A Survey of the Relation between Activity Ratios and Information Disclosure in Financial Statements of TSE

Samad Bahrami*, Dr. Ramazan Ahmadi**
* Department of Accounting, Persian Gulf International Branch, Islamic Azad University, Khorramshahr, Iran
** Assistant Professor, Department of Accounting in Shahid Chamran University of Ahvaz, Iran

Abstract

The principle function of financial reporting is Effective Transformation of Information to outsiders in a valid and timeliness way, this should be done through transparency reporting and high quality financial information disclosure. Reviewing recent studies show that the transparency and quality of financial information disclosure in business entities has significant effects on investor’s strategies. The relationship, in this research, between disclosure level of financial statements in accepted TSE companies with common activity ratios (Assets Utilization Measurements) will be surveyed.

At the first phase, in order to determine the disclosure level of financial statements as a dependent variable in this research, a checklist of disclosure quality has been arranged based on Iran’s accounting standards and for every selected company a disclosure index allocated. For second phase, common activity ratios (Assets Utilization Measurements) including Sales to Working Capital Ratio, Sales to Fixed Assets Ratio, Sales to Total Assets Ratio and Sales to Equity Ratio has been assessed. Then in this research, to survey the relationship between disclosure levels of financial statements in accepted TSE companies with common Assets Utilization Measurements, the cross-sectional regression method based on panel data from 1382 to 1387 has been used. The sample of this research consists of 65 accepted TSE companies for 5-years period.

Findings show that there is a significant relationship between disclosure level of financial statements in accepted TSE companies with common activity ratios.

Keywords: Activity Ratios, Information Disclosure, TSE, financial reporting.
Introduction:

Accounting is an information system that as a subset of the management information systems undertakes the financial data processing task. Financial reports users are considered as one of the main sources of financial information in making decision in economic units. Therefore, financial reporting based on financial standards board must provide useful information for actual and potential investors and credit providers in investment decision-making and granting credit decisions and other similar decisions.

The main role of financial reporting is effectively transfer of information for people out of organization in timely and reliable manner. It is realized in light of reporting transparency and high quality exposure of financial information.

In this study, the relationship between activity ratio and the level of information disclosure in the financial statements of companies listed on the Tehran Stock Exchange is investigated.

Review of literature

External studies

Peyton et al (2004) investigated the effect of ownership structure on disclosure practices at the level of companies listed on the Prague stock exchange. This study approves the relationship between the disclosure level and ownership structure type.

Using disclosure in transparency provided by Standard & Poor's Institute at the level of US companies, Ali (2005) found that companies that have ownership relations with each other have less tendency to transparency and disclosure of financial reporting.

Internal studies

After investigating 111 Iranian companies, Mashayekhi and Mohammadabadi (2012) found that conservatism has a direct impact on the quality of disclosure and reporting financial information.

Khodamipoor and Mahroumi (2012) examined the impact of voluntary disclosure on earnings per share. Based on their findings, voluntary disclosure had not a significant effect on the earnings per share.

Hasas Yeganeh and Ahmadi (2013) investigated the relationship between corporate governance mechanisms and conservatism on 179 companies listed on Tehran Stock Exchange. The findings of their study showed that the presence of the director on the board of directors, the shareholder of company, the value of company's float share in the stock exchange and government ownership and influence over the company had significant negative relationship with conservatism.

Research Hypotheses

The main hypothesis: there is a significant relationship between ratios of activity and adequate disclosure in the financial statements.

Secondary Hypotheses:

1. There is a significant relationship between ratio of sales to working capital and adequate disclosure in the financial statements.

2. There is a significant relationship between ratios of sales to fixed assets and adequate disclosure in the financial statements.

3. There is a significant relationship between ratios of sales to total assets and adequate disclosure in the financial statements.
4. There is a significant relationship between ratios of sales to equity and adequate disclosure in the financial statements.

Methodology

This study is an experimental research in the field of positive accounting research that is based on actual information of financial statements of companies listed on the Tehran Stock Exchange. This study is an applied research in terms of objective and it is descriptive-correlational type of study. The relationship between independent variables and the dependent variable was analyzed using a regression model in this study.

