Investigate Real Earning Management and Accounting Earning Management from the Perspective of Income Smoothing

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Abstract: The purpose of this research is investigate of real earning management and accounting earning management from the perspective of income smoothing. In this study has been focus on the optional part of operating cash flow as representative of real earnings management and also discretionary accruals as representative of accounting earnings management. For examine income smoothing activities and the relationship between real earnings management and accounting earnings management are used variables of real earnings management and accounting earnings management representatives that estimated by model of Roychowdhury (2006) (12) and Kothari et al. (2005) (9) and empirical models built by Bartov (1993) (1) and Herrmann (2003) (7). 100 firms accepted in Tehran stock exchange are used during the period 2002-2011 for test the research hypothesis. The results show that managers are used both approaches real earnings management and accounting earnings management simultaneously and as complementary for income smoothing.

Keywords: Unexpected Income, Income Smoothing, Real Earning Management, Accounting Earning Management

I. Introduction

Reported earnings is among financial information very important be considered when deciding by individuals. Financial analysts generally are considered the company reported earnings as important factor in its review and analysis. Also investors who are looking invested their wealth and resources in the most efficiency solution for their investment decisions have rely on the financial information contained in the financial statements of economic units especially reported earnings. On the other managers’ act authority in the timing of transactions and choose between different ways of financial events audit in the framework of accounting accepted standards makes possible earnings manipulate by them. Therefore, any manipulation of earnings can be have impact on the decisions of investors and be caused consequences, particularly in inefficient capital markets have more importance and effective. Including incentives for management which be leads to earnings management can be noted impact on stock prices, increases in management salaries and benefits and prevent breaches of loan agreement. Most of these incentives is concerned to future benefits such as reward or prevent future losses such as decline in stock prices. (5)

II. Problem Statement

Overall, earnings management be done the two methods real earnings management and accounting earnings management. Managers are authorized for performance bold or conservative financial reports. Real earnings management and accounting earnings management are useful tool to manage earnings. Burgstahler and Dichev (1997) (2) provided evidence that show managers to avoid reporting of
REDUCED PROFITS OR LOSSES WILL MANAGE PROFIT USING REAL EARNINGS MANAGEMENT AND ACCOUNTING EARNINGS MANAGEMENT. MANAGERS ARE ABLE HAVE BENEFIT FROM WIDE VARIETY OF EARNINGS MANAGEMENT METHODS. ONE BENEFIT MANAGEMENT METHODS IS INCOME SMOOTHING. INCOME SMOOTHING IS A COMMON STRATEGY IN EARNINGS MANAGEMENT. CHEN ET AL (2008) (3) HAVE INVESTIGATED ABOUT THE USE OF REAL EARNINGS MANAGEMENT AGAINST ACCOUNTING EARNINGS MANAGEMENT TO ACHIEVE EARNINGS FORECASTS THROUGH THE ANALYSIS OF MARKET AND THE CONCLUSION THAT COMPANIES DUE TO AVOID THE CONSEQUENCES OF FAILING TO MEET ESTIMATES DOING EARNINGS MANAGEMENT AND ALSO MARKET OFTEN CAN’T DISTINGUISH A DIFFERENTIATION BETWEEN REAL EARNINGS MANAGEMENT AND ACCOUNTING EARNINGS MANAGEMENT. MANAGERS CAN SMOOTHING PROFIT THROUGH BOTH REAL ACTIVITIES AND ACCRUALS. BUT, NOT CLEAR MANAGERS WHEN USE THROUGH REAL ACTIVITIES OR ACCRUALS FOR SMOOTHING PROFIT.

III. THEORETICAL RESEARCH AND PREVIOUS RESEARCH

UNEXPECTED INCOME: A USED TERM FOR THE EXPRESSION OF SWINGING INCOMES, ALSO, REFERS TO REALIZE A LARGE INCOME THAT WAS UNEXPECTED IN THE PAST, (6)

INCOME SMOOTHING: MANAGEMENT OF SOME BUSINESS UNITS WILL ACT USING TOOLS SUCH AS ACCOUNTING METHODS THAN INCOME SMOOTHING IN DIFFERENT ACCOUNTING PERIODS AND THUS MANIPULATE AND SMOOTH REAL INCOME. CONSCIOUSLY REDUCE EARNINGS VOLATILITY LEVELS SO THAT PROFITS SEEM NORMAL. (13)

REAL EARNING MANAGEMENT: IT MEANS MANIPULATION REAL ACTIVITIES IS DEFINED AS DEVIATE MANAGE EXERT FROM NORMAL BUSINESS METHODS REQUIRED FOR INITIAL TARGET SPECIFIED PROFIT THRESHOLD AND IT IS INCLUDED REAL PRODUCTION AND REAL INVESTMENT DECISIONS. (8)

ACCOUNTING EARNING MANAGEMENT: IT IS OPPORTUNISTIC SELECT FROM FLEXIBILITY OF LIST MODE OF ACTIONS ACCOUNTING ACCEPTED STANDARDS (GAAP). LIKE EVALUATION ASSETS SUCH GOODS INVENTORY AND WAYS THAT SOME EXPENSES ARE IDENTIFIED DURING SUCH AS CAPITAL EXPENDITURE. (INCLUDING DEPRECIATION COSTS) (4)

CHEN (2009) DEFINES EARNINGS MANAGEMENT AS OPPORTUNISTIC USE FROM THE FLEXIBILITY OF STANDARD METHODS AND ACCOUNTING ACCEPTED PRINCIPLES. OF COURSE CAN BE PICKED VARIOUS INTERPRETATIONS FROM THE EXECUTIVE METHODS OF STANDARDS ACCOUNTING. OTHER REASON IS EARNINGS MANAGEMENT. (3)

ACCORDING TO SAYING Kireschenheiter and MELUMAD (2002): UNLIKE OPINION OF MOST PEOPLE THAT KNOW SMOOTHING AS ABUSE IN REPORTING, BUT IN OUR OPINION, MANAGERS WHO THEIR AIM IS INCREASE THE COMPANY’S VALUE IN THE FRAMEWORK OF THE LEGAL AND ACCOUNTING REQUIREMENTS WILL ATTEMPT TO INCREASE UNDER CORPORATE VALUE. AGAINST IF THE REFLECTED INFORMATION IN FINANCIAL STATEMENTS CHANGE TO LOSS PROFIT OWNERS, IT IS CONSIDERED MANAGEMENT’S FRAUD TOWARD PERSONAL PURPOSES. (10)

DEGEORGE, PATEL, ZEKHAUSER (1999) DEFINE EARNINGS MANAGEMENT AS A KIND OF ARTIFICIAL MANIPULATION OF BENEFIT BY THE MANAGEMENT TO REACH THE EXPECTED LEVEL OF PROFIT FOR SOME SPECIFIC DECISIONS. IN TERMS OF THEIR THE MAIN MOTIVATION OF EARNINGS MANAGEMENT IS MANAGEMENT OF INVESTORS IMPRESSION ABOUT THE PERFORMANCE OF BUSINESS UNITS. (11)

FOR TEST THE HYPOTHESIS IS CREATED TWO EMPIRICAL MODELS, MODELS OF REAL EARNINGS MANAGEMENT AND ACCOUNTING EARNINGS MANAGEMENT. REAL EARNINGS MANAGEMENT MODEL IS CREATED AS FOLLOWS:

\[
REM_{it} = a_0 + a_1 \text{Pr eEMUL}_{it} + a_2 DE_{it} + a_3 \text{GROWTH}_{it} + \lambda_{it}
\]
ACCOUNTING EARNINGS MANAGEMENT MODEL IS CREATED AS A FUNCTION OF REAL EARNINGS MANAGEMENT WITH THE USE OF EXPECTED PROFIT BEFORE ACCOUNTING EARNINGS MANAGEMENT BUT AFTER REAL EARNINGS MANAGEMENT NAMELY PREAEMUI.

