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Board monitoring and earnings quality: An empirical study in Iran

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The current study examines the effect of board independence on earnings quality of the companies listed in the Tehran stock exchange (TSE). It makes use of the collected data from 165 companies quoted in the TSE during a period from 2005 to 2010. Regression and forward statistical method was applied to conduct the study. The findings indicate that earnings quality increases in the companies with higher proportion of non-executive directors. Also, the significance of the relationship between executive directors and earnings quality is lower than the relationship between non-executive directors and the reported earnings quality. Furthermore, in the companies where there is no duality-chairman, earnings quality decreases. The impact of firm size on the increase of earnings quality is confirmed, being positive and significant. The relationship between the leverage ratio and earnings quality is confirmed, being negative and significant though. Moreover, earnings quality is higher in privately owned companies compared with publicly owned companies.

Key words: Earnings quality, nonexecutive board, executive board, board independence, duality-chairman.

INTRODUCTION

Accounting is a process designed to prepare financial reporting for a wide spectrum of shareholders, so such reporting should be of high quality to satisfy their needs. Earnings quality is characterized as a fundamental factor in efficient allocation of resources in capital markets. If income statements do not properly reflect an accurate measure of the company’s economic performance, loss of investors, stockholders and finally the whole economy is almost inevitable (Wan, 2009). Examination of the accounting scandal and bankruptcy of giants such as Enron, WorldCom, Xerox and Parmalat in the U.S. and Tell one in Australia has led to the conclusion that these events mainly stemmed from earnings manipulation and artificial, poor quality income statements (Ghosh et al., 2010; Shen et al., 2007). Majority of directors in the mentioned companies made use of fraudulent means such as structuring and artificial transactions with related parties with the intention of earnings management, which downgraded earnings quality to a record low. Consequently, many shareholders lost their confidence (Wats and Zimmerman, 1990). Corporate governance regulations turned out to be the most significant tool to regaining the lost confidence. Therefore, there might be a relationship between earnings quality and corporate governance to a large extent. It is one of the most important duties of corporate governance to ensure the quality of financial reporting (Low et al., 2011). Proper function of the board of directors and their supervisory role, which upgrade the quality of financial statements, can partly reduce such violations. Corporate governance establishes a link between management, the board and stockholders; also, it is a structure which set the company’s objectives and the way to materialize them (Yu, 2010; Wan, 2009; Vinita et al., 2007).

From the viewpoint of agency theory, the supervisory function of nonexecutive directors, who enjoy more independence, lowers the ongoing conflict of interest between stockholders and directors. Nonexecutive directors make judgment from a professional standpoint
with neutrality. Fama and Jensen (1983) argue that non-executive directors have the motivation for being effective monitors in order to retain their credibility. Moreover, it seems that they can further safeguard the shareholders' interests compared with executive directors, who are full-time employers of the company (Wats and Zimmerman, 1990). Cabory’s report maintains that a balance should be kept between executive and nonexecutive members on the board in order not to allow any of them to hold unconditional monopoly on decision-making. Furthermore, the chief of the board should be separated from the president of corporation to help the board supervise the CEO with ease, that is, there is duality in the firm (Liao, 2009; Andresen and Kaleton, 2008).

Chan et al. (2004) argue that CEO duality enhances stewardship and trusteeship of the board. All in all, the corporate governance system seeks to enhance justice, increase transparency, raise accountability, decrease conflict of agency, reduce information asymmetry, better performance, increase corporate value, and finally better the status of shareholders. It is materialized by the implementation of extra (enforcement of laws and regulations) and intra (determination of the board composition, the ratio of nonexecutive directors to executive directors, separation of duties of the chief of the board from the president of corporation) organizational mechanisms, which leads to enhancement quality of financial statements.

