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CONSERVATIVE REPORTING AND ITS RELATIONSHIP WITH AGGRESSIVE REPORTING OF EARNINGS FIGURES

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ABSTRACT

In this study, the relationship between conservatism in reporting financial figures and aggressive reporting of earnings figures has been investigated. Here, Jones's adjusted model for calculating earnings management has been used as the substitute variable for aggressive reporting. Data were extracted from a sample of 102 companies listed on Tehran Stock Exchange for the period of 2007-2011. Hypotheses were tested using correlation analysis and regression modeling. In the first hypothesis, the relationship between earnings management and conservatism on MTB is addressed. The second hypothesis deals with the relationship between earnings management and conservatism based on accrual items. Findings from the first hypothesis indicate an inverse correlation between aggressive reporting and conservative reporting, i.e. where there is more conservatism, earnings management is less, and vice versa. However, findings from the second hypothesis represent a direct correlation between earnings management and conservatism. i.e. where there is more conservatism, the earnings management is higher. This contradiction in the relationship between conservatism and earnings management, caused by economic environment and behavioral factors, is the subject of conservatism in financial reporting.

Keywords: *Earnings Management, Aggressive Reporting, Conservatism, Accrual Items*

INTRODUCTION

Adoption of informed and rational decisions about business units requires having awareness of their financial status, financial performance, and financial flexibility. Financial statements, which are to address this need, should contain information with quality features like conservatism (prudence). Basu (1997) defines accounting conservatism as the accountants' tendency to require higher degree of verification for recognizing good news such as earnings, than bad news like cost and loss. Conservatism speeds up recognition of losses, and by accurate and prudent measurement of economic enterprises' outputs reduces calculated earnings and finally decreases distributed cash dividend (Basu, 1997). However, in the absence of conservatism, managers may achieve their favorable earnings by recognition of unrealized earnings, and so ask for additional reward (Watts, 2003a; Watts, 2003b). In other words, using accounting procedures (either in accordance with accounting standards or not) seeks to make financial position of the company more favorable. This practice is called aggressive reporting. According to Watts (2003), with neutralization of the manager's biased behavior, accounting figures, prepared on conservatism accounting standards, curb opportunistic payments to the manager and other groups such as shareholders, and consequently increases value of the company. In accordance to the mentioned theories, the present study seeks to measure accounting conservatism in the companies listed on Tehran Stock Exchange and investigates its relationship with earning management, as the substitute for aggressive reporting (Watts, 2003a; Watts, 2003b).

Theoretical Bases and Research Background

Earning management means taking advantage of financial reporting in favor of company's operational performance; while, conservatism intentionally reports less favorable operational performance of the company in financial reporting. Despite various applications of the above concepts in accounting, researchers have got contradictory results. Watts (1993), followed by Basu (1997), can be considered as pioneer researchers in the field of conservatism (Watts, 2003a; Watts, 2003b). Iatridis suggests that due to the higher agency-related problems in small and newly established firms, they are more conservative than large companies (Iatridis, 2011). Knoops's findings indicate that high leverage and the resulting conflict

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between creditors and shareholders, particularly in the field of dividend policies, are another factor for adopting conservatism approach (Knoops, 2010).

Feltham suggests that the reason for employing unconditional conservatism is assessment difficulties. While, the main reason for using conditional conservatism is to neutralize biased tendency of management towards exaggerated reports (Feltham and Ohlson, 1995).

Xi Li in a study Accounting Conservatism and the Cost of Capital: International Analysis concluded that the countries with accounting conservatism approach have significantly lower capital cost (Li, 2010).

Tao Ma suggests a negative, significant correlation between both expectations from future performance and investment size with conservatism (Tao, 2010).

Banimahd's findings indicate that accounting conservatism has a positive relation with reliability and a negative relation with relevance.

Also relevance and reliability have a negative relation. The other results show that firm size is related to reliability and relevance but leverage is not related to relevance and has a positive relation with reliability (Banimahd, 2006).