\[ AEM_t = \beta_0 + \beta_1 PreAEMUI_t + \beta_2 REM_t + \beta_3 DE_t + \beta_4 SIZE_t + \beta_5 GROWTH_t + \mu_t \]

IV. THE RESEARCH HYPOTHESES

THE FIRST HYPOTHESIS: THERE IS A NEGATIVE RELATIONSHIP BETWEEN REAL EARNINGS MANAGEMENT AND UNEXPECTED INCOME.

THE SECOND HYPOTHESIS: THERE IS A NEGATIVE RELATIONSHIP BETWEEN ACCOUNTING EARNINGS MANAGEMENT AND UNEXPECTED INCOME.

THE THIRD HYPOTHESIS: THERE IS A POSITIVE RELATIONSHIP BETWEEN REAL EARNINGS MANAGEMENT AND ACCOUNTING EARNINGS MANAGEMENT.

V. RESEARCH METHODOLOGY

METHOD OF THIS RESEARCH IS DESCRIPTIVE AND CORRELATION TYPE, SINCE THIS STUDY DEALS TO DESCRIBE CURRENT SITUATION WITHOUT MANIPULATION AND GIVEN THE VALUE JUDGMENTS IN THIS STUDY IS INCONSPICUOUS, THE PRESENT STUDY IS AMONG DESCRIPTIVE STUDY OF ACCOUNTING. IT IS CORRELATION, BECAUSE IN THIS STUDY BE EXAMINED THE RELATIONSHIP BETWEEN VARIABLES, COMPANIES LISTED ON THE TEHRAN STOCK EXCHANGE ARE STATISTIC POPULATION UNDER STUDY. THE FINAL SAMPLE BE MADE USING SAMPLING IN THE DESIRED PERIOD WITH APPLYING THE FOLLOWING CRITERIA;

THE FISCAL YEAR ENDED MARCH MONTHS,

DATA USED IN THIS STUDY IS AVAILABLE FOR THEM,

COMPANY DURING THE 2002 TO 2011 HAS NOT FISCAL YEARS CHANGED,

COMPANY IS NOT COMPONENT COMPANIES OF FINANCIAL INTERMEDIATION, BANKS, AND INDUSTRIES REGULATED

ACCORDING TO THE ABOVE AND METHOD OF PLAYOFF SAMPLING WERE CONSIDERED 100 COMPANIES AS RESEARCH SAMPLE.

DATA ANALYSIS IS PROVIDED IN TWO METHODS, DESCRIPTIVE STATISTICS INCLUDED INDICES AND ABUNDANCE PERCENTAGES, TABLES AND GRAPHS AND ALSO INFERENTIAL STATISTICS INCLUDED TESTS SUCH AS PEARSON CORRELATION COEFFICIENTS AND HIERARCHICAL REGRESSION BY SPSS SOFTWARE,

IN THIS STUDY FOR TEST THE HYPOTHESES IS USED EMPIRICAL MODELS BASED ON BARTOV (1993) AND HERRMANN (2003) AND METHODS OF DESCRIPTIVE STATISTICS (MEAN, MEDIAN, STANDARD DEVIATION, ETC) AND STATISTICAL ANALYSIS (PANEL ANALYSIS, ORDINARY LEAST SQUARES (OLS), REGRESSION ANALYSIS, TWO-STAGE LEAST SQUARES (2SLS), AND CORRELATIONS), RESEARCH VARIABLES IS CALCULATED TO HELP EXCEL SPREADSHEET AND RESULTS BE USED AS INPUT SPSS AND E-VIEWS SOFTWARE AND STATISTICAL ANALYSIS IS DONE USING THIS SOFTWARES.
VI. Test Results

The First Model Examined

In this section for review and estimation the overall model are used panel analysis. The reason for using this method is type of data nature, because in the panel analysis of data have been collected as sectional – time.

In the present study for each of the partial regression coefficients are used statistics T, Student and for significantly of model Fisher statistic (F) at 95% confidence level.

In the table below is given analysis of panel:

Table 1: Result of First Model Checking

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFO IT</td>
<td>0.020</td>
<td>0.024</td>
<td>0.831</td>
<td>0.406</td>
</tr>
<tr>
<td>SALE IT</td>
<td>0.041</td>
<td>0.012</td>
<td>3.443</td>
<td>0.001</td>
</tr>
<tr>
<td>∆ SALE IT</td>
<td>-0.054</td>
<td>0.019</td>
<td>-2.780</td>
<td>0.006</td>
</tr>
<tr>
<td>ROA IT</td>
<td>0.655</td>
<td>0.093</td>
<td>7.072</td>
<td>0.000</td>
</tr>
<tr>
<td>R2</td>
<td>0.390</td>
<td>F</td>
<td></td>
<td>125.684</td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td>1.836</td>
<td>Sig, F</td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

CFO IT: Net flow input (output) of cash resultant from operating activities / total assets at beginning of period

ROA IT: Return on assets (net profit / total assets at beginning of period)

SALE IT: Net sales / total assets at beginning of period

∆ SALE IT: Annual change in the sales / total assets at beginning of period
MODEL:

\[ CFO_{it} = a_0 + a_1 \text{SAL}_E_{it} + a_2 \Delta \text{SAL}_E_{it} + a_3 \text{ROA}_{it} + \varepsilon_{it} \]

Amount probability (or \( \text{SIG.} \)) of F is equal to 0.000. Because this value is less than 0.05, therefore the null hypothesis be rejected at 95 percent confidence level. Means in the model, there is significant, the rate coefficient of determination or R^2 is equal to 0.39, namely means 39% of the changes dependent variable is expressed by independent variable. Amount of Durbin-Watson statistics is equal to 1.84 that value indicates the absence of autocorrelation.

Values of T for \( \text{SAL}_E \) is equal to 3.44, for \( \Delta \text{SAL}_E \) it is -2.78, and for \( \text{ROA} \) is 7.07. All them placed in area of null hypothesis rejection, variables at 95% confidence level are significant. Value of T for the width of source is equal to 0.83 that is indicative failure to reject the null hypothesis for width of the source. The model can be written as follows

\[ CFO_{it} = +0.041 \text{SAL}_E_{it} - 0.054 \Delta \text{SAL}_E_{it} + 0.655 \text{ROA}_{it} \]

The remaining model will be represent real earnings management, (subtracting the estimated values from real values)

### Table 2: Result of second Model checking

<table>
<thead>
<tr>
<th>Dependent Variable: TACC</th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>T</th>
<th>SIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample: 2002-2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Included Observations: 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-Sections Included: 100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0.001</td>
<td>0.018</td>
<td>0.059</td>
<td>0.953</td>
</tr>
<tr>
<td>PPE, T</td>
<td>0.106</td>
<td>0.023</td>
<td>-4.690</td>
<td>0.000</td>
</tr>
<tr>
<td>( \Delta \text{SAL}_E ), T</td>
<td>-0.058</td>
<td>0.021</td>
<td>-2.818</td>
<td>0.005</td>
</tr>
<tr>
<td>ROA, T</td>
<td>-0.449</td>
<td>0.056</td>
<td>-8.021</td>
<td>0.000</td>
</tr>
<tr>
<td>R2</td>
<td>0.390</td>
<td>F</td>
<td>71.032</td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td>1.806</td>
<td>SIG, F</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>
TACC IT: IT IS AGGREGATE ACCRUALS THAT IS EQUAL TO DIFFERENCE NET FLOW INPUT (OUTPUT) OF CASH RESULTANT FROM OPERATING AND NET PROFIT / TOTAL ASSETS AT BEGINNING OF PERIOD

