

Research Article

THE RELATIONSHIP BETWEEN BOARD CHARACTERISTICS AND THE LEVEL OF INFORMATION DISCLOSURE OF LISTED COMPANIES IN TEHRAN STOCK EXCHANGE

Mohammad Miri and Hossein Jabbari

Department of accounting, Zahedan Branch, Islamic Azad University, Zahedan, Iran

**Author for Correspondence*

ABSTRACT

This research aimed to identify the relationship between board characteristics and the level of information disclosure of listed companies in Tehran Stock Exchange in 2008-2012. In the present study, variables of characteristics of the board (board size, composition of board, and CEO duality (the CEO is also the chairman of the board)) were considered as the "independent variable" and the disclosure level as a "dependent variable; and, the relationship between the independent and dependent variables were studied and tested in such respects as described under hypotheses of the research. In this research, descriptive analysis, regression and data correlation methods were used. For descriptive analysis, data were analyzed using E-views software. The results suggested that there was a significant relation between board size and board composition on the one hand, and disclosure level on the other hand. The results, however, showed no significant relationship between CEO duality and disclosure level among Tehran Stock Exchange listed companies.

Keywords: *Disclosure of Information, Composition of Board, Board Size, CEO Duality*

INTRODUCTION

Given privatization, and increased investment, as well as security market regulation, there is an increasing trend to focus on investment, and subsequently, financial reports.

Based on agency theory, managers, as agents of shareholders, may take actions or make decisions that don't necessarily increase the wealth of shareholders.

According to this theory, there must sufficient supervision in place to ensure that that shareholders' are protected against conflict of interests.

The transparency of financial reports and disclosure quality has received attention as a practical solution (Setayesh *et al.*, 2010).

Since one of the effective ways in which the management can influence disclosure level is by board characteristics, which can reduce quality of profit report, this research tried to study relationship between the characteristics of board and the disclosure level.

Description

Disclosure by board of directors is very important, because directors' predictions have been observed to have an effect on credibility of disclosure. Thus, stock prices response to prediction news must increase the prices to a higher level than previously predicted by directors. Generally, the literature on role of directors suggests that investors and analysts must consider the fact that director's predictions are different from the actual responses of stock prices (Hutton, 2009; Stocken, 1996).

Importance and Necessity

Managers can use their knowledge about the company's business activities to improve financial statements, as a means to convey information to potential investors and funders.

The issue of board characteristics has also become important in recent years. For example, the composition of the board and its size are determinants of disclosure (Ezat and Al-Masry, 2011).

So, one of the main reasons why the issue of board characteristics has become important in recent years is that the board characteristics are expected to have an effective role in improved quality of disclosure. Given the above said, this research studied the relationship between the board characteristics and disclosure level among Tehran Stock Exchange listed companies.

Research Article

Research Objectives

General Objective

The general objective of this research was to study the relationship between board characteristics and the disclosure level in companies listed in Tehran Stock Exchange.

Ideal Objective

The ideal objective of this research was to provide a better understanding of the role of application of the results of the study of the relationship between the board characteristics and disclosure level in present and future policies and effects of economic policies and measures on different activities.

Special Objective

The special objective of this research was to identify the relation between board characteristics and disclosure level in Tehran Stock Exchange listed companies, and providing reports to investors, funders and other beneficiaries for improving their investment efforts.

Research Questions

Primary question:

Is there a significant relationship between the characteristics of the board and the disclosure level?

Secondary questions:

1. Is there a significant relationship between the size of the board and the disclosure level?
2. Is there a significant relationship between the composition of the board and the disclosure level?
3. Is there a significant relationship between the CEO duality and the disclosure level?

Research Hypotheses

Based on the above said, the research hypotheses were proposed as follows:

Primary Hypothesis

There is a significant relationship between the characteristics of the board and the disclosure level.

Secondary Hypothesis

1. There is a significant relationship between the size of the board and the disclosure level.
2. There is a significant relationship between the composition of the board and the disclosure level.
3. There is a significant relationship between the CEO duality and the disclosure level.

Definition of Terms and Expressions

Board of Directors

Board of directors can be defined as a body of members, who jointly work to organize different activities, to ensure proper performance of each organization for achievement of ultimate goals, by making proper decisions regarding different issues to overcome problems and difficulties, and to ensure achievement of predicted goals (Naghizadeh, 2013).

