Review of Relation between Accounting Conditional Conservatism and Bankruptcy risk in Tehran Stock Exchange Companies

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ABSTRACT

The aim of present research is to review the relation between accounting conditional conservatism and risk of bankruptcy. To this end, 48 companies were analyzed during a fixed period of 2002-2010 via analysis of combined data using the panel-data method. Results of test of hypothesis show that the more conservative companies have a lesser chance of bankruptcy than companies with lower level conservatism. The results also showed that, there is a negative correlation between the size of companies and risk of bankruptcy, but this correlation from statistics point of view, is not significant. There is also a positive correlation between profit changes and risk of bankruptcy, but this correlation is not significant.

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INTRODUCTION

Conservatism has been tied up with the theory and practice of accounting for some time as a clear trait of financial reporting [1]. Constant and continuous attention to definition of conservatism and its significance in compilation of accounting standards signifies that benefits of employing conservative accounting outweighs its costs[2]. Conservatism has always been emphasized by developers of accounting standards, and according to necessity of standards, it enjoys various practical applications some of which are thus: applying the least norm of finished price or sale value net in evaluating stock, want of identification of key-money and other intangible assets which are created inside the commercial unit, allocating development & research as costs, identification and reporting costs before utilization as cost and not an asset item and…[3]. Biddle et al. showed that creative trait of cash flow and role of conservative information lead to improvement of companies and reduction of risk of bankruptcy. In other words, the implementation of conservatism in companies with high risk of bankruptcy, leads to increase of cash flow and reduction of risk of bankruptcy. Consequently, companies who use more conservatism in their profit, face lesser probability of bankruptcy [4].

Definition and statement of problem:

Conditional conservatism has had much effect on accounting over times. Recently, international financial reporting standards have much persisted over setting up standard values accounting. The principle of standard value (current) insists on time keeping, and negative and positive news are identified on this basis. This is at a time when conditional conservatism is against standard value principle, and insists on delaying identification of positive news and haste in identifying negative news [5]. Basou (1997) believes that conservatism has been presented at least 100 years ago with the aim of preventing unrealistic presentation of condition of commercial unit, and reduction of bankruptcy risk from various groups especially the capital providers. From Basou’s view, conservatism requires a high level of confirmation for recognizing good news like profit, and against recognizing bad news like loss. Conservatism is one of accounting’s basic concepts, which is considered in the conceptual statement No. 2 of by the Financial Accounting Standards Codification Panel. The Financial Accounting Standards Codification Panel defines conservatism thus: cautious reaction to ensure that company’s financial/economic situation is presented sufficiently [6].

One of the reasons which lead to the acceptance of principle of using current values is the possibility of transferring useful information punctually to users of financial statements. This leads to an accurate reflection of company’s economic stance, and more swing for profit. Against that, accounting conditional conservatism leads to less profit swing, and these methods prevent managers’ opportunism and exorbitant optimism in presenting profits, and leads to more reliable profits reporting [7].
In this research, attempts have been made to review whether there exists a significant correlation between accounting conservatism in companies admitted into Tehran Stock Exchange and bankruptcy risk, using new models introduced by accounting researchers, which have been employed in this research. If the answer to this is positive, then we can expect to have a significant correlation between employing standard values and future positive news in the opposite way.

**Importance and necessity of research:**

The importance of research is to show practically to the financial analysts, investors, managers and other users of accounting information, that accounting conditional conservatism can affect future company negative news like reduction of net profit, or reduction in the level of dividends, or the wrong forecasting of the financial analysts. There is also been some judgments in this research regarding the relation between employment of fair value accounting and future positive news. The recent financial scandals worldwide from Enron and WorldCom in America to Parmalat in Europe, have led to the finger of accusation being aimed at financial reporting. Financial statements make the main nucleus of financial reporting process, and on top of that the profit/loss statement (figure of net profit) is at the centre of investors’ attention. In recent years, the subject of reported profit has been attended to by many researchers. Conservatism is an aspect of profit quality; meaning that the higher profit conservatism, the higher its quality (Gilen & Starks 2003). In case of conducting this research, companies under study will be informed of the effects of employing conservative accounting and also, its effect on bankruptcy risk and will make more appropriate decisions on the method of applying conservatism. For today, many companies worldwide have realized that being information on bankruptcy risk can prevent them from being left out of the competitive world. It is therefore necessary for companies to take outmost precaution in employing accounting and financial reporting methods and take appropriate steps. This leads to profitability, increase in share prices and company value [6] [8].

**Objectives of research:**

The general objective of research is to review the relation between accounting conditional conservatism and bankruptcy risk in Tehran Stock Exchange companies. Another objective is to present application results of relation between conservatism and aptness of net profit reduction, dividends and company share returns to potential investors/creditors to assist them in making correct and logical financial decisions.

**Research hypothesis:**

Considering that the size of company affects company risk, the size is used in this research as the second independent variable so that the bankruptcy risk under study can be subjected to testing [6]. With consideration of previous researches and theoretical basics, the three research hypothesis is codified as follow:

- H1: between accounting conditional conservatism and bankruptcy risk there is significant correlation.
- H2: there is a significant correlation between company size and bankruptcy risk.
- H3: there is significant correlation between accounting conditional conservatism and reduction of future profitability.

**Operational definition of variables:**

Conservatism: is an accounting concept which leads to reduction of reported accumulated profit via later recognition of income and quicker recognition of cost, and lower evaluation of assets and higher evaluation of debt [9].

Conditional conservatism: conditional conservatism is conservatism that has been enforced by accounting standards. It is timely recognition of loss in case of unfavorable and bad news, and lack of recognition of profit when desirable and good news. This conservatism is also called the profit and loss conservatism, or retrospective conservatism [10]. Unconditioned conservatism: this type of conservatism is not enforced by accepted accounting standards. This conservatism is showing the assets net book value less than actual using predetermined accounting methods. This conservatism is also known as balance sheet conservatism or futurist conservatism.

Operational cash flows: are equal to cash flows reported in company cash flow statement.

Company size: is equal to natural logarithm of total assets of company.

Profitability: profitability is the result of financial performance of company. In this research, the net profit index is used to make profitability variable operational.

Variables are two main groups of independent and dependent. Independent variable is probable cause of dependent variable, and dependent variable is probable cause of independent [11]. In adjusting the research regression models, some control variables will also be used. All the data relating to variables are extracted from financial statements of companies in Tehran Stock Exchange. All the research variables are presented respectively as below:
EDF: bankruptcy index means company assets value will not be able to settle the debts of the company until a near future (after T years).

CONSI: accruals growth conservatism index can be an index from change in degree of accounting conservatism during a long term period. In other words, if the accruals increase, then conservatism reduces, and vice versa.

Size: the size of company is equal to natural logarithm of company’s total assets. This figure is higher for companies whose volume of activities is more widespread.

CFO: operational cash flows are equal to total cash flow from company activities during the year, and are extractable from cash flow statement.

EARNt+1: net profit changes in the next financial year are equal to difference between next year’s net profit and this year’s net profit.

Loss: loss is considered (1) if the company suffers a loss this year, and (zero) if the company does not suffer a loss.

ROA: assets’ returns are equal to ratio of net profit to total assets.

Inst: percentage of institutional shareholders total percentage of shares of public institutions.

Tat+1: future accruals are equal to changes in next year’s accruals.

To test the hypothesis 1 to 3 and reviewing the correlation between research variables, we use the below regression models as are presented by Hwan Kim and M Pevzner[5] and Biddle, Mary and Song [6]:

\[
\begin{align*}
EDF_t &= \beta_0 + \beta_1 CONSI_t + \beta_2 CFO_t + \beta_3 SIZE_t + \beta_4 Loss_t + e_t \\
\Delta EARN_{t+1} &= \beta_0 + \beta_1 CONSI_t + \beta_2 ROA_t + \beta_3 Inst_t + \\
&\beta_4 Loss_t + \beta_5 \Delta TA_{t+1} + e_t
\end{align*}
\]

(1) (2)

In these models:

EDF t; is the risk of bankruptcy index of company in year t.

Earn t+1; amount of net profit reduction during year t+1 as the first criteria of assessing future negative news (should the said changes reflect increase, variable will be considered zero).

CONSI t; is the accounting conditional conservatism index,

CFO t; it is the operational cash flow which is extractable from the company’s cash flow invoice;

Size t; is the company size and is measured via the natural logarithm of the total assets,

ROA t; assets’ revenue in the year t for company I,

Inst t; percentage of institutional ownership in year t for company I (percentage of shares belonging to public institutions and organs),

Loss t; it is considered (1) in case of loss, otherwise it is (0),

TA t+1; changes of accruals in year t+1 for company I (total accruals equal to difference between net profit and operational cash flow).

In this section, method of measuring conditional conservatism as dependent variable of research is pointed out. Two proposed methods are used to measure conditional conservatism, and the above models are forecasted separately using these methods. These two methods were introduced by Ball and Shimakover (2008). The first method which is based on operational profit changes is \( \beta_3 \) coefficient in below regression model:

\[
\Delta OI_t = \beta_0 + \beta_1 OI_{t-1} + \beta_2 D_t + \beta_3 \Delta OI_{t-1} + e_t
\]

(3)

In this model:

OIt: changes to operational profit in year t

OIt-1: changes to operational profit in year t-1 &

Dt: if the operational profit change in the year t-1 is negative equal to (1), and if positive, it will be (0).

The second method is based on accruals, coefficient of \( \beta_3 \) is in the below regression model:

\[
\begin{align*}
Accr_t &= \beta_0 + \beta_1 D_t + \beta_2 CFO_t + \\
&\beta_3 D* CFO_t + e_t
\end{align*}
\]

(4)

In this model:

Accrt: accruals in year t

CFOt: operational cash flow in year t-1

Dt: if the operational cash flow for year t is negative, it will be (1) and if it is positive, it will be (0).
Operational cash flow is equal to total cash flow earned from companies operations during year and it is extracted from cash flow invoice. Models 4 & 5 will be implemented to measure level of conditional conservatism for each sample company based on available information in the period 2002 to 2010.

Method of making bankruptcy risk operational
In this research, the introduced Merton’s (1974) structural method was used to measure bankruptcy risk. This method which has high capability in forecasting bankruptcy risk is also used in research by Hillcrest (2004) & Biddle, Mary & Song (2011). In this model which is known as EDF, to forecast bankruptcy risk, the accounting variables are used. Another model, in which market variables as well as accounting variables are used, is called the Campbell et al. Model (2008).

The EDF model means the lack of continuity of the expected activity, and it shows the probability that the company’s asset values during next year may be less than debt values. In this research, for measuring bankruptcy risk, like Barras and Shomoi (2008) and Biddle, May & Song (2011), the EDF calculation model is also used.

\[
EDF_t = \frac{-\ln \left( \frac{V_{A,t}}{X_t} \right)}{\Delta A T}^{\alpha/2}
\]

In this relation, EDF represents bankruptcy risk in the company. Here, bankruptcy risk means company’s assets’ values are not able to settle the company debts in near future (after T year). In this relation, \( T \) is considered as one year. \( VA \) stands for company market value which is calculated via share market price. \( X \) is the nominal value of company’s debt, and also, shows average of company assets during the year. EDF is an estimate for bankruptcy risk during next year, and the more this rate is for the company the higher is the risk of bankruptcy.

**MATERIALS AND METHODS**

Since this research deals with actual data of companies, we used various sources to gather information on these companies in Tehran Stock Exchange including compact disks from Tehran Stock Exchange, ‘Tadbirpardaz’ software, and information site of the Tehran Stock Exchange on the web. Therefore, our method of gathering data is the field method. To study theoretical basics of research, we shall use the library method with reference to books and various articles in this field. To review the research hypothesis and to forecast models, we use the composite data econometrics and test F (panel recognition test or pooled, and use coefficient of determination R² (amount of changeability in dependent variable which is described by regression) to estimate the intensity of relation between variables. Also, for statistics test like correlation (if the aim of research is only to review the link between dependent variable with independent variable/s, the degree of dependence and relation between two or more variables can be determined by calculating the correlation coefficient) etc, we use Eviews and Excel software.

**Type of research**

The statistic population is made up of Tehran Stock Exchange companies between start of 2002 and end of 2010. The targeted elimination method was used to select samples. For this purpose, the statistic population will be adjusted using the below conditions:

- The sample companies not to include financial suppliers, investors or insurance (due to the particular nature of these companies’ activities).
- Sample companies’ financial year to end by end of February (in order to provide more comparability).
- Research variables’ data for the said companies to be accessible.

By applying all above limitations, the sample companies numbered 48. All these companies were used for test of research hypothesis, and no other sampling will be used.

| Table 1: Percentage of industries of sample companies |
|---------------------------------|--------|---|
| Industry                        | No. of companies | %  |
| Autos & Parts                   | 7      | 14.58 |
| Medicine                        | 4      | 8.33  |
| Electrical Appliances           | 1      | 2.8   |
| Metal Products Manufacturing    | 2      | 4.17  |
| Other non-metal minerals        | 5      | 10.42 |
| Cement, limestone, chalk        | 2      | 4.17  |
| Textiles industry               | 3      | 6.25  |
| Food (except sugar)             | 1      | 2.08  |
| Base Metals                     | 3      | 6.25  |
| Sugar                           | 1      | 2.08  |
Descriptive statistic:

The descriptive statistic of research variables are shown in table 2. Descriptive statistic quantities include minimum, maximum, median, average and variable deviation. Considering the below mentioned criteria, the selection of sample and its effect on sample size, 48 companies in total were used in this research between 2002 & 2010. Considering we use the combined cross section and time-series data (panel data) for testing the hypothesis, therefore the annual company observations based on combined data are 432 and companies have been distributed randomly between industries. As is evident in above table, average bankruptcy risk for Tehran Stock Exchange companies in the research time intervals is 0.0000326. The lowest and highest risk of bankruptcy and the median is also in the table. This variable has been calculated using the Shomai (2008) and Song (2011) models. Since the natural logarithm of numbers between zero and one are negative, therefore in this model, by placing negative sign in case of deficit of all calculated sums for this variable, the values are positive. For other variables, we can also present their particular versions. For example, the other variable which is the natural logarithm of total assets, and it is always positive. Or, the loss variable which is an artificial one and its highest value is one and the lowest is zero.

The variable for the percentage of institutional shareholders is a variable with values between zero and one whose values are always positive. The descriptive statistic table in general, as the name indicates, shows data position in terms of most important statistical components (average, median, maximum and minimum).

Table 2: Descriptive statistics of data

<table>
<thead>
<tr>
<th></th>
<th>EDF</th>
<th>CONSI</th>
<th>SIZE</th>
<th>COF</th>
<th>EARN</th>
<th>LOSS</th>
<th>ROA</th>
<th>INST</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>.0000326</td>
<td>-.0000049</td>
<td>5.547699</td>
<td>85.56345</td>
<td>214541.4</td>
<td>0.157724</td>
<td>0.111747</td>
<td>0.203629</td>
<td>156714.1</td>
</tr>
<tr>
<td>Median</td>
<td>.0000126</td>
<td>-.0000369</td>
<td>5.516855</td>
<td>22.09999</td>
<td>30561.00</td>
<td>0.000000</td>
<td>0.085918</td>
<td>0.28103</td>
<td>122008.9</td>
</tr>
<tr>
<td>Max</td>
<td>.0000141</td>
<td>.000120</td>
<td>7.659029</td>
<td>1632.990</td>
<td>1115501.</td>
<td>1.000000</td>
<td>0.890211</td>
<td>0.702092</td>
<td>399620.3</td>
</tr>
<tr>
<td>Min</td>
<td>.0000369</td>
<td>-.000133</td>
<td>4.254935</td>
<td>0.000000</td>
<td>-844215</td>
<td>0.085918</td>
<td>0.28103</td>
<td>122008.9</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
</tr>
</tbody>
</table>

Table 3: Correlation table for collinearity test of data

<table>
<thead>
<tr>
<th></th>
<th>EDF</th>
<th>CONSI</th>
<th>SIZE</th>
<th>COF</th>
<th>EARN</th>
<th>LOSS</th>
<th>ROA</th>
<th>INST</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF</td>
<td>1.000000</td>
<td>-.056986</td>
<td>.034843</td>
<td>-.020296</td>
<td>.128293</td>
<td>.019599</td>
<td>.046603</td>
<td>.052196</td>
<td>.021612</td>
</tr>
<tr>
<td>CONSI</td>
<td>-.056986</td>
<td>1.000000</td>
<td>-.07249</td>
<td>-.052719</td>
<td>-.059655</td>
<td>.043209</td>
<td>-.036553</td>
<td>-.151392</td>
<td>.108034</td>
</tr>
<tr>
<td>SIZE</td>
<td>.034843</td>
<td>-.07249</td>
<td>1.000000</td>
<td>.909598</td>
<td>.415490</td>
<td>-.100405</td>
<td>-.181804</td>
<td>.089797</td>
<td>-.04102</td>
</tr>
<tr>
<td>COF</td>
<td>-.020296</td>
<td>-.052719</td>
<td>.909598</td>
<td>1.000000</td>
<td>5.84115</td>
<td>-.000532</td>
<td>-.205876</td>
<td>-.000385</td>
<td>-.013717</td>
</tr>
<tr>
<td>EARN</td>
<td>.128293</td>
<td>-.059655</td>
<td>.415490</td>
<td>5.84115</td>
<td>1.000000</td>
<td>.242821</td>
<td>.013142</td>
<td>.216968</td>
<td>-.068695</td>
</tr>
<tr>
<td>LOSS</td>
<td>-.019599</td>
<td>.043209</td>
<td>-.100405</td>
<td>-.242821</td>
<td>1.000000</td>
<td>.007988</td>
<td>.025143</td>
<td>.080729</td>
<td>-.301156</td>
</tr>
<tr>
<td>ROA</td>
<td>.046603</td>
<td>-.036553</td>
<td>-.181804</td>
<td>-.205876</td>
<td>.013142</td>
<td>.007988</td>
<td>.079257</td>
<td>.301156</td>
<td>.091436</td>
</tr>
<tr>
<td>INST</td>
<td>.052196</td>
<td>-.151392</td>
<td>.089797</td>
<td>-.000385</td>
<td>.216968</td>
<td>.025143</td>
<td>.079257</td>
<td>.091436</td>
<td>.091436</td>
</tr>
<tr>
<td>TA</td>
<td>.021612</td>
<td>.108034</td>
<td>-.04102</td>
<td>-.013717</td>
<td>-.068695</td>
<td>.080729</td>
<td>.301156</td>
<td>.091436</td>
<td>.091436</td>
</tr>
</tbody>
</table>

Testing of research hypothesis:

a- Collinearity test between variables and normality of data

Table 3 shows that for liaison of each variable with other variables and even with itself, a particular coefficient is used. As it is evident, the correlation coefficient of each variable with itself is one (diagonal of table). Namely, each variable has complete correlation with itself. Other calculated coefficients should be less than 0.5 to avoid a significant effect of correlation between variables on research results. Review by analysts
show that when number of data is high, the correlation between some variables (imperfect correlation) does not significantly affect the results of research [12].

b- Testing of regression classic hypothesis

That which is known as vertical linear regression model or standard, is based on the below hypothesis:

1- Average for rest of components (errors) is zero: based on this hypothesis, remaining average \( X_i \) is assumed zero, namely that factors not expressly mentioned in model, are placed in \( U_i \) and therefore, will not affect the average amount \( Y \) regularly. To review this basic hypothesis in Eviews software, after each fitting of chart, the remaining can be drawn, and review normality of remaining (chart 1).

Fig. 1: total of remains equal to zero and normality of data

2-Lack of correlation between the \( U_i \): namely, remaining components (errors) not to have relevancy in various time periods, in other word, \( E(u_i \mid u_i) = 0 \) where \( i \neq j \). Technically, this hypothesis reflects lack of autocorrelation which means, considering each given \( X_i \), deviations of both \( Y \) sums from their averages, should not have a regular model. If in an equation, \( u_t-1 \) and \( u_t \) have positive correlation, then, \( Y_t \) will not depend on \( X_t \) alone rather, it is also dependent on \( u_{t-1} \), because \( u_{t-1} \) is relatively affective in determining \( u_t \). To determine the existence of this problem, we use the Watson-Durban statistic and LM Test. Hypothesis in LM test are thus:

H0: lack of autocorrelation
H1: existence of autocorrelation

As in the White test, if the aptness relating to \( F \) statistic is above level of error, H0 hypothesis is not rejected, and consequently there is no problem of autocorrelation. Want of autocorrelation hypothesis in classic model, is related to components of population disruption, which cannot be observed directly. It is replaced by remains obtained by ordinary OLS method. In this research we used the Watson-Durban statistic to test the autocorrelation of the remaining components.

3-Lack of dissonance \( U_i \) variance: namely, remaining components in various time periods to have similar variance, in other words, \( E(u_i)^2 = \sigma^2 \). Reversal of this hypothesis leads to the problem of variance dissonance. Since variance disruption is equal to dependent variable variance, the dissonance problem of variance is related to dependent variable variance in various time periods not being identical. To identify the variance dissonance, the Arch and White tests are usually used, and the statistic hypothesis in these test are as follow:

H0: Variance homology
H1: Variance dissonance

Using the \( F \) statistic (Fisher), we can easily judge that the model has dissonance or not. In such a way that, if the probability of \( F \) statistic is more than error level (Alfa), the H0 hypothesis is not rejected and therefore, the variance homology is accepted. If the contrary is the case, and the model has dissonance, we can use the generalised least squares (GLS) method to remove it. In this research, to solve the problem of variance dissonance, weight has been given to data which is a result of the White test. The interesting point here is that these tests have been conducted at the level of all data.

Hypothesis test
Table 4: Fitness result of the first model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Symbol</th>
<th>Coefficient</th>
<th>t Statistic</th>
<th>Prob.</th>
<th>Relation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant Coefficient</td>
<td>C</td>
<td>0.009243</td>
<td>0.083250</td>
<td>0.9337</td>
<td>Positive</td>
<td>Insignificance</td>
</tr>
<tr>
<td>Conditional</td>
<td>CONSI</td>
<td>-0.49508</td>
<td>-0.45112</td>
<td>0.00487</td>
<td>Negative</td>
<td>99%</td>
</tr>
<tr>
<td>Conservatism</td>
<td>SIZE</td>
<td>0.00326</td>
<td>-0.162581</td>
<td>0.8710</td>
<td>Negative</td>
<td>Insignificance</td>
</tr>
<tr>
<td>Size</td>
<td>COF</td>
<td>-5.65001</td>
<td>-0.11755</td>
<td>0.9066</td>
<td>Negative</td>
<td>Insignificance</td>
</tr>
<tr>
<td>Existence of loss</td>
<td>LOSS</td>
<td>0.003695</td>
<td>0.97471</td>
<td>0.0033</td>
<td>Positive</td>
<td>99%</td>
</tr>
<tr>
<td>F Statistic</td>
<td></td>
<td>4.40821</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probability of (F statistic)</td>
<td></td>
<td>0.0000</td>
<td></td>
<td></td>
<td>Adjusted determination of coefficient</td>
<td>0.421054</td>
</tr>
</tbody>
</table>

Panel Test

<table>
<thead>
<tr>
<th>Significance test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted F Test</td>
<td>4.5380</td>
</tr>
<tr>
<td>Housman test</td>
<td>1.2068</td>
</tr>
</tbody>
</table>

Statistic hypothesis of the first hypothesis are expressed thus:

H0: No significant correlation exists between accounting conditional conservatism and bankruptcy risk.
H1: There is a significant correlation between accounting conditional conservatism and bankruptcy risk.

For testing this hypothesis, the first model is used. As can be seen in chart 4, Watson-Durban test is the figure 1.78534, which is an appropriate sum. The chart also shows the variable probe of conservatism is 0.0048. Therefore the H0 hypothesis is rejected and H1 hypothesis is accepted, which means there is a significant negative correlation between conditional conservatism and bankruptcy risk. The results also indicate there is significant positive correlation between company making losses and its bankruptcy. Adjusted coefficient of determination shows about 0.42105% of changes will be explained by the said independent variables.

Table 5: Fitness result of the second model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Symbol</th>
<th>Coefficient</th>
<th>t statistic</th>
<th>Prob.</th>
<th>Relation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant coefficient</td>
<td>C</td>
<td>-5.83596</td>
<td>-0.31967</td>
<td>0.7496</td>
<td>Negative</td>
<td>Insignificance</td>
</tr>
<tr>
<td>Conditional conservatism</td>
<td>CONSI</td>
<td>0.007892</td>
<td>0.054084</td>
<td>0.9569</td>
<td>Positive</td>
<td>Insignificance</td>
</tr>
<tr>
<td>Assets' returns</td>
<td>ROA</td>
<td>1.63090</td>
<td>3.8867</td>
<td>0.0001</td>
<td>Positive</td>
<td>99%</td>
</tr>
<tr>
<td>% of institutional shareholders</td>
<td>INST</td>
<td>-2.29925</td>
<td>-0.81398</td>
<td>0.0167</td>
<td>Negative</td>
<td>95%</td>
</tr>
<tr>
<td>Existence of loss</td>
<td>LOSS</td>
<td>2.1556</td>
<td>1.3240</td>
<td>0.1871</td>
<td>Positive</td>
<td>Insignificance</td>
</tr>
<tr>
<td>Accruals changes</td>
<td>EATA</td>
<td>-0.068126</td>
<td>-1.16079</td>
<td>0.2472</td>
<td>Negative</td>
<td>Insignificance</td>
</tr>
<tr>
<td>F Statistic</td>
<td></td>
<td>1.916158</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probability of F statistic</td>
<td>0.00042</td>
<td></td>
<td></td>
<td></td>
<td>Adjusted determination of coefficient</td>
<td>0.311858</td>
</tr>
</tbody>
</table>

Panel Test

<table>
<thead>
<tr>
<th>Significance test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted F test</td>
<td>47.20011</td>
</tr>
<tr>
<td>Housman test</td>
<td>14.3439</td>
</tr>
</tbody>
</table>

For testing this hypothesis, the first model is used. As can be seen in chart 4, Watson-Durban test is the figure 1.78534, which is an appropriate sum. The chart also shows the variable probe of conservatism is 0.0048. Therefore the H0 hypothesis is rejected and H1 hypothesis is accepted, which means there is a significant negative correlation between conditional conservatism and bankruptcy risk. The results also indicate there is significant positive correlation between company making losses and its bankruptcy. Adjusted coefficient of determination shows about 0.42105% of changes will be explained by the said independent variables.

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Results of the research:

There is significant correlation between accounting conditional conservatism and bankruptcy risk in Tehran Stock Exchange companies.

The evaluation of above hypothesis in the selected sample of TSE companies was conducted using research model. To measure bankruptcy risk, the structural method by Morton (1974) was used. In this model known as EDF, accounting variables are used to forecast probability of bankruptcy. Results show that this hypothesis is accepted by the companies in Tehran Stock Exchange. This is because the estimated coefficient in the research for conservatism is significant at 99% as research’s independent variable (the estimated coefficient is -0.49508
whose significance level is 0.00487), and this means that there is a significant correlation at confidence level of 99%, between accounting conservatism and bankruptcy risk. The results also indicated that there is no significant correlation between company size and bankruptcy risk (the estimated coefficient is -0.00326 whose level of significance is at 0.8710), and this means that this hypothesis is rejected in Tehran Stock Exchