The Relationship between Earnings Quality and Corporate Social Responsibility Disclosure in Tehran Stock Exchange

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ABSTRACT: The present study aims to investigate the relationship between earnings quality and corporate social responsibility disclosure in Tehran Stock Exchange (TSE). This is an applied research that adopted a descriptive method. The spatial domain of the study was all the companies listed in TSE. The temporal domain was from 2008 to 2012. The research sample consisted of 88 companies listed in TSE. Earnings quality and corporate social responsibility disclosure were considered as the independent and dependent variables, respectively. Firm size, financial leverage, firm age and industry type were considered as the four control variables in the study. A number of three research hypotheses were developed and the relative data were collected. Regression analysis was used to analyze the data. The results showed a significant correlation between earnings quality and corporate social responsibility disclosure in TSE companies. The managers and decision makers in the field of corporate social responsibility are recommended to pay greater attention to earnings quality in order to increase disclosure of the various aspects of corporate social responsibility.

Keywords: Corporate social responsibility, Disclosure, Earnings quality.

INTRODUCTION

Social responsibility is an opportunity for economic enterprises to make public what is highly important to them. Although the concept of corporate social responsibility has extensively been discussed in theory and practice, there has not yet been a generally-accepted definition of the concept (Turker, 2009). Academic efforts have failed to provide a satisfactory and acceptable definition. Therefore, there is no agreement on a definition of corporate social responsibility. It seems impossible to offer a comprehensive definition of corporate social responsibility because every company may have a different notion of the concept depending on its level of development, awareness and ambitions.

Despite a rich literature on it, corporate social responsibility is a broad, complicated and evolving concept that involves a variety of ideas and attitudes. The conceptual scope of corporate social responsibility is controversial in practice as it lacks a robust and comprehensive operational definition so that no generally-accepted definition has already been offered of the concept (Turker, 2009). Disregard for social considerations and failure to offer it in the form of social reporting have created a gap between what economic enterprises expect and what the society expects. Under such circumstances, though economic activities may be profitable to the companies, it may cause irreparable damages to the society. Therefore, social reports and sustainability make the real outcomes of corporate performance objective and tangible and increase social awareness in dealing with potential losses (Turker, 2009). On the other hand, profit is one of the fundamental elements of financial statements, which is used as a criterion to evaluate the going-concern and efficiency and review the structure of enterprise representatives’ contracts. There is evidence that accounting profit is a good indicator of return on equity and prediction of future cash flows. However, due to conservative limitations and the priority of determining the accounting profit, some analysts have concluded that economic profit is a better indicator than accounting profit to predict future cash flows (Sharbat Oghli, 2010). Economic profit was first introduced by Adam Smith. The definition was expanded by Hicks (1939). Profit was then defined as an amount that an individual can consume over a given period and enjoy the same welfare at the end of the period as the beginning of the period.
The theory of earnings quality was first introduced by financial analysts and stock brokers because they felt that the reported earnings did not display earnings power as it might be pictured in mind. They found that it was difficult to predict future earnings based on the reported results. Moreover, the analysts realized that it was difficult to analyze financial statements of the companies due to various weaknesses in measuring accounting information (Foroughi, 2007). In this regard, the present study aims to investigate the relationship between earnings quality and corporate social responsibility disclosure (CSRD) in the companies listed in TSE. The results may be an effective help to corporate managers, potential and actual investors, institutional investors and independent auditors.

