The effect of accounting conservatism and earnings management on earnings quality

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Abstract

The net income has been always one of the important issues that had always been a favorite among financial statement's user, and the quality and management of it has always been the focus of attention of investors and creditors. The purpose of this study is to investigate the role of conservatism and earning management in earning quality. For this purpose, the Givoly and Hayn (2000) index were used as conservative measurement criteria and the modified Jones model (1995) was used as a measure of earning's management measurement, and the Dechow and Dichev (2002) index were used as a measure of the quality of earning (earnings sustainability) of the company. The statistical population of this study is 123 companies that listed on Tehran Stock Exchange between 2009 and 2014. For testing the research hypothesis a multivariate regression analysis was used. The results of the research indicate a significant negative (invert) relation between accounting conservatism and earning's management on the quality of earnings.

Keywords: Conservatism; Accruals; Earnings Management; Earnings Sustainability.

1. Introduction

The primary objective of financial accounting is to provide useful information for investors to predict the performance of the economic unit. The necessity to earning report as a primary source for investment decisions, executives and analysts have been well documented. The earning reports help to economy of the community in different ways, such as providing a basis for tax calculation, is a criterion for assessing the success of company’s performance, a criterion for determining the amount of dividends, a criterion for managing the distribution of earning, a criterion for managing an economic unit and so on. Also, because the value of a company is linked to its present and future earning, the determination of earning is of great importance (Kurdistan and Hedayati 2010). Managers often manage their earning in order to mislead their shareholders over the company's real economic performance. This earning management, which is done by manipulating accounting figures or manipulating real activities, reduces the accuracy of messaging earning. This action will increase the risk and uncertainty of outsourcing, and may also lead to information asymmetry and lower quality of earning. Earning management not only hides the company's true performance but also hides the real growth of company earnings and income that are beneficial to the company's future growth (Mac Nichols & Steven, 2008).

So, it is not surprising that the various stakeholders of the company perceive the management of the earning as undesirable and try to reduce the powers and discipline of the managers through the intensification of their supervision. In this regard, conservative shareholders consider it as regulatory and corporate governance tools that limit accruals-based management. (Garcia et al. 2012)

Conservatism is the result of asymmetric requirements for identifying earning and losses in the company's financial statements. This action will make accountants more likely to identify and reflect economic losses to their earning (Basu 1997). Based on past research, conservatism creates limitations on accruals-based earning management. Guy and Verchia (2006) argue that conservatism reduces the opportunities for successful earnings management based on accruals through identifying losses in real time and delaying the identification of economic earning. This issue has been raised with a broader perspective. Conservatism in this study is consistent Watts (2006). Watts (2003) argued that one of the key roles of conservatism is to restrict the financial statements of managers opportunistically, and to neutralize and eliminate the bias applied to financial statements by profitable and selfish individuals. Considering the above-mentioned perspectives, this study examines the effect of accounting conservatism and earning management on earnings sustainability in Iranian companies. To be precise, this study seeks to answer this question: What does Conservatism effect to the sustainability of earning? What does sustainability of earning effect to Conservatism? What does Conservatism and earning management simultaneously to the sustainability of earning?

2. Theoretical framework of research

Conservatism: Conservatism means the use of the care element to the extent necessary for judgment in ambiguous situations in such a way that revenues or assets are more likely to be incurred and costs or liabilities less likely to be provided. In other words, conservatism is one of the moderating covenants governing on accounting and financial statements in the sense that in some conservative conditions, it requires a procedure to be selected and applied that has the less favorable effect on assets, incomes, earning and, therefore, the owners' equity. (Committee for the Formulation of Accounting Standards, 2005)
The goal of conservatism: The massive flood of financial scandals in recent decades, from Enron and the US World Wide Web to the parliament in Europe, has caused financial accountability to be accused. Financial statements are the core of the financial statements process. Financial statements, and at their head, earning and loss, accounts (net income) are at the heart of investors' attention. In recent years, the issue of reported earning's quality has attracted many researchers. One aspect of the quality of earning is conservatism; it means that the more conservative the earning is, the quality is higher. (Dechowet, AL (2009).)

