The Effect of Unconditional Accounting Conservatism on non-profitability in An Emerging Market: Case of Iran

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Abstract

The present study is intended to examine the effect of accounting conservatism on firms' non-profitability in Tehran Stock Exchange in 48 unprofitable firms and 57 profitable firms over a period of seven years from 2001 to 2007. This study was conducted according to Givoly and Hayn model to measure accounting conservatism index in non-profitable and profitable) firms. Data analysis performed with logistic regression. The results of study showed that there is significant and direct relationship between unprofitability and accounting conservatism. It was also concluded that, unprofitability is positively correlated with financial leverage, and is negatively correlated with firm size and profitability index. In addition, the results of the study showed that there was not any significant relationship between sales growth and non-profitability; moreover there is a direct relationship between financial leverage and non-effectiveness of sales growth in non-profitable firms. The results showed that accounting conservatism is an effective mechanism to limit the bias behavior of managers in overstatement of earnings in non-profitable firms and it consequently increase the firm value of non-profitable firms in long term.

Keywords: Accounting conservatism**,** Non-profitable firms**,** Management performance.

1- Introduction

The relationship between accounting conservatism and unprofitability of the firms listed in Tehran Stock Exchange (TSE) is being analyzed in the this study. According to previous studies, there is direct and significant relationship between accounting conservatism and non-profitability (Givoly, D. and C. Hayn., 2000). In Iran, the continuity of unprofitability of listed firms in Tehran Stock Exchange is growing. So that, in 2008, more than 30 firms, ejected from the Tehran Stock Exchange due to non-profitability and bankruptcy. In some accounting study, it is mentioned that at the time of financial crisis, firms managers tend to increase firm's value by transferring good news to capital markets (Biddle ,G. C., L.M. Mary, and F. M, Song, 2010, Vichitsarawong ,T. and L. Eng, 2010). Some accounting scholars in positive accounting researches also believe that accounting conservatism is as an effective mechanism in setting contracts between different groups, which neutralize the bias behavior of managers in overstatement of earnings, through to delay the recognition of good news such as profit . As a result, it prevents the outflow of cash in form of dividends and tax(Watts, R, 2003). Therefore, the primary purpose of the present study is to elaborate on theoretical issues related to accounting conservatism and unprofitability of firms. Secondly, it investigates whether or not accounting conservatism can be used as a mechanism in negotiating contracts to reduce manager's bias behavior. We hope that the outcomes of this study will be useful to financial analysts, investors, administrators and other users of accounting information. The difference between the present and previous studies is that this paper examines the relationship between accounting conservatism and non-profitability in a less developed economic environment and in an emerging market. This research also is carried out in a country that the government is the ultimate owner of industries, it means ownership and managing has been not separated. However, the previous researches were conducted in an environment where ownership and management are completely segregated.

This paper first describes the theoretical framework of the study. It then describes the methodology before presenting the results of the empirical study and the study's findings.

Theoretical Framework

Definition of accounting conservatism

Basu defines conservatism as the accountant’s tendency to require a higher degree of verification to recognize good news as gains than to recognize bad news as losses (Basu,S.,1997).This definition, describes the conservatism, from the income statement view point. Another definition defines the conservatism in the view of the balance sheet. According to this view, when there is a real doubt in choosing between two or more reporting methods, the method which is selected has the minimum desired effect on equity (Feltham, G. and J. A. Ohlson., 1995). The third definition of conservatism is a combined method of balance sheet and income statement perspective. In the third perspective, conservatism is an accounting concept which leads to decreased retained earnings reported by delayed recognition of revenue, and fast recognition the expense, evaluation of low asset and high liability (Givoly, D. and C. Hayn., 2000).In this study, the third definition is used to calculate the accounting conservatism index. Another category to define conservatism is presented by Ryan that includes conditional and unconditional conservatism. Conditional conservatism has been required by accounting standards. Conditional conservatism leads to a more timely recognition of bad news than good news in earnings. This kind of conservatism is also known as profit and loss conservatism. Unconditional conservatism is not required from accepted accounting standards (Ryan, S. 2006). This kind of conservatism shows lower net assets value through predetermined procedures accounting. This kind of conservatism is known as balance sheet conservatism. It explains that the Givoly and Hayn model, has measured the unconditional conservatism (Ryan, S. 2006).