**RESEARCH BACKGROUND**

Ahmadpour (2009) examined the effect of nonexecutive directors and family corporations, as supervisory tools of corporate governance, on earnings managements. Results indicate that discretionary accrual items do not justify profitability change. Also, when there is high motivation for earnings manipulation, nonexecutive directors and family corporations play a minor role in decreasing abnormality of discretionary accrual items.

Ramsey et al. (2005) examined the relationship between earnings quality and some aspects of corporate governance, which mainly include ownership share, independence of directors and the number of members on the board. The results indicate that there is a linear relationship between the total percentage of the shares held by members of the board and earnings quality. Also, their research finds that there is a positive relationship between nonexecutive directors and earnings quality, and that there is no relationship between the board size and earnings quality when total accrual is taken into account. Niu (2006) examines the effect of some mechanisms of corporate governance on earnings quality in an article under the title of “Corporate Governance and the Quality of Accounting Earnings: Some Canadian Evidence”. Results indicate that there is a positive relationship between corporate governance and stock market return based on the earning-return model, and a negative relationship between corporate governance and discretionary accrual items based on the modified Jones model.

Hesiang et al. (2010) studied the effect of board supervision on enhancement of transparency. They find that offering rewards to independent managers results in improvement of firms' performance, and that training plays a decisive role in improvement of information transparency.

Milica et al. (2010) examined corporate governance model with regard to the European (especially German) model of corporate governance in Serbia. Their study is based on a questionnaire sent to three groups. They examined the monitoring role and transparency and analyze the capital structure and board role. They finds that majority stockholders always play the major role in appointment of managers and board of directors in Serbia, and that minority stockholders fail to play any role. Firms do not show enough transparency before privatization; furthermore, following the privatization, transparency has improved and politicians' role has paled into insignificance.

Nicolae et al. (2010) made a comparison between internationally recognized models of corporate governance from a legal point of view through a case study. A comparison is drawn between the U.S., British and Canadian models as well as the Romanian model (as a developing country). They focused on agency theory and the conflict of interest between directors and shareholders. They confirmed the montary role of the board of directors, finding that there is greater sensitivity to the corporate governance data in the United States whose capital market is more significant; also, the monitoring process enjoy more transparency.

White et al. (2003) and Penman and Zhang (2002) argued that earnings quality is relevant to the level of conservatism reported in earnings. Chan et al. (2004) argued that dividend quality is relevant to return of stock in the future, believing that there is a significant relationship between accrual items and return of stock. Lugee (2004) argues that earnings quality is relevant to family ownership.

Sagafi et al. (2005) studied the earnings quality in Iranian firms and conclude that there is a significant relationship between earnings quality and the market response to cash income changes. Panagiotis and Dimitrios (2010) examined the effect of board composition on improvements of earnings quality reported in Greece. They found that there is a significant relationship between the percentage of non-executive directors on the board and improvement of earnings quality; there exists no relationship between the percentage of non-executive directors on the board and the firm size though. Moreover, when bad news begins to circulate in these companies, there is conservatism in income reporting. The discretionary accrual item model was used in the study.
Beasley (1996), Dechow and Skinner (2000), and Penniman (2002) found that fraud is less probable in firms where the percentage of non-executive directors on the board is higher.

Various researches have been carried out in Iran which given the current economical, cultural, and legal conditions, implying that Iran's economical, legal, and cultural components are effective on the Iranian accountants and companies behaviors. All these literatures emphasize that the earnings quality could be due to country's economical and legal conditions, and factors based on corporate governance system could influence the earnings quality. Considering the obtained result, the current paper investigates the effective components of corporate governance on the earnings quality of the Iranian companies.

The research's results could be a complement to the results and suggestions presented by previous researches. Unlike mentioned researches, the Jones adjusted model is not used for examining the earnings quality, but the effect of information related to the earning and its quality on investors' behavior in Tehran Stock Exchange is considered (Mashayekh and Esmaeili, 2005; Yazdanian, 2005; Hasanifard and Baharmoghadam, 2010; Hasasyeganeh, 2008; Meydari, 2006; Rezazadeh et al., 2003).

