



The relationship between corporate social responsibility and investment performance of companies listed in Tehran Stock Exchange

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Abstract: The study aimed to investigate the relationship between corporate social responsibility and investment performance of companies listed in the Stock Exchange of Tehran. Special and temporary domains are the companies listed in Tehran Stock Exchange during 2010 and 2013, respectively. Score for disclosure of corporate social responsibility and the investment efficiency are considered as independent and dependent variables, respectively. In this study, to analyze the content for determining the level of corporate social responsibility, a discloser checklist, social responsibility model of Barzegar (2013) and a binary method were used. This paper is an applied and correlative one in terms of objective and nature and method. 93 companies were sampled using systematic elimination. The results showed a significant relationship between corporate social responsibility and investment performance of companies listed in Tehran Stock Exchange.

Keywords: corporate social responsibility, investment efficiency, Tehran Stock Exchange

INTRODUCTION

For a long time, the corporate social responsibility has been debated to be implemented. However, some researchers believe in that CSR is related to high performance and high value of company, low financial risk, reduced information asymmetry, easy access to financing and decreased cost of capital (El Gall et al., 2011); other researchers believe that CSR activities are a source of conflict between shareholders and unnecessary costs which involves, will lead to the decrease in resources, and creating competitive disadvantages compared with companies that do not pay social responsibility (Aprl et al., 1985). In one hand, according to the findings of Ben Lmly (2015), social responsibility within the companies reduced investment inefficiency and thus increased the investment efficiency. Under Modigliani and Miller's paradigm (1958), the investment opportunities have been only stimulus a company to invest. There are at least two crucial factors for determining the efficient investment. First, a company to finance its investment opportunities, the need to increase capital, within a perfect market, all projects of positive net present value should be funded, although the investment texts would tell companies are facing financing constraints whose managements' ability is limited to finance potential projects (Hubbard, 1998). Second, the investment performance suggests that even if the company decided to increase its capital, there would be no guarantee of the investment done rightly. Most studies show that a bad chosen project makes the company invest more than ever (Stein, 2003). Allocated corporate social responsibility has created a competition between shareholders and other stakeholders (Vadok and Grieve, 2014). It is utmost essential the sources available to determine CSR. The returns on the investment are considered as biggest sources to the companies, since the investment performance affects directly the sources availability (Williams and Ganapati, 2007). The evidence suggests that future profitability will be resulted from corporate social responsibility to be spent (Lees et al., 2013). The researchers showed that high socially responsible companies have confronted to reduced information asymmetry and to a high correlation among shareholders. Components of social responsibility that communicates directly with the main stakeholders (employee relations, product features, environment and diversity) reduce inefficiencies in investment,

compared with companies having secondary stakeholders (human rights and participation in society) (Ben Lemli, 2015). In this study, we sought to examine the relationship between corporate social responsibility and investment performance of companies listed in the Tehran Stock Exchange.

2- Literature

Arabsalehi et al., (2013) examined the relationship between social responsibility and financial performance of companies listed in Tehran's Stock Exchange. The results show that financial performance is related to the corporate social responsibility of company towards its customers and the communities. But there is no significant relationship between the financial performance and the corporate social responsibility of company against the employees and the environment. This research will help the managers to develop some effective policies on corporate social responsibility of companies in order to achieve better long-term financial performance. As well, it provides an insight for the companies, indicating what role SR plays to get future benefits. Amiri and Vakilzadeh (2014) studied the effect of social responsibility on the corporate performance. The statistical sample consists of active participations in the Stock Exchange during 2002 and 2011. The companies' performance measures include (return on assets, return on equity, real stock returns, Tobin Q ratio, and the market value of equity, economic value added and cost of equity). The results show a significant relationship between social responsibility and corporate performance. Ahmadpur and Farmanbourdar (2014) examined the relationship between the corporate social responsibility and forecast error in earnings per share of companies listed in Tehran's Stock Exchange. The results showed a significant inverse relationship between the disclosure level of corporate social responsibility and absolute forecast error earnings per share. Also there is a significant inverse relationship between disclosure level of social and environmental performance of company and absolute forecast error in earnings per share. Ben Lemli (2014) examined the moderating investment mechanisms. According to surveys conducted, the empirical evidence indicates that companies reduce their own debt maturities to avoid phenomenon of overinvestment of the corporate social responsibility. The results also showed increased levels of corporate social responsibility of companies cause some problems to represent. So the corporate social responsibility does not contribute positively in the investment efficiency. Ioannou and Seraphim (2014) examined the impact of corporate social responsibility on the investment performance of companies listed in the United States Stock Exchange. Using a large sample in a 15-year period in the United States of America, the results showed no significant relationship between the rate of corporate social responsibility and the forecast error in earnings, as well as analysts understood the social responsibility as the cost of representative. Ben Lemli (2015) examined the relationship between social responsibility and investment performance. Historically, who implement the corporate social responsibility has still been debated. However, some researchers believe in that CSR of companies is related to high value of companies, low financial risk, reduced information asymmetry, easy access to financing and cost of investment. Kok et al., (2015) examined the relationship between corporate social responsibility and investment performance in the companies. The study aims at how the social responsibility influences the investment performance. The results showed that high socially responsible companies are investing more efficiently. Whatever the company has a high degree of social responsibility, it also less invest in projects with negative net present value which have been profitable and of a higher value.

