Manipulate real activities and accounting performance thereafter on the Tehran stock exchange companies

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Abstract

Today, information is an important tool in economic decision-making and without doubt, the quality of decisions depends on the accuracy of the information. Financial statements, especially investors in the most important source of external parties access to information is required. There is evidence of the fact that their managers to achieve profit entity, acting in their real earnings management. As well as any commercial units according to the type of their activity in the sphere of action that results in different ways their performance evaluation and assessment and measurement. This study examines the effect of manipulating the real activities and accounting function after it has paid. The sample used in this study consisted of 109 companies listed on Tehran Stock Exchange in the period to 1392 is 1388 years. The dependent variable of this study, return on assets is adjusted. Independent variables examined their effect on the adjusted return on assets, including the activities actually manipulate and are manipulated plus actual activities. The collected data as Excel file was in the database. The hypothesis testing, multivariate regression models based on data fusion techniques using econometric software Eviews is done.

Introduction

Today, information is an important tool in economic decision-making and without doubt, the quality of decisions depends on the accuracy of the information. Financial statements, especially investors in the most important source of external parties access to information is required. In the meantime, profit and loss statements provide useful information about the profitability of the business, has attracted the attention of many investors. The exercise of judgment by management in preparing the financial statements, concerns about reliability earnings has created. If managers through the exercise of its powers in the field of accounting and financial reporting choices incentives to mislead the users of financial statements have, there is a possibility of manipulation or earnings management (Saeedi et al., 1392). The purpose of accounting and financial reporting, demands and meet the needs of their users. The main tool to deliver information to citizens and users outside the organization, the financial statements are important. One of the basic financial statements, profit and loss statements in evaluating management stewardship responsibility or accountability for the resources they have at their disposal, are of utmost importance. For profit and loss of efficiency encompasses resources under the control of the management of the business unit and the performance of the business units during the period reflected the desired. Since the responsibility for the preparation of the financial management unit responsible for trading in and with regard to the direct access of managers to the information and having the right to choose the optional methods of accounting, there is the possibility of profit management (baharmoghadam and Hasani fard, 2010).

background research

Sadresfahani (1392), explores the motives and consequences of profits by manipulating the activity of actual payment. The results showed that manipulation of real work in companies with larger feature size, growth opportunities, capital intensity of the industry, the accumulation of receivables and inventory, increased capital and growth once debt is more than other companies. The negative effects of manipulation of the actual items on the performance of companies is the future years.

Shamohammadi (1392), the impact of corporate governance on the issue of asymmetry of representation and administrative expenses, and for the sale of 100 companies listed on Tehran Stock Exchange in the period from 1379 to 1389 began. The results showed that both agency and corporate governance variables with asymmetric administrative costs, general and selling has been a significant relationship. The asymmetry costs because it represented a positive relationship with personal motives and government managers. Also, these results suggest that inhibition of corporate governance through personal motivation managers, behavioral asymmetry reduces costs.

Saeediet al (1392) examined the relationship between real earnings management activities and future work on the 123 companies listed on Tehran Stock Exchange have ranged from 9 years old. The results showed that the real earnings management standards and there is a significant inverse correlation with future performance. In other words, it can be inferred from these results that the manipulation of actual activity in the current period, reduced the company's future performance.

Chen et al (2014), the manipulation of real activity and accounting performance after it. The results showed that the real activities manipulation with the accounting function is that it is a meaningful relationship then the results could be a signal to corporations for a closer look at the aggressive managers reports through real activities manipulation.
Garcia Lara and Garcia Avsma (2012), examines the issue whether limitations on accrual manipulation to reduce conservatism through increased real earnings management leads? The results showed that a negative relationship between conservatism and manipulation of accruals and a positive relationship between conservatism and management of real benefit show.

Gani (2010), to investigate the relationship between profits by manipulating the activity of actual payment. The results of the study showed that reducing the cost of research and development and the production of more of the profits with the size as a result of manipulating the real activities achieved positive relationship. The profits through real earnings management created an inverse relationship with the company’s future performance.

Chen et al (2010), to investigate the relationship between management incentives and corporate governance asymmetric behavior of cost of sales, general and administrative began. The results showed that the asymmetry costs of free cash flow, positive and negative relationship with corporate governance and managerial incentives will be amplified if there is a negative relationship.

Hypotheses
To answer the research question, based on theoretical research and empirical studies conducted by Chen et al (2014), the following hypotheses are developed and tested:

1. Revenue Increase of actual manipulation activities, with performance accounting thereafter, unrelated.
2. Revenue Decrease of actual manipulation activities, with performance accounting thereafter, negatively relationship.

