

## Impact of Real Earnings Management on Subsequent Financial Performance

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**Abstract:** This study examines the impact of Real Earnings Management on consequent financial performance. Three proxies are taken for real earnings management; abnormal discretionary expense, abnormal production cost and abnormal operating cash flows and proxies for financial performance are taken as; Return on Asset (ROA), Return on Equity (ROE) and Earning per Share (EPS) and Price to Earnings ratio (PE). Manufacturing sector of Pakistan is selected for analysis and data is collected from year 2004 to 2011. Generalized Least Square Regression has been applied for analysis. It is found that impact of real earnings management on financial performance is negative.

**Key words:** Real Earnings Management (REM) • Discretionary Expenses • Overproduction • Sales Manipulation • Operating Cash Flows (CFO) • Financial Performance • Pakistan • Manufacturing Sector

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### INTRODUCTION

Earnings are considered as the final economic outcome of any organization in a specific time period. Since it shows the net performance of the company which in turn illustrates about the increase/decrease in wealth of shareholder. Also fluctuations in stock's prices are reliant on firm's earnings, thus managers are keen to show higher earnings. A specific activity which is adopted by managers to alter earnings by applying some accounting principles (accrual earnings management) or by manipulating some real activities (real earnings management) is called earnings management.

Schipper [1] defined earnings management as: "A purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as opposed to, say, merely facilitating the neutral operation of the process." Similarly, Healy and Whalen [2] defined earnings management as "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers."

Since, purpose of these activities is to alter earnings current period. This study aims to find out the impact of these activities in future in case of Pakistan. Anjum *et al.* [3] found a negative impact of accrual earnings management on firm's future performance. This study examines the impact of real earnings management on future performance. We have taken Return on Equity (ROE), Earnings Price Share (EPS) and Price Earnings Ratio (PE) as measures of financial performance which are not taken before while examining the impact of real earnings management on performance. Moreover, this is the first study that choose aggregate variable of real earnings management (adding all proxies of real earnings management) in order to assessing the said relationship.

Extant literature provides evidence of real earnings management. Findings of Graham *et al.* [4] show that about 80% of the managers manipulate earnings through real activities manipulation rather than accruals earnings management. Fazeli and Rasouli [5] found that managers overproduce inventories to report lower cost of goods sold, reduced discretionary expenses and offer discounts in order to report higher earnings. Study conducted by Zang (2012) demonstrated that managers use accrual earnings manipulation and real earnings manipulation as alternate. Cohen and Zarowin [6] also found that there is

trade-off between two types of earnings management; Accounting Earnings Management and Real Activities Manipulation. An extensive study of Roychowdhury [7] revealed that managers manipulate earnings by offering price discounts to accelerate sales, overproduction to record less cost of goods sold as a result of less per unit fixed cost and cutting of discretionary expenses to improve reported margins. Ghaemi *et al.* [8] also examined these three ways of real earnings management.

Eldenburg *et al.* [9] demonstrated that non profit organizations like hospitals manage earnings through change in expenses and sales of assets. A study conducted on Japanese firms by Herrmann *et al.* [10] and concluded that managers manipulate their earnings by selling fixed assets and marketable securities. Bartov [11] provides evidence that managers sale fixed assets of the firms to report higher gains. Findings of the study depicts that income from sales of asset is significantly higher for the firms which are facing decline in annual earnings. Poitras *et al.* [12] investigated Singaporean companies and determined that the managers of the Singaporean companies manipulate earnings through asset sales when they are facing low earning per share as compared to last years.

Cohen *et al.* [13] examined that managers make alterations in advertising expenses to show superior condition of firm by avoiding to report losses and decreased earnings and to meet analyst forecasts. Osm and Young [14] scrutinized that managers reduce R&D expenses in order to increase short term earnings. Bange and Bondt [15] investigated that adjustments are made in R&D expenses to manage earnings. When there is low accounting flexibility, managers prefer to cut R&D expense [16]. Mande *et al.* [16] investigated that Japanese firms in various industries alter their R&D budgets to level earnings. Firms overproduce for the sake of reporting lower cost of goods sold and consequently higher earnings [17]. Cook *et al.* [18, 19] also provided evidence that firms managed earnings through overproduction.

