The effect of management ability on earning quality: Case study of Tehran Stock Exchange

Mohammad Amin Ojaghi
Department of Accounting, Payame Noor University, I.R of Iran

*Farshad Rezaee Nejad
PhD Student of Accounting, Islamic Azad University Abdanan, Ilam, Iran
*Farshad.rezaeinejad@gmail.com

Moslem Talebvand
Department of Accounting, Andimeshk Branch, Islamic Azad University, Andimeshk, Iran

Ebrahim Mosavi
Department of Accounting, Ahwaz Branch, Ialamic Azad University, Ahwaz, Iran

Abstract

In this study the relationship between management ability and earning quality was examined. A number of 201 companies accepted into Tehran Stock Exchange between a period of time between 2004 and 2009 are selected in order to probe into this relationship. The criteria of earning restatement, earning persistence, and accruals quality were employed to measure earning quality. The results of the study show that management ability has an influence on earning quality using any of the measuring criteria for earning quality, so that more capable managers report earnings with a higher quality.

Keywords: management, earning quality, Stock Exchange.
Introduction

Management is the process of effectively employing human resources and materials to reach organizational goals. Realization of this process is possible through performing the basic tasks of the managers that is programming, organizing, leading and controlling and also taking into account the prevailing value system of the organization. Capable managers are able to use the available resources better in the realization process of the organizational goals. In other words, a capable manager is someone who can give the organization the most benefits using the least resources (Hendriksen & Van Breda, 1992). Thus adopting the right financial and operational policies, managers always try to maximize the efficiency and profitability of the company and win the stockholders satisfaction with the amount of company's profitability.

If the strategies adopted by the manager are not able to fulfill the expectation of stockholders from the profitability of the company, then it will create an incentive for the manager to make an attempt to extend the company's profits to the level expected by stockholders through earning management. The managers' freedom of action in using the principle of revenue realization and the matching principle, and using estimate and predict are among the factors using which a manager is able to manage earnings. Therefore, in this case the earning reported by the manager might be influenced. The compliance rate of the reported earning with the economic reality is called the earning quality by Krishnan & Parsons (2008).

Many of the factors related to the earning quality such as the size of the company, the type of industry, or the operation cycle of the company cannot be easily altered to change the earning quality, but in contrast it is possible to try to improve the management quality and as a result the managers' ability as a tool to improve the earning quality. Usually two types of information are used to assess the management ability (Parsaeian & Jahankhani, 1992):

The first type is the information related to the individual characteristics and features of managers such as education, experience, previous achievements, perseverance and interest.

The second type is the information which evaluates the how of managing practices of the managers during the course of time. This includes information like existence of the strategic planning in the organization activities, the ability to maintain the competitive position of the company (the sale growth trend of the company), the ability to develop the company and improve its competitive position, the ability to maintain profit margin, the ability to improve the operation efficiency, the ability to provide finance for the projects, the ability of interacting with employees and labor unions, and the ability of exerting new methods.

The policies adopted by the manager will lead to the maximum earnings for the company if the management ability is high at leading the company. In such a case there is no need to use earning management to extend the profitability of the company to the expected level. Demerjian et al. (2010) found that in general, the earning quality has a positive relationship with the management ability. They also found that in particular, the more capable managers have less presentation renewals, higher earning persistence, fewer mistakes in calculating uncollectible accounts expense, and make higher quality estimates of accruals.

Therefore through the evaluation of the management ability, it is possible to be informed of the earning quality of the company. Taking into account the arguments presented here and the necessity of conducting a study in this field, in this study we will examine if the ability of the
managers is effective on the earning quality of the companies listed in Tehran Stock Exchange?

**Theoretical foundations**

Potential and actual investors are looking to increase the profit and return on their investment. So they tend to predict the company earnings and its future cash flow, and for this purpose, they use the financial information of the company. The information of great importance is net income and earnings per share. Only when the information is of informative content and good quality, earnings will help to the predictions of these beneficiary groups. The managers' freedom of action in using the principle of revenue realization and the matching principle, and using estimate and predict are among the factors influencing the earning quality. On the one hand, due to the greater awareness of the managers from the company, it is expected that information are collected and presented in a way that best reflects the status of company. On the other hand, because of retention in the company, getting rewards, and other factors, the managers may willingly or unwillingly portray the company's status favorable. Thus the earning quality of the companies is influenced by fundamentals of financial reporting and the discretion of their managers (Olson & Ghosh, 2009). The criteria for measuring the earning quality in this study are as follows: 1) earning restatement, 2) earning persistence, 3) and the quality of the earnings accruals.

**Earning restatement**

Earning restatement in the companies can occur for various reasons like mistakes in estimating accruals. Earning restatement in each year will result in the reduction of the offered earning quality and the loss of the invertors' and shareholders' trust to the desired profit (Demerjian et al., 2010). The first hypothesis of the research can be stated as follows:

**H1**: There is a significant negative relationship between the management ability and the earning restatement.

In order to define a variable for earning restatement (as a criteria for earning quality), in case of an earning restatement for a company in each year the number 1 will be assigned for it and in other cases the number zero. If there is any earning restatement, the earning quality will be low.