Research model
Since the subject of the research is to determine the significance of the relationship between activity ratios with adequate disclosure in the financial statements, adequate disclosure (Indexₙ) has been represented as function of the ratio of sales to working capital, ratio of sales to fixed assets, the ratio of sales to total assets, and ratio of sales to equity. Therefore, model of study will be as follows:

\[ \text{Index} = B_0 + B_1 \text{SWC}_j + B_2 \text{SFA}_j + B_3 \text{STA}_j + B_4 \text{SE}_j + e_j \]

So that:
\( B_0 \) is Intercept
\( \text{SWC}_j \) is ratio of sales to working capital for company \( j \)
\( \text{SFA}_j \) is ratio of sales to fixed assets for company \( j \)
\( \text{STA}_j \) is ratio of sales to total assets for company \( j \)
\( \text{SE}_j \) is ratio of sales to equity for company \( j \)
\( e_j \) is residual

Population of study

In this study, to determine the sample, special equation or model was not used to estimate sample size and sampling. However, the systematic elimination method was used in this regard. Ultimately, 65 companies listed in Tehran Stock Exchange from the beginning of 2010 until the end of 2015 were studied.

Hypotheses testing

First secondary hypothesis test

In this section, the effect of the ratio of sale to working capital on adequate disclosure variable was tested.

\[ e_j Y = \beta_0 + \beta_1 \text{SWC}_j + \]
As seen in table 4-5, considering the value of calculated ts and probability related to them, estimate coefficient of the model is significant at the 5% level and its presence in the model is necessary. This indicates relationship between ratio of sales to working capital and disclosure adequacy in financial statements of companies listed in Stock Exchange of Tehran.

Second secondary hypothesis test
According to second hypothesis of the study, there is relationship between ratio of sales to fixed assets and adequacy of disclosure in financial statements. To test this hypothesis, univariate model was used based on data of ratio of sales to fixed assets at the level of 325 companies. The summery of model analysis and results related to model test has been represented in Table 4-6.

Table 4-6

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Coefficient</th>
<th>Statistic t</th>
<th>probability p-value</th>
<th>Estimate method</th>
<th>R² Moderate</th>
<th>F significance statistic</th>
<th>Durbin-Watson</th>
<th>Bartlett statistic Significance (t)</th>
<th>Number of observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed coefficient</td>
<td>β₀</td>
<td>0/312</td>
<td>2/36</td>
<td>0/008</td>
<td>Fixed effects method</td>
<td>0/62</td>
<td>14/44 (0/000)</td>
<td>2/32</td>
<td>38/79 (0/432)</td>
<td>325</td>
</tr>
<tr>
<td>effect of the ratio of sale to working capital</td>
<td>SWC_j</td>
<td>0/125</td>
<td>6/88</td>
<td>0/000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in table 4-6, considering the value of calculated ts and probability related to them, estimate coefficient of the model (the ratio of sales to fixed assets) is significant at the 5% level
and its presence in the model is necessary. This indicates relationship between ratio of sales to fixed assets and disclosure adequacy in financial statements.

Third secondary hypothesis test

In this section, the effect of ratio of sales to total assets on disclosure adequacy variable has been tested. As mentioned before, to test this hypothesis, univariate model was used based on data of ratio of sales to total assets at the level of 325 companies. Results related to model test has been represented in Table 4-7.

### Table 4-7

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Coefficient</th>
<th>Statistic</th>
<th>probability</th>
<th>Estimate method</th>
<th>$R^2$</th>
<th>F significance statistic</th>
<th>Durbin-Watson</th>
<th>Bartlett statistic (Significant)</th>
<th>Number of observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed coefficient</td>
<td>$\beta_0$</td>
<td>0/183</td>
<td>0/463</td>
<td>0/632</td>
<td>Fixed effects method</td>
<td>0/58</td>
<td>8/83 (0/000)</td>
<td>2/21</td>
<td>35/76 (0/052)</td>
<td>325</td>
</tr>
<tr>
<td>effect of the ratio of sale to total assets</td>
<td>STA$_j$</td>
<td>0/362</td>
<td>3/843</td>
<td>0/000</td>
<td>Fixed effects method</td>
<td>0/41</td>
<td>5/66 (0/000)</td>
<td>2/34</td>
<td>22/43 (0/051)</td>
<td></td>
</tr>
</tbody>
</table>

As seen in results of table above, considering the value of calculated $t$ and probability related to it, estimate coefficient of the model (the ratio of sales to total assets) is significant at the 5% level and its presence in the model is necessary. This indicates relationship between ratio of sales to total assets and disclosure adequacy in financial statements.

Fourth secondary hypothesis

In this section, the effect of ratio of sales to equity on disclosure adequacy variable has been tested.