PPE IT: SUM OF TANGIBLE FIXED ASSETS AT BEGINNING OF PERIOD / TOTAL ASSETS AT BEGINNING OF PERIOD

ROA IT: RETURN ON ASSETS (NET PROFIT / TOTAL ASSETS AT BEGINNING OF PERIOD)

Δ SALE IT: ANNUAL CHANGE IN THE SALES / TOTAL ASSETS AT BEGINNING OF PERIOD

MODEL:

\[ TACC_{it} = b_0 + b_1PPE_{it} + b_2ΔSALE_{it} + b_3ROA_{it} + \zeta_{it} \]

AMOUNT PROBABILITY (OR SIG.) OF F IS EQUAL TO 0.000. BECAUSE THIS VALUE IS LESS THAN 0.05, THEREFORE THE NULL HYPOTHESIS BE REJECTED AT 95 PERCENT CONFIDENCE LEVEL. MEANS IN THE MODEL, THERE IS SIGNIFICANT. THE RATE COEFFICIENT OF DETERMINATION OR \( R^2 \) IS EQUAL TO 0.27, NAMELY MEANS 27% OF THE CHANGES DEPENDENT VARIABLE IS EXPRESSED BY INDEPENDENT VARIABLE. AMOUNT OF DURBIN-WATSON STATISTICS IS EQUAL TO 1.81 THAT VALUE INDICATES THE ABSENCE OF AUTOCORRELATION.

VALUES OF T FOR PPE IS EQUAL TO 4.69, FOR Δ SALE IT - 2.81, AND FOR ROA IS -8.02. ALL THEM PLACED IN AREA OF NULL HYPOTHESIS REJECTION. VARIABLES AT 95% CONFIDENCE LEVEL ARE SIGNIFICANT. VALUE OF T FOR THE WIDTH OF SOURCE IS EQUAL TO 0.059 THAT IS INDICATIVE FAILURE TO REJECT THE NULL HYPOTHESIS FOR WIDTH OF THE SOURCE. THE MODEL CAN BE WRITTEN AS FOLLOWS

\[ TACC_{it} = +0.106PPE_{it} - 0.058ΔSALE_{it} - 0.449ROA_{it} \]

THE REMAINING MODEL WILL BE REPRESENT ACCOUNTING EARNINGS MANAGEMENT. (SUBTRACTING THE ESTIMATED VALUES FROM REAL VALUES)

VII. RESULTS OF TWO-STAGE LEAST SQUARES REGRESSION ANALYSIS

ACCORDING ASSUMED SYNCHRONICITY DECISIONS OF REAL EARNINGS MANAGEMENT AND ACCOUNTING EARNINGS MANAGEMENT BE USED THE FOLLOWING EQUATION SYSTEM FOR TEST HYPOTHESES:

\[ REM_{it} = \gamma_0 + \gamma_1preEMul_{it} + \gamma_2AEM_{it} + \gamma_3DE_{it} + \gamma_4Size_{it} + \gamma_5Growth_{it} + \varepsilon_{it} \]

\[ AEM = \delta_0 + \delta_1preAEMul_{it} + \delta_2REM_{it} + \delta_3DE_{it} + \delta_4size_{it} + \delta_5Growth_{it} + \psi_{it} \]

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>COEFFICIENTS</th>
<th>STANDARD ERROR</th>
<th>T</th>
<th>SIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.175</td>
<td>0.055</td>
<td>-3.166</td>
<td>0.002</td>
</tr>
<tr>
<td>PREEMU</td>
<td>-1.026</td>
<td>0.124</td>
<td>-8.288</td>
<td>0.000</td>
</tr>
<tr>
<td>AEM</td>
<td>3.243</td>
<td>0.277</td>
<td>11.724</td>
<td>0.000</td>
</tr>
<tr>
<td>DE</td>
<td>-0.017</td>
<td>0.016</td>
<td>-1.036</td>
<td>0.300</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.015</td>
<td>0.004</td>
<td>3.374</td>
<td>0.001</td>
</tr>
</tbody>
</table>

TABLE 3: RESULTS OF ANALYSIS REGRESSION REM
TABLE 4: RESULTS OF ANALYSIS REGRESSION AEM

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>COEFFICIENTS</th>
<th>STANDARD ERROR</th>
<th>t</th>
<th>SIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.054</td>
<td>0.017</td>
<td>3.206</td>
<td>0.001</td>
</tr>
<tr>
<td>PREEMUI</td>
<td>-0.316</td>
<td>0.012</td>
<td>-26.115</td>
<td>0.000</td>
</tr>
<tr>
<td>AEM</td>
<td>0.308</td>
<td>0.026</td>
<td>11.724</td>
<td>0.000</td>
</tr>
<tr>
<td>DE</td>
<td>0.005</td>
<td>0.005</td>
<td>1.040</td>
<td>0.299</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.005</td>
<td>0.001</td>
<td>-3.433</td>
<td>0.001</td>
</tr>
<tr>
<td>GROWTH</td>
<td>0.092</td>
<td>0.006</td>
<td>7.479</td>
<td>0.000</td>
</tr>
<tr>
<td>R2</td>
<td>0.920</td>
<td>F</td>
<td>1331.765</td>
<td>0.000</td>
</tr>
<tr>
<td>Sig. (F)</td>
<td></td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

In first and second equations amount of F is equal to 0.000. Because this value is less than 0.05, therefore the null hypothesis be rejected at 95 percent confidence level. Means in the model, there is significant. The rate coefficients of determinations or R² are equal to 0.54 and 0.92. Values of t for PREEMUI, AEM, SIZE, GROWTH placed in area of failure to null hypothesis rejection. Namely these variables are significant at 95 percent confidence level.

The final model can be written as follows:

\[ REM_{it} = -0.175 - 1.026preEMui_{it} + 3.243AEM_{it} + 0.015Size_{it} + 0.135Growth_{it} \]

\[ AEM = +0.054 - 0.316preAEMui_{it} + 0.308REM_{it} - 0.005size_{it} + 0.092Growth_{it} \]

According to results can be seen unexpected income has a significant negative relationship with real earnings management and also accounting earnings management (confirmed of first and second hypotheses). Accounting earnings management and real earnings management have significant positive relationship together (confirmed of third hypotheses). Company size has a significant positive relationship with real earnings management and also significant negative relationship with accounting earnings management. Company growth has a significant positive relationship with real earnings management and accounting earnings management.

VIII. CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Statistical tests results of research hypotheses are indicative confirmed of research hypotheses also it is conclusion managers used real earnings management and accounting earnings management for income smoothing. Plus, positive relationship between real earnings management and accounting earnings management indicative real earnings management and accounting earnings management are complement each other.

1. Review it how managers choose real activities manipulation and accruals manipulate when they have flexibility for use both.
2. Criteria to measure the variables be done another way, for example defined growth ratio market value to equity value.
3. Designing a model for cash flow resultant operations and a model for discretionary accruals for more detailed analysis.
IX. LIMITATIONS OF RESEARCH

1. The definition of earnings management is very specific and specialized. Many analytical researches have different definitions for income smoothing.
2. In finance research access to complete and accurate information is considered the main element. Whereas in this study, due to lack of data in some years be forced to remove some firms.
3. In this research is used Roychowdhiury model (2006) and estimate discretionary cash flow resultant from variable operations and Kothari model (2005) for estimate discretionary accruals. Although these models can’t distinguish completely between discretionary earnings management and its normal part.

REFERENCES

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