The hypotheses of the research with regard to the results of the mentioned studies and theoretical bases are as follows:

1. There is a significant relationship between the proportion of non-executive directors on the board and earnings quality.
2. There is a significant relationship between the proportion of executive directors on the board and earnings quality.
3. There is a significant relationship between duality - chairman and earnings quality.

METHODOLOGY
Definition and measurement of variables

Executive board

According to Iran's business law, commercial firms are managed by board of directors based on the statute. Some members of the board work full-time in the company as executive directors. They are more aware of the events occurring in the company, and they are major beneficiary of the outcome of those events; therefore, there can be a conflict of interest between them and other shareholders.

The corporate governance law has not made any statement over it and just points out that an executive member of the board is required to specialize in financial, economics or management fields. If the number of executive directors on the board is divided by the total number of directors on the board the result is the percentage of executive members on the board. These data have been obtained from the annual reports of the firms to the TSE.

Non executive board

According to Iran's business law, Iranian firms are permitted to hire several members of the board from outside the company. They might be the managers of other companies; however, according to the laws pertaining to state organizations, they must not be in charge of government sectors. They enjoy higher independence due to the fact that they do not work full-time in the company. Some of them might lack technical or specialized experiences, and in some cases they hold political positions. Iran's corporate governance law has not made any statement over it. If the number of non-executive directors on the board is divided by the total number of directors on the board the result is the percentage of non-executive members on the board. These data have been obtained from the annual reports of the firms to the TSE.

Duality - chairman

Based on Iran's business law, the board of directors can appoint the chair of the board as the CEO, with over 2/3 of stockholders voting for him, to hold both positions at the same time. The chairman is presumed to fail to efficiently fulfill his monitoring and governing roles in such a case due to lack of independence. Iran's corporate governance law has not made any statement over it. If a chairman serves as the board, the company receives 1; otherwise, it receives 0. Annual financial statements of firms published on the TSE website have been used to obtain the data pertaining to duality - chairman.

Earnings quality

Regression method is applied to measure the relationship between different values of earnings and stock prices and return in order to calculate earnings quality. The higher is the adjusted correlation coefficient, the more relevant are earnings to the share prices. Therefore, earnings quality is calculated as the dependant variable of the research through the return-earning model in which "earnings quality" is defined as "capability of predicting a company's stock return through earnings". If earnings predict the stock return more precisely, the calculated earnings enjoy higher quality.

Control variables

The firm size is calculated through revenue logarithm. The firm's financial leverage is calculated through dividing total liability by total assets. Business ownership type (as to whether they are state or private) is other control variable.

Data collection method

The companies' financial statements have been used for data collection related to each variable. These financial statements include balance sheets, income statement, and notes of financial statement, as well as board's annual performance report to the stockholders. Such reports are available online on Tehran stock exchange's website at www.sid.ir. The data averages during 2005 to 2010 were used as inputs for the model.

Research technique employed

In order to examine the research's hypotheses, the linear regression statistical method was applied and the error acceptance level of 5% was considered. In order to examine the data normality
Regarding the theoretical bases and prior research, the relationship between variables is predicted as follows:

\[ R_{it} = a_0 + a_1 \frac{E_{it}}{P_{it-1}} + a_2 \frac{E_{it}}{P_{it-1}} \times \text{%exe Board} + a_3 \frac{E_{it}}{P_{it-1}} \times \text{%nonexe Board} + a_4 \frac{E_{it}}{P_{it-1}} \times \text{duality} + a_5 \frac{E_{it}}{P_{it-1}} \times \text{Chairman} + a_6 \frac{E_{it}}{P_{it-1}} \times (\text{owner} - \text{type}) + a_7 \frac{E_{it}}{P_{it-1}} \times \text{Leverage} + \epsilon \]

\[ R_{it}; \] (Dependant variable): The stock return rate of the company \( i \) in the year \( t \), composed of stock price change and cash dividend. 
\( E_{it} \): Earnings per share of the company \( i \) in the year \( t \). 
\( P_{it-1} \): The stock prices of the company \( i \) in the beginning of the year \( t \).