literature review

Watts believes that if the firm contracts with various groups such as investors and creditors are adjusted based on accounting figures, due to conflicts of benefits between its managers and group, managers will try to manipulate the figures through bias behavior to their own benefits. He believes that accounting conservatism, by delaying the recognition of net income and net assets, reduces cash payment for performance-based compensation, taxation and dividends. He presents arguments that the accounting conservatism is still very significant in improving financial reporting; and accounting conservatism is an effective mechanism to limit biased behavior of the managers through delay recognition of income and assets, and timely recognition of losses and debt. In fact, conservatism can limit management's opportunistic behavior in reporting accounting measures used in a contract. This prevents the cash outflows by the form of dividend and company tax-and increases the firm's value in long term(Watts, R, 2003).The research of Givoly and Hayn showed profitability has been reduced in U.S. over the last four decades but this loss does not reduce cash flows. Their results showed that recognition of loss has been done sooner than of the profits, and unconditional conservatism and losses has increased to 35 percent in the U.S. financial reporting(Givoly, D. and C. Hayn., 2000). Klein and Marquardt examined accounting and non-accounting factors behind accounting losses over a fifty-year period. They reported evidence that the annual percentage of losses for U.S. firms is significantly related to accounting conservatism and they found direct and positive relation between unconditional conservatism and accounting losses. Givoly and Hayn's results were confirmed by their research (Klein A. and C .Marquardt, 2006).Bal Krishna et al. carried out a study which shows that loss incidence in Australia is frequent; with around 40 per cent of the sample firm reported the increase in unconditional conservatism and unprofitability during a decade from 1993 to 2003 (Balkrishna, H.,J. Coulton, and S.Taylo, 2007).Watts and Zimmerman showed that firms with high political costs tend to use conservative accounting procedures(Watts R. and J. Zimmerman, 1978). Ahmed and et al. confirmed their findings and showed that large firms used more conservative accounting methods than other firms. Their results also showed that firms facing more severe conflicts over dividend policy tend to use more conservative accounting. Their evidence is consistent with the notion that accounting conservatism plays an important role in mitigating bondholder-shareholder conflicted over dividend policy and in reducing firms' debt costs(Ahmed, A. , et al, 2002). Biddle and et al. examined relations between accounting conservatism and bankruptcy risk. They found both unconditional and conditional conservatism to be negatively associated with bankruptcy risk. They also found that bankruptcy risk associates positively with unconditional conservatism and negatively with conditional conservatism. They believe that their findings will help to inform continuing deliberations regarding conservatism's ongoing role as an important principle of financial accounting (Biddle, G. C., L.M. Mary, and F. M, Song, 2010).

In another study Vichitsarawong and eng revealed that in the period of Asian financial crisis in Hong Kong, Malaysia, Singapore, and Thailand in 1997 , use of conservatism was low, but it was improved in the post-crisis period. Their findings were consistent with an increase in conservatism after the crisis period. Overall, the results indicate that corporate governance reforms (using conservatism or accounting conservatism) in these four countries after period of financial crisis was effective (Vichitsarawong ,T. and L. Eng, 2010).

Research methodology

Sample selection

The statistical population used in this paper includes all firms listed on the Tehran Stock Exchange (TSE) over a 7- period between 2001 and 2007. The statistical sample includes 48 non-profitable and 57 profitable firms that have listed on the Tehran Stock Exchange before 2001. Binary logistic method is employed as the technique to estimate the model. Financial and accounting data is collected directly either from firms annual reports or Tehran Stock Exchange website. Non-profitable firms including firms that exited from the list in Tehran Stock Exchange because of non-profitability. Among these firms, 48 firms that their data was available are considered.

Profitable firms have to the following conditions:

1) The firms which were listed in Tehran Stock Exchange before 2001 .The reason is that the period of the study began from 2001 and for some study variables may also needed to be about the past years.
2) These firms must not included investment and banking firms since they had different nature and classification of financial statements items.
3) Their fiscal year ends on 21 March which was compatible with the Iranian calendar in the most of Iranian firms.
4) The firms that were profitable and those data should be available.

According to the above mentioned conditions, only 57 firms had these conditions, so they were chosen as profitable firms. In total, study sample included 105 firms.

Variable Definitions:

Dependent Variable:

The dependent variable in our research is non-profitability which is a dummy variable. It is shown with zero and one. Zero for the unprofitable firms and one for profitable firms.