Disclosure and Transparency

Disclosure refers to disclosure of important information that can affect the market, and transparency can be defined a simplicity and ease with which a meaningful analysis of a company and its financial foundations can be performed by a person outside that company (Nobakht, 2005).

Board Size

This includes records of members such as career, term of office, functional backgrounds, the degree of independence of directors, shareholding of each of them (Qalibaf *et al.*, 2007).

Composition of the Board

Number of CEOs, the number of executive and non-executive directors, number of female/male directors, number of foreign and local directors, the degree of dependence of directors on the company (Qalibaf *et al.*, 2007).

CEO Duality: This means that CEO serves as the chairman of board of directors as well (Naghizadeh, 2013).

Theoretical Framework

Corporate Governance Mechanisms

Currently, several mechanisms of corporate governance have been proposed at the corporate level, to ensure achievement the goals of accountability, transparency, justice and the rights of beneficiaries.

Research Article

Independence of Auditor

The importance of the concept of independence in auditing is so much that little justification is required to demonstrate that it is one of the cornerstones in the structure of every audit theory. Since the opinion of auditor is provided to certify and accredit the financial statements prepared by the employer, the independence of auditor appears to be a necessity (Watts and Zimmerman, 1986; Cejka, 1989).

Shareholding of Directors

In a broad sense, corporate governance can be defined as a system by which the companies are controlled and directed. Then, the role of board of directors, as a body that monitors and supervises performance of executive managers to secure proprietary interests of shareholders, becomes increasingly important (Hassas, 2006).

Importance of Transparency and Voluntary Disclosure

Voluntary disclosure is disclosure of information beyond the legal obligations imposed by the legislative bodies. Disclosure is the process of providing the financial markets with the information collected from reporting companies (Madhani, 2009).

Role of Transparency in Financial Reporting

Based on the conceptual framework for financial reporting, financial information must have two aspects of relevance and reliability. However, the quality of information regarding transparency is rather appropriate and timely when considered from view of disclosure of information (Madhani, 2009).

Literature

A Review of Foreign and Domestic Literature

Foreign Literature

Ho and Woang (2001), who studied the relationship between corporate governance and voluntary disclosure, concluded that there was a direct relationship between the audit committee and voluntarily disclosure, but that there was no significant relationship between the percentage of independent directors and the voluntary disclosure, and also, that a director having family ties with other director(s) was inversely related to voluntary disclosure in stock exchange.

Hanoku (2008) studies the relationship between board characteristics and performance of companies listed in New Zealand Stock Exchange using data from 207 listed companies, which had made their financial data available, in 2004-2007. The results showed that from among different characteristics of the board, only rate of return on assets and proprietary ratio had a significant and positive relationship with corporate performance, and that board size had a negative and significant relationship with corporate performance.

Nurwati *et al.*, (2009) carried out a research in Malaysia on the relationship between board composition, the audit committee and the quality of financial disclosure among companies that were offering their share on stock exchange for the first time. The results of this research suggested that companies with higher number of non-executive directors and with a larger audit committee showed a higher disclosure quality.

Mindzak (2013) studied the relationship between interlocked board of directors, voluntary disclosures and earnings quality. The results showed that the interlocked board has a negative relationship with voluntary disclosures, and a positive association with earnings quality. Consistent with previous researches, this study also found that the size of company and the independence of chairman of the board were positively associated with voluntary disclosures.

Domestic Literature

Aghaei and Etemadi (2009) studied the concentrated ownership, institutional ownership, influence of CEO, CEO duality, board size, board independence of board, reliance on debt, and term of office of the CEO as a director. The results showed that the relationship between institutional ownership and independence of the board with information content of dividends was stronger in companies that were more highly motivated to manage dividends, compared with companies in which dividend management motivation was lower. Also, the results showed that other characteristics of corporate governance had no impact on improvement of information content of dividends.

Research Article

Kashanipour *et al.*, (2009) studied the relationship between two control mechanisms, i.e., the voluntary disclosure (external control mechanism), and non-executives directors (internal control mechanism), which reduce the agency problems. Voluntary disclosure was measured using 71 indicators. The results showed that the model used account for 20% of voluntary disclosure variations. However, the no significant relationship was found between voluntary disclosure and non-executive directors.

Bani and Mohseni (2010) studied the factors affecting rank of companies listed in Tehran Stock Exchange in terms of disclosure quality and timeliness of disclosure. Their results suggested that disclosure level has a significant positive relationship with corporate size and type of industry in which a company operates.

Me-likian *et al.*, (2011) examined the relationship between disclosure quality and the cost of capital among the companies listed in Tehran Stock Exchange. The results revealed that there was a significant negative relationship between quality and cost of capital.

Moeinoddin and Dehghan (2012) studied the effect of structure of corporate governance on the quality of disclosure. They found that there was a significant relationship the percentage of institutional ownership and concentration of power on the one hand, and final score of corporate disclosure and its elements on the other hand. However, the results showed that there was no significant relationship between percentage of non-executive directors, and final score of corporate disclosure and its elements.

MATERIALS AND METHODS

Methodology

This research was a deductive – inductive research in terms of argumentation, followed a descriptive method based on real data from financial statements of companies. Also, in terms of objective, this was an applied research. Data required for this research were collected from CD provided by Rahavard Novin Company, as well as reports related to activities of board of directors published by The Securities and Exchange Organization (SEO). Further, data analysis was carried out using Excel and E-views software based on panel data analysis.

Scope

a) Subject: In this research, the relationship between board characteristics and disclosure level among Tehran Stock Exchange companies was studied.

b) Time period: Given data must be collected from a period close to research date, and given the requirement that such data must be available; this research covered a five-year period from the March 20, 2008 to March 21 2013.

c) Population: In this research, the research population comprised the Tehran Stock Exchange.

Statistical Population and Sample

Statistical Population

The Statistical population comprised all companies listed in Tehran Stock Exchange.

Sample:

For this purpose, a sample was selected from among companies listed on the Tehran Stock Exchange during the years 2008 to 2012 considering the following criteria:

1. The required information about the company must be available for the period from 2008 to 2012.
2. The financial year of the companies must end on March 19 and must not have been changed during 2008-2012.
3. Company's shares must have been traded in Tehran Stock Exchange during all the studied years, and end of period prices must be available.
- 4- The studied companies must not be among investment and financial brokerage companies.

Data Collection Instrument

a) Documentary Method: Library sources, papers, and also, worldwide information network were used.

b) Organizational data and the reports published by listed companies were collected through audited financial reports of companies listed on the official website of Tehran Stock Exchange, and also, through Rahavard Novin Software.

Research Article

Variables

Dependent Variable

IPi: This indicates the disclosure level of a company at the end of fiscal year.

In this research, annual corporate disclosure scores, as calculated for Tehran Stock Exchange listed companies, were used.

Independent Variable

BSIZEi: Board size that is calculated by counting the number of directors.

BINDi: Board composition (percentage of independent directors)

DUALi: CEO duality: if the CEO is chairman of the board, its value is 1; otherwise, its value is zero.

Moderating or Control Variables

SIZEi: Corporate size that is given by logarithm of the total assets of the company.

ROEi: Corporate profitability, return on equity.

Research Model

In the present study, a regression model with panel data was used to analyze the data and test the hypotheses.

$$IP_i = \alpha + \beta_1 BSIZE_i + \beta_2 BIND_i + \beta_3 DUAL_i + \beta_4 SIZE_i + \beta_5 ROE_i + e \tag{1}$$

Methods of Analysis and Test of Hypotheses

In order to test the hypotheses, multivariate linear regression model was used. Statistical method used in this research is panel data method. It should be noted that data analysis software was carried out using E-views and Excel.

Panel Data Method

The model below represents a general model with panel data:

$$Y_{it} = \alpha_{it} + \sum_{k=1}^k \beta_{kit} X_{kit} + \varepsilon_{it} \tag{2}$$

Chow or Bounded F Test

The null hypothesis of Chow test or bounded F test is as follows:

$$\begin{cases} H_0 : \alpha_i = \alpha \\ H_1 : \alpha_i \neq \alpha \end{cases}$$

To test the said hypothesis, F statistic is used as follows:

$$F(N-1, NT-N-K) = \frac{(RRSS - URSS)/(N-1)}{URSS/(NT-N-K)} \tag{3}$$

In this test, H_0 hypothesis, that is, the hypothesis that the intercepts are equal, is placed opposite to H_1 , that is, the hypothesis that the intercepts are equal. If null hypothesis is confirmed, it would mean that slopes are equal for different points, and it is statistically confirmed that data can be combined, and that panel regression model can be used. However, if H_0 is rejected, panel data method is confirmed, and panel data method can be used.