Statistical population and time period

The statistical population includes all the firms listed in the Tehran stock exchange in a period from 2005 to 2010. The conditions that the population should fulfill are as follows:

(i) Their fiscal year should lead up to March 19.
(ii) They should not have reported any loss in the years mentioned earlier.
(iii) They should not be categorized as banks or financial institutions (investment companies, intermediary companies, holding companies or leasing companies).

Of all the firms quoted in the TSE, just 408 firms satisfy the conditions. A total of 165 firms are selected as the research sample. Calculation is as follows:

\[ 408 - 90 - 35 - 118 = 165 \]

Research model

Regarding the theoretical bases and prior research, the relationship between variables is shown in the results using the sign value. Each variable with its sign value less than 5% is acceptable. The correlation intensity and the effect of each variable are determined using the value of \( R^2 \). The sign of \( R^2 \) indicates the relation direction between variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Variable-name</th>
<th>Average</th>
<th>mean</th>
<th>variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent</td>
<td>return</td>
<td>0.127</td>
<td>0.214</td>
<td>0.043</td>
</tr>
<tr>
<td></td>
<td>Non exe director</td>
<td>0.58</td>
<td>0.62</td>
<td>0.004</td>
</tr>
<tr>
<td>Independent</td>
<td>CEO-duality</td>
<td>0.729</td>
<td>0.26</td>
<td>0.012</td>
</tr>
<tr>
<td></td>
<td>Exe director</td>
<td>0.42</td>
<td>0.49</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Size</td>
<td>5.87</td>
<td>4.28</td>
<td>0.392</td>
</tr>
<tr>
<td>Control</td>
<td>Leverage</td>
<td>0.641</td>
<td>0.613</td>
<td>0.048</td>
</tr>
<tr>
<td></td>
<td>Government corporation</td>
<td>0.57</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 1. Descriptive analysis.

Table 2 represents statistical results of all hypotheses. The first hypothesis discusses the effect of the proportion of nonexecutive directors on the reported earnings quality. It is confirmed due to the fact that sign is lower than 5% \( \alpha \). The intensity of the relationship measures 53%, which indicates that 53% of changes to earnings quality have been materialized by nonexecutive members. The relationship between the percentage of executive directors on the board and earnings quality is confirmed, regarding the fact that sign = 0.035 is lower than \( \alpha \). The third hypothesis discusses duality-chairman and the effect of these issues on the reported earnings quality. It is confirmed, regarding the fact that sign =0.038 is lower.
than $\alpha (\alpha = 5\%)$. The intensity of the relationship is 45% which is relatively high. The effect of other variables such as the firm size, financial leverage and the type of ownership on earnings quality is examined, in addition to studying the effect of independent variables on earnings quality. The relationship between firm size and the reported earnings quality is positive and confirmed. The relationship between financial leverage and the reported earnings quality is negative and reverse. The intensity of the relationship of ownership type with earnings quality in privately-owned companies proves significant and positive, which is indicative of earnings quality improvement.

### Conclusion

It is expected that, based on the earning-return model, there is a more significant relationship between prices and return in the firms that enjoy higher earnings quality from the investors’ point of view. On the contrary, lack of a significant relationship between a company’s share prices and return is translated into poor quality of the reported earnings. Improvement of the reported earnings quality in firms might come under the influence of ongoing corporate governance. Board of directors, which is the main pillar in the system, plays a pivotal role as the monitory component of corporate governance. The board, entitled to supervise CEO performance, can prevent identify of artificial revenue. If the board enjoys more independency, it plays the role mentioned above more efficiently. The relationship between the board and the improvement of earnings reporting is confirmed in all hypotheses. However, the role and effect of board independence are confirmed more strongly. A review over firms and Iran’s business law reveals that board independence from the CEO is observed in most Iranian firms, and in Iranian firms most of the directors on the board are nonexecutive. The proportion is higher in state-owned companies, which results in improvement of board independency. However, despite the fact that Iran’s corporate governance law has put emphasis on employing at least one financial member on the board, half of the firms fail to abide by it.

Firm size, financial leverage, and ownership type, among other factors, improve the reported earnings quality. Results indicate that firm size leads to the improvement of the earnings reporting directly, which might stem from the increase in monitoring of corporate performance and the fact that the Iranian Association of Certified Public Accountants (IACPA) bears the burden of auditing larger firms. Moreover, the majority of Iranian firms apply for bank loan to finance their projects, so they have high financial leverage. The research results have confirmed the negative relationship between leverage and improvement of reported earnings quality. It means that firms might have manipulated net income figures, with loan and interest expense increasing, due to tax benefit of interest expense in Iran. Furthermore, privately-owned companies enjoy higher earnings quality due to more external monitoring and sensitivity of stockholders; although board independence in such firms, where a larger number of the board members serve as employees or executive directors, is lower compared with state-owned companies.

### RECOMMENDATIONS

According to the obtained results, the followings are suggested:

1. When the board of directors is more independent from CEO, there would be a fewer chances for manipulation of earnings and low earnings quality. Therefore, this issue should be considered in Iran’s corporate governance regulations.
2. When there is more CEO-chairman duality, then there could be a better supervision by the board on CEO and managers’ functions. Therefore, it is suggested that this case should be considered in Iran’s trade law, which is currently being modified.
3. Companies with private ownership have higher

### Table 2. Regression results of hypothesis.

<table>
<thead>
<tr>
<th>Model</th>
<th>Dependent variable  = rate of return $R = a_0 + a_1 \frac{E_{P, t-1}}{P_{t-1}} + a_2 \frac{E_{B, t-1}}{P_{t-1}} \times % Board + a_3 E_{P, t-1} \times Board indep + a_4 \frac{E_{P, t-1}}{P_{t-1}} \times share + a_5 owner + a_6 \text{Size}<em>{t-1} + a_7 \text{Lev}</em>{t-1} + a_8 \text{Growth}<em>{t-1} + a_9 \text{Rank}</em>{t-1} + i</th>
<th>$R^2$ adjusted</th>
<th>T statistic</th>
<th>sign</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variable</td>
<td>Non exe director</td>
<td>0.531</td>
<td>2.356</td>
<td>0.025</td>
<td>Conform</td>
</tr>
<tr>
<td></td>
<td>exe director</td>
<td>0.484</td>
<td>2.296</td>
<td>0.035</td>
<td>Confirm</td>
</tr>
<tr>
<td></td>
<td>duality</td>
<td>0.449</td>
<td>2.298</td>
<td>0.038</td>
<td>Confirm</td>
</tr>
<tr>
<td>Control variable</td>
<td>size</td>
<td>0.426</td>
<td>2.096</td>
<td>0.033</td>
<td>Confirm</td>
</tr>
<tr>
<td></td>
<td>leverage</td>
<td>-0.392</td>
<td>-2.202</td>
<td>0.042</td>
<td>Confirm</td>
</tr>
<tr>
<td></td>
<td>Owner-privative</td>
<td>0.612</td>
<td>2.117</td>
<td>0.049</td>
<td>Confirm</td>
</tr>
</tbody>
</table>
earnings quality. Therefore, it is suggested that government should accelerate privatization process and merely maintain a supervisory role.

4. Companies with higher liabilities are exposed to more risk of earnings manipulation and low earnings quality, therefore it is suggested that there should be more supervision from auditors and boards, especially from non-executive directors.

REFERENCE