Managers manipulate earnings to show higher and smooth earnings in current years. Different researchers tried to examine what are its consequences. Bens *et al.* [20] demonstrated that managers manipulate earnings by reducing R&D expenses and report lower return on assets in the subsequent years. Taylor and Xu [21] determined that earnings manipulation through overproduction and discretionary expense lead to lower earnings in future. Gunny [22] found a positive relationship between real earning management and future performance. Gunny [23] investigated the impact of real earning management on

future performance and assessed that firms which are engaged in real activities manipulation to report higher earnings have poor earnings in consequent years.

Leggett *et al.* [24] demonstrated that firms engaged in real earnings manipulation through reduction in discretionary expense have worse performance in subsequent years. Mizik and Jacobson [25] studied the management of marketing expenses to manage earnings and also investigated the impact of this management on long term performance of the firm. It was identified that that increase in earnings seems satisfactory in current situation. But in long run there is lower income and stock valuation. Chapman and Steinburgh [26] studied the different marketing expenses which are used to meet earning targets and impact of these change in expenditures on firm future performance and its competitors. It was also observed that in order to achieve the forecasted earnings, managers sacrifice the long run earnings. So, in this respect there is negative impact of manipulation in expenses to the firm's future performance.

On the basis of above literature; we form the following hypotheses. Measures of financial performance are taken as Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS) and Price Earnings Ratio(PE).

- H1: There is negative impact of real earnings management on future ROA.
- H2: There is negative impact of real earnings management on future ROE.
- H3: There is negative impact of real earnings management on future EPS.
- H4: There is negative impact of real earnings management on future PE ratio.

## MATERIALS AND METHODS

**Sample Selection:** A sample of 119 companies is selected for this study listed in Karachi Stock Exchange(KSE). Period of data selection is 2004 to 2011. There are total 574 listed companies in Karachi Stock Exchange. In which 410 are manufacturing and remaining are financial and service. Financial firms are not taken in this research since financial and accounts' handling of these firms is totally different. Service firms are also ignored here because we are taking three types of REM, reduction in discretionary expenses, overproduction and sales manipulation. These ways are more prevalent in manufacturing sector. Among 410 manufacturing firms, we selected 119 companies from the 17 manufacturing sectors. These sectors have also representation in KSE 100 index.

At first we selected top firms from this sector and remaining firms are the top firms from these sectors in term of market capitalization. By this, sample gets almost 30% representation of whole population of manufacturing firms. Following criteria are taken to select companies:

- The firms remained listed on KSE from the period 2004 to 2011
- All selected firms have the all required data from the year 2004 to 2011
- The firms that remained in the business for the duration 2004 to 2011.
- The firms are not merged during the selected period.

**Data Sources:** Data is selected from the financial statements and balance sheet analysis of joint stock companies presented by state bank of Pakistan for the year 2004 to 2009 and for the year 2006 to 2011. Data of market value is collected from the website of business recorder.

**Measurement of Real Earnings Management:** On the basis of documented literature, mainly there are six types of real activities manipulation overall.

- Manipulation in R&D Expense
- Manipulation of Sales, General and Administrative Expenses.
- Manipulation in Advertising Expenses.
- Overproduction, or increasing production to report lower cost of goods sold.
- Timings the Sale of long lived assets and long lived investments and to report gains.
- Sales manipulation, that is, boost up the sales through increased price discounts or offering lenient credit terms.

In Pakistani scenario, separate data is not available for R&D. So we merged all expenses; R&D expenses, advertising expense and sales, general and administrative expenses as discretionary expenses. Data for sales of long lived assets and investments is also not available of a representative sample of firms. Thus, this measure has to be dropped in this study. Finally, following three measures are taken to estimate real earnings management.

- Abnormal level of discretionary expenses
- Overproduction, or increasing production to report lower cost of goods sold.
- Sales manipulation measured by abnormal level of CFO

**Model to Measure Abnormal Level of Discretionary Expenses:** To measure normal level of discretionary expense the following model was first proposed by Dechow *et al.* [27]. Then this model was also applied by Gunny [22], Taylor and Xu [21], Kim *et al.* [28], Leggett *et al.* [24] and Roychowdhury [7].

$$\frac{DISEXP_t}{A_{t-1}} = \alpha_0 + \alpha_1 \frac{S_t}{A_{t-1}} + \varepsilon \quad (1)$$

where

DISEXP = Summation of R&D, Advertising, Sales, General and Administrative Expenses

By applying this model to the data of selected companies, residuals are taken as level of abnormal discretionary expenses. Lower the value of the residual higher is the value of abnormal lower discretionary expenses. For the sake of convenience and uniformity, residuals are multiplied by -1 and named that variable REM1. REM1 is the measure of abnormal lower level of discretionary expenses. Higher the value of this variable, higher will be the value of real earnings management through reduction in discretionary expenses.

**Model to Measure Overproduction:** To measure normal production cost Dechow *et al.* [27] developed. After its development, model was also used by various researchers; Gunny [22], Taylor and Xu [21], Kim *et al.* [28], Leggett *et al.* [24] and Roychowdhury [7]. Since, model measures normal production cost, residuals of this model will give abnormal production cost.

$$\frac{PROD_t}{A_{t-1}} = \beta_0 + \beta_1 \frac{S_t}{A_{t-1}} + \beta_2 \frac{\Delta S_t}{A_{t-1}} + \beta_3 \frac{\Delta S_{t-1}}{A_{t-1}} + \varepsilon$$

where:

- PROD = COGS + ΔINV
- COGS = Cost of goods sold
- ΔINV = Change in inventory
- S<sub>t</sub> = Sales during time t
- A<sub>t</sub> = Total assests at time t

**Model for Sales Manipulation:** Third type of real earnings management taken in this study is sales manipulation. Sales manipulation in literature is measured by examining abnormal level of operating cash flows. Since, sales manipulation is done by offering discounts and lenient credit term, thus there would be lower abnormal CFO as

compared to sales. Following model was formed by Dechow *et al.* [27] which gives normal level of CFO as compared to sales. Residuals of this model gives abnormal CFO.

$$\frac{CFO_t}{A_{t-1}} = \gamma_0 + \gamma_1 \frac{S_t}{A_{t-1}} + \gamma_2 \frac{\Delta S_t}{A_{t-1}} + \varepsilon \quad (3)$$

CFO = Operating Cash Flows

S<sub>t</sub> = Sales during time t

A<sub>t</sub> = Total assets at time t

**Description of Variables:** Following are the details of all variables used in this study.

**Independent Variables:** Real earnings management is independent variable whose impact is to be investigated on performance. This variable is defined as

$$REM = (-) \text{Residuals of model 1} + \text{Residuals of model 2} + (-1) \text{Residuals of model 3}$$

**Control Variables:** Some factors are incorporated in this study which may influence the said relationship. These variables are given below.

**Firm Size:** Size of the firm may affect financial performance of firm. There is positive relationship between firm size and earnings [29]. Jermias [30] examined that firms with large size take advantage from economies of scale which in turn affect financial performance. Earlier researchers used various proxies of firm size. Kang *et al.* [31] took logarithm of total assets to measure size. Hillman and Keim [32] used total assets, sales and number of employees as proxy for firm's size. Leggett *et al.* [24] used logarithm of market value of equity to control size while determining impact of real earnings management on performance. Gunny [23] examined the consequences of real earnings management and took natural logarithm of assets to eradicate the impact of firm size. Chen *et al.* [33] also investigate the relationship between real earnings management and performance and used natural log of market equity to control firm size.

Firm size in this study is defined as natural log of total assets and denoted by LOGASSETS.

LOGASSETS = Natural logarithm of total assets

**Growth:** Growth of firm can also impact performance of the firm. Firms which are capable to grow tend to be more profitable and strong (Nuryaman, 2012). Researchers used

different proxies for measuring growth. Kim *et al.* [28] summed up Market value of equity and book value of debt and then divided it by book value of total assets to use as proxy of growth. Leggett *et al.* [24], Chen *et al.* [33], Gunny [22] and Gunny [23] measured growth by dividing Market value of equity with book value of equity. Lasfer [34] used Tobin's-Q to control growth which is defined as Market capitalization plus Total Debt divided by Total Assets. Mustapha and Ahmad [35] measured Market value of the firm/total assets to control growth.

Growth in this study is defined as:

$$BTM = \frac{\text{Book value of equity}}{\text{Market value of equity}}$$

**Z-Score:** Altman in 1968 formed a formula to measure the financial strength of the firm named it as ZSCORE. It has been observed that various researchers used ZSCORE to control financial strength of firm in their studies as financial strength has positive impact on performance. Chen *et al.* (2010) used  $3.3 \times (\text{net income}/\text{total assets}) + 1.0 \times (\text{total sales}/\text{total assets}) + 1.4 \times (\text{retained earnings}/\text{total assets}) + 1.2 \times (\text{working capital}/\text{total assets}) + 0.6 \times (\text{market value of equity}/\text{total liabilities})$  as proxy of financial strength. Leggett *et al.* [24] and Gunny [22] defined Zscore as  $3.3(\text{net income}/\text{total assets}_{t-1}) + 1.0(\text{sales}_t/\text{total assets}_{t-1}) + 1.4 (\text{retained earnings}_t/\text{total assets}_{t-1}) + 1.2(\text{working capital}_t/\text{total assets}_{t-1})$ .

ZSCORE in this study is defined as:

$$ZSCORE = 3.3 \times (\text{Net Income}/\text{Total Assets}) + 1.0 \times (\text{Total Sales}/\text{Total Assets}) + 1.4 \times (\text{Retained Earnings}/\text{Total Assets}) + 1.2 \times (\text{Working Capital}/\text{Total Assets}) + 0.6 \times (\text{Market Value of Equity}/\text{Total Liabilities})$$

**Industry Dummy:** Performance in different time periods can be varied from industry to industry. So we have also added a control variable to moderate any industry impact. Kang [31] examined relationship between corporate diversification and corporate social performance and added industry dummies in his model to control any industrial impact. Caballero *et al.* [36] determined a linkage between working capital management and corporate performance and used industry dummy variables to alleviate its impact. McClelland *et al.* (2012) [37] also used industry dummies in their studies. In this study, industry dummy (ID) is taken to control any industry impact.

**Dependent Variables (Financial Performance):** Different proxies are used to measure financial performance in literature. There are two types of measures of financial performance; Accounting measures and Market measures [38]. Abbas *et al.* [39] used ROA and ROE as proxies of financial performance. Iqbal *et al.* [40] used accounting measures ROA and ROE as proxy of financial performance. Umar *et al.* [41] used EBIT, ROE, ROA, EPS, P/E and net profit margin proxies for financial performance. Zeitun and Tian [42] used measures market performance measures (PE ratio, Tobins Q and market value of equity to book value of equity) as well as accounting measures (ROE, ROA and EBIT) in their study. Gunny [22], Taylor and Xu [21], Leggett *et al.* [24], Mizik and Jacobson [25] and Rangan [43] used ROA as proxy for performance while determining relationship between earnings management and performance. None of the researchers used ROE, EPS and PE ratio as performance measures in order to assess the impact of earnings management on performance. This study uses ROA, ROE and EPS are used as accounting measures and market measure PE ratio as market measure.