Lobo and Zhou found in their research that the companies employing financial conservatism may have more earning management behaviors (Lobo and Zhou, 2006). In contrast, Zhou (2008) concluded that the companies employing financial conservatism perform less earnings management. From an enterprise creditors' view, applying conservatism means proportional and proper distribution of earnings and net assets between the stakeholders.

The experimental studies (for example: by Ahmed *et al.*, 2002) have shown that conservatism eliminates the conflict of interests between shareholders and creditors (Ahmed and Duellman, 2005). Basu may be considered as the first researcher who conducted an experimental study to measure conservatism in financial statements (Basu, 1977).

Paek *et al.*, (2005) sought the association between conservatism and market to book value (Paek *et al.*, 2005).

Givoly *et al.*, measured conservatism in financial reporting (Givoly *et al.*, 2007). Wu *et al.*, (2009) investigated the impact of conservatism on earnings prediction (Wu *et al.*, 2009).

Li studied the contractive advantages of accounting conservatism on international capital and debt markets (Li, 2010). Zhang examined the advantages of conservative accounting for all parties in debt contracts (Zhang, 2008).

García *et al.*, in a series of research in Spain investigated the impact and role of the board of directors on applying conservatism on earnings (García *et al.*, 2009).

Zhang studied the advantages of conservative accounting for all parties in debt contracts (Zhang, 2008). Charbel *et al.*, (2010) arrived at the conclusion that a positively significant relationship exists between the bankruptcies with smaller and independent board of directors achieve consisting of external managers and the shares owned by the managers (Charbel *et al.*, 2010).

Iatridis *et al.*, studied the English firms for low and high quality reporting (Iatridis *et al.*, 2011). Athanasakou and Strong examined the classification of exceptional items and investigated how managers use them to present sustainable profit and perform earnings management (Athanasakou and Strong, 2010). Ping and Yan (2009) studied earnings smoothing through unrealistic incomes via accruals.

Atik (2009) investigated Turkish firms' behaviors, using accounting changes for earnings management. He also presents a number of models to be used by those firms to achieve expected earnings (Atik, 2009). Bauwheede *et al.*, (2007) investigated the impact of conservatism on earnings sustainability (Bauwheede *et al.*, 2007).

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Measuring Research Variables

| | |
|---|---|
| Independent Variables (Conservative Financial Reporting) | Givoly & Hayn's Conservative Index : $CI = TA^{(-1)} / A_{it-1}$ CI=Conservative Index TA= Sum of Accrual Items =Net Income + Depreciation - Operating Cash Flows A= Sum of Asset |
| | Feltham & Ohlson's Conservative Index : $MTB = MARKET\ VALUE_{it} / BOOK\ VALUE_{it}$ |
| Dependent Variables (Aggressive Financial Reporting) | adjusted Jones model(earnings management) : $DA_{it} = (TA_{it} / A_{it-1}) - NDA_{it}$ DA = Discretionary Accruals $TA_{it} / A_{it-1} = \alpha_1 (1 / A_{it-1}) + \alpha_2 (\Delta REV_{it} / A_{it-1}) + \alpha_3 (PPE_{it} / A_{it-1}) + \varepsilon_{it}$ $NDA_{it} = \alpha_1 (1 / A_{it-1}) + \alpha_2 ((\Delta REV_{it} - \Delta REC_{it}) / A_{it-1}) + \alpha_3 (PPE_{it} / A_{it-1})$ $TA_{it} = E_{it} - OCF_{it}$ REV_{it} = Change of sales income PPE_{it} = Change of assets, machineries & equipments REC_{it} = Change of receivables OCF_{it} = Operating Cash Flows E_{it} = net income before extraordinary items |
| | debts to assets ratio (Leverage ratio) Total assets turnover Earnings growth = current year's profit / last year's profit directly or indirectly owned by the government = Numbers 1 and 2 are assigned to the public and the private firms |
| Control variables | |

Statistical Population and Sample

The statistical sample that has been extracted from the statistical population, including all companies listed on Tehran Stock Exchange, is comprised of 102 companies (510 companies-year). This selection has been done, using systematic elimination technique, and is based on the below criteria:

1. Companies listed on Tehran Stock Exchange during research conduction.
2. Companies whose fiscal-year-end is end of solar year.
3. Companies not categorized as investment firms and financial intermediaries.
4. Companies active in the stock exchange for a 5-year period, from 2007 to 2011.

