderson et al., 2004).

Duality of role also is referred to role separation of CEO from chairman of the board. When is expected to the board be effective and independent that CEO and chairman of the board have no a unit position. As well, with attention to theory of agency, dominance of CEO may be lead to an opportunistically behaviors that stakeholder interests are not considered (Alkeidi and Hanifa, 2012).

Existence of the members with a financial knowledge at board also is one of board features of company. They should be trained and experienced and at the same time being able to can do well their responsibilities (Alkeidi and Hanifa, 2012).

The board should establish a balance between cost - benefits and number of sessions. Results of the previous research suggests an inverse relationship between number of sessions and the cost of debt because whatever the number of board meetings be more, supervisory role of board is increased and causes to the reduction of information deviations (Pisano and Lipori, 2012).

In recent decades, shares owned by institutional investors have increased dramatically. Institutional investors areas follow: insurance companies, investment funds, financial institutions, banks and joint stock companies which are investing in the other general joint stock companies, hence, institutional investors become the largest group of shareholder of the general joint stock companies. According to agency theory "institutional ownership" may be reduce conflict of agency through the monitoring on performance of management measures and improve performance of company. Institutional owners are not only have a motivation but also have the expertise and the resources to monitor the company (Noroush and Hosseini, 2008).

Background

Sengoupetta (1998) examined the relation between disclosure quality and the cost of debt. The results showed there is a negative relationship between disclosure quality and the cost of debt and timely information disclosure can reduce the risk of non-payment of debt.

Chen et al. (2000) studied relationship between non-bound independent directors, family control and disclosure of financial information in Hong Kong. The results showed that the presence of non-bound independent managers at board of companies has a

quite significant relationship with detailed disclosure of financial information. Their research has been centralized on essential disclosure of information. Their results also showed that if the analysis is performed only in the case of companies with a high focus on the owners, this relationship was not significant.

Pisano (2012) review the relationship between the disclosures of key indicators of financial performance, features of board and information asymmetry between shareholders and creditors. The results of this study suggests that board independence and Audit Committee have a negative relationship with debt costs, while these have a positive and significant relationship with quality of disclosure. And the relationship between quality of disclosure and the cost of debt is a negative and significant relationship.

Shojaei (2010) investigated the impact of corporate governance and audit quality on cost of financing through debt (borrowings). Findings of empirical research shows that existence of major institutional shareholders in the combination of stakeholders and their efficient monitoring has a significant reduction impact on sample member corporates debt, while sample audit quality has no such effect.

Babazadeh (2010) investigated the relationship between corporate governance and voluntary disclosure. The examined mechanisms of corporate governance include ownership structure and composition of the board. The results show that a decrease in the level of management and increasing the percentage of ownership of major shareholders has a relationship with an increasing at the level of voluntary disclosure of information. Although governance ownership and the non-bound (independent) members ratio of board has no a relationship with optional disclosure of the information.

Setayesh et al. (2011) evaluated the effect of disclosure quality on liquidity of shares and cost of normal current and future capital shares. The results of the research indicated no significant relation between quality of disclosure and current and future liquidity of company. Moreover, there is a negative and significant relationship between quality of disclosure and cost of normal current and future capital shares of company. Also, the results of study show that the report disclosure of the company is helpful indecision making of investors.

According to the cases presented in this study can be expressed hypothesis of the study as follows:

1 - There is a significant relationship between the size of the board and the cost of debt.

2 - There is a significant relationship between the independent board and the cost of debt

3 - There is a significant relationship between a financial knowledge of the board and the cost of debt.

4 - There is a significant relationship between the number of board meetings and the cost of debt.

5 - There is a significant relationship between the duality of role of CEO and chairman of the board and the cost of debt.

6 - There is a significant relationship between institutional ownership and the cost of debt.

7 - There is a significant relationship between a disclosure quality and the cost of debt.

8 - There is a significant relationship between the size of the board and the quality of disclosure.

9 - There is a significant relationship between independence of the board and disclosure quality.

10 - There is a significant relationship between the financial knowledge of board and disclosure quality.

11 - There is a significant relationship between the number of board meetings and disclosure quality.

12 - There is a significant relationship between the duality of CEO and chairman of the board and disclosure quality.

METHODS

This research in terms of type of purpose is an applied research that the required information is gathered using a library studies and with use of multi variable regression model have been tested the hypothesis. Moreover, the research is set in the descriptive and correlation field, on the basis of specifications of topic and question of the research (Tehran stock exchange, 2013). In order to achieve the required data to processing hypothesis of research, information available in software of company of Rahavarde Nowin. As well, check of reports of corporative disclosure score has been obtained with reference to site of organization publishers' information system (KEDAL) of Tehran Stock Exchange. At next stage, Excel software has been used to gathering and classification of statistical data and SPSS software has been used to the statistical tests.

Methods of data analysis

At present research with attention to type of data and available methods of analysis, method of panel data was used. In this research to test of significance of regression equation was used statistics fisher (F) at level of 95% confidence and to test significance of each coefficients, t student test used. As well, self-correlation between errors of model was survey using Durbin - Watson test. On this basis of the test, if statistics of Durbin- Watson test be between 1.5 to 2.5

it can be accept the hypothesis of lack of correlation between the model errors.

Variable the statistical model

In this research, board characteristics and quality of disclosure of variable independent and information asymmetry (cost of debt) are dependent variables. Features of the board include: independence of board, size of board, independence of CEO, independence of chairman, number of board meetings, and financial knowledge of board. As well, size of company, profitability ratio and financial leverage have been considered as a control variable.

The first statistical model of first to seven hypotheses of the research:

$$\text{Cost of Debt} = \alpha + b_1 \text{BS} + b_2 \text{BI} + b_3 \text{BCOMP} + b_4 \text{BMEET} + b_5 \text{BDUAL} + b_6 \text{DIS} + b_7 \text{INS} + b_8 \text{SIZE} + b_9 \text{PROF} + b_{10} \text{LEV} + e$$

The first statistical model of eighth to the twelfth hypotheses of the research:

$$\text{DIS} = \alpha + b_1 \text{BS} + b_2 \text{BI} + b_3 \text{BCOMP} + b_4 \text{BMEET} + b_5 \text{BDUAL} + b_6 \text{INS} + b_7 \text{SIZE} + b_8 \text{PROF} + b_9 \text{LEV} + e$$

Constant of the model

Costs of debt: according to approaches available in the former researches [27], information asymmetry between managers and creditors is measured by the total financial costs divided by the debts.

BS: The number of board members in each of the years of research.

BI: board independence: the number of independent (non-bound) members ratio to total of board

BCOMP: Financial Knowledge of Board: it is assigned by 1 if there is a financial education among board members (even for one person) and else, it takes the value 0.

BMEET: Number of sessions: Number of meetings held by the board in each of the years of research.

BDUAL: Independence of Chairman from CEO: if chairman of the company be one person the variable will be assigned by 1, otherwise it takes the value 0.

DIS: Quality of Disclosure of Company: With attention to approach available in the former researches (Hejaziet et al., 2010) (Setayeshet et al., 2011) (Noravesh et al., 2008) to measure this variable, the points allocated to each company that published by Stock and Exchange Tehran organization through announcements of disclosure quality and proper information have been used.

INS: percentage of ownership of institutional shareholders which is equal to the ratio of common stock of institutional investors.

LEV: Financial leverage which is equal to the ratio of total debt to book value of equity

PROF: Profitability ratios that is equal to the return of equity.

SIZE: this is a size of company that is calculated through the natural logarithm of sales.

e: The model error

Population

The population of the study are consisted of all companies listed in Tehran Stock Exchange at the beginning of 2003 until the end of 2011. The companies choose by exclusion method and on the basis of following criteria:

1. Their years is leading in 29 March.
2. During the period of the research, fiscal year may not be changed.
3. Information required by the company be available in the period of study.
4. During the financial years not be bad.
5. Company's shares be traded at least once during each year.

After restrictions mentioned above, the 71 companies were selected. Data during 9 years were examined. The sample size was 639 year - company.

The tests related to panel data

When the panel data is used, should be performed different tests to diagnose of appropriate estimate method. The most common of them are Chow test, Brosh - Pagan test and Hausman test (Baltajy, 2005).

Chow test

Chow (1960) introduced a test that is used to select between methods of ordinary least squares of integrated data model and fixed effects model. Probability amount of Chow statistic in the first and second models at table of Chow test (Table 1) has been more than significance level 5% and therefore, to test the hypothesis use of method of fixed data is cancelled and should be used method of the combined data (in the combined data, measure variables both among the population (company)and in during time (years))should be used.

Broush- Pagan Test

Broush and Paganat (1980) used Lagrange coefficient (LM) to test the integrated data model against bilateral random effects. With use of estimation method the exponential proper maximum is obtained. In this test zero hypothesis means to use of the integrated data model is better and rejection of zero hypothesis means to existence of random effects in the model. According to the statistic of Broush and Pagan test the zero hypothesis is confirmed in Table 2 and integrated data should be used in the model.

Table 1. Pagan and Broush test results

	Value of Statistic Test	Degrees of Freedom	Likelihood of Test Statistic
The First Model	6.390	(627, 10)	0.142
The Second Model	3.818	(629, 8)	0.2002

Table 2. Chow test results

	Value of Statistic Test	Degrees of Freedom	Likelihood of Test Statistic
The First Model	1.736	(618 , 10)	0.0639
The Second Model	4.324	(622, 8)	0.0723

Hausman test

Hausman test is applied for determination of method used through methods of the fixed effects and random effects. In this this test if H_0 is rejected to meaning existence of the fixed effects model and if H_0 is accepted it is better to use of random effects model for estimation. With attention to the statistics of Chow and Broush- Pagan has not been in a significant level and the integrated method will be used and no need to survey Hausman test for choice between fixed effects model and random effects model.

RESULTS

Descriptive statistics:

Table 3 presents results of descriptive statistics and according to the table is observed that the mean size of board of directors is 5.17 and mean of independence of board is 0.638, it indicates an average of 64 percent of board members of companies listed in Stock are non- bound members and balance dose not established between non-bound and bound members and non- bound members form more members of board.

The maximum number of members of board is 7 persons and a minimum number of them has been 3 person. As well, with attention to the variable of CEO role and chairman board duality it specifics that in 18percent of board of companies listed in Exchange, a CEO undertaken the responsibility of chairman of the board. In addition, a survey of financial knowledge variable of the board showed an average of 74 percent of the boards have at least a member with degree PHD or a financial Degree. corporative disclosure quality mean score (48.58) has been average with respect to the maximum score of 100 in listed companies in Tehran stock exchange and companies listed in Tehran stock exchange have adequate disclosure.

Also, according to the data analysis, the mean of the control variable of institutional ownership is 48%, which indicates that institutional ownership forms almost half of the property of stock companies.

Table 3. Descriptive statistics of the variables used in the study

Variables	Number of Observations	Minimum	Maximum	Average	Standard Deviation
Disclosure Quality	639	- 16.8	99.33	48.58	23.98
The size of the board	639	3	7	5.17	0.547
Independence of the board	639	0	1	0.638	0.180
Number of board meetings	639	5	48	15.2	0.75
Institutional ownership	639	0	1	0.48	0.326
Profitability	639	-4.93	.96	0.325	0.620
Financial Leverage	639	0.11	3.64	0.726	0.428
Cost of debt	639	0	0.27	0.048	0.035
Company size	639	2.82	6.88	5.49	0.567
Financially knowledgeable of the board	639	472		0.74	
Lack of financial knowledge	639	167		0.26	
Duality of CEO and Chairman of the Board	639	522		0.82	
Uniqueness of CEO and Chairman of the Board	639	117		0.18	

Inferential statistics

The result of the **first hypothesis** statistical tests in **Table 4** has been listed. As the table shows, the size of the board variable ($p > 0.05$) has not a significant relationship with cost of debt. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of board size, company size, financial leverage and profitability ratios have together a significant effect on the cost of debt and according to the coefficient of determination, these variables explain 14.8 % of the changes in the cost of debt. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **second hypothesis** statistical tests in **Table 5** has been listed. As the table shows, the variable of board independence ($p < 0.05$) has a negative and significant relationship with cost of debt. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of board independence, company size, financial leverage and profitability ratios have together a significant effect on the cost of debt and according to the coefficient of determination, these variables explain 13.7 % of the changes in the cost of debt. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

Table 4. Regression results for the first hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
The Size of the Board	0.121	3.275	0.051	28.663	0.000	0.148	1.948	Reject the Hypothesis
Company Size	0.010	0.265	0.791					
Profitability	-0.2060	-5.522	0.000					
Financial Leverage	0.309	8.352	0.000					

Table 5. Regression results for the second hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Independence of the Board	0.022	-1.229	-0.045	26.316	0.000	0.137	1.935	Confirm the Hypothesis
Company Size	0.557	0.588	0.022					
Profitability	0.000	-5.636	-0.211					
Financial	0.000	7.950	0.294					

The result of the **third hypothesis** statistical tests in **Table 6** has been listed. As the table shows, the variable of board financial knowledge ($p < 0.05$) has a negative and significant relationship with cost of debt. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of

board financial knowledge, company size, financial leverage and profitability ratios have together a significant effect on the cost of debt and according to the coefficient of determination, these variables explain 14% of the changes in the cost of debt. Also,

according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **fourth hypothesis** statistical tests in **Table 8** has been listed. As the table shows, the variable of board meetings number ($p < 0.05$) has a negative and significant relationship with cost of debt. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of board meetings number, company size, financial leverage and profitability ratios have together a significant effect on the cost of debt and according to the coefficient of determination, these variables explain 13.6% of the changes in the cost of debt. Also, according to the Watson-Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **fifth hypothesis** statistical tests in **Table 9** has been listed. As the table shows, the duality variable of CEO and chairman of the board role ($p < 0.05$) has a negative and significant relationship with cost of debt. According to value of statistics F (p -value < 0.05) for the fitted model regression is significant and variables of duality of CEO and chairman of the board role, company size, financial leverage and profitability ratios have together a significant effect on the cost of debt and according to the coefficient of determination, these variables explain 13.7% of the changes in the cost of debt. Also, according to the Watson-Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **sixth hypothesis** statistical tests in **Table 10** has been listed. As the table shows, the variable of board independence ($p < 0.05$) has a negative and significant relationship with cost of debt. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of board independence, company size, financial leverage and profitability ratios have together a significant effect on the cost of debt and according to the coefficient of determination, these variables explain 13.7 % of the changes in the cost of debt. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the seventh hypothesis statistical tests in **Table 11** has been listed. As the table shows, the variable of disclosure quality ($p < 0.05$) has a negative and significant relationship with cost of debt. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of disclosure quality, company size, financial leverage and profitability ratios have together a significant effect on the cost of debt and according to the coefficient of determination, these variables explain 13.7 % of the changes in the cost of debt. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **eighth hypothesis** statistical tests in **Table 12** has been listed. As the table shows, the variable of disclosure quality ($p < 0.05$) has a negative and significant relationship with disclosure quality. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of disclosure quality, company size, financial leverage and profitability ratios have together a significant effect on the disclosure quality and according to the coefficient of determination, these variables explain 4.7% of the changes in the disclosure quality. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **ninth hypothesis** statistical tests in **Table 13** has been listed. As the table shows, the variable of the board independency ($p < 0.05$) has a negative and significant relationship with disclosure quality. According to value of statistics F (p -value < 0.05) for the fitted model regression is significant and variables of the board, company size, financial leverage and profitability ratios have together a significant effect on the disclosure quality and according to the coefficient of determination, these variables explain 6.4% of the changes in the disclosure quality. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **tenth hypothesis** statistical tests in **Table 14** has been listed. As the table shows, the variable of the board financial knowledge ($p < 0.05$) has no a significant relationship with disclosure quality. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of the board financial knowledge, company size, financial leverage and profitability ratios have together a significant effect on the disclosure quality and according to the coefficient of determination, these variables explain 4.5% of the changes in the disclosure quality. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **eleventh hypothesis** statistical tests in **Table 15** has been listed. As the table shows, the variable of the board meetings number ($p < 0.05$) has no a significant relationship with disclosure quality. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of the board meetings number, company size, financial leverage and profitability ratios have together a significant effect on the disclosure quality and according to the coefficient of determination, these variables explain 4.3% of the changes in the disclosure quality. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

The result of the **twelfth hypothesis** statistical tests in **Table 16** has been listed. As the table shows, the variable of duality role of the CEO and the board ($p < 0.05$) has a positive and significant relationship with disclosure quality. According to value of statistics F ($p < 0.05$) for the fitted model regression is significant and variables of duality role of the CEO and the board,

company size, financial leverage and profitability ratios have together a significant effect on the disclosure quality and according to the coefficient of determination, these variables explain 4.5% of the changes in the disclosure quality. Also, according to the Watson -Dourbin statistics value, the model has no a self-correlation among variables.

Table 6. Regression results for the third hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Financial Knowledge of The Board	-0.071	-1.915	0.006	943.26	0.000	0.140	1.944	Confirm The Hypothesis
Company Size	0.030	0.804	0.421					
Profitability	-0.212	-5.672	0.000					
Financial Leverage	0.292	7.914	0.000					

Table 8. Regression results for the fourth hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Number of Board Meetings	0.022	0.558	0.558	25.976	0.000	0.136	1.929	Reject The Hypothesis
Company Size	0.019	0.488	0.626					
Profitability	-0.212	-5.653	0.000					
Financial Leverage	0.295	7.977	0.000					

Table 9. Regression results for the fifth Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistic	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Duality of CEO and Chairman or Vice Chairman of the Board	0.029	-0.785	0.043	26.065	0.000	0.136	1.928	Confirm the Hypothesis
Company Size	0.019	0.509	0.611					
Profitability	-0.212	-5.671	0.000					
Financial Leverage	0.294	7.959	0.000					

Table 10. Regression results for the sixth Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Institutional Ownership	-0.152	-4.039	0.000	30.622	0.000	0.157	1.960	Confirm the Hypothesis
Company Size	0.045	1.217	0.224					
Profitability	-0.186	-4.941	0.000					
Financial Leverage	0.286	7.803	0.000					

Table 11. Regression results for the Seventh Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Disclosure Quality	-0.039	-1.026	0.031	26.182	0.000	0.137	1.933	Confirm the Hypothesis
Company Size	0.024	0.646	0.518					
Profitability	-0.212	-5/678	0.000					
Financial Leverage	0.287	7.591	0.000					

Table 12. Regression results for the eighth Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
The Size of the Board	-0.100	2.558	0.011	8.806	0.000	0.047	1.834	Confirm the Hypothesis
Company Size	0.036	0.920	0.358					
Profitability	-0.014	-0.363	0.717					
Financial Leverage	-0.220	-5.613	0.000					

Table 13. Regression results for the Ninth Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Ndependenceof the Board	0.163	4.250	0.000	11.814	0.000	0.064	1.827	
Company Size	0.029	0.750	0.453					
Profitability	-0.013	-0.334	0.739					
Financial Leverage	-0.204	-5.292	0.000					

Table 14. Regression Results for the tenth Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Financial Knowledge of the Board	0.092	2.374	0.055	8.569	0.000	0.045	1.831	Reject the hypothesis
Company Size	0.016	0.396	0.692					
Profitability	-0.009	-0.228	0.082					
Financial Leverage	-0.204	-5.239	0.000					

Table 15. Regression Results for the eleventh Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Number of Board Meetings	-0.020	-0.513	0.608	7.165	0.000	0.037	1.822	Reject the Hypothesis
Company Size	0.029	0.718	0.473					
Profitability	-0.009	-0.227	0.820					
Financial Leverage	-0.207	-5.315	0.000					

Table 16. Regression Results for the twelfth Hypothesis

Variable Name	Beta Coefficient	T-Statistics	P-Value	F-Statistics	P-Value	The Coefficient of Determination	Dourbin Watson	Result of Hypothesis
Duality of CEO and Chairman or Vice Chairman of the Board	-0.090	2.291	0.022	8.467	0.000	0.045	1.840	Confirm the Hypothesis
Company Size	0.307	0.932	0.352					
Profitability	-0.008	-0.206	0.837					
Financial Leverage	-0.206	-5.295	0.000					

CONCLUSION

In this study, the relationship between the qualities of disclosure features of the board and information asymmetry between the directors (shareholders) and the creditors of listed companies in Tehran Stock Exchange were analyzed. The results of

the test of hypothesis show that there is a significant negative relationship between independence features, financial knowledge of the Board, the CEO role duality, institutional ownership and the cost of debt. While was found a significant relationship between the number of the board meetings and the size of the board and the cost of debt. That is, the large or small

number of the board meetings will have no effect on the investors' decisions in the requested interest rates of them. But other investigated features are as an effective mechanism for reducing information asymmetry between the creditors and the credit receiver and they reducing agency costs of debt. Also, the presence of institutional investors due to having the high expertise in financial and investment can reduce information asymmetry.

However, a significant and negative relationship between disclosure quality and the cost of debt suggests that the creditors use the indicator issued of stock as an effective mechanism on the credited decision and rely more to financial statements issued by the company.

After examination of the effective variables on the cost of debt, the two variables complementary role of disclosure quality and features of the board were discussed to the complementary and simultaneously role of these two variables on the reducing cost of debt of the agency be investigated.

The results show that there is a significant and positive relationship between the characteristics of the board size, the board independence, and duality of CEO role, that is, the variables have a complementary role in the disclosure quality and have a significant impact on increase the quality of disclosure. The presence of the variables in the board cause to increase quality of disclosure and thus on reducing agency cost of debt. However, no significant relationship found between the variables of the board financial knowledge and the number of board meetings, the board found and quality of disclosure.

Suggestions

- Given that the OTC and bad companies were removed from the population, is recommended to be assessed the relations of the variables in the OTC or bad companies and the results will be compared with recent research findings.
- Assessing the impact of the board characteristics on disclosure quality and the cost of debt resolution in various industries.
- Assessing the effect of the board characteristics on disclosure quality and the cost of debt in private and public companies.

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