Relationship Between Methods of Financing and Earnings Management

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ABSTRACT

Earnings management is one of exciting and controversial issues in accounting research due to investors account earnings as one of important factor. In current research, we tested corporate governance and performance of 268 companies listed at Tehran stock exchange during 2007 and 2011. Furthermore, we used F, T and Durbin-Watson. Dependent variable is earnings management and independent variable is methods of financing such as debt, stock and retained earnings.

INTRODUCTION

Increasingly development of economic activities and increasing complexity as well as attention to accurate accounting information and financial reporting leads to important institutional changes thought and theory in accounting and creating analyzing method and modern management accounting. One of changes is emphasizing and determining changes to income and losses statement and leads to earnings management. Earnings management define as a process of deliberate steps to maximize reported earnings in the range of generally accepted accounting principles operating profit was closer to the target profit level by manipulating accounting.

Earnings management:

Healy and Wahlen, [8], suggest that managers use judgment in financial reporting and in structuring transactions to alter financial reports in order to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers. Further, Roychowdhury, [14], argues that manager exercises REM such as sales manipulation and overproduction in order to avoid reporting losses.

REM is the deviation of ordinary business operation practices in order to make at least some stakeholders believe that financial reporting goals have been met through the normal activities of business [14]. Gunny, 2010, further explains that managers may undertake actions that may have changed the timing or structuring of an operation, investment and financial transaction. Other than that, Roychowdhury, [14], had examined the management of sales, reduction of discretionary expenses, overproduction and reduction of R&D expenses. He found that the sample firms are manipulating real activities to avoid reporting losses.

According to Kim and Sohn, [13], even though REM can have direct and indirect consequences on current and future cash flows of the business, REM activities are more difficult to be detected than AEM and are normally less subject to external monitoring and scrutiny. In fact, they are more difficult for average investors to understand that make them into believing that business has achieved the targeted normal business goals.

One of the ways to stay in operation of business is that a company may join another company by means of mergers and acquisition. Ghosh and Jain, [7], claim that leverage increases significantly following mergers due to increase in debt capacity. However, companies with high debt are at risk of bankruptcy due to failure in settling their external financing which subsequently may put them in another future risk of not being able to find other new lenders. Therefore, if this company may want to apply for a new loan, the new lenders may impose several conditions to the company as to keep their debt level within reasonable boundaries. Prior studies highlight that leverage affect EM activities. Most researchers have argued that leverage increases the potential for EM which responds to avoid debt covenant violations [2,4,15]. For example,
Sweeney, [15], provides direct evidence to support a debt hypothesis that the larger a firm’s debt to equity ratio, the more likely the firm’s manager is to select income increasing accounting procedures. Jaggi and Lee,[10] examine EM incentives among managers in financial distress firms. They argue that the use of discretionary accruals is to convince their creditors that the financial distress is temporary nature and will able to recover soon.

Although the previous literature has provided arguments to the positive association between EM and leverage, there is some empirical evidence with the opposite view. Prior studies [11,12] suggest that leverage limits EM. For example, in relation to the control hypothesis theory by Jensen, [11], Jelinek’s, [12], findings are consistent with the theory used as increased leverage is associated with a reduction of EM in low growth, high free cash flow firms. Jelinek, [12], also makes an additional contribution to the EM literature: that the leverage changes and leverage levels have different impacts on EM.

Literature review:

Almeida et al. [1] found that constrained firms display significantly positive cash-cash flow sensitivities, while unconstrained firms do not. The exact opposite results obtain for the KZ index.