**Accounting Measures of Performance: Return on Assets (ROA)**

ROA represents return on assets which is calculated as ratio of earnings before tax to the total assets.

$$ROA = \frac{\text{Earnings before Tax}}{\text{Total Assets}} * 100$$

**Return on Equity (ROE):** ROE represents return on equity which is defined as earnings before tax divided by total number of common shares outstanding.

$$ROE = \frac{\text{Earnings before Tax}}{\text{Total Equity}} * 100$$

**Earnings per Share (EPS):** EPS represents earnings per share; which is defined as net profit to number of shares outstanding

$$EPS = \frac{\text{Net Income}}{\text{Numbers of common stocks shares}}$$

**Market Measures of Financial Performance**

**Price to Earning:** Chiarella *et al.* (2008) defined price to earnings ratio as the ratio of market price of the share divided by the earnings per share

$$PE = \frac{\text{Market Price per Share}}{\text{Earnings per Share}}$$

**Models:** On the basis of hypotheses developed in the previous section, following models are the mathematical forms of those hypotheses which are to be checked by using different statistical tools.

$$ROA_{t+i} = \alpha_0 + \alpha_1 REM_t + \alpha_2 LOGASSETSS_{t+i} + \alpha_3 ZSCORE_{t+i} + \alpha_4 ID + \alpha_5 BTM_{t+i} + \alpha_6 ROA_t + \varepsilon_{it} \quad I$$

$$ROE_{t+i} = \alpha_0 + \alpha_1 REM_t + \alpha_2 LOGASSETSS_{t+i} + \alpha_3 ZSCORE_{t+i} + \alpha_4 ID + \alpha_5 BTM_{t+i} + \alpha_6 ROE_t + \varepsilon_{it} \quad II$$

$$EPS_{t+i} = \alpha_0 + \alpha_1 REM_t + \alpha_2 LOGASSETSS_{t+i} + \alpha_3 ZSCORE_{t+i} + \alpha_4 ID + \alpha_5 BTM_{t+i} + \alpha_6 EPS_t + \varepsilon_{it} \quad III$$

$$PE_{t+i} = \alpha_0 + \alpha_1 REM_t + \alpha_2 LOGASSETSS_{t+i} + \alpha_3 ZSCORE_{t+i} + \alpha_4 ID + \alpha_5 BTM_{t+i} + \alpha_6 PE_t + \varepsilon_{it} \quad IV$$

## RESULTS

Results of Table-1 are obtained from models 1, 2 and 3. This table shows how much percentage firms were involved in year's 2006 to 2011.

Results show that about 69% firms in the year 2006 reduced discretionary expenses to accelerate sale. In the same year percentage of firms engaged in overproduction and sales manipulation was 47% and 59% respectively. In year 2007 69% firms reduced discretionary expense, 33% firms adapted overproduction and 51% firms did sales manipulation to report higher earnings. 67% firm of the selected sample manipulate earnings through reduction in discretionary expense in the fiscal year 2008, whereas 44% firms over produced inventory and 35% firms manipulated sales in the said year. 71% firms reduced discretionary expenses, 24% firms managed earnings through overproduction and 50% manipulated through sales in 2009. The same trend was seen in the year 2010 and 2011.

A detailed descriptive analysis of all variables used in this study is given below.

REM is the measure of performance. Minimum value of this variable is -2.570 and maximum value is 2.290. Negative sign shows that some firms in some years engaged in real activities manipulation to show lower

Table 1:

REM Type	2006	2007	2008	2009	2010	2011
Reducing Discretionary Expenses (REM1)	69%	69%	67%	71%	69%	71%
Overproduction(REM2)	47%	33%	44%	24%	41%	44%
Sales Manipulation(REM3)	59%	51%	35%	50%	52%	32%

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
REM	595	-2.570	2.290	0.0006	0.435
LOGASSETS	595	11.400	19.250	15.575	1.508
ZSCORE	595	-0.410	8.280	2.594	1.366
BTM	595	0.002	3.640	0.281	0.448
ROA <sub>t</sub>	595	-0.330	0.540	0.125	0.132
ROA <sub>t+1</sub>	595	-0.330	0.510	0.114	0.130
ROE <sub>t</sub>	595	-0.880	1.370	0.256	0.293
ROE <sub>t+1</sub>	595	-0.950	1.420	0.228	0.303
EPS <sub>t</sub>	595	-25.240	39.850	2.600	3.652
EPS <sub>t+1</sub>	595	-25.240	84.140	2.491	5.340
PE <sub>t</sub>	595	-253.210	653.220	61.585	101.218
PE <sub>t+1</sub>	595	-253.210	633.920	62.976	108.240
Valid N (list wise)	595				

earnings. mean value of this variable is 0.0006 and standard deviation is 0.435. First measure of financial performance is ROA. There are total 595 observations of this variable. Minimum and maximum value of ROA<sub>t</sub> is -0.330 and 0.540 respectively. Minus sign in ROA<sub>t</sub> is because some firm suffer losses in the selected period of analysis. Mean value of ROA<sub>t</sub> is 0.125 which shows that there is 12.5% return on asstes of Pakistani firms. Standard deviation is 0.132. ROA<sub>t</sub> is taken as control variable when ROA<sub>t+1</sub> is taken as dependent variable. Minimum value of ROA<sub>t+1</sub> is also -0.330 but maximum value is 0.510. Mean value of variable is 0.114 which is lower than the mean of ROA<sub>t</sub>. This depicts that on average ROA is reduced in future. Similarly the descriptive of other variables is given in Table-2.

Table 3 to Table 6 illustrates the results of models I-IV. Stata11 is used for analysis. As we have different firms for different years, thus data is panel. The most important technique fo analysing panel data is Generalised Least Square (GLS) techniques, hence we have also used this technique. On the basis of the features of the data, it has been decided, whether the model is fixed or random.

Model I investigates the relationship of real earnings management with next year’s performance in presence of other five control variables LOGASSETS, ZSCORE, ID, BTM and ROA<sub>t</sub>. Impact of REM on ROA<sub>t+1</sub> is strongly significant with p-value 0.000. Result shows that one unit manipulation of real earnings management leads to 0.042 unit decreased in subsequent first year performance. Size is insignificantly significantly related to ROA<sub>t+1</sub>. ZSCORE (p-value 0.013) is significantly related

to dependent variable. Impact of industry and BTM is insignificant. Impact of ROA<sub>t</sub> is strongly significant with p value 0.000. R square of the model is 0.591 which depicts that 59.1% of the dependent variable is explained by the given independent variables. There is no autocorrelation in the independent variables because Durbin Watson value is 1.784 Wald chi square value of this model is also strongly significant which depicts that model is valid.

Model II explains the impact of real earnings management on subsequent year’s performance (return on equity) and this relationship is controlled with five variables LOGASSETS, ZSCORE, ID, BTM and ROE<sub>t</sub>. Impact of REM on ROE<sub>t+1</sub> is strongly significant with p-value 0.000. It is determined that one unit manipulation

Table 3:

VARIABLES	I
REM	-0.042 0.000***
CONTROL VARIABLES	
LOGASSETS	0.001 0.605
ZSCORE	0.01 0.013**
ID	0 0.739
BTM	0.006 0.574
ROA <sub>t</sub>	0.627 0.000***
Durbin Watson	1.784
Wald-Chi-Square	647.57 0.000***
Panel Data Model Type	Random
R Sqaure	0.591

Table 4:

VARIABLES	II
REM	-0.123 0.000***
CONTROL VARIABLES	
LOGASSETS	0.008 0.288
ZSCORE	0.032 0.002***
ID	0 0.79
BTM	-0.006 0.837
ROE <sub>t</sub>	0.52 0.000***
Durbin Watson	1.778
Wald-Chi-Square	369.95 0.000***
Panel Data Model Type	Random
R Square	0.452

Table 5:

VARIABLES	III
REM	-2.595 0.000***
CONTROL VARIABLES	
LOGASSETS	0.233 0.134
ZSCORE	0.425 0.040**
ID	-0.039 0.438
BTM	-0.201 0.734
EPS <sub>t</sub>	0.372 0.000***
Durbin Watson	1.993
Wald-Chi-Square	100.4 0.000***
Panel Data Model Type	Random
R Square	0.178

Table 6:

VARIABLES	IV
REM	-16.103 0.100*
CONTROL VARIABLES	
LOGASSETS	4.645 0.098*
ZSCORE	3.851 0.277
ID	-0.791 0.385
BTM	-24.342 0.028**
PE <sub>t</sub>	0.529 0.000***
Durbin Watson	1.829
Wald-Chi-Square	223.83 0.000***
Panel Data Model Type	Random
R Square	0.333

of real earnings management causes 0.123 units decreased in subsequent first year performance. Size is insignificantly related to ROE<sub>t+1</sub>. ZSCORE is significantly related to dependent variable with p-value 0.002. Impact of industry and BTM is insignificant. Impact of ROE<sub>t</sub> is strongly significant with p value 0.000. R square of the model is 0.452 which depicts that 45.2% of the dependent variable is explained by the given independent variables.

Model III measures the relationship between real earnings management and future Earnings per Share. There are also five control variables in this model; LOGASSETS, ZSCORE, ID, BTM and EPS<sub>t</sub>. Impact of REM on EPS<sub>t+1</sub> is strongly significant with p-value 0.000. it has been observed that one unit manipulation of real earnings management results in 2.595 units decreased in subsequent first year performance. Size is insignificantly related to EPS<sub>t+1</sub>. ZSCORE (p-value 0.040) is significantly related to dependent variable. Impact of industry and BTM is insignificant. Impact of EPS<sub>t</sub> is strongly significant with p value 0.000. Coefficient of determination is 0.178 which depicts that 17.8% of the dependent variable is explained by the given independent variables. There is no autocorrelation in the independent variables because Durbin Watson value is in the range 1.5-2.5.

Model IV is about the relationship of real earnings management with subsequent year's price earnings ratio. Impact of REM on PE<sub>t+1</sub> is significant at 10%. Result shows that one unit manipulation of real earnings management causes 16.103 units decreased in price earnings ratio in the next year. LOGASSETS is significantly related to dependent variable. Impact of ZSCORE and industry is insignificant. Wald chi square value of this model is also strongly significant which depicts that model is valid.

Summarizing the results of model I to IV, it is determined that impact of real earnings management is strongly negatively related to all measures of financial performance. This illustrates that firms engaged in real earnings management have poor and lower earnings in future. Same results were examined by Leggett *et al.* [24], Taylor and Xu [21] and Gunny [23]. Chen *et al.* [33], Li [44] and Mizik and Jacobson [25] also found that reduction in marketing expenses in current period leads to lower ROA in subsequent period [45-53].

## CONCLUSION

This study investigates the impact of real earnings management on future performance of the firm by taking three measures of real earnings management and four

measures of financial performance. By analysing data from period 2004-2011, it has been revealed that relationship between real activities manipulation and future financial performance is strongly negative. This depicts that managers manipulate earnings to show smooth earnings and good economic condition currently but consequently this activity is worse for firms.

This study has a connotation for stock holders to determine how firms are engaged in playing with their wealth. Findings also state that firms which show consistent higher earnings do not guarantee improved wealth for shareholders. Current study has also an indication for regulators to keep an eye not only the accounting choices of a firm but also on different business operations which are manipulated to misguide general public.

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