**Earning persistence**

Persistence means the repetition of the earnings in the coming periods and the predictability of the earnings in the next year. The higher amount of this persistence indicates a higher earning quality (McNichals, 2002). High earning persistence for a company represents its positive management performance. Thus the second research hypothesis can be stated as follows:

**H2**: Between management ability and earning persistence, there is a significant positive relationship.

Equation (1) is used to measure earning persistence. The more the correlation between this year's earning and the next year's earning, the more persistent this year's earning will be. The
measuring criterion for correlation is the coefficient of the independent variable in the Equation (1).

Equation (1)

\[ Earnings_{i, t+1} = a_0 + a_1 \cdot Earnings_{i, t} + e_i \]

Earning accruals quality

The third criterion used in this study to measure the earning quality is the earning accruals quality. Higher values are representative of a higher earning quality. According to this method, accruals are of quality when they are converted to cash, that is when they are predictor of the future operating cash flow (Dechicó & Dachio, 2002). Thus the third research hypothesis can be stated as follows:

**H3:** There is a significant positive relationship between the management ability and the earning accruals quality.

In order to determine the accruals quality, the model by Francis et al. (2005) was used. This model is shown in Equation (2):

Equation (2)

\[ TCA_{i,t} = c_{0,t} + c_{1,t} \cdot CFO_{i,t-1} + c_{2,t} \cdot CFO_{i,t} + c_{3,t} \cdot CFO_{i,t+1} + c_{4,t} \cdot \Delta REV_{i,t} + c_{5,t} \cdot PPE_{i,t} + e_{i,t} \]

\( TCA_{i,t} \) is total amount of current accruals, \( CFO_{i,t} \) is the cash flows, \( CFO_{i,t+1} \) is the cash flow, \( \Delta REV_{i,t} \) is changes in sale, and \( PPE_{i,t} \) is gross properties, machinery, and equipment.

Research variables and descriptive statistics

The research population was the companies listed under Tehran Stock Exchange. The following conditions are observed to select samples for testing the hypotheses of the study:

1) The firms should not be bank, investment, or insurance.
2) The sample companies should be continuously a member of the stock exchange for this period of six years.
3) The sample companies should have a financial year ending in 19th March (end of year in Iran).
4) The data for the variables of the research are available for the target companies.
5) The sample companies are audited and their audit report has not failed.

Applying the above conditions, a number of 201 firms listed in Tehran Stock Exchange during the period of 2004-2009 were chosen.

In order to test the research hypotheses, Equation (3) was used:

Equation (3)

\[ EQ_t = \alpha_0 + \alpha_1 \cdot Mangibility_t + \alpha_2 \cdot Fsize_t + \alpha_3 \cdot CFO_t + \alpha_4 \cdot ROA_t + \alpha_5 \cdot \Delta Sales_t + \varepsilon_t \]

In this formula, \( EQ_t \) is the dependent variable which is used to examine the first hypothesis, earning restatement; the second hypothesis, earning persistence; and the third one, earning accruals quality. \( Fsize_t \) is the natural logarithm of the total assets of the company at the end of the financial year, \( CFO_t \) is the company's operational cash flow, \( ROA_t \) is the return on the assets of the company (ratio of net income to the total assets) and \( \Delta Sales_t \) is the sale growth of the company. The independent variable of the research is \( Mangibility_t \), management ability .
Demerjian et al. (2006, 2010) in their studies provided a criterion for measuring management ability. They stated that the resources of the company which are available to the management consist of cost of sold goods, selling and administration expenses, research and development expenses, net fixed assets, net operating leases, and intangible assets. These resources also include assets (fixed and intangible) and other inputs which are not directly reported in financial statements (such as wage expenses, and consulting services). Output is the result of using these sources of sale revenue. The total efficiency of the company resources \((Total\ Efficiency)\) is calculated using Equation (4)

\[
Total\ Efficiency = \frac{Sales}{COSG + SAE + RD + PFE + OpLeas + IntA}
\]

In this Equation, \(COSG\), \(SAE\), \(RD\), \(PFE\), \(OpLeas\), and \(IntA\), respectively represent cost of sold goods, selling and administration expenses, research and development expenses, net fixed assets, net operating leases, and intangible assets.

Demerjian et al. (2010) maintain that the total efficiency of the company calculated using Equation (4) is a representative of the efficiency of the resources available to the management as well as individual abilities of the management, for a manager with higher management capabilities, regardless of the size of the company, is more influential on predicting the mechanisms and processes of the company, and the discussions and the debates with major customers and suppliers of materials and products. In addition to the management ability, the total efficiency of the company measured using Equation (5), also depends on factors such as firm size, market share, free cash flow, number of branches or subsidiaries (complexity of operations), and exchange index (as a result of foreign relations). This regression analysis is shown in Equation (5).

\[
Total\ Efficiency = \beta_0 + \beta_1\ln_TA + \beta_2MSh + \beta_3FCF + \beta_4\ln_Seg + \beta_5FCurrency + \epsilon
\]

In this model, the dependent variable is the efficiency of the company and \(T\)Assets, \(MSh\), \(FCF\), \(Seg\), and \(FCurrency\) respectively represent firm size, market share, free cash flow, number of branches or subsidiaries, and exchange index. After conducting regression analysis model (5), the manager's ability or the performance exclusive to the manager is determined through the amount of residue (\(\epsilon\)) in each year.