Types of conservatism: Conditional and unconditional conservatism: Basu (1997) defined conservatism as follows: Conservatism is a different confirmation capability that is needed to identify incomes and costs, which leads to a diminution of earning and assets. Conditional conservatism is a conservatism that is required by accounting standards. That is the timely recognition of losses in the event of bad and unfavorable news and the lack of recognition of earnings when there is good news. For example, the application of the lowest cost or net worth value in inventory evaluation is a conditional conservatism. This kind of conservatism is also a conservative of earning and loss or retrospective conservatism. However, unconditional conservatism has not been required by accepted accounting standards. This kind of conservatism shows the net book value of assets less, which is done by prescriptive accounting procedures. This conservatism is also known as balance sheet conservatism or "prospective conservatism." The main motive for unconscious conservatism is the difficulty of valuing assets and liabilities. The main motive for conditional conservatism is to neutralize the incentives of managers to report accounting information upside down in which higher than usual, and it happens when inappropriate events occur.

B. Earning Management: Earning management occurs when managers use personal judgments in financial statements and transaction structure. Their goal is to change financial statements in order to mislead the stakeholders or effect on contracts that are based on accounting figures. (Healy and Wahlen, 1999)

Earning Management Methods: In general, earning management is possible in two ways: earning management based on accounting data and real earning management.

A. Manipulating real activities
B. Manipulation of optional accruals

Definition of earning management: Skipper (1989) said in his research that earning management could include real activities. This kind of earning management is done through a change in operational activities aimed at misleading the stakeholders. The manipulation of actual activities affects cash flows and, in some cases, affects accruals. (ValizadehLarijan, 2008)

Definition earning management based on accruals: Definition of accrual-based earning management: Due to the flexibility of accepted accounting principles; administrators try to apply earning's accruals using various accepted methods. Applying managers' perceptions can increase the quality of earning reporting by reporting confidential information. (Hohlhausen, 1990).

C. The quality of earning: The theory of earnings quality was first proposed by financial analysts because they felt that the reported earnings did not show the power of earning as big as the mind. They believe that the benchmark for earning's quality is the ratio between earning reported net and cash flow from minus non-recurring yields (Chano et al., 2006). In Kurdistan, the criteria used to measure the quality of earnings is:

1) Stability of earning, which is the repeatability of current earning.
2) The predictability of earnings.
3) The relationship between earning and operating cash flow (Saqafi and Kurdistani, 2004).

In previous studies, the quality of earning has several definitions, and there is no equal view on its definition. So far, financial professionals have not been able to achieve a non-earning-making computation that they consider to be qualitative (Khajavi and Nazemi, 2005). However, researchers have tried to achieve a range of earning's qualifications from earning reported net, using appropriate adjustments. Therefore, the concept of quality of earning is not a fixed definition of what can be achieved, but rather a relative concept depending on its relation to views and attitudes. (Dastgir and colleagues, 2012)

3. Background research

Dellkosh and Musazadeh (2016) investigated the relationship between earning's management, and the earning's quality of companies listed on Tehran Stock Exchange. The research sample included 40 companies accepted between 2010 and 2014. The results of the research showed that there is a significant relationship between earning's management and earnings quality companies listed on Tehran Stock Exchange. Therefore, the results indicate that increasing in the discretionary accruals is reduced from a number of desirable characteristics of benefit. In the meantime, accrual's quality will be affected by earning's management more than other properties. Moreover, an increase in a number of discretionary accruals is associated with a reduction of quality scores of corporate profits.

Dellkosh and Maddah (2016) investigated the relationship between earning management and earning conservatism with earning's quality (dispersion of profits) in the firms listed on the Tehran Stock Exchange. The research sample included 135 companies accepted between 2010 and 2014. In this study, to measure the earning management, Jones’ modified model and to measure conservatism, Givoly and Hayn's model (2000) have been used. Using multivariable regression analysis, the results indicate that earning's management increases profit dispersion. Furthermore, the results suggest the negative impact of conservatism on the dispersion of profit. Husseini and Razani (2015) in the study have investigated the relationship between contingent and non-controversial conservatism and the quality of earning in companies listed on the Tehran Stock Exchange for the years 2006 to 2011. The basic model used in this research for the time-free asymmetry of earning is the Basu model. The coefficient of the variable DR * RET is positive and significant. As a result, as the Basu cites, this is an indicator for the time asymmetry of earning and a criterion for measuring conservatism. This suggests that sample companies of this research use earnings conservatism in their reporting. The variable coefficient (CFO / NI) is negative and significant, which shows that there is a meaningful relationship between conditional conservatism and earning's quality. After entering the market value of the book value, the coefficient of the mentioned variable is positive and significant. As a result, it can be concluded that there is a meaningful relationship between unconditional conservatism and the quality of earning. Heidarpoor and Tahordari (2015) have influenced the effect of earning management on the relationship between corporate governance and the quality of earning. The spatial scope of the research includes companies admitted to the Tehran Stock Exchange. The time span also covers the period from 2008 to 2013. Research consists of two independent variables (earning management and corporate governance), the dependent variable (earning quality), and some control variables. In the first hypothesis, the relationship between earning management and earnings quality is examined in the second hypothesis of the relationship between corporate governance with earning quality and in the third hypothesis, the relationship between earning's management and corporate governance with earning quality is discussed. The results of the test showed that the first, second and third hypotheses were confirmed and there was a significant relationship between the variables.

Kurdistani and Tatali (2014) identified the effective and opportunistic approaches to earning management at the levels of earning's quality. In this regard, for measuring the quality and earning management, the data of 841 years of the company during the period from 2001 to 2011 were evaluated and for the analysis of the
hypotheses, 490 years of the company has been analyzed. The findings show that earning's management in companies with a low level of quality earnings is opportunistic. Also, in companies with a high level of earning's quality, evidence of the opportunistic nature of earning management is more than its efficiency. Therefore, high earning management leads to a decrease in the quality of earning, and false data does not lead to proper decision making.

Badie et al. (2014) examined the effect of conditional and non-conditional conservatism on earning's quality using the Basu, Wing, and Shawakumar models. The sample consisted of 65 companies that were studied between 2003 and 2012. In this research, conservatism measurements have been used from two models of Basu (1997) and Wool and Shiva Kumar (2005). Another variable added to the two models is the ratio of operating cash flow to net income (CFO / NI), which is considered as representative of the quality of earning. The results of data analysis showed that there is no significant relationship between conditional and non-conditional conservatism and quality of earning in the Basu model, but according to the Wald and Shawakumormodel, there is a significant negative relationship between conditional and non-conservative conservatism with the quality of earnings. It means that companies with high conservatives have lower earning's quality, and with applying conservative, reported earnings quality is lower.

Valipour, Talibian, Javanmard (2013). They examined the effect of earning's management on the earning's quality of companies with a financial crisis during 2004-2010. Data from 32 companies with the financial crisis and 82 other companies were used. The criterion for identification of companies with a financial crisis is the inclusion of Article 141 of the Commercial Code. The findings of the research show that companies with the financial crisis over the four years before inclusion in Article 141 have managed earning's management more than other companies by way of manipulating accruals and manipulating actual activities. The manipulation of accrual items is measured using the optional Kaznik accrual pattern (1999) and the manipulation of real activities by the pattern of unusual cash flows on Chaudhry (2006). In the next step, the effect of earning's management on the quality of earnings is assessed by conditional conservatism. For measuring the conditional conservative the wing pattern and Shivakumar were used (2005). The conditional conservative test indicates that, contrary to expectations, both groups use non-conservative accounting methods. Therefore, despite the increased earning management in companies with the financial crisis, the quality of earnings measured with the conditional conservatism criterion is the same in both groups and there is no difference between them.

Chang and Shiva (2010) examined the effect of earning management on the ability to predict earnings. The researchers say that generally earning management will reduce profitability predictive power. However, when the size of earning management and predictability is measured in different clusters, the results show that in the decile with the highest level of earning management, not only the profitability prediction cannot be reduced, but it can be concluded that earning's management has an informed behavior. Ultimately, the researchers say that their research results do not strongly support opportunistic earning management.

Li et al. (2011), by examining earning management and the effect of the quality of earning on the level of financial distress and insolvency of Chinese companies, found that the quality of accounting earnings decreases when managers make earning manipulation. Because accruals have increased and earning are rising more than cash flow, and the longer the gap between earnings and cash flows, the earning quality decreases. However, the decline in earning's management does not guarantee high earnings quality, because factors such as the capital market and poor standards that increase the quality of financial statements are contributing to the quality of earning. Tariq and Rasha (2011) tested the conditional and unconditional conservative effect on the quality of earnings and stock prices in Egyptian companies. They expanded the Basu model by adding two variables and analyzed data using multivariate regression 30 companies from 2005 to 2009. The results showed that conditional conservatism negatively affects the quality of earnings and stock prices of Egyptian companies, and unconditional conservatism does not affect the quality of earning but has a negative relationship with the stock prices of Egyptian companies.