Furthermore, higher accounting quality should enhance investment efficiency by reducing information asymmetry between managers and outside suppliers of capital Almeida et al. [1]. The effect of higher quality accounting on investment-cash flow sensitivity should be stronger in economies where financing is largely provided through arm’s length transactions and also predict a stronger (weaker) relation between accounting quality and capital investment efficiency in countries with predominant equity (bank) financing of firm-level capital investment [3]. Investment is more sensitive to cash flow for the group of firms that our model implies is most likely to face external finance constraints [5]. What is more; different sources of financing affect the importance of accounting quality on firms’ investment-cash flows sensitivity. Firstly, investment cash flows sensitivity is associated with both under investment when cash flows are low and overinvestment when cash flows are high. Secondly, our analysis also shows that firms with higher investment-cash flow sensitivity have characteristics that are traditionally associated with tighter financial constraints, such as smaller size, lower likelihood of paying dividends or having investment grade debt rating. Hovakemian and Hovakemian, [9] Poorer AQ is associated with larger costs of debt and equity. This result is consistent across several alternative specifications of the AQ metric. They also distinguished between accruals quality driven by economic fundamentals (innate AQ) versus management choices (discretionary AQ). Both components have significant cost of capital effects, but innate AQ effects are significantly larger than discretionary AQ effects [6]. In addition, Accruals quality, are negatively associated with both firm underinvestment and overinvestment. The relation between financial reporting quality and underinvestment is stronger for firms facing financing constraints, consistent with the argument that financial accounting information can reduce the information asymmetry between the firm and investors. Verdi realized that the relation between financial reporting quality and investment efficiency is stronger for firms with low quality information environments [16].

Methodology:

The present research was conducted on 268 companies listed in Tehran Stock Exchange which were operating in the primary market during 2007-2011. We used companies which have following condition:
1) The companies should be listed before 2007.
2) Date financial firms should lead to the end of March each year.
3) The companies should be activated during 2007 to 2011.
4) The companies should not change their financial periods.
5) The companies’ availability of information is required

Hypotheses:

H1: Significant relationship exits methods of financing throughout debt and earnings management
H2: Significant relationship exits methods of financing throughout stock and earnings management
H3: Significant relationship exits methods of financing throughout retained earnings and earnings management

We apply methods based on the modified Jones approach to separate either total accruals or current accruals into normal components (i.e., the portion associated with accounting fundamentals) and abnormal components (i.e., accruals that are not statistically associated with accounting fundamentals).

To apply the modified Jones model, first we estimate the following regression for calculating non-discretion:

\[
D\text{NA}_{it} = TA_{it} - \alpha_1 \left( \frac{1}{\Delta A_{i,t-1}} \right) + \alpha_2 \left( \frac{\Delta \text{REV}_{it}}{A_{it}} \right) + \alpha_3 \left( \frac{\Delta \text{PPE}_{it}}{A_{it}} \right) \quad (1)
\]

\[
A_{it} = \text{firm } i's \text{ total assets at the beginning of year } t,
\]

\[
\Delta \text{REV}_{it} = \text{firm } i's \text{ change in revenues},
\]

\[
\Delta \text{PPE}_{it} = \text{firm } i's \text{ gross value of property, plant and equipment in year },
\]

\[
\Delta \text{REC}_{it} = \text{firm } i's \text{ change in accounting receivable between year } t-1 \text{ and year } t
\]
The industry- and year-specific parameter estimates obtained from equation (1) are used to estimate firm-specific normal accruals (as a percent of lagged total assets),

$$TA_{it} = \alpha_1 \left( \frac{1}{A_{it-2}} \right) + \alpha_2 \left( \frac{REV_{it} - 3\times RE_{it}}{A_{it-1}} \right) + \alpha_3 \left( \frac{PPE_{it}}{A_{it-2}} \right) + \epsilon_{it}$$

Methods of financing through debt:
$$Dt = dt - dt_{1}$$
Where:
$$Dt$$ shows financing through debt in period $$t$$, $$dt_{1}$$ indicates that financing through debt in period of $$t$$-1.

Financing through stock:
$$S=(C_1 - C_0) - A$$
Where:
$$S$$=shows financing through stock
$$CO$$=shows amount of capital before capital increase
$$C1$$= shows amount of capital after capital increase
$$A$$= Shows that percentage of capital increase through cash receive of stockholders

Financing through retained earnings:
$$E = (C1 - C2) - B$$
Where:
$$E$$= shows financing through retained earnings
$$CO$$= Shows amount of capital before capital increase
$$C1$$= Shows amount of capital after capital increase
$$B$$= It shows percentage of capital increase through reserves and earnings