3- Research methodology

3-1- Hypothesis

- There is a significant relationship between the economical disclosure of corporate social responsibility and investment performance of companies listed in the Tehran Stock Exchange.

3-2- Methodology

This is an applied research in terms of an objective-based classification. The applied research aims to develop practical knowledge in a particular field. Also, it is a correlative one, in terms of methodology and

the nature. The study aimed to determine the relationships between variables. For this purpose, according to the scale of measuring variables, appropriate indicators are chosen. The relative indicators are used to measure data.

3-3- The operational definition of variables

3-3-1- Corporate social responsibility

In this study, to analysis content in order to determine the level of corporate social responsibility, the disclosure checklist of Barzegar (2013) and binary method were used. In fact, in the survey, scoring procedures for assessing the corporate social responsibility has been based on the method of Ernst and Ernst (1978) Abbott and Monsen (1979), which if an item of disclosure of corporate social responsibility is made, it scores 1, otherwise 0. Hence, the number of items disclosed to authorized items disclosed determines the percentage of each company's CSR or CSR score to determine its level in each company, in reporting corporate social responsibility based on data contained in the annual reports:

CSR Score= total disclosed/ authorized total disclosed

3-3-2- Investment performance

In this study, the performance of investment is considered as a cash payment by a company for the acquisition or construction of fixed assets, intangible assets or other non-current assets divided by total assets at the beginning (Yang and Jiang, 2008).

3-3-3- Firm size

It is the natural logarithm of the book value of total assets (Hemmati et al., 2012).

3-3-4- Financial Leverage

It is the ratio of total debt to total assets (Alvani et al., 2009).

3-4- Statistical population and sample

This includes the companies listed in Tehran Stock Exchange between 2010 and 2013. The systematic removal method was used to sample, taking into account the following conditions:

1. Not changed fiscal year or activity during study
2. Financial information is available.
3. Not taken into consideration of intermediaries, investment, leasing and insurance companies.
4. The financial period ends up to March 19.
5. The Company's shares are traded on the stock exchange.

According to restrictions, 93 subjects were sampled from 421 member companies in exchange, using systematic removal method.

3.5 Analysis of data

To determine whether time series x_t is a static (integration rank of zero) or divergent process (integration rank of 1), Lin-Levin test is used. As investigating the static variables, here using the appropriate method for panel data is needed. We used modified Wald statistic for examining heteroscedasticity of group variance among the residuals of fixed effects regression model. The two F and Hausman tests are used to determine one of two ways of fixed effect or random effects. To determine whether the panel data method is used in estimating the models, F Limer test is used and in case of rejection of the null hypothesis, the panel data method must be used. Multi-regression test and software Eviews 7 are used to confirm or reject hypotheses.

4- Results

4-1- Evaluation of heteroskedasticity of variance

Here the variance heteroskedasticity is estimated which is due to different characteristics of the companies. As investigating the static variables, here using the appropriate method for panel data is needed. We used modified Wald statistic for examining heteroskedasticity of group variance among the residuals of fixed effects regression model. ARCH LM heteroskedasticity results include:

Table 1.1 ARCH LM heteroskedasticity results of research model

Description	Statistics value	Probability
F-statistics	2.165187	0.069*
Obs*R-squared	5.014162	0.069*

* 5% error level

According to Table 1-1, F statistic test is not significant at the 5% level, so the hypothesis of homogeneity of variance is confirmed and heteroscedasticity of disturbing terms are rejected.