Descriptive Statistics

Descriptive statistics of the variable are presented in Table 1:

| | Y Earnings Management | 1 MTB | X Accrual Items |
|--------------------|----------------------------------|------------------|----------------------------|
| Mean | 0.0509 | 1.5504 | 0.5115 |
| Std. Error of Mean | 0.0392 | 0.124 | 0.02208 |
| Median | 0.028 | 1.2763 | 0.0021 |
| Std. Deviation | 0.34838 | 0.1024 | 0.19623 |

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According to the above table, MTB is 155% and accruals are 51%. It means that market values of the firms are at the minimum and, on average, 50% more than values written in their books. In addition, their use of non-cash accruals is high and this could be due to a variety of reserves that companies typically show in their books for prudence, at the end of the year. On the other hand, accounting standards do not inhibit them from such practices, and the standard deviation between them indicates the popularity of that action among companies. From another perspective, the existence of such reserves in the companies' books indicates aggressive reporting and manipulation of earnings figures. In addition, the results show that all companies have used this type of reporting as a tool for their managers to smooth the earnings.

Statistical Hypothesis Testing (Conservatism Variable X with Earning Management Variable Y)

Statistical hypotheses were developed as follows:

H₀: $\rho = 0$ there is no correlation between conservatism and earnings management.

H₁: $\rho \neq 0$ there is a correlation between conservatism and earnings management.

Since conservatism is introduced by means of two features (MTB and the accruals based criterion), two statistical hypotheses can be drawn on these two independent variables. Therefore, where Sig<0.05, H₀ is rejected and H₁ is accepted.

Figure 2: Tables of correlation coefficients between the variables

| | | Y Earnings Management | X1 MTB | X2 Accrual Items |
|---------------------|---------------------|--------------------------|-----------|---------------------|
| Earnings Management | Pearson Correlation | 1 | 18.- | 211 |
| MTB | Sig. (2-tailed) | | 421 | 0.0458 |
| Accrual Items | Pearson Correlation | -0.18 | 1 | -0.076 |
| | Sig. (2-tailed) | 421 | | 0.506 |
| | Pearson Correlation | 0.211 | -0.076 | 1 |
| | Sig. (2-tailed) | 0.0458 | 0.506 | |

AS seen:

- As correlation coefficient of MTB and earnings management is -0.18, and regarding that Sig=0.0421 is less than 5%, there is a significant correlation between the two variables.
- As correlation coefficient of the accruals based criterion and earnings management is 0.211, and that Sig=0.0458 is less than 5%, there is a significant correlation between the two variables.

Chart 3: Tables of the summary of multiple regression model (R^2 interpretation)

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|-------------|-------------------|----------------------------|---------------|
| 1 | .397 ^a | 0.157 | .146 | 0.35085 | 2.035 |

Correlation analysis of independent variable (i.e. conservatism) with linear combination of "MTB" and "accruals based" variables with earnings management is R=0.397. In addition, multiple determinant factor (R^2) is 0.157. It means that MTB and accruals-based variables could justify 0.157 of whole earnings management changes. Other factors and random events account for the remaining. In addition, the value of Durbin-Watson statistic equals 2.035, which is a good value. Therefore, data independence is good.

Significance Test for Regression

Hypothesis:

There is a linear correlation between conservatism (MTB and accruals-based criteria) and earnings management.