### Table 4-8

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Coefficient</th>
<th>Statistic</th>
<th>probability</th>
<th>Estimate method</th>
<th>$R^2$</th>
<th>F significance statistic</th>
<th>Durbin-Watson</th>
<th>Bartlett statistic (Significant)</th>
<th>Number of observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed coefficient</td>
<td>$\beta_0$</td>
<td>0/133</td>
<td>1/389</td>
<td>0/108</td>
<td>Fixed effects method</td>
<td>0/41</td>
<td>5/66 (0/000)</td>
<td>2/34</td>
<td>22/43 (0/051)</td>
<td>325</td>
</tr>
</tbody>
</table>
As seen in results of table above, considering the value of calculated $t$ and probability related to it, estimate coefficient of the model (the ratio of sales to equity) is significant at the 5% level.

Main hypothesis test
Main hypothesis of study states that there is significant relationship between ratios of activities and adequate disclosure in financial statements. In other words, according to main hypothesis of the study, information available in related activity ratios is taken into consideration during explaining the disclosure adequacy at the financial levels. At this stage, four variables went under regression analysis using the fixed effects of panel data on dependent variable. Results related to model test based on activity ratios have been shown in Table 4-9.

Table 4-9

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Coefficient</th>
<th>Statistic $t$</th>
<th>Probability p-value</th>
<th>Estimate method</th>
<th>$R^2$</th>
<th>F significance statistic</th>
<th>Durbin-Watson</th>
<th>Bartlett statistic (Significant)</th>
<th>Number of observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed coefficient</td>
<td>$\beta_0$</td>
<td>0/118</td>
<td>4/088</td>
<td>0/157</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effect of the ratio of sale to working capital</td>
<td>$SWC_j$</td>
<td>0/254</td>
<td>5/492</td>
<td>0/000</td>
<td>Fixed effects method</td>
<td>0/73</td>
<td>17/41 (0/000)</td>
<td>2/28</td>
<td>32/23 (0/011)</td>
<td>325</td>
</tr>
<tr>
<td>effect of the ratio of sale to fixed assets</td>
<td>$SFA_j$</td>
<td>0/119</td>
<td>2/171</td>
<td>0/017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effect of the ratio of sale to fixed assets</td>
<td>$STA_j$</td>
<td>0/232</td>
<td>4/036</td>
<td>0/000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As seen in results of table above, considering the value of calculated ts and probability related to them, estimate coefficient of the model (the activity ratios) is significant at the 5% level and their presence in the model is necessary. This indicates relationship between ratios of activity and adequate disclosure in financial statements.

**Conclusion**

**First secondary hypothesis**

Variable coefficient used in the regression model is significant indicating a relationship between historical data of ratio of sales to working capital and adequate disclosure in financial statements of companies listed in Tehran Stock Exchange. Second, investigating the value of moderated determination coefficient of model indicates explanatory power of the model to explain the dependent variable that is adequate disclosure in the financial statements. The results of moderated coefficient index of model show that explanatory variable of ratio of sales to working capital explains almost 65% of the volatility caused by the quality of disclosure.

**Second secondary hypothesis**

This hypothesis was tested according to estimates obtained based on a multivariate regression model. Estimates obtained and tests carried out showed that the ratio of sales to fixed assets explain almost 53% of the volatility caused by the quality of disclosure.

**Third secondary hypothesis**

This hypothesis was tested according to estimates obtained based on a multivariate regression model. Estimates obtained and tests carried out showed that the variable coefficient used in the regression model is significant indicating a relationship between historical data of ratio of sales to total assets and adequate disclosure in financial statements of companies listed in Tehran Stock Exchange.

**Fourth secondary hypothesis**

Estimates obtained from tests conducted in the fourth section showed that the variable coefficient used in the regression model is significant indicating a relationship between historical data of ratio of sales to equity and adequate disclosure in financial statements of companies listed in Tehran Stock Exchange. Therefore, results obtained from moderated determination coefficient index of the model indicate that explanatory variable of ratio of sales to equity explains almost 43% of the volatility caused by the quality of disclosure.
Main hypothesis of study
Marks of coefficients of independent variables in the model indicate the effect of each variable stated in the general model of study on adequate disclosure so that positive coefficient indicates an increase (decrease) in adequate disclosure as result of increase (decrease) of the relevant variable and negative coefficient indicates a decrease (increase) in adequate disclosure as result of the decrease (increase) is the relevant variable. In addition, results of moderated coefficient of determination index of model showed that explanatory variables of activity ratios explain approximately 75% of the volatility caused by the quality of disclosure. Thus, results of the conducted tests were confirmed by main hypothesis of study.
References