# Investigation on the Association between conditional and unconditional Accounting conservatism and earning management

Mohammad Nesarvand [1], seyed ali vaez [2], Mohammad ramezan ahmadi[3]

[1.] Master of Accounting, Persian Gulf International Educational Brunch-Islamic Azad University- khoramshahr -Iran
[2.] Assistant Professor of Accounting, Persian Gulf International Educational Branch -Shahid Chamran University. Ahvaz. Iran
[3.] Assistant Professor of Accounting, Persian Gulf International Educational Branch -Shahid Chamran University. Ahvaz. Iran

**Abstract:** The present study investigates the relationship between conditional and unconditional accounting conservatism and earning management in 279 companies listed in Tehran stock exchange for the period 1380 to 1388.it includes two hypotheses. In first hypotheses we examined the relationship between conditional conservatism and earnings management, and second hypotheses the relationship between unconditional conservatism and earnings management was investigated the first hypotheses statistical analysis was estimated using pooled (combined) data. Result of the models estimation with a fixed effects approach shows that the variable "earnings management" has a significant effect on the measure of conditional conservatism. This indicates that conditional conservatism and earnings management are significantly associated. To test the second hypotheses, it was estimated using pooled data. A result of the second hypotheses with a bound approach shows that there is a significant relationship between unconditional conservatism and earnings management. IN other words, we can say that companies providing conservative financial reporting may have more earnings management.

[Mohammad Nesarvand, seyed ali vaez, Mohammad ramezan ahmadi. **Investigation on the Association between conditional and unconditional Accounting conservatism and earning management.** *J Am Sci* 2013;9(6):54-61]. (ISSN: 1545-1003). http://www.jofamericanscience.org. 7

**Keywords:** conditional conservatism, unconditional conservatism, earnings management, discretionary accruals, Non-discretionary accruals

## Introduction

The purpose of accounting and financial reporting is to meet the information demands and needs of users. Basic financial statements are main tool to convey information to the external individuals and users. One of the basic financial statements is income statement. Since preparing financial statement is the responsibility of the manager of business unite, and given the direct access of managers to the information and their right to choose optional methods of accounting, it is possible to manage earnings (earnings manipulation). For example, smoothing earnings in order for the investors to ensure the sustainability of profits is an example of data manipulation. Such measures may significantly affect the data contained in the financial in the financial statements. This causes loss to the users of financial statement. Accordingly, there will be a raised demand for conservatism, since conservatism decreases the losses from earnings management. Research on accounting conservatism is among positive researches in accounting. Positive accounting assumes that accounting conservatism has been created through requirement for high provability and conformability to recognize the income, or low provability and conformability to recognize the costs related to the bonus contract between managers and shareholders (watts and Zimmerman, 1986:25)-in the absence of conservatism. Manager may achieve their, intended profit through identifying earnings that have not been fulfilled, yet, and accordingly receive an additional bonus. It seems that in case of non-realization of the incomes in the future. It would be difficult to compensate for the opportunistic behaviors of the manager, and the company's value may be reduced as well (watts,2003:24).recent studies suggest that accounting profits(earnings)are conservative. in other words, earnings tend to reflex bad news (negative stock returns) based on a more timely basis rather than good news(positive stock returns).conservatism and earnings management in financial reporting. earnings management means that companies in financial reporting, report information mostly to reflex the operational performance of the company, while through conservatism companies intentionally report the company's operational performance unmoor favorably. However, there are some distinctions between conditional and unconditional conservatism. In terms of situation, conditional conservatism can be used to recognize bad news against good news and unconditional conservatism can be applied by means of the application of inherent accounting principles. According to what we said above and the impact of conservatism and earning management on different

dimensions of accounting system and financial reporting and the decisions of the decisions of the users of financial statements, the relationship between conditional and unconditional accounting conservatism and earnings management in companies listed on Tehran stock exchange has been examined in the present study.