H₀: r =0 there is no linear correlation between conservatism and earnings management (regression model is linear)

H₁: r \neq 0 there is a linear correlation between conservatism and earnings management (regression model is not linear)

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Chart 4: Table containing the results from significant test for linear regression model

| ANOVA^b | | | | | |
|--------------------------|-----------------------|-----------|--------------------|----------|-------------------------|
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 0.11 | 2 | 0.06 | 2.45 .0438 ^a |
| | Residual | 9.36 | 76 | 0.12 | |
| | Total | 9.47 | 78 | | |

Here, Sig=0.0438 is less than 5%, and so H_0 is supported. Investigating the regression model by including the control variables as well as market to book value (as independent variable) into the model. For the effect of control variables, all variables (i.e. Main and control) were included into the model to investigate their effect in comparison with MTB (as independent variable). The included variables: MTB, earnings growth, leverage ratio, ownership type, Assets turnover ratio.

Chart 5: Table First hypothesis related multiple R table with inclusion of control variables
Model Summary^b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|--------------|-------------------|-----------------|--------------------------|-----------------------------------|----------------------|
| 1 | .482 ^a | 0.232 | -0.037 | 0.35362 | 1.958 |

According to the model's summary table and despite the main and control variables, R equals 0.482, which does not significantly differ from multiple R (0.460) of the main variables. In addition, $R^2=0.232$ which means the four control variable and the main variable (i.e. MTB), all together, could only justify 0.232 of earnings management (dependent variable) changes. It means that in comparison with R^2 (0.212) in a similar table (hypothesis 1 model's summary table, without the control variables), it could produce very small amount of 2% change. In addition, the value of Durbin-Watson statistic equals 1.958, which is a good value.

Result from the First Hypothesis

There is an inverse correlation between conservatism based on MTB and Earnings management. Therefore, at significance level of 95%, the hypothesis proposing an inverse and significant correlation between conservatism and earnings management is supported. It means that the higher conservatism index is, the less earnings management would be, and vice versa. This study is in compliance with Zhou (2008), who found that the companies embarking on conservative financial reporting less address earnings management, as well as Penman and Zhang (2002), who found that conservatism accounting leads to low earnings quality (Penman and Zhang, 2002; Watts, 2003).

Result from the Second Hypothesis

At significance level of 95%, the hypothesis, assuming the significant correlation between accruals-based conservatism and earnings management, was confirmed. In addition, the correlation between them was positive and significant. It means that the higher the accruals-based conservatism is, the more the earnings management would be, and vice versa.

This study is in accordance with: Zhou and Lobo (2006) who found out that the companies embarking on conservative financial reporting could have more earnings management behavior (Lobo and Zhou, 2006); Garcia et al. who discovered the direct relationship between earnings management and conservatism (GarcíaLara, 2009); Paek who found out that earnings management has conditional relationship with conservatism, in voluntary, and not involuntary, accruals; and Molnar who showed that conditional conservatism and earnings management are, respectively, low and high in banking industry, but the opposite is not true (Paek, 2007). On the other hand, it contrasts with Petrovska who found out that the companies, experiencing advanced fraud, had employed very low level of conservatism.

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CONCLUSION

Based on the results from the first hypothesis, in the companies with greater MTB, where assets assessment has not been done, earnings management is lower; on the other hand, in the companies with lower MTB, earnings management is greater. It indicates to the inverse relationship between the two variables. This study is in accordance with that of Pye *et al.*, (2005) who discovered an inverse relationship between accruals and MTB. The results from the second hypothesis show that the greater accruals based conservatism is, the greater earnings management would be. It is in agreement with Lobo and Zhou who concluded that the companies with conservative financial reporting can have greater earnings management behaviors (Lobo and Zhou, 2006). It seems that the main reason for contradiction between the results from different models is their focus on different aspects and effects of conservatism on economic environment and behavioral factors of conservatism in financial reporting. For example, MTB is among the net assets criteria and measures conservatism in balance sheet. On the other hand, Givoly and Hayn's model is among the accruals and earnings criteria which consider conservatism as accumulated accruals (Givoly and Hayn, 2000); Finally, as conservatism is among the quality subjects, as finding and analyzing convergent and optimal models for measuring it is a difficult task, and as conservatism and earnings management are two separate spectrum of financial reporting, the optimal model should be chosen and analyzed to relate conservatism with earnings management.

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