Independent Variables:

Accounting Conservatism:

In this study, we use Givoly and Hayn model to measure accounting conservatism index. Following Givoly and Hayn, we measured accounting conservatism using operating accruals (Givoly, D. and C. Hayn., 2000). The below equation is designed to estimate accounting conservatism index.

Conservatism Index = (Operating accruals – Total Assets in the beginning of the year) * (-1)

Operating accruals is obtained from differences between net income and operating cash flows plus depreciation expense. Based on Givoly and Hayn, Growth in accruals can be an indicator of change in the degree of conservative accounting during a long period. In other words, if accruals increase then accounting conservatism decrease, and vice versa. Hence, operations accruals are multiplied in a negative number (Givoly, D. and C. Hayn., 2000)..This index is used in several studies, such as Ahmed and et al. and Klein and Marquardt (Ahmed, A., Klein A. and C .Marquardt, 2006).

Firm Size

Theoretically, large and very profitable firms have probably more profit (or less non-profitability) in comparison with other firms. Also, small firms are more likely to report losses than larger firms (Klein A. and C .Marquardt, 2006).Therefore; firm size could impact on non-profitability. This study uses the natural logarithm of total assets as a proxy for firm size.

Financial Leverage

Various studies have confirmed that increase in debt could increase financial expense, and decrease net income. This has a negative effect on management's bonus and, consequently, will force the managers to improve the company's performance, which could prevent the bankruptcy. Zeitun and Tian have also concluded that the borrowing, improve firm performance(Zeitun, R. and Tian G.G, 2007). Huang and et al. indicates that increase in financial leverage will increase conflict between managers and shareholders interest (Huang J.J., S. Yifeng and S. Qian, 2011) .Therefore in this study, financial leverage, measured as the ratio of debt to assets, and it is considered as one of the independent variables.

Sale Growth

Since sale growth, can impact on accruals items like accounts receivables, inventory and profitability index (Ahmed, A.,et al, 2002). In this research, sales growth also is added as a control variable to the other variables.

Profitability

Some of studies relate non-profitability index and bankruptcy to the performance of manager. To evaluate the performance of the manager the index of profitability is used; it can be calculated via the division of net income borrower by total asset of borrower. This study uses ROA (return on asset) for manager performance and it is measured by net income divided to total assets. This index is used in several studies, including Givoly and Hayn and Klein and Marquardt (Givoly, D. and C. Hayn., 2000, Klein A. and C .Marquardt, 2006).

Research hypotheses: We have considered the main hypothesis of this study on the basis of literature review. This hypothesis is as follows:

H_1:Accounting conservatism has a significant relationship with non-profitability.

H_2: Firm Size has a significant relationship with non-profitability.

H_3: Financial Leverage has a significant relationship with non-profitability.

H_4: Sale growth has a significant relationship with non-profitability.

H_5: Profitability has a significant relationship with non-profitability.

Results Analysis:

Descriptive Statistic

Table 1, provides descriptive statistics for dependent and independent variables. The sample observations are grouped in non-profitable and profitable firms. The findings show that accounting conservatism, profitability index, firm size and financial leverage are different in two groups of firms.

Table 1:Descriptive Statistics for dependent and independent variables

Firm Situation		Mean	Median	Std.deviation	Skewness	Kurtosis
Unprofitable firms	Conservatism index	0.06347	-0.03809	0.263855	-0.458	4.359
	firm size	11.67006	11.78118	1.265638	0.288	-0.624
	financial leverage	0.15881	0.09159	0.197246	2.644	8.036
	sale growth	0.14325	0.03027	0.932276	5.88	47.55
	profitability index	-0.09393	-0.01715	0.460983	-0.446	22.955
profitable firms	Conservatism index	-0.02985	-0.0295	0.117128	-0.461	2.394
	firm size	12.91208	12.613	1.456105	1.084	1.433
	financial leverage	0.08696	0.058	0.081272	2.534	9.412
	sale growth	0.18555	0.15250	0.238621	1.885	9.036
	profitability index	0.16776	0.14948	0.127346	0.753	0.945

Statistical analysis

In this study we have used binary logistic regression to investigate the effect of accounting conservatism, firm size, sales growth, financial leverage and profitability index on dependent variable (non-profitability) .As table 2 shows, statistical results which is indicated that there is a significant relation between non-profitability and accounting conservatism, firm size, financial leverage and return on assets. Also the results of the study showed that there was not any significant relation between non-profitability and sales growth.

Table 2:Logistic Regression Analysis

variable	B	S.E	Wald	Exp(B)
Conservatism index	3.24	0.746	18.85	0.000
firm size	-0.631	0.089	50.28	0.000
financial leverage	2.05	0.914	5.11	0.024
sale growth	0.083	0.164	0.25	0.62
profitability index	-10.82	0.99	119.84	0.000

The result of test of hypothesis is given in the above table. As it is shown in Table2,Conservatism index, firm size, financial leverage and profitability index have level of significance as $p<0.05$ less ,but sale growth has level of insignificant as $p>0.05$.

The Probability of non-profitability Model

Binary logistic regression was used to construct our prediction model. For binary logistic regression classifications of problems like bankruptcy and non-profitability prediction, are the key techniques to build a function between two groups: non-profitable and profitable firms. Logistic regressions which are much more straightforward are typically preferred to construct and validate non-profitability model .The final logistic regression model for probability of non-profitability is as follows:

$$Y = a_0 + a_1 X_1 + a_2 X_2 + a_3 X_3 + a_4 X_4$$

Table 3:Coefficient of Logistic Regression Analysis

variables	index	B
X_1	Conservatism index	3.256
X_2	firm size	-0.631
X_3	financial leverage	2.05
X_4	profitability index	-10.78
-	constant	8.159
Y	Probability of non-profitability	
	Estimation Percentage	82.6
	Cox & Snell index	0.41
	Chi-square	386.769

Table 3, shows that profitability index, as a management performance, has more effect on non-profitability than other variables .Based on model results, probability of non-profitability on firms listed in Tehran stock exchange is explained by 41%. Given the significant level of chi-square ,as well as high percentage of model estimation, the model validity can be confirmed.

Multicollinearity: As shown in Table4, the Pearson correlation between variables are small (< 0.5 or < %50). Therefore, we find that each pair of variables in this study are not acute correlated. Suggesting a nonlinear relation between the two variables is existed.

Table 4: Multicollinearity Matrix

variables	Pearson Correlation Coefficient				
	Conservatism index	**firm size**	**financial leverage**	**sale growth**	**profitability index**
Conservatism index	1	0.09	-0.077	0.053	0.445
firm size		1	0.203	0.016	0.31
financial leverage			1	-0.048	-0.447
sale growth				1	0.103
profitability index					1

DISCUSSIONS AND CONCLUSIONS

This research discusses the effect of accounting conservatism, firm size, financial leverage, sale growth and profitability index on probability of non-profitability in Tehran Stock Exchange (TSE) over a period of seven years between 2001-2007 in 48 non-profitable and 57 profitable firms.

Research results emphasis on the existence of a direct relation between accounting conservatism and non-profitability in firms. In other words, when the firms use more conservative accounting procedures and profit recognition is less, probability of non-profitability will be increased.This result is consistent with accounting theory. In other words, in non-profitable firms, accounting conservatism can delay and limit manager's bias behavior in income overstatement. Consequently, additional payments to manager and other groups such as shareholders become limited and increase firm value in the long term. Increase of accounting conservatism could improve the value of non-profitable firms in the long term.In this study, the greatest impact on the non-profitability of firms is the profitability index or management performance.Therefore, improvement of the management performance will increase profitability in firms and it will prevent non-profitability .Finally, the findings show that companies financed through borrowing ,could increase non-profitability factor..

Consistent with previous studies, we find a positive relation between the accounting conservatism and non-profitability in firms, where accounting conservatism is defined as growth in operating accruals (Givoly, D. and C. Hayn., 2000)..The study indicates that with an increasing in the size of the firm and an improvement in management performance (profitability index), probability of non-profitability will be reduced but increasing debt factor, will have an effect on increasing the probability of non-profitability. Our findings have two contributions:

- First, we have confirmed results of the prior studies in an emerging market like Iran. The results showed that in the Iranian emerging market, the main factor of non-profitability is the managers' poor performance.These could also expand the results of previous studies.
- The second contribution is that in emerging market such as the capital market in Iran, accounting conservatism is an efficient contracting mechanism that could limit income overstatement and constrain any management opportunistic behavior in this regard, and thus, the firm value increases in the long term.
- Finally, on the basis of the research results, privatization of industries and separation the ownership from management in content, or ownership dispersion is recommended. This would reduce non-profitability in firms. In less developed countries, it is recommended that accounting standards board avoid to develop of non-conservative accounting standards in accounting standards setting.

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