Hausman Test

Hausman test is used to specify which method (fixed effects or random effects) is more suitable for estimation (identifying whether the differences between cross-sectional units is fixed or random).

$$W = [\beta_{RE} - \beta_{FE}]^T [\text{var}(\beta_{RE} - \beta_{FE})]^{-1} (\beta_{RE} - \beta_{FE}) \tag{4}$$

In Hausman test, the null hypothesis is as follows (Baltagi, 1995).

$$\begin{cases} H_0 : E(u_{it} | X_{it}) = 0 \\ H_1 : E(u_{it} | X_{it}) \neq 0 \end{cases}$$

Research Article

Test of Significance of the Model

F-statistic was used to study the significance of the regression model. The null hypothesis in F test would be as follows,

$$\begin{cases} H_0 : \beta_1 = \beta_2 = \dots = \beta_k = 0 \\ H_1 : \beta_1 \neq \beta_2 \neq \dots \neq \beta_k \neq 0 \end{cases}$$

which is verified by the statistic below:

$$F = \frac{ESS / (K - 1)}{RSS / (N - k)} \tag{5}$$

To decide as to whether to confirm or reject the null hypothesis, F statistics obtained is compared with F from the table as calculated with the degrees of freedom of the K-1 and N-K for the error level (α) of 5%. If calculated F is greater than F given by the table ($F > F_{\alpha(K-1, N-K)}$), the numerical value of test function falls in the critical zone, and null hypothesis (H_0) is rejected, in which case, the whole model would be significant at confidence level of 95%. However, if value of calculated F is smaller than F given by the table, H_0 is confirmed, and significant of model would not be confirmed at confidence level of 95%.

Decision as to Whether to Reject or Confirm Hypotheses

F statistic was used to investigate the significance. By comparing calculated F with F given by the table, the whole model was studied. Also, t-statistic was used to investigate of coefficients of independent variables. T-statistic obtained was compared with t-statistic obtained from table with degree of freedom of N-K at confidence level of 95%. Also, as an alternative method to decide as to whether to confirm or reject a hypothesis probability value or significance level has been used. If the calculated probability value was equal to or greater than type I error (α), the null hypothesis is confirmed, and if probability value is smaller than of type I error (α), then the null hypothesis is rejected.

RESULTS AND DISCUSSION

Analysis of Results

Acronyms related to research variables used in statistical tests are as follows:

Table 1: Acronyms related to research variables

Variable	Acronym
Ranking of corporate disclosure level	IP
Board size	BSIZE
Board composition (independent directors' share of board)	BIND
CEO duality (CEO serves as chairman of board as well)	DUAL
Corporate size (natural logarithm of total assets)	SIZE
Corporate profitability	ROE

Sample size amounts to 56 companies.

Results of Descriptive Statistics

Properties of descriptive statistics related to the variables used in this are summarized research in the tables (2).

Research Article

Table 2: Descriptive statistics of stock returns and independent variables

Independent variable	ROE	SIZE	DUAL	BIND	BSIZE	IP
Median	27.42337	13.68034	0.989286	20.24925	5.171429	61.22831
Mean	32.39472	13.34829	1.000000	0.000000	5.000000	65.50000
Maximum	171.1049	19.61803	1.000000	97.80000	8.000000	99.00000
Minimum	-234.8685	10.99739	0.000000	0.000000	3.000000	-16.26087
STD	37.22606	1.534596	0.103138	28.28921	0.554459	26.74747
Jarque–Bera	-2.957744	1.039843	9.504955-	1.207388	1.316118	-0.674641
Skewness	21.87255	4.231848	91.34416	3.260246	9.583294	2.618634
Kurtosis	4563.606	68.16298	95270.79	68.82015	586.4650	22.93669
Prob.	0.000000	0.000000	0.000000	0.000000	0.000000	0.000010
Number of observations	280	280	280	280	280	280

Correlation Test

In the following correlation matrix, Pearson’s correlation between the dependent and independent variables was calculated. Correlation level between variables is written as null hypothesis and alternative hypothesis.

$$\begin{cases} \rho_{XY} = 0 \\ \rho_{XY} \neq 0 \end{cases}$$

Coefficient related to Pearson statistics ranges between + 1 and -1. If the obtained value is positive, it means that the two variables have changed in the same direction, and if obtained value is negative, i.e. it means that two variables have changed in opposite directions.

Table 3: Test of correlation between variables

SIZE	ROE	DUAL	BSIZE	BIND	Covariance IP	Correlation
					712.8723	IP
					1.000000	
				797.4214	-69.88409	BIND
				1.000000	-0.092689	
			0.306327	1.225815	-0.791165	BSIZE
			1.000000	0.078431	-0.053539	
		0.010599	0.001837	-0.315258	0.104779	DUAL
		1.000000	0.032234	-0.108438	0.038118	
	1380.831	-0.052804	-1.090434	-15.84630	235.3259	ROE
	1.000000	-0.013802	-0.053020	-0.015101	0.237188	
2.346573	-1.297025	0.014828	0.081407	-6.362649	-6.847331	SIZE
1.000000	-0.022786	0.094021	0.096018	-0.147088	-0.167417	

It is seen from the above table that the correlation values between the independent variables is very low. This indicates that there is no correlation between the variables, and that one of the basic conditions of regression is in place. Therefore, in order to solve the said problems, the generalized least squares (GLS) method must be used in this model.

Research Article

Test of Hypotheses

Test of Hypothesis One

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

H₀: There is no significant relationship between the size of the board and the disclosure level.

H₀: $\beta_i = 0$

H₁: There is a significant relationship between the size of the board and the disclosure level.

H₁: $\beta_i \neq 0$

Test of Significance of the Fixed Effects Method

To test the significance of the fixed effects method, F-statistic test and Hausman test should be used.

Test of Hypothesis One

A) F-Statistic Test

Table 4: Results of F-statistic test for test of the first hypothesis

Description	Statistic value	Degree of freedom	Prob.
Cross-section F	18.849393	(54,217)	0.0000

B) Hausman Test

Table 4: Results of Hausman test for test of the first hypothesis

Description	Statistic value	Degree of freedom	Prob.
Cross-section random	51.188371	3	0.0000

The analysis of this test is based on obtained error level of the statistic in question. If the error level obtained in Hausman test is lower than 5%, null hypothesis, that is, random effects method is confirmed, but if error level is higher than 5%, alternative hypothesis, that is, fixed effects method is confirmed.

Table 6: Study of panel model using GLS method

Variable	Coefficient	STD	t-statistic	Prob.	Type of relationship	Significance level
Bsize	2.538624	1.524349	1.665382	0.0973	Positive	95%
ROE	-0.102240	0.030379	-3.365503	0.0009	Negative	99%
SIZE	9.955748	1.620573	6.143350	0.0000	Positive	Significant
C	-84.81265	23.09435	-3.672441	0.0003	Negative	99%
Weighted statistics			Non-weighted statistics			
Coefficient of determination	0.865766		Coefficient of determination	0.677385		
Adjusted coefficient of determination	0.830506		Durbin-Watson statistic	2.010434		
Durbin-Watson statistic	2.271957					
F-statistic	24.55398					
Prob. (F-statistic)	0.000000					

As seen from table (6), P-Value of Prob. (F-statistic) that indicates the significance of the whole regression is equal to 0.0000, which indicates that the model is significant at 99% confidence level. Also, it is seen from the above equation that the result of Durbin-Watson test ranges between 1.5 and 2.5, which is good, and shows that there is a significant relationship between board composition and disclosure level (confidence level = 95%).

Test of Hypothesis Two

- There is a significant relationship between the board composition and the disclosure level.

H₀: There is no significant relationship between the board composition and the disclosure level.

Research Article

$H_0: \beta_i = 0$

H_1 : There is a significant relationship between the board composition and the disclosure level.

$H_1: \beta_i \neq 0$

Test of Significance of the Fixed Effects Method

To test the significance of the fixed effects method, F-statistic test and Hausman test should be used.

Test of Hypothesis Two

a) *F-Statistic Test*

Table 7: Results of F-statistic test for test of second hypothesis

Description	Statistic value	Degree of freedom	Prob.
Cross-section F	18.812216	(54,217)	0.0000

A) *Hasuman Test*

Table 8: Results of Hausman test for test of second hypothesis

Description	Statistic value	Degree of freedom	Prob.
Cross-section random	54.114931	3	0.0000

Table 9: Study of panel model using GLS method

Variable	Coefficient	STD	t-statistic	Prob.	Type relationship	ofSignificance level
BIND	-0.155144	0.067603	-2.294920	0.0227	Negative	95%
ROE	-0.104462	0.031838	-3.281057	0.0012	Negative	95%
SIZE	10.70303	1.711070	6.255165	0.0000	Positive	Significant
C	-78.71312	22.95622	-3.428837	0.0007	Negative	99%
Weighted statistics			Non-weighted statistics			
Coefficient determination	of 0.862757	Coefficient determination	of 0.678654			
Adjusted coefficient determination	of 0.826707	Durbin-Watson statistic 2.005526				
Durbin-Watson statistic	2.235868					
F-statistic	23.93219					
Prob. (F-statistic)	0.000000					

As seen from table (9), P-Value of Prob. (F-statistic) that indicates the significance of the whole regression is equal to 0.0000, which indicates that the model is significant at 99% confidence level. Also, it is seen from the above equation that the result of Durbin-Watson test ranges between 1.5 and 2.5, which is good, and shows that there is a significant relationship between board composition and disclosure level (confidence level = 95%).

Test of Hypothesis Three

- There is a significant relationship between CEO duality and the disclosure level.

H_0 : There is no significant relationship between CEO duality and the disclosure level.

$H_0: \beta_i = 0$

H_1 : There is a significant relationship between CEO duality and the disclosure level.

$H_1: \beta_i \neq 0$

Test of Significance of the Fixed Effects Method

To test the significance of the fixed effects method, F-statistic test and Hausman test should be used.

Research Article

Test of Research Hypothesis

a) *F-Statistic Test*

Table 10: Results of F-statistic test for test of third hypothesis

Description	Statistic value	Degree of freedom	Prob.
Cross-section F	18.407387	(54,217)	0.0000

B) *Hausman Test*

Table 11: Results of Hausman test for test of third hypothesis

Description	Statistic value	Degree of freedom	Prob.
Cross-section random	55.442711	3	0.0708

Table 12: Study of panel model using GLS method

Variable	Coefficient	STD	t-statistic	Prob.	Type relationship	of Significance level
DUAL	-4.896943	13.50708	-0.362546	0.7173	Negative	-----
ROE	-0.100180	0.030870	-3.245199	0.0014	Negative	95%
SIZE	9.962392	1.617710	6.158331	0.0000	Positive	Significant
C	-67.00673	26.09301	-2.567995	0.0109	Negative	90%
Weighted statistics		Non-weighted statistics				
Coefficient of determination	0.862459	Coefficient of determination	0.677153			
Adjusted coefficient of determination	0.826330	Durbin-Watson statistic		2.010328		
Durbin-Watson statistic	2.248631					
F-statistic	23.87203					
Prob. (F-statistic)	0.000000					

As seen from table (12), P-Value of Prob. (F-statistic) that indicates the significance of the whole regression is equal to 0.0000, which indicates that the model is significant at 99% confidence level. Also, it is seen from the above equation that the result of Durbin-Watson test ranges between 1.5 and 2.5, which is good, and shows that there is no significant relationship between CEO duality and disclosure level.

Conclusions and Suggestions

The results from test of this hypothesis and secondary hypotheses on the studies companies are as follows:

1. There is a significant relationship between the size of the board and the disclosure level.
2. There is a significant relationship between the composition of the board and the disclosure level.
3. There is no significant relationship between the CEO duality and the disclosure level.

Summary Results

Table 13: Summary results

Hypothesis	Statistical method	confirmation or rejection
There is a significant relationship between the size of the board and the disclosure level.	Multivariate regression (panel data)	Confirmed
There is a significant relationship between the composition of the board and the disclosure level.	Multivariate regression (panel data)	Confirmed
There is no significant relationship between the CEO duality and the disclosure level.	Multivariate regression (panel data)	Rejected

Research Article

Comparison of the Results from Test of Hypotheses with the Results of Other Research

1. According to the results from the test of the first hypothesis, this research is inconsistent with Moeinoddin and Dehghan (2012), which showed that there was no significant relation between ratio of number of non-executive directors to number of executive directors on the one hand, and the final scores of corporate disclosure and its elements.

Also, the results of this study were consistent with Mindzak (2013), who showed corporate size and independence of chairman of board had a positive relationship with voluntary disclosure.

2. According to the results from the test of the second hypothesis, this research is inconsistent with Kashanipour *et al.*, (2009), who showed there was no relation between voluntary disclosure and ratio of number of non-executive directors to number of executive directors.

Also, this research is inconsistent with Ho and Wong (2001), who showed that there was no significant relation between percentage of independent directors and voluntary disclosure.

3. According to the results from the test of the third hypothesis, this research is consistent with Aghaei and Etemadi (2009), who showed that CEO duality had no effect on disclosure or improvement of information content.

Suggestions

1. It is suggested that listed company increase their level of information disclosure by increasing the board size.

2. It is suggested that listed companies increase the percentage of independent directors to increase the level of disclosure.

3. It is suggested that listed companies avoid electing CEO as the chairman of board, because CEO duality results in reduced credibility of disclosure.

Suggestions for Future Research

1- Study of external factors (governing laws, investment regulations, geographic region, industry index), and internal factors (the number of internal auditors, the number of board meetings, the number of audit committee meetings, shareholding of internal auditors, shareholding of independent directors) affecting the level of disclosure in over-the-counter (OTC) companies.

2 – Study of the relationship between transactions of the owners of the company and disclosure level among listed companies.

3 – Study of the disclosure quality with emphasis on corporate governance mechanisms in one of the industries being traded on Tehran Stock Exchange.

REFERENCES

Amr Ezat and Ahmed El-Masry (2008). The impact of corporate governance on the timeliness of corporate internet reporting by Egyptian listed companies. *Managerial Finance* **34**(12) 848–867.

Azar A and Momeni M (2000). *Statistics and Its Application in Management*, 4th edition (samt press) **2**.

Azar A and Momeni M (2010). *Statistics and Its Application in Management*, 10th edition (samt press) **2**.

Baltagi BH, Hidalgo J and Li (1995). A non-parametric test for pool ability using panel data. *Journal of Econometrics*, forthcoming.

Banimahad B and Mohseni Sharif M (2010). Factors affecting the ranking of companies listed in Tehran Stock Exchange in terms of quality of disclosure and timeliness.

Ghalibaf Asl H and Rezaei F (2007). Effect of composition of board of directors on performance of companies listed in Tehran Stock Exchange. *Financial Research Journal* **9**(23) 33.

Hanoku Bathula (2008). Board Characteristics and Firm Performance: Evidence from New Zealand. A thesis submitted to Auckland University of Technology in fulfilment of the requirements for the degree of Doctor of Philosophy (PhD).

Hasas Yeganeh Y (2006). Corporate governance in Iran. *Auditor Quarterly* **32** 32.

Ho SM and Wong KS (2001). A Study of the Relationship between Corporate Governance Structures and the Extent of Voluntary Disclosure. *Journal of International Accounting, Auditing and Taxation* **10**(2) 139-156.

Research Article

Hutton and Stocken (2009). Prior Forecasting Accuracy and Investor Reaction to Management Earnings Forecasts. Available: <http://ssrn.com/abstract=817108>.

Kashanipour M, Rahmani A and Parchini Parchin SM (2009). Relationship between voluntary disclosure and non-executive directors. *Quarterly of Accounting and Audit Studies* **16**(57).

Madhani M (2009). Pankaj, Role of Voluntary Disclosure and Transparency in Financial Reporting. *The Accounting World* 63-66.

Melikian E, Adili M and Ebrahimian SJ (2011). Relationship between disclosure quality and the cost of capital in companies listed in Tehran Stock Exchange, Ninth Congress of Accountants. *Sistan and Baluchestan University, Zahedan*.

Mindzak Justin (2013). Interlocked Boards of Directors, Voluntary Disclosures and Earnings Quality, *Wilfrid Laurier University, Working Paper*. Available: <http://ssrn.com/abstract=2238871>.

Moeinoddin M and Dehghan F (2012). Effect of corporate governance on disclosure of information. *Tenth National Conference of Accounting, Al-Zahra University*.

Setayesh Rial MH and Kazemnezhad M (2010). Disclosure in accounting. *Accountant Journal* **25** 227.

Watts R and Zimmerman J (1986). *Positive Accounting Theory* (Prentice- Hall) Englewood Cliffs, NJ.