**METHODOLOGY**

The method of the study is correlational. In order to achieve research objectives, a number of 88 companies were selected from among 352 top companies listed in TSE using Cochran’s sampling method within the period 2007-2012. Accruals quality was used as a criterion to measure the independent variable, earnings quality. Like Rahmani and Fallah Nezhad (2009), the residuals of Dechow and Dichev’s model (2002) and adjusted Mc Nichols model were used to measure accruals quality as illustrated in Equation 1 below:

\[
\text{Accruals}_{it} = \beta_0 + \beta_1 \text{Cash flow}_{it-1} + \beta_2 \text{Cash flow}_{it} + \beta_3 \text{Cash flow}_{it+1} + \beta_4 \text{Fixed assets}_{it} + \epsilon_{it}
\]

Where:
- Accruals\(_{it}\): changes in accruals of working capital of company \(i\) between the year \(t\) and \(t-1\)
- Cash flow\(_{it-1}\): net operating cash flows of company \(i\) in the year \(t-1\)
- Cash flow\(_{it}\): net operating cash flows of company \(i\) in the year \(t\)
- Cash flow\(_{it+1}\): net operating cash flows of company \(i\) in the year \(t+1\)
- ΔRevenue\(_{it}\): changes in sales revenue of company \(i\) between the year \(t\) and \(t-1\)
- Fixed assets\(_{it}\): net assets, machinery and equipment of company \(i\) at the end of year \(t\)
- \(\epsilon_{it}\): model residual for company \(i\) in the year \(t\), which is used as a criterion to determine accruals quality

Estimation of Model 1 in every year yields the model residuals for every individual company in the research sample. These residuals were used to calculate earnings quality criterion. Using Equation 2, earnings quality criterion for every company in the year \(t\) was calculated as the standard deviation of residuals of the estimation of Equation 1 in the years \(t, t-1\) and \(t+1\).

\[
E_{Qt} = \sqrt{\frac{\sum_{t-1}^{t+1}(\epsilon_{it} - \bar{\epsilon})^2}{2}}
\]

Where:
- \(E_{Qt}\): earnings quality criterion
- \(\epsilon\): mean residuals from the year \(t\) to \(t-2\)

The criterion obtained for earnings quality is an inverse criterion of earnings quality. In other words, the larger the standard deviation of residuals is, the weaker the earnings quality is. On the other hand, the smaller the standard deviation of residuals is, the better the earnings quality is (Rahmani & Fallah Nezhad, 2009).

The dependent variable was corporate social responsibility disclosure (CSRD). The CSRD score of every company was calculated based on the final checklist of CSRD items (every disclosure item obtains either the value of 1 or 0 in scoring every company) (Carroll, 1991). The control variables were firm size (natural logarithm of all assets), financial leverage (total debts divided by total assets), firm age (based on the number of years of enlistment in TSE) and industry (based on the classification of industries by TSE). Multivariate linear regression was run to test the research hypotheses. Earnings quality and CSRD were the independent and dependent variables, respectively. The regression model was developed as follows:

\[
(\text{CSRD}) = B_0 + B_1(\text{Earnings Quality}) + B_2(\text{industry}) + B_3(\text{age}) + B_4(\text{Size}) + B_5(\text{Leverage}) + e_i
\]

Where:
- CSRD: corporate social responsibility disclosure
- Earnings quality: the quality of earnings
- Industry: the type of industry
- Age: firm age
- Size: firm size
- Leverage: financial leverage
Panel data were used to estimate regression models. In this method, time-series and cross-sectional data are combined together. Fixed-, random- or mixed-effect models are used to estimate the efficiency of a regression model using panel data. F-test is run to choose between fixed- and mixed-effect models. If fixed-effect model is selected, Hausman test is used to choose between fixed- and random-effect models. Moreover, autocorrelation of the model components, variance anisotropy and normality of the data were examined in this study. Statistical analyses were conducted using EXCEL and EVIEW7 software. The level of significance was considered to be P≤0.05.