Findings:
We used descriptive variables in order to process of analyzing research. Descriptive statistics were used to summarize the data collected and the identification of the population and purpose of the descriptions, the main points are extracted and combined data using the language of numbers. We used measures of central tendency and dispersion in order to describe variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>MEAN</th>
<th>SD</th>
<th>MAX</th>
<th>MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings management</td>
<td>-0.075</td>
<td>0.011</td>
<td>0.261</td>
<td>-0.85</td>
</tr>
<tr>
<td>DT</td>
<td>220.8</td>
<td>44.206</td>
<td>366</td>
<td>143</td>
</tr>
<tr>
<td>S</td>
<td>126.59</td>
<td>30.806</td>
<td>266</td>
<td>75</td>
</tr>
<tr>
<td>E</td>
<td>200.38</td>
<td>37.007</td>
<td>326</td>
<td>131</td>
</tr>
</tbody>
</table>

Test of hypotheses:
First Hypothesis:
Significant relationship exists between methods of financing through debt and earnings management. This hypothesis indicated that significant relationship exists between financing through debt and earnings management. We used Pearson correlation between methods of financing through debt and earnings management due to sig= 0.008 and it is less than 0.05. Consequently, null hypothesis is rejected and H1 is approved. In other words, significant relationship exists between methods of financing through debt and earnings management.

<table>
<thead>
<tr>
<th>Partial correlation coefficient</th>
<th>Sig</th>
<th>t</th>
<th>Intercept</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5870</td>
<td>0.000</td>
<td>2.586</td>
<td>0.473</td>
<td>Intercept</td>
</tr>
<tr>
<td>Significance level of the correlation coefficient</td>
<td>6.513</td>
<td>F</td>
<td>0.345</td>
<td>coefficient of determination</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>(P-VALUE) F</td>
<td>0.341</td>
<td>Adjusted coefficient of determination</td>
</tr>
<tr>
<td>0.008</td>
<td>268</td>
<td>Number of observations</td>
<td>1.952</td>
<td>Durbin-Watson</td>
</tr>
</tbody>
</table>

Results
H1 is approved

Second Hypothesis:
Significant relationship exists between methods of financing through debt and earnings management. This hypothesis indicated that significant relationship exists between financing through debt and earnings management. We used Pearson correlation between methods of financing through debt and earnings management due to sig= 0.018 and it is less than 0.05. Consequently, null hypothesis is rejected and H1 is
approved. In other words, significant relationship exists between methods of financing through debt and earnings management.

Table 3: Results of first hypothesis.

<table>
<thead>
<tr>
<th>Partial correlation coefficient</th>
<th>Sig</th>
<th>t</th>
<th>Intercept</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0735</td>
<td>0.038</td>
<td>-2.293</td>
<td>0.2268</td>
<td>Intercept</td>
</tr>
<tr>
<td>Significance level of the</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.018</td>
<td>268</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>H1 is approved</td>
<td></td>
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</tbody>
</table>

Third Hypothesis:
Significant relationship exists between methods of financing through retained earnings and earnings management. This hypothesis indicated that significant relationship exists between financing through retained earnings and earnings management. We used Pearson correlation between methods of financing through retained earnings and earnings management due to sig= 0.031 and it is less than 0.05. Consequently, null hypothesis is rejected and H1 is approved. In other words, significant relationship exists between methods of financing through retained earnings and earnings management.

Table 4: Results of first hypothesis.

<table>
<thead>
<tr>
<th>Partial correlation coefficient</th>
<th>Sig</th>
<th>t</th>
<th>Intercept</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.620</td>
<td>0.045</td>
<td>5.9413</td>
<td>0.1063</td>
<td>Intercept</td>
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<tr>
<td>Significance level of the</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>coefficient</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>0.000</td>
<td>268</td>
<td></td>
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<td></td>
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<tr>
<td>H1 is approved</td>
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Conclusion and discussion:
In current research, relationship between methods of financing and earnings management by Jones model was investigated. Results of test indicated that there was significant relationship between financing throughout debt and Earnings management. Furthermore, significant relationship exists between financing throughout stock and Earnings management. Finally, there was significant relationship between financing throughout Retained earnings and Earnings management. Therefore, managers can use sources of financing and optimal structure in order to determine financing.

REFERENCES