***Theoretical basics and background of the study**

*Conservatism: Felltham and Olson's definition (1995) is a conservatism definition in terms of balance sheet. According to this perspective, in cases where there is a real question of choosing between two or more reporting methods, we should choose the method with least favorable effect on equities. However, basso (1997) requires conservatism to have a high degree of documentation and approval to recognize good news such as earnings against bad news such as loss. This definition describes conservatism in terms of income. Third definition of conservatism by Givoly and hay (2000) is based on combined perspective of balance sheet and profit and loss (income). In the third perspective, conservatism is an accounting concept which leads to a decrease in the reported retained earnings through later recognition of the income and faster recognition of the costs of low evaluation of assets and high evaluation of debts. Another grouping for defining conservatism has been presented by Ryan (2006) which includes conditional conservatism and unconditional conservatism. Conditional conservatism is a conservatism required by accounting standards.in other words, timely recognition of losses in case of bad news (negative stock returns)and lack of understanding the earnings in case of good news(positive stock returns).for instance, the application of the minimum cost principle or net sales value in the evaluation of the inventories is some kind of conditional conservatism. This kind of conservatism is called "income conservatism" or "retrospective conservatism". But, unconditional conservatism-unlike conditional conservatism-is not required by the accepted accounting standards and it is a result of underestimating net book value of the assets by means of predetermined accounting procedures. This type of conservatism is also known as "balance sheet conservatism". Accounting conservatism can be evaluated based on four interpretations including contract, tax, political costs, and legal cases. Contract interpretation states that if the company's contracts with different groups such as investors and creditors are adjusted based on accounting figures, then due to the conflict of interest between managers and those groups, corporate managers will try to change the figures to their advantage through biased behaviors. For example they increase the earnings and assets and reduce liabilities. Conservatism neutralizes the managers biased behavior through delaying the recognition of earnings and low magnification of net assets (watts, 2003) taxes can also be a source of conservatism. in this perspective, conservatism delays tax payments by delaying the recognition of earnings and accelerating that of costs. therefore, there is a close relationship between accounting conservatism and tax (watts, 2003). According to the interpretation of political costs and legal cases, big and profitable companies –compared to small companies-are more considered politically and their political costs and legal cases are more. In this case also accounting conservatism can reduce the costs through applying conservative methods of accounting (watts, 2003).

*methods of measuring conditional conservatism:

1-asymmetric timeliness of earning: basso (1997)using these basics introduces a measure entitled "asymmetric timeliness of earnings" for conservatism. Therefore,asymmetric timeliness of earnings based on the relationship between earnings and stock returns, is known as one measure of conservatism entitled "conditional conservatism ".

2-the application of the operational items: the use of this measure is based on the assumption that in confidence level associated with item that are not part of the confidence level associated with items that are part of the company's normal activities with items that are part of the company's normal activities (givoli and hayn, 2000:p.p 287-320).

***methods for measuring unconditional conservatism**

1-market to book ratio (MTB) method: the difference between enterprise value and reported cash value, is also known as market to book value (MTB). Thus the higher the MTB is than (1), it indicates more conservatism in financial reporting (watts and Richard Harry, 2007:p. p 2-31).

2- RES method: penman and Zhang (2002) used this method to estimate level of unconditional conservatism in financial reporting. In this method, the following formula is used to determine the amount of unconditional conservatism:

$$\mathbf{Uc - Res\ it} = \frac{\mathbf{Inv}_{it} + \mathbf{Rd}_{it} + \mathbf{Adv}_{it}}{\mathbf{At}_{it}}$$

UC- Res it:unconditional conservation index for company (i) at time (t)

INV it: Inventory levels.

Rd: it: costs of research and development.

At it: Total assets of the company.

3- method of APPLYING ACCRUALS:conservatism Index based on this model is calculated as follows

**Uc – Acc** _____

According to Ahmed and duel man (2007),accruals growth can be an indicator of the degree of change in accounting conservatism during a period.in other words,if accruals increase,then conservatism will decrease and will decrease and vice versa. thus in order to determine conservatism, accruals are multiplied by (-1).