RESULTS

Augmented Dicky Fuller test was run to determine whether $x_t$ time series had a stationary or non-stationary process. The computed statistics and their level of significance revealed that all variables were stationary (Table 1).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sig.</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRD</td>
<td>0.0017</td>
<td>-4.145321</td>
</tr>
<tr>
<td>Earnings quality</td>
<td>0.0006</td>
<td>-5.231412</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.0002</td>
<td>-5.462522</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>0.0014</td>
<td>-4.197452</td>
</tr>
<tr>
<td>Firm age</td>
<td>0.0001</td>
<td>-6.128456</td>
</tr>
</tbody>
</table>

Variance anisotropy was estimated in the next step. Modified Wald test was run to examine group variance anisotropy among the residuals of fixed-effect regression models. The results showed homogeneity of variance in the variables ($K^2=8254.62, P≥0.05$). Regression analysis was used to examine the relationship between earnings quality and CSRD. Table 2 illustrates the results of regression analysis. The value of Durbin-Watson test falls within the range 1.5 to 2.5. Thus, the assumption as to a lack of correlation among errors is not rejected so that regression test can be used.

Considering the significance of F test value (8.662) at significance level smaller than 0.05, one may conclude that the regression model of the study consisting of independent, dependent and control variables, is a good model so that independent and control variables can account for variations in CSRD. The value of adjusted coefficient of determination is 0.447 so that 44.7% of variations in the dependent variable depends on independent and control variables in this model. Moreover, the impact factor of earnings quality on CSRD is 0.228, which indicates the positive and direct effect of earnings quality on CSRD. Thus, there is a significant relationship between earnings quality on CSRD in the companies listed in TSE (P≤0.05). Based on the data illustrated in the table, the empirical research model is as follows:

$\text{(CSRD)} = 0.375 + 0.228 \times \text{Earnings quality} + 0.264 \times \text{Industry} + 0.044 \times \text{age} + 0.575 \times (\text{size}) - 0.167 \times (\text{leverage}) + e_i$

<table>
<thead>
<tr>
<th>Variable</th>
<th>Impact factor</th>
<th>SD</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed</td>
<td>0.375</td>
<td>0.662</td>
<td>1.996</td>
<td>0.012*</td>
</tr>
<tr>
<td>Earnings quality</td>
<td>0.228</td>
<td>0.465</td>
<td>2.415</td>
<td>0.000*</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.578</td>
<td>0.218</td>
<td>2.015</td>
<td>0.009*</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>-0.167</td>
<td>0.336</td>
<td>-1.726</td>
<td>0.033*</td>
</tr>
<tr>
<td>Firm age</td>
<td>0.044</td>
<td>0.598</td>
<td>1.887</td>
<td>0.029*</td>
</tr>
<tr>
<td>Industry type</td>
<td>0.264</td>
<td>0.117</td>
<td>2.069</td>
<td>0.011*</td>
</tr>
<tr>
<td>Coefficient of determination</td>
<td>0.447</td>
<td>Durbin-Watson statistic</td>
<td>1.592</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Results of regression analysis.
DISCUSSION AND CONCLUSIONS

The study aimed to investigate the relationship between earnings quality and CSRD in the companies listed in TSE. The results showed a significant correlation between earnings quality and CSRD in the TSE companies. This is consistent with the findings of Babajani (2005); Brammer and Millington (2008); Choi, Lee and Park (2013) and Adams and Frost (2006). In this regard, Brammer et al (2008) showed that from among the five dimensions of CSRD including human resources, social activities, energy consumption, satisfaction and product quality, human resources information disclosure was the most common dimension of CSRD. Brammer et al (2008) also reported that there was a significant correlation only between firm size and CSRD in the sample companies. Research findings suggest that awareness raising is necessary as to corporate social responsibility in developing countries, particularly in Iran. The present findings, however, is not consistent with the findings of Porter and Kramer (2006), Prior, Surroca and Tribo (2007) and Salewski and Zülch (2013). For example, Prior et al (2007) reported that there was no significant correlation between earnings management and CSRD. Considering the present findings, one may conclude that earnings quality can affect the disclosure level of corporate social responsibility. It is recommended that managers and other decision makers pay greater attention to the issue of earnings quality in order to increase CSRD level. It is further recommended that companies establish independent units or committees of social responsibility in their organizational chart in order for them to develop strategies, goals and plans for corporate social responsibility. Such committees may also decide on how to monitor and disclose corporate social responsibility at various levels with a sustainable development approach.

REFERENCES