4. Research hypotheses

Hypothesis 1: There is a significant relationship between accounting conservatism and earnings sustainability.
Hypothesis 2: There is a significant relationship between earnings management and earnings sustainability.
Hypothesis 3: There is a significant relationship between accounting conservatism and earnings management with earnings sustainability.

5. Variables

5.1. Independent variable

(A) Conservatism: in Basu's conservative model (1997), the positive returns represent good news and negative returns representing bad news. According to him, the reaction to earning from bad news is faster than the reaction to earnings rather than good news. The following statement is as follows:

\[ \Delta \text{REV}_i = \beta_0 + \beta_1 \overline{D}_{1,t} + \beta_2 R_{1,t} + \beta_3 \overline{D}_{2,t} R_{1,t} + \varepsilon_{1,t} \]

\[ \text{E}_{1,t}: \text{Corporate accounting earning in the year} \]

\[ \text{P}_{1,t-1}: \text{The market value of the company's equity at the end of the year (at the beginning of year t).} \]

\[ \text{D}_{1,t}: \text{A virtual variable; if there is bad news there is one and otherwise it is zero.} \]

\[ \text{R}_{1,t}: \text{Return on equity of the company in year t, which is the difference between the price of each share of the company at the end of the period and the price of each share at the beginning of the period plus stock adjustments (including dividends, bonus shares, etc.),} \]

\[ \text{And the total is divided by the price for each period defined at the beginning of the period.} \]

In this model, if \( \beta_3 \) is opposite zero and positive. It represents the conservatism that is calculated for each company individually and annually. \( \beta_2 + \beta_3 \) is the reaction of earning to bad news and because\[ \beta_2 > \beta_3 \]

Therefore, \( \beta_3 \) is a positive and in fact the asymmetric coefficient of time of earning, which is a conservatism criterion.

(B) Earning Management: In this study, optional accruals (DA) are used according to the modified Jones model as a measure of earnings management. The following steps have been applied to calculate the accruals items as follows:

First, the total accruals (TA) of the company must be calculated in the year in question.

To calculate accruals in this research, the modified Jones model (Ducho and Deger (1955)) has been used as follows:

\[ TA_t = E_{1,t} - OCF_{1,t} \]

E: Operating earnings of i in year t
OCF: Net operating cash flow of company i in year t
TA: Total accruals

In the next step, using Excel and SPSS software, using the least squares sum method, we calculated the parameters \( \alpha_1, \alpha_2 \) and \( \alpha_3 \) as the company’s specific parameters for the estimation of non-obligatory accruals (NDA) according to the following equation:

\[ TA_t^{\text{NDA}} = \alpha_1 (1/A_{1,t}) + \alpha_2 \Delta \text{REV}_t / A_{1,t} + \alpha_3 (\text{PPE} / A_{1,t}) + \varepsilon_{1,t} \]

TA: Total accruals
A: Total assets of company i in year t-1
**8. First hypothesis test**

The first hypothesis states that there is a significant relationship between earnings management and earnings sustainability:

<table>
<thead>
<tr>
<th>Table 2: Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

According to Table (2), the correlation coefficient between the independent earnings management variables with the dependent variable of earning stability is -.126 and the probability value is equal to .001, which is smaller than 5%, then the assumption H0 is not verified, therefore, with a probability of 95%, the existence of a negative and significant relationship is confirmed. In order to determine the reliability of the existence of a linear relationship between the two variables, the statistical hypothesis of the significance test of the whole regression model is as follows:

<table>
<thead>
<tr>
<th>Table 3: Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Regression</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

According to Table (3), it is noted that the adjusted coefficient of the model ($R^2$) is 0.193, which means that about 19.3% of the variation of the response variable (earning stability) by the independent variable (earning management) is descriptive. The probability value associated with the zero hypothesis that there is no linear relationship between the independent variable and the variable (H0) (Table 4) is equal to 0.001, which is smaller than 0.05, so it is 95% Statistical hypothesis is rejected. As a result, the linear relationship between the independent variable and the dependent variable is observed, and thus the hypothesis number one (H1) is confirmed.