Research Methodology
In terms of classified research in its objective and the classification based on applied research methods, descriptive research and the research is descriptive, correlational. Because the relationship between independent and dependent variables examined. Also, due to the lack of possibility to control all relevant variables and the use of historical data to test the hypothesis, it can be in terms of the way the data was collected among the quasi-experimental research after the event. In these projects, the data of the natural environment that existed or of an incident that occurred achieved without direct intervention is provided.

Data collection and analysis of data
In this study, to collect the data and information requirements, the beginning of a library and documentary methods used that on this basis, the theoretical foundations of the research of literature and books and magazines in Latin and English, was compiled. The data needed to test the hypothesis by referring to the financial statements and explanatory notes of the company, the board reports, CDs, video archives and statistical Tehran Stock Exchange, Stock Exchange website as well as software Ware devise new processes and outcomes were extracted. The collected data after ensuring the authenticity and accuracy of them, in order to calculate each of the variables transferred to Excel spreadsheet software for analysis were prepared. The final analysis of the data was carried out with the help of econometric software Eviews.

Society And sample Statistics
The study population consisted of all firms listed on the Tehran Stock Exchange. A sample of this study consisted of all companies listed on the stock exchange that have the following conditions:

1. Date of acceptance in the Stock Exchange before the end of 1387 and 1392 are listed in company stock.
2. Their financial statements to the end of March.
3. The investment companies and financial intermediaries are not (investment companies due to differences in the nature of activity to other companies were not statistically order).
4. The financial information will be available during the study period.

The restrictions above 109 companies were selected as the sample in this study.

Research model
The model for the hypothesis defined as follows:

\[ \text{ROA}_{i+1} = \beta_0 + \beta_1 \Delta \text{RM}_t + \beta_2 \text{SIZE}_t + \beta_3 \text{LEV}_t + \beta_4 \text{MTB}_t + \beta_5 \text{CAPD}_t + \varepsilon_t \]

1. **Dependent variable: Return on assets \( \text{ROA}_{i+1} \)**
   
   Return on assets (ROA): operating income before amortization to total assets is.

   \[ \text{ROA}_{i+1} = \frac{\text{Operating profit before depreciation}}{\text{Total assets}} \]

   Adjusted return on assets: equal to the difference between the return on average assets and return on assets for the year and the industry.

2. **Independent variable: Real activities manipulation \( \text{RM} \)**

   A combination of two measures of cost of production (PROD) and discretionary spending (DISCEXP) is used to calculate the RM. Production costs as the sum of cost of goods sold (COGS) and changes in inventory during the year (\( \Delta \text{INV}_{t} \)) is defined.

   **COGS sales model linear function of time:** (Model 1)
The growth model of simultaneous linear function of sales and changes are:

\[
\Delta \text{INV}_{t} = \frac{1}{\text{Assets}_{t-1}} + \alpha_1 \frac{\text{Sales}_{t}}{\text{Assets}_{t-1}} + \varepsilon_t
\]

By combining models 1 and 2, the natural level of production costs is achieved PROD:

\[
\text{PROD}_{t} = \frac{1}{\text{Assets}_{t-1}} + \alpha_1 \frac{\text{Sales}_{t}}{\text{Assets}_{t-1}} + \alpha_2 \frac{\Delta \text{Sales}_{t}}{\text{Assets}_{t-1}} + \alpha_3 \frac{\Delta \text{Sales}_{t-1}}{\text{Assets}_{t-1}} + \varepsilon_t
\]

Abnormal production costs Abnormal PROD (production costs too much) = PROD difference between the actual cost of production and production costs PROD is normal.

The full size of the total cost of advertising discretionary spending, research and development costs is formed.

\[
\text{DISC XP} = \text{difference between the amount of abnormal discretionary spending, discretionary spending is DISCEXP DISCEXP and normal levels of discretionary spending.}
\]

Given the level of sales, companies that have high profit is likely to be one of or both of the following:

- Optional low cost unusual or abnormal production costs are high.
- Finally RM above indicates that probably these companies are more involved in real earnings management.

\[
\text{RM} = \text{abnormal production costs} + \text{abnormal discretionary expenses}
\]

Control variables:
Company size (Size)

The natural logarithm of the book value of total assets at the end of the year. The large size of the company which are due to more access to more product markets, the effect of agency costs and quality of the financial report and saving on the scale effect in the factors of production of less commercial risk and in one of his more commercial show of resistance therefore, the expected low risk higher in larger companies. This ratio in this case t is calculated:

\[
\text{Size} = \ln \frac{\text{AT}}{\text{Assets}}
\]

Financial leverage (Lev)

Ratio of total liabilities to total assets is defined. Always benefit by increasing the share of debt in the capital structure is more common stockholders swing. As a result, ordinary shareholders increased earnings volatility increased the investment risk. This ratio is calculated in year t as follows:

\[
\text{Lev} = \frac{\text{Total liabilities}}{\text{Total assets}}
\]

Production capacity (CAPD)

the proportion of the total sales of property and equipment already achieved. This ratio is calculated in year t as follows:

\[
\text{MTB} = \frac{\text{Market value of stock rights}}{\text{Book value of stock}}
\]

Descriptive Statistics

Descriptive statistics is a set of methods that provides data processing. Descriptive statistics of the variables listed in the table below. The quantity of descriptive statistics such as minimum, maximum, median, mean and standard deviation. Statistical values for the variables include real-based earnings management activities, debt ratio, return on assets, the ratio of intangible assets to total assets ratio of market value to book value and size of a company is calculated.

Results Jdvl1-4 descriptive statistics show that 0.13 standard deviation variables that represent the distribution and diversity of the types of companies are active. The average rate of return on assets is 0.14. Also, the average debt ratio was 0.65, which shows the commitment of the top companies in the sample. The results of descriptive statistics showed that the mean and median are close together and a small standard deviation, so the data are normally distributed.
In order to test its lack of correlation between variables, correlation between variables in Table 2-4 are provided. The results show that the size of the company, property and equipment to total sales ratio and debt ratio and return on assets have a positive relationship between firm size that shows the highest correlation. This indicates that the returns are also higher in major Iranian companies. On the other hand, MTB and RM variables negatively related to the dependent variable showed that the highest correlation is between RM.

Test hypotheses research

Since the data are for combination must be consolidated or chav test pattern to determine the pattern of use grew up that the hypothesis can be expressed as follows:
H0: All the width of the origin are equal together.
H1: At least one of the width of the origin are different.

If greater than 5% significance level of the hybrid model, and otherwise the panel pattern can be used. The results showed that the model is estimated with the use of the pattern panel. Chow test results is presented in Table 3:

<table>
<thead>
<tr>
<th>Verified Method</th>
<th>Result</th>
<th>Significant</th>
<th>Degrees of freedom</th>
<th>F statistic</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow test</td>
<td>H0 rejected</td>
<td>0.0000</td>
<td>(108.428)</td>
<td>2.9044</td>
<td>Model</td>
</tr>
</tbody>
</table>

Since the data using fixed effects models grew up or random effects have been estimated to be using appropriate model selection Hausman. The hypothesis of this test can be expressed as follows:

H0: Using a random effects model
H1: Using the fixed effects model

If the surface is significantly greater than 5% random pattern and a fixed effects model used otherwise. The results showed that the model is estimated with the use of a fixed effects model. Chow test results is presented in Table 4:

<table>
<thead>
<tr>
<th>Verified Method</th>
<th>Result</th>
<th>Significant</th>
<th>Degrees of freedom</th>
<th>F statistic</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hausman test</td>
<td>H0 rejected</td>
<td>0.0000</td>
<td>8</td>
<td>258.9958</td>
<td>Model</td>
</tr>
</tbody>
</table>

In this study is based on the model described below. The first hypothesis states that the increase in real earnings management activities based on the future performance of the Company has no significant relationship.

Model

\[
\operatorname{ROA}_{it+1} = \beta_0 + \beta_2 \Delta \operatorname{RM}_{it} + \beta_2 \operatorname{SIZE}_{it} + \beta_3 \operatorname{LEV}_{it} + \beta_4 \operatorname{MTB}_{it} + \beta_5 \operatorname{CAPD}_{it} + \epsilon_{it}
\]
As the results in Table 5 shows, significant regression of F at 95% according to statistics confirmed. The value adjusted coefficient of determination shows that 0.85 of the Company's future performance changes can be explained by the independent variables and control. The Durbin-Watson statistic is also close to the value 2, which indicates the absence of serial correlation is between remaining.

The results show significant positive changes vary according to the level of memory greater than 0.05, so the increase in income from real activity manipulation of accounting Bamlkrd then there is no significant relationship.

### Table 5. The first hypothesis test results

<table>
<thead>
<tr>
<th>Significant</th>
<th>T-statistic</th>
<th>standard error</th>
<th>Factor</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0002</td>
<td>3.7721</td>
<td>0.0875</td>
<td>0.033</td>
<td>Constant</td>
</tr>
<tr>
<td>0.1646</td>
<td>1.392</td>
<td>0.0012</td>
<td>0.0016</td>
<td>+ Δ RM</td>
</tr>
<tr>
<td>0.0017</td>
<td>-3.1601</td>
<td>0.0144</td>
<td>-0.0456</td>
<td>SIZE</td>
</tr>
<tr>
<td>0.0769</td>
<td>1.7732</td>
<td>0.0002</td>
<td>0.0004</td>
<td>MTB</td>
</tr>
<tr>
<td>0.0003</td>
<td>3.6775</td>
<td>0.0256</td>
<td>0.0941</td>
<td>LEV</td>
</tr>
<tr>
<td>0.0160</td>
<td>-2.4187</td>
<td>0.0083</td>
<td>-0.0201</td>
<td>CAPD</td>
</tr>
<tr>
<td>0.85</td>
<td>Adjusted coefficient of determination</td>
<td>0.88</td>
<td>The coefficient of determination</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Durbin-Watson statistic</td>
<td>27.892</td>
<td>F statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.0000</td>
<td>F probability statistics</td>
<td></td>
</tr>
</tbody>
</table>

The second hypothesis of this study is to investigate the relationship between real activity-based earnings management to reduce the Company's future performance.

As Table 6 shows the test results, according to the statistical significance of the regression F at 95% approved. The value adjusted coefficient of determination shows that 0.60 of future performance changes can be explained by the independent variables. The Durbin-Watson statistic is also close to the value 2, which indicates the absence of serial correlation is between remaining.

The results show a significant level of attention to the negative changes in the RM variable is greater than 0.05 is therefore between the reduction of income from real activities manipulation of accounting performance thereafter there is no significant relationship.

### Table 6. The second hypothesis test results

<table>
<thead>
<tr>
<th>Significant</th>
<th>T-statistic</th>
<th>standard error</th>
<th>Factor</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0629</td>
<td>-1.864</td>
<td>0.001</td>
<td>-0.1119</td>
<td>+ Δ RM</td>
</tr>
<tr>
<td>0.3307</td>
<td>0.9736</td>
<td>0.0159</td>
<td>0.0155</td>
<td>LEV</td>
</tr>
<tr>
<td>0.2279</td>
<td>1.2072</td>
<td>0.007</td>
<td>0.0084</td>
<td>CAPD</td>
</tr>
<tr>
<td>0.0075</td>
<td>2.6855</td>
<td>0.0003</td>
<td>0.001</td>
<td>MTB</td>
</tr>
<tr>
<td>0.0426</td>
<td>1.6351</td>
<td>0.053</td>
<td>0.0087</td>
<td>SIZE</td>
</tr>
<tr>
<td>0.1968</td>
<td>1.2229-</td>
<td>0.0329</td>
<td>0.0425</td>
<td>Constant</td>
</tr>
<tr>
<td>0.60</td>
<td>Adjusted coefficient of determination</td>
<td>0.6</td>
<td>The coefficient of determination</td>
<td></td>
</tr>
<tr>
<td>2.06</td>
<td>Durbin-Watson statistic</td>
<td>104.4916</td>
<td>F statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.0000</td>
<td>F probability statistics</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion**

In this section based on the theory and previous studies, as well as models and variables used in this research to interpret the results of hypothesis explains:

**First hypothesis:** the relationship between income increase real activity manipulation, with the accounting performance thereafter, were tested.
To test the first hypothesis: the image of the first hypothesis test results showed a significant negative correlation with the probability of 90 percent. The income statement is that no matter how real activities manipulation increases, degrading the performance of accounting, which reflects opportunistic behavior management. Therefore, this hypothesis is accepted in error by 10%.

The second hypothesis: the relationship between the decline real earnings manipulation activities with accounting performance thereafter were tested.

For the second hypothesis: the table of the results of tests revealed that a significant negative relationship with the probability of 90 percent. The expression to reduce the income of the real activities manipulation of accounting performance, it suffered losses and reflects the conservative strategy or adjusted strategy based on the performance of subsequent accounting. Therefore, this research hypothesis at the level of 10% of the error can be accepted.

Offers
Including any limitations of this study can be generalized to the possibility of relying and effective results. So be cautious about the use and interpretation of the results should be considered to be consumers. At the same time, based on the results of research carried out in the Tehran Stock Exchange and some other markets somewhat similar, proposals will be presented in two separate parts. From the results of the study are as originally proposed, and then, according to literature and literature, suggest a topic for future research will be presented.

1. Given the importance of earnings manipulation as well as the company's performance, it is necessary strategies to improve how to increase the quality, to be determined. For example, laws and regulations related to factors affecting profit and on the other hand the performance of companies.
2. According to the results of the research, investors who are looking to earn a higher efficiency of your investment, you should choose your investment to the extent of the company's future performance and attention their investment in the shares of companies that do a good performance.
3. Due to the presence of companies on the stock exchange and other targets that have attracted investor, they gun from the financial, capital market and investors can use this research to advance his goals in the direction of investment decisions.

References
Baber, W., P. Fairfield, and J. Haggard. (1991). the effect of concern about reported income on discretionary spending decisions: The case of research and development.