



# The impact of the board structure on corporate social responsibility disclosure of listed in Tehran Stock Exchange

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**Abstract:** The study aimed at to investigate the impact of board structure on the social responsibility disclosure of companies listed in Stock Exchange of Tehran. The board size and non-obligated managers' ratio of the board were defined as independent variables and the disclosure of social responsibility of the companies as dependent variable. The research includes companies that were members, a 4-year period from 2009 to 2012, of Tehran Stock Exchange. 69 companies were selected using simple random sampling and analyzed using Software Eviews 7 software. The results showed that the board size has a significant impact on social responsibility disclosure of companies listed in Tehran Stock Exchange. The ratio of non-obligated managers of the board has no significant impact on the social responsibility discloser of companies listed in Tehran Stock Exchange.

**Keywords:** Corporate social responsibility, Board size, Stock exchange of Tehran.

## Introduction

Today, CSR is from outstanding place in making strategies for organizations in in the current competing marketplace, it makes vital role of CSR outstanding in the organization's decisions strategy. Organizations make their reputation within the community and among the competitors when adopting CSR strategies. Organizations devoted a part of their activities for the public welfare and promoted the staff moral traits and efficiency (Aribi et al, 2010). Hence, they show goodwill in terms of their management skills through the use of internal and external expertise to reduce the risks of stakeholders. They also benefit from CSR strategies to grapple with environmental issues and CSR led their initiatives to improve the community. Also, a large proportion of independent or external members of the board have positive effects on an organization's CSR performance to be better (Beattie et al, 2004). The external members of the board are well aware of the dynamics of the external environment so that they maintain their readiness to cope with their surroundings. By doing so, the board members protect the interests of all (Kafee and Wang 1998). Accordance with the findings of Abraham and Anjlidis (1995) and Abraham, et al (2003), the external members of the board pay attention tightly to the dimensions of the corporate social responsibility. In a survey by Johnson and Grening (1999) and Zahera et al (1993), they found a positive relationship between corporate social performance of the organizations and activities of external directors on the board. Further investigation revealed that a large board can lead to poor coordination and communication behaviors and attitudes. Ghader Shahin et al (2011) studied the relationship between the board size and characteristics and behavior of corporate social responsibility of the organizations in Turkey. A great board helps not only to the loss of the problems, but also to protecting the interests of stakeholders and to a good performance of the corporate social responsibility. Also commenting on the study has been confirmed by other authors (Don & Senti, 2009). This paper seeks to examine the impact of the board size on disclosure of CSR listed in Tehran Stock Exchange. It seems that the answer to this question will be very impressive for the obligated and non-obligated directors of the companies and institutional, potential and actual investors, independent auditors.

## 2- Methodology

### 2-1- Hypotheses

- The board size has a significant impact on the disclosure level of companies' CSR, listed in Tehran Stock Exchange.

**2-2- The statistical population of the study**

The statistical population studied in this research is the companies listed in Tehran Stock Exchange during the years 2009 and 2012. In sampling, companies were selected by three conditions:

- 1) Listed in Tehran Stock Exchange before 2009.
- 2) The end of its fiscal year is March 20.
- 3) The information is available.

**2-3- The statistical sample**

The sample in this study, given the size of the population, consists of 69 companies, which to estimate the number of samples with respect to the variables' scale of the research hypotheses, the following formula is used:

$$n = \frac{N(Z_1 - \frac{a}{2})^2 \sigma^2}{(N + 1)d^2 + (Z_1 - \frac{a}{2})^2 \sigma^2}$$

Z<sub>1</sub>= confidence level of 95%

N= the population size

d= sampling error

σ<sup>2</sup>= the population variance

**2-4- Measure of the research variables**

**2-4-1- Disclosure level of environmental and social accounting information**

In this study, for content analysis to determine the level of social and environmental accounting information disclosure, a check list of disclosure and a binary method (Zero & One) are performed. In fact, the scoring procedure would be applied to measurement of CSR based on Ernst & Ernst (1978), Abbott and mosen (1979), if an item out of CSR items disclosure is performed, it catches 1; otherwise, 0. Hence, the number of items disclosed to the total items can be disclosed of CSR reporting which is based on data contained in the annual reports of companies represent disclosure percentage of CSR or CSR ranking to determine its level on each corporate :

CSR Score= the number of items disclosed/ the total items can be disclosed

Table 1-1- the operational definition of the research variables

Row	The variable name	How to measure
1	The board size	The number of people present at the board's and managers' commissions
2	The firm size	Natural logarithm of total assets book-value of a firm
3	Industry type	Based on classification of Tehran Stock Exchange Organization
4	Financial leverage	Ratio of total liabilities to total assets of a firm