4-2- Testing of fixed effects method significance

The model's estimation method is based on the panel data. This is a combination method of "time series data" and "cross-sectional data". In each model of time series and cross section data, there are shortcomings that can be reduced in the combined model. In panel method, first two F-test and Hausman test are used to determine one of two methods of the fixed effect or random effects methods, the results are given in the following tables:

Table 1-2- F Limer test

Description	Statistics value	Freedom degree	Probability
Cross-section F	3.247131	92	0.032*
Cross-section chi-square	108.203218	92	0.014*

* 5% error level

Table 1-3- Huasman test

Description	Statistics value	Degree freedom	Probability
Cross-section F	5.629315	27	0.023*

* 5% error level

According to Tables 1-2 and 1-3, and the results of two tests (F and Hausman), the probability obtained is less than 5% and therefore, the fixed effects method in the regression model should be used.

4-3- Lin-Levin Method

Lin and Levin indicated that in panel data, using unit root test on these data has more power than conventional unit root tests such as tests Dickey- Fuller, Advanced Dickey-Fuller and Phillips-Perron test. In this study, Lin and Levine test is used.

Table 1-4 collective unit root tests on the variables in Lin-Levine method

Variables	Statistics	Probability
CSR's economic dimension	5.269	0.0031*
Investment performance	5.316	0.0029*
Firm size	-7.498	0.0005*
Financial leverage	-4.009	0.0042*

* 5% error level

According to Table1-4, investigated statistics values and probability of their acceptance indicate that the null hypothesis on non-stationary can be rejected for all the variables that are located in stationary level.

4-4- Hypothesis testing

Table 1-5- The hypothesis regression testing

Variable	Estimated coefficients	Standard deviation	t-statistics	Significance level
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Fixed	0.269	0.047	5.723	0.015*
CSR	0.665	0.123	5.406	0.023*
Firm size	1.478	0.329	4.492	0.035*
Financial leverage	-0.518	0.102	-5.078	0.037*

* 5% error level

Table 1-6- Explanation capability and significance of the entire model

R ²		Durbin-Watson	ANOVA	
Determination coefficient	Adjusted determination coefficient		F-statistics	Significance level
0.341	0.338	2.169	47.015	0.000**

* 1% error level

According to Table 1-5, as the Durbin-Watson test statistic is in the interval of 1.5 to 2.5, the hypothesis on the correlation between the errors is rejected and the regression can be used. The adjusted coefficient of determination is equal to 0.3384, indicating that 33.8% of changes in companies' investment performance depends on independent and control variables in this equation. On the other hand, given the significance of the F test (47.015) less than 0.01 error level, it can be concluded that the research regression model consisting of independent, control and dependent variables is a good model and a set of independent variables are capable of explaining the changes in the companies' investment performance. The coefficient of estimated impact for variable disclosure of CSR's economic dimension on the investment performance (0.665) shows a direct and positive impact of the variable disclosure of CSR's economic dimension on the investment performance. On the other hand, due to the significance level of t-statistic for the variable disclosure of CSR's economic dimension on the investment performance equal to (0.023), and less than 5% error level, H₀ can be rejected at 95% confidence level and a significant impact of the disclosure of CSR's economic dimension and the investment performance of companies listed in Tehran Stock Exchange can be expressed. The empirical model is as follows:

Investment efficiency_{it}

$$= 0.269 + 0.665CSR_Economical_{it} + 1.478 Size_{it} - 0.518 Lev_{it} + \varepsilon_{it}$$

5- Conclusions and recommendations

The first hypothesis test result showed a significant relationship between the disclosure of CSR's economic dimension and the investment performance. According to research results, Kok et al., (2015) showed that high level of social responsibility companies are investing more efficiently. Ben Lemly (2015) showed the social responsibility to reduce inefficiencies in investment within the companies and therefore increased the investment performance. Dalival et al., (2011) showed that due to lowering information asymmetry, the high levels of social responsibility lead to an increase in the investment performance. Aslani et al., (1393) showed a significant relationship between the social responsibility and quality of profit for a group of chemical products industry companies listed in Tehran Stock Exchange. In contrast to the outcome of the investigation, Sanobar et al., (2010) showed that there is no relationship between variable CSR, each of its quintuple dimensions and variable financial performance. Thus, the study results are consistent with Kok et al., (2015), Ben Lemli (2015), Dalival et al., (2011), Aslan et al., (2014) and Amiri and Vakilzadeh (2014); but not with Sanobari et al., (2010). Given above, it can be stated that the companies are investigating more efficiently whose economic performance, market presence, accountability investment and taxing are further regulated than other investing companies.

6- References

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