**9. Second hypothesis test**

The second hypothesis states that there is a significant relationship between conservatism and earnings sustainability:

<table>
<thead>
<tr>
<th>Table 5: Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

In Table 5, the correlation coefficient between the independent variable, conservatism, with the dependent variable of earning sustainability is equal to -0.193, and the probability value is 0.000, that the probability value of the conservative relation with the expression of the earning stability is less than 5%, then the assumption (H0) is not confirmed, so with a probability of 95%, the existence of a negative and significant relationship is confirmed. In order to
determine the reliability of the existence of a linear relationship between the two variables, the statistical hypothesis of the significance test of the whole regression model is as follows.

Table 6: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.193a</td>
<td>.037</td>
<td>.036</td>
<td>.379997</td>
<td>1.825</td>
</tr>
</tbody>
</table>

According to Table 6, it is seen that the Modified coefficient of the model (R²) is 0.036, which means that about 36% of the variation of the response variable (earning stability) by the independent variable (Conservatism) can be described. The probability value of the zero hypothesis is that there is no linear relationship between the independent variable and the response variable (H0) (Table 7) equal to 0.000, which is smaller than 0.05, so that 95% this statistical hypothesis is rejected. As a result, the linear relationship between the independent variable and the dependent variable is observed, and thus the hypothesis No. 2 (H1) is confirmed.

10. Third hypothesis test

The third hypothesis states that there is a meaningful relationship between conservatism and earning management with earning stability.

Table 8: Correlations

<table>
<thead>
<tr>
<th>Description</th>
<th>EM</th>
<th>conserva-</th>
<th>EQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.660**</td>
<td>-.143**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>687</td>
<td>687</td>
<td>687</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.660**</td>
<td>1</td>
<td>.212**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>687</td>
<td>687</td>
<td>687</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.143**</td>
<td>-.212**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>687</td>
<td>687</td>
<td>687</td>
</tr>
</tbody>
</table>

In the table (8), the correlation coefficient between independent variables, conservatism and earning management is presented with the dependent variable of earning stability, and the probability value related to its significance is 0.000. As can be seen, the probability value related to the conservatism relationship And earnings' management with earning stability is less than 5%, so the assumption of (H0) is not verified, so with a probability of 95%, the existence of a negative and significant relationship is confirmed. In order to determine the reliability of the existence of a linear relationship between the two variables, the statistical hypothesis of the significance test of the whole regression model is as follows.

Table 9: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.212a</td>
<td>.045</td>
<td>.042</td>
<td>.349271</td>
<td>1.818</td>
</tr>
</tbody>
</table>

According to Table 9, it is seen that the Model adjusted coefficient of determination (R²) is equal to 0.042, which means that about 42% of the variation of the response variable (earning stability) by independent variables (Conservatism and earning management) can be described. The probability value associated with the hypothesis of zero is that there is no linear relationship between the independent variable and the response variable (H0) (Table 10) equal to 0.000, which is smaller than 0.05. Therefore With 95% confidence, this statistical hypothesis is rejected. As a result, a linear relationship between the variables is observed between the independent and dependent variables, thus confirming the hypothesis number three (H1).

11. Conclusion

Summary of results the research hypotheses are as follows:

Hypothesis 1: There is a negative (inverse) and significant relationship between accounting conservatism and earnings sustainability.

Table 10: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regres</td>
<td>3.921</td>
<td>2</td>
<td>1.961</td>
<td>16.072</td>
<td>.000 a</td>
</tr>
<tr>
<td>Residual</td>
<td>83.441</td>
<td>684</td>
<td>.122</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>87.363</td>
<td>686</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are requirements for the application of conservative methods in the accounting standards of Iran and the world, which indicates the importance of the issue of conservatism. Various researches conducted in the field of conservatism and the results of it show the conservative information interests. In recent years, the reported quality of earnings has also attracted by some researchers. The scam from big companies such as Enron and Tyco WorldCom has raised questions about the ability to rely on reported earnings, and has drawn the attention of researchers and analysts from earning to earning's quality. The quality of interest is the interest of users of financial statements for decision making. If the earnings have a low quality, they will supply false information to the financial markets. Empirical research over the years has shown that the use of conservative procedures and earning management can affect the quality of earnings, but less research has simultaneously investigated this relationship. The results showed a significant negative relationship between accounting conservatism and earning's management with earning sustainability (profitability criterion). Our results have been
similar to the research of Tareq and Rasha (2011) and Etemadi et al. (2012).

References