**2-5- Methods of data analysis**

To determine whether time-series X<sub>t</sub> is of a static process (the order of accumulation of zero), or divergent (the order of accumulation of 1, we use generalized test of Dickey Fuller (ADF). As static variables examination here, we also need to use the proper method for data fusion. We use modified Wald-statistic to assess the heterogeneity of group variance among the residuals of a constant-effect model of regression and too, both Hausman method and F-test to determine a constant-effect or random-effect. To illustrate the explanting power of the explanatory variables, the coefficient of determination adjusted (Adjusted R<sup>2</sup>), to examine significance of the variables and the overall model adequacy, T-statistics and F-fisher, respectively. Well, the statistics analyses do by EVIEWS 7 and EXCEL software.

**3- Results**

**3-1- Examining the variance heterogeneity**

We use modified Wald-test for reviewing the group variance heterogeneity among the residuals of the constant-effect model of regression. Due to the absence of this test in the area of EVIEWS software, Stata software by version 88 was used.

Table 2-1- results of the variance heterogeneity test using modified Wald-test

Description	Value of chi-square	Probability
modified Wald-test	-7465.33	0.5964

\* Error level of 5%

According to table 2-1, due to the significance level of chi-square statistic is not significant at 5% error level, it can be rejected the hypothesis on heterogeneity and contrary to, homogeneity accepted.

### 3-2- Determining the model estimation method-significance test of the constant-effects method

#### 3-2-1- F-statistic test

Table 3-1- results of F-statistic test

Description	Value of statistic	Freedom degree	Probability
Cross-section F	1.918452	68	0.005*
Cross-section Chi-square	141.103224	68	0.001*

\* Error level of 5%

#### 3-2-2- Hausman test

Table 4-1- results of Hausman test

Description	Value of statistic	Freedom degree	Probability
Cross-section F	7.923665	9	0.006*

\* Error level of 5%

According tables 3-1 and 4-1, the results of both tests conducted (F and Hausman), in each case, the calculated probability was less than 1% and so it should be used the constant-effects method in the relevant regression model.

### 3-3- hypothesis testing

Table 5-1- first hypothesis regression testing

Variable name	Influence coefficient	Deviation of the estimation	t-statistic	Significance level
Constant	0.452	0.658	2.245	0.003*
The board size	0.277	0.702	2.166	0.006*
Firm size	0.512	0.541	2.079	0.009*
Financial leverage	-0.316	0.337	-1.885	0.024*
Industry type	0.496	0.496	1.744	0.033*

\* Error level of 5%

Table 6-1- explanation capability and significance of total model

R		Watson-Durbin	ANOVA	
Determination coefficient	Adjusted determination coefficient		F	Sig.
0.662	0.654	1.802	12.335	0.000**

\* Error level of 1%

According to table 5-1-, since statistic value of the Watson-Durbin test is ranged within 1.5 to 2.5, it is not rejected the hypothesis on lack of correlation between the errors and the regression can be used. Given the significance value of F-test (12.335) at the error level less than 0.01, it can be concluded that the research regression model is composed of the independent, dependent and control variables was a good model and a collection of independent and control variables are able to explain CSR disclosure changes. The adjusted

coefficient of determination value is equal to 0.654, showing that 65.4% of the total changes in the dependent variable, depends on the independent and control variables of the model. Also, the influence coefficient of the variable of the board size on the corporate social responsibility disclosure level is equal to 0.277, which suggests a direct and positive impact of the board size on CSR disclosure level. However, given the significance level of t-statistics for the board size onto the CSR level (0.06), due to the error level less than 5%,  $H_0$  can be rejected at 95% confidence level, suggesting that the board size has no significant impact on the CSR disclosure level of Companies listed in Tehran Stock Exchange. The regression model of the research is as follows:

$$\text{CSR}_{it} = 0.452 + 0.277 \text{ Board Size}_{it} + 0.512 \text{ Firm Size}_{it} + 0.496 \text{ Industry}_{it} - 0.316 \text{ Leverage}_{it} + \varepsilon_{it}$$

#### 4- Conclusions and recommendations

The aim of this study was to investigate the impact of the board size on corporate social responsibility disclosure level of companies listed in Tehran Stock Exchange. The board size was defined as independent variable and CSR disclosure level as a dependent variable. It recommends the managers and the head of the board in the companies help to increase CSR disclosure level of the corporate dramatically, when increasing the number of board members, independence of the board members, the ratio of non-obligated managers of the board and rotation of the board. And it suggests potential and actual investors, accountants, auditors, brokers and other stakeholders that rather than decide on the amount of CSR disclosure level, pay their attention to the factors such as the number of board members, independence of the board members, the ratio of non-obligated managers of the board and the board rotation.

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