***Earning management**

Healy and Whalen (1999)defined earnings management as follows:((earning management occurs when managers use their personal judgment in financial reporting and manipulate the structure of truncations so as to change financial reporting this is either to mislead some shareholders on the economic performance of the firm or affect the results of the contracts that their signature is subject to the achievement of personal interest)).Scott (1997) divided earnings management to two types including good earning management and bad earnings management:in ((bad))earnings management which is originally improper earnings management, it is attempted to hide the actual operating performance of the company through creating artificial accounting records or changing estimations beyond reasonable limits. which is often illegal.in the worst case, these lead to fraud.in contrast, there is also (good)earnings management. a wise and good activity which is part of the financial management process and restoration of shareholder value is considered an example of good earnings management. good earnings management results from the daily management of a company with excellent management. Achieving stable a predictable results and a positive earnings trend using good planning and operational stimulus is neither illegal nor immoral. it is a sign of skills and development which the market is looking for and rewards it (rahimian and homayouni rad,1387:p27).jones and sharma (2001)have suggested a comprehensive definition on earnings management. They believe that earnings management (earnings manipulation )occurs when management make changes in financial reporting through personal judgments ( recognition )in financial reporting and the structure of transaction in order to mislead some stakeholders(stakeholders(including shareholders, creditors, employees, the government, investors,…)about the economic performance of the firm via influencing contractual outcomes that are dependent on the reported accounting figures.

***incentives for earnings management**

Bonus incentive: in which the manager manages earnings in order to receive more bonus. incentive for loans: in which the manager manages earnings to receive loans from creditors. political incentive: in which the manager attempts to manage earnings through applying income-decreasing procedures to reduce political interests of different groups when earning enhance. Tax incentives: in which the manager manages earning in order to reduce tax payments. Management change: when executive managers get retired or changed (that is, their last years activity in the firm), they attempt to manage earnings in order to gain more bonus. when a company is listed in the stock exchange for the first time: companies listed in the stock exchange for the first time, attempt to magnify their earnings through earnings management so as stabilize their stock price status.

The research background basu(1997),in estimating conservatism index, investigated the association between earnings and stock returns by means of regression. He found that in companies with negative stock returns, stock returns are more correlated with earnings than in companies having positive stock returns. Basu(1997) found that in period when litigation increases, conservatism increases as well. ahmed et al (2002)showed that big companies use more methods of conservatism accounting procedures. Zhou and Lebo (2006) in their studies found that companies providing conservative financial reporting can have more earnings management behaviors. Zhou (2008) found that companies that provide conservative financial reporting are less likely to engage in earning management. in their study, pike et al (2007) investigated the impact of conservatism on earnings sustainability. They concluded that earnings with higher conservatism are more unsustainable compared to earnings with lower conservatism. Chen line and woo(2010)in their study showed that frequency of earnings management is more when a company is going to use an expert in earnings prediction. moreover, companies tend to use earnings management largely because they try to prevent from earnings reduction, rather than preventing earnings from becoming negative through earning management. in addition, when companies are trying to avoid profit loss, the volume of earnings management would rise. Sepasi and nowravesh(1384) in their paper showed Thad big companies in iran also attempt to manage earnings and the incentive to exert this management increases with increased debts. They also showed that managers of large firms use accruals to reduce taxes in their firms, and as firms get larger, the managers will be more likely to manage their earnings. Results by baninmahd and baghbani {1388(Persian year) } emphasize a direct relationship between the firm size and its unprofitability, and a reverse relationship between leverage ratio and unprofitability. results show that governmental ownership does not affect the unprofitability of a

company. Results of the study suggest that if conservatism is exerted, weighted average cost of capital (wacc) will decline. Jabbarzadeh, kangarloui et al (1389, Persian calendar) in their study explained the relationship between conservatism and income smoothing. their results made it clear that there is a significant difference regarding the association of non-smoother firms with conservatism in accounting and the association of smoother firms with conservatism. also, by adding these results to results of the previous study we can conclude that in order for managers of bankrupt firms to maintain their position in the market (given the current situation, regarding bankrupt firms in Iran)they always attempt to influence their profit and loss figures through applying one of the variables "smoothing 0r conservatism" so as to achieve their intended goals.

***research hypotheses**

First hypothesis: there is a significant relationship between conditional conservatism and earnings management.

Second hypothesis: there is a significant relationship between unconditional conservatism and earnings managements.

**Research area**

Subject area of this study is the investigation of the association between conditional and unconditional and unconditional accounting conservatism and earnings management. Spatial and time domain of the study is all statistical population samples including companies listed in Tehran stock exchange between 1380-1388 (Persian calendar the above mentioned conditions.

*statistical population and sample

Statistical population of the present study consists of all companies listed in Tehran stock exchange from 1380 to the end of the 1388 (457 firms, 3248 years company). To determine the statistical sample in systematic elimination method, the following conditions were imposed: 1-first, companies whose fiscal year was not ended in esfand (Persian month) $29^{th}$ or $30^{th}$ were eliminated. 2- then banks, financial institution, and financial investment companies were eliminated. 3-finally, outlier observations (the first and $99^{th}$ percentiles of all observation) as well as companies with negative book valu of equity were eliminated. By exerting the above conditions, a total of 279 firms(equivalent to 2133 years-company) were selected for estimating the models and testing the hypotheses.

***data collection method**

To develop the theoretical basics of the study, library method was used and to collect the required data, financial statements submitted to the stock exchange and other related information resources such as databases "tadbir pardaz and rahavard-e-novin" were used.after preparing data in excel, the model estimation and analysis and the hypothesis testing were performed using Eviews 7.

***statistical models of the study and operational definition of variables**

After data collection and preparation, firstly in order to decompose the accruals into discretionary and non-discretionary components, we use jones model adjusted to the function proposed by Kothari, lean, and Wesley (2005): $acc_{it}=a_0+a_1(1/a_{it}-1)+a_2(\Delta rev_{it}-\Delta rec_{it})+a_3(ppe_{it})+a_4roa_{it}+€_t$ (4)

Where, (Acc) is accruals which is obtained from the deduction of operating cash flow from net in come. (A) is total assets, (Rev) IS SALES REVENUE, (Rec) is receivable accounts (receivables), (PPE) is fixed assets, and (ROA) is return on assets which is obtained from net income divided by tat at assets in the beginning of the period. all the variables mentioned are modified using assets in the beginning of the period. After estimating the above model, discretionary accruals (model residuals) are extracted and their absolute value is used as a measure of earnings management (EM). second, in order to test the first hypothesis, a modified version of ball and shiva komar model(2005) is used. in this version, the measure of EM is also included. the model is presented as follows: $Acc_{it}=\alpha+\beta_1em_{it}+\beta_2dcf_{it}+\beta_3cfo_{it}+\beta_4dcf_{it}\times cfo_{it}+\beta_5em_{it}\times dcf_{it}+\beta_6me_{it}\times cfo_{it}+\beta_7em_{it}\times dcf_{it}\times cfo_{it}+€_{it}$, where (CFO) is operating cash flow, and (DCF) is a two-valued variable whose value will be (1) as (CFO) is negative and in othe cases it will be zero. Other variables were previously defined. in the above model, the coefficient of the variable ($DCF_{it}\times CFO_{it}$) measures the value of conditional conservatism. high (low) values of the coefficient indicate high (low) levels of conditional conservatism. In addition, if in model (4) the coefficient of the variable ($EM_{it}\times DCF_{it}\times CFO_{it}$) is significant, the first hypothesis will not be rejected. To test the second hypothesis also the following model is estimated: $EM_{it}=\alpha_0+\alpha_1"(MTB_{it})+(Size_{it})+\alpha_3(RoA_{it})+€_t$ (6), where (MTB) is market to book value ratio whose high (low) value indicate high (low) level of unconditional conservatism. the variables "size, and ROA" are also included in the model as control variables in order to control the effects of profitability and size on the relationship between dependent and independent variables. In model (6) if the coefficient of the variable (MTB) is significant, then the second hypothesis will not be rejected.

*data Analysis method

For data analysis and model estimation, pooled data approach was used. pooled data basically refers to the movement of the cross-sectional units over the time. models based on this type of data are

called pooled data regression models. the pooled data approach usually includes three models: restricted model, fixed effect model, and random effect model (Abrishami,1372). In pooled data approach, some restriction and assumption are considered on the intercept and slope coefficient of the following model: $\gamma_{it}=\alpha_{it}+\beta x_{it}+£_{it}$ (7), where ($\gamma_{it}$) is the independent variable, ($x_{it}$) is a set of independent variables, and ($£_{it}$) is the error sentence of the model. polled data approach usually includes three models: restricted model, fixed effect model, and random effect,model.