Summary of descriptive statistics related to the variables measured using the data from sample companies is presented in Table (1).

Table 1: Results of descriptive statistics for research variables during the period of 2004-2009

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Standard deviation</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>MangAblty</td>
<td>0.36</td>
<td>0.39</td>
<td>0.21</td>
<td>0.69</td>
<td>0.06</td>
</tr>
<tr>
<td>ERestatement</td>
<td>0.32</td>
<td>0.41</td>
<td>0.16</td>
<td>0.64</td>
<td>0.05</td>
</tr>
<tr>
<td>EPersistence</td>
<td>0.446</td>
<td>0.381</td>
<td>0.328</td>
<td>0.892</td>
<td>0.091</td>
</tr>
<tr>
<td>AccQuality</td>
<td>0.522</td>
<td>0.519</td>
<td>0.292</td>
<td>0.789</td>
<td>0.089</td>
</tr>
<tr>
<td>FSize</td>
<td>5.56</td>
<td>5.69</td>
<td>0.31</td>
<td>6.96</td>
<td>4.42</td>
</tr>
<tr>
<td>CFO</td>
<td>437</td>
<td>391</td>
<td>168</td>
<td>848</td>
<td>-126</td>
</tr>
</tbody>
</table>

http://www.ijhcs.com/index.php/ijhcs/index
Experimental results

The results from testing the first hypothesis are shown in Panel A, table (2). As stated earlier, the dependent variable for testing this hypothesis is the earning restatement. The value of probability $F$-statistics (0.014) indicates that at the significance level of 0.05, the model is significant. Adjusted $R^2$ presented in the table also indicates that approximately 54% of the dependent variable is explained by the independent variables and the control variables. Finally according to $t$-test statistics of the independent variable, which is 0.006, at the level of 0.01 there is a significant relationship between management ability and earning restatement. The coefficient calculated for the independent variable is -0.26 which shows that there is significant negative relationship between the management ability and the earning restatement, and thus the first research hypothesis is confirmed.

In Panel B, table (2), the results of the second hypothesis test are shown. The earning persistence is the dependent variable for testing this hypothesis. According to $F$ statistics (0.000), at the significance level 0.01, the whole model is significant. Adjusted $R^2$ provided in the table also suggests that approximately 42% of the dependent variable is explained by the independent variables and the control variables. Finally according to $t$-test statistics of the independent variable, which is 0.000, at the level of 0.01, there is significant relationship between the management ability and the earning persistence. The coefficient calculated for the independent variable is 0.34 which shows that there is significant positive relationship between the management ability and the earning restatement. Therefore, the second research hypothesis is accepted.

Panel C, table (2), presents the results of testing the third hypothesis. The dependent variable for testing this hypothesis is the earning accruals quality. According to $F$ statistics (0.000), at the significance level 0.01, the whole model is significant. Adjusted $R^2$ provided in the table also shows that approximately 44% of the dependent variable is explained by the independent variables and the control variables. Finally according to $t$-test statistics of the independent variable, which is 0.043, at the level of 0.05, there is a significant relationship between the management ability and the earning accruals quality. The estimated coefficient for the independent variable is 0.48 which indicates that there is a significant positive relationship between the management ability and the earning accruals quality. Therefore, the third research hypothesis is confirmed.

<table>
<thead>
<tr>
<th>Panel A</th>
<th>description</th>
<th>MangAbly</th>
<th>FSize</th>
<th>CFO</th>
<th>ROA</th>
<th>ΔSales</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-test</td>
<td>(p-value)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>coefficient</td>
<td></td>
<td>-0.26</td>
<td>0.37</td>
<td>0.71</td>
<td>-0.43</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11.21</td>
<td>6.87</td>
<td>9.36</td>
<td>7.53</td>
<td>6.99</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.022)</td>
<td>(0.0000)</td>
<td>(0.021)</td>
<td>(0.063)</td>
<td></td>
</tr>
</tbody>
</table>

Table2: Results from testing the research hypotheses
Conclusion

The managers always try to bring the best performance to their companies, adopting appropriate strategies. Choosing the appropriate strategy largely depends on the personal ability of the manager in analyzing the available space and selecting the best methods for leading the company. If the strategy adopted by the manager is not able to fulfill the stockholders' expectations from company's profitability, the manager will be induced to use the earning management to extend the company's profitability to the level expected by the stockholders. Therefore the manager's capabilities can have an impact on the earning quality of the company. The results of this study confirm the positive effect of the manager ability on the earning quality.
References