***tests for selecting model type**

In this model, in order to select the type of estimation model, firstly restricted F-test was carried out as follows: $H_0:\alpha_1=\alpha_2=\alpha_3=\alpha_4=\alpha_5 \Leftrightarrow$ *all* intercept are equal $\Leftrightarrow$ *pooled model*

$$\mathbf{F}=\frac{(\mathbf{R^2_{LSDV}}-\mathbf{R^2_{Pooled}})/(\mathbf{T-1})}{(\mathbf{1-R^2_{LSDV}})/(\mathbf{NT-T-K})} \qquad (8)$$

$$\mathbf{F}=\frac{(\mathbf{RSS_{Pooled}}-\mathbf{RSS_{LSDV}})/(\mathbf{T-1})}{\mathbf{RSS_{LSDV}}/(\mathbf{NT-T-K})} \qquad (9)$$

In the models, ( $R^2_{LSDV}$ ) and ( $RSS_{LSDV}$ ) are determination coefficient and sum of the squares of the residuals from the fixed effect model respectively. ( $R^2_{Pooled}$ ) and ( $RSS_{Pooled}$ ) are determination coefficient and sum of the squares of the residuals from the pooled model, respectively. (N) is number of cross-sections (here, firms) and (T) is duration of time (that is, year). if null hypothesis is rejected, the model is estimated using fixed affect model, otherwise will be estimated using pooled method. if fixed effect model is selected, it should be tested against random effect model using houseman test: $H_0$=there is not a correlation between individual effects and explanatory variables $\Leftrightarrow$ *random effect model.*

$H_1$= there is a correlation between individual effects and explanatory variables$\Leftrightarrow$ *fixed effect model.*

$$\boldsymbol{H}=(\hat{\boldsymbol{\beta}}_{\boldsymbol{FEM}}-\hat{\boldsymbol{\beta}}_{\boldsymbol{R}}$$

Is slope coefficients in random effect model, and ) $\hat{\beta}_{REM}$ (In the above (Var) stands for variance. This statistic has ($x^2$) distribution. In null hypothesis is rejected, the model is estimated using fixed effect model; otherwise, random effect model is applied (Allatoun and Aikbakht, 1389(Persian year).

$H_1: \exists\, r(\neq 0) \Rightarrow \alpha_i \neq \alpha_j$
$\Leftrightarrow$ at least one intercept is different from other
$\Leftrightarrow$ fixed affect model.

*estimation of model (4) and decomposition of Accruals into discretionary and non-discretionary components to decompose total accruals into discretionary and non-discretionary components, model (4) is estimated with pooled data, and results are presented in table (11). the significance of fisher statistic (5/67) and Housman statistic (32/.2)at 1% level shows that in order to estimate model(4),fixed effect approach has been used. Estimation results show that intercept (. /. 3), coefficient of fixed asset variables (-. /12), and return on assets (./39) are significant at 1% level. The significance of fisher statistic (32/64) suggests the overall significance of the model. Modified determination coefficient also shows that independent variables of model (4) would account for about 21 percent of changes in the variable "accruals".

*Table (11):results of the estimation of model(4)*

$$\boldsymbol{ACC_{it}=a_0+\alpha_1(1/A_{it-1})+\alpha_2(\Delta REV_{it}-\Delta REC_{it})+\alpha_3(PPE_{it})+\alpha_4 ROA_{it}+\varepsilon_t}$$

| Variables | coefficient | **t-student statistic** | significance |
|---|---|---|---|
| **Intercept** | **./.3**** | **4/..** | ./.. |
| **$1/A_{it}$-1** | **-149/40** | **-./28** | ./78 |
| | **-./.2** | **-1/72** | ./.9 |
| | **-/.12**** | **-6/69** | ./.. |
| | **./39**** | **14/61** | ./.. |
| **Fisher statistic (significance)** | **(./..)32/64**** | | |
| **Adjusted determination coefficient** | **20/76%** | | |
| **Limer F-statistic (significance)** | **(./..5)/67**** | | |
| **Hausman statistic (significance)** | **(./..)32/.2\|**** | | |

**significance at 1% leve

After estimating model (4), disturbing elements of the model are extracted ad discretionary accruals and then, their absolute value is used as a measure for earning management (EM).

***descriptive statistic**

Descriptive statistic of the study which suggest an overview of the data status are presented in table (12).

***Table (12):** descriptive statistic

| variable | Average | median | max | min | Standard deviation |
|---|---|---|---|---|---|
| **ACC** | **./.6** | **./.4** | **1/13** | **-./67** | ./16 |
| **CFO** | **./10** | **./.8** | **-./79** | **-./578** | ./17 |
| **REC** | **./25** | **./23** | **1/13** | **./..** | ./19 |
| **REV** | **./99** | **./92** | **3/75** | **./.5** | ./53 |
| **PPE** | **./32** | **./27** | **1/14** | **./..** | ./23 |
| **MTB** | **3/29** | **2/.6** | **34/58** | **./28** | 3/92 |
| **SIZE** | **12/81** | **12/71** | **17/11** | **9/62** | 1/36 |
| **ROA** | **./15** | **./12** | **./98** | **-./31** | ./15 |

Variable definition: ACC= Accruals, CFO=Operating cash flow, REC=Receivables, REC=Receivables, REV=sales revenue, PPE=fixed Assets, MTB=Market to book value ratio, SIZE=size of a firm which equals natural logarithm of firm assets, ROA=return on Assets which equals net income to total assets ratio in the beginning of the period

***correlation coefficients**

Pearson's correlation coefficient are presented in table(13).these statistics were used to examine the linear correlations and its direction between the variables of the study.

***Table(13)**:person's correlation coefficients*

| variable | ACC | CFO | REC | REV | PPE | MTB | SIZE | ROA |
|---|---|---|---|---|---|---|---|---|
| ACC | 1 | | | | | | | |
| CFO | -./59** | 1 | | | | | | |
| REC | ./30** (./..) | -./23** (./..) | 1 | | | | | |
| REV | ./20** (./..) | ./10** (./..) | ./30** (./..) | 1 | | | | |
| PPE | -./15** (./..) | ./24** (./..) | -./25 (./..) | ./.3 (./34) | 1 | | | |
| MTB | ./.8** (./..) | ./24** (./..) | -./.6* (./.3) | ./.9** (./..) | ./.6* (./.2) | 1 | | |
| SIZE | -./.3 | ./.8** | -./14** | -./.9** | ./.8** | -./.8** | 1 | |
| ROA | ./36** (./..) | ./55** (./..) | ./.4 (./11) | ./33** (./..) | ./13** (./..) | ./36** (./..) | ./.6* (./.2) | 1 |

**are significance at 5% and 1% level, respectively results show that the correlation between accruals and operating cash flow variable is -./59, receivable accounts is %30, sales revenue is %20, fixed assets is -./15, MTB is./.8, and ROA is %36 significant. Correlation coefficient between operating cash flow and the variables REC (-./23), REV (./10), PPE(./24), MTB(./24), size (./.8), and ROA (./55) is also significant at the level of (1%). Correlation coefficient between (REC)and the variables, REV(./30), PPE(-./25), and size (-/14) is significant at 1% level, and correlation coefficient between (REC) and (MTB)(-./.6) is significant at 5% level. The correlation between (REV) and variables, MTB (./.9),size (./.9), and ROA (./33)is significant at 1% level. Correlation coefficient between PPE(fixed assets) and MTB (./.6) is significant at 5%level, and correlation coefficient between PPE and the variables, ZIZE (./.8), and ROA (./13) is significant at 1% level.MTB with variables, size(.-/.8)and ROA (./36) is significant at 1%level. ROA and size (./.6) are also correlated at 5% level.

*results of the estimation of the models

First hypothesis results:

To test the first hypothesis, model (4) was estimated with pooled data. Significance of limer statistic (16/27) at 1% level and the lack of possibility to estimate random effects model and perform Housman test due to technical reasons shows that the model has been estimated using fixed effect approach. estimation results of this model using fixed effect approach show that intercept(./.4) and coefficient of the variables, EM (-./.5), dummy variable $DCF_{it}$(-./.6), operating cash flow (./18), $EM_{it}\times dcf_{it}$(./24), $Em_{it}\times cfo_{it}$(-./21), $EM_{it}\times DCF_{it}\times CFO_{it}$(./23) are significant at 1% level. significance of the coefficient of the variable, $EM_{it}\times DCF_{it}\times CFO_{it}$(./23)at 1% level shows that the variable earnings management has a significant effect on conditional conservatism measure. This shows that there is a significant association between conditional conservatism and EM. thus, the first hypothesis is not rejected.

**Table (14)**: estimation results of model (4)+$\beta_1 EM_{it} + \beta_2 DCF_{it} + \beta_3 CFO_{it} + \beta_4 DCF_{it} * CFO_{it} + \beta_5 EM_{it} * DCF_{it} + \beta_6 EM_{it} * CFO_{it} + \beta_7 EM_{it} * DCF_{it} * CFO_{it} + \epsilon_{it}$

| Variables | coefficient | t-student statistic | significance |
|---|---|---|---|
| **Intercept** | **./.4**** | **5/15** | ./.. |
| | **-./.5**** | **-4/31** | ./… |
| | **-./.6**** | **-4/92** | ./.. |
| | **./18**** | **3/98** | ./.. |
| | **-./.6** | **-./50** | ./62 |
| | **./24**** | **16/10** | ./.. |
| | **-./21**** | **-7/12** | ./… |
| | **./23**** | **4/57** | ./… |
| **Fisher statistic (significance)** | **(./..)139/70**** | **-7/12** | **./…** |
| **Adjusted coefficient of determination** | **59/88%** | | |
| **Limer F-statistic (significance)** | **(./..)16/27**** | | |
| Hausman statistic(significance) | **----** | | |

**significance at 1% level

***second hypothesis results**

To test the second hypothesis, model (5) was estimated using pooled data. Significance of limer statistic (./72) shows that mode model. Adjusted determination coefficient show that independent variables would accunt for 5 percent change in dependent variable

*Table(15):estimation results of model(5)

$$EM_{it} = \alpha_0 + \alpha_1(MTB_{it}) + \alpha_2(SIZE_{it}) + \alpha_3(ROA_{it}) + \varepsilon_t$$

| variables | coefficient | t-student statistic | **Significance** |
|---|---|---|---|
| **Intercept** | **./33** | **1/71** | ./.9 |
| | **./.2**** | **1/..** | ./.. |
| | **./.1** | **1/..** | ./32 |
| | **./86**** | **5/92** | ../. |
| **Fisher statistic (significance)** | **(./..)21/87**** | | |
| **Adjusted determination coefficient** | **5/18%** | | |
| **Limer F-statistic(significance)** | **(./63)./72** | | |
| Hausman statistic(significance) | **------** | | |

**significance at 1% level

Significance of the coefficient of the variable MTB(./.2) (unconditional conservatism measure) at 1% level shows that there is a significant relationship between unconditional conservatism and EM.so, the second hypothesis of our study is not rejected as well.

***the overall conclusion of the study**

The researcher in this study, over the study period |(1380-1388) concluded that given the statistical analysis associated with hypotheses, there is a positive significant relationship between conditional and unconditional conservatism and EM.in other \words, it can be said that firms providing a conservative financial reporting can have more EM behaviors. This result is consistent with result by zhou and lebo(2006).

***suggestion for future studies**

-studies on the impact of industry type on the relationships of (EM) and conservatism.

-the use of other models and variables in defining conservatism and EM.

-investigating the effects of other control variables

***limitations of the study**

1-given that the statistical population of the study is limited to firms listed in Tehran stock exchange, and that they are required to submit consolidated financial statements, and their fiscal year must be ended in the of esfand,therefore extending the results to other firms should be performed catiously.

2-another limitation of the present study is the lack of considering all control variables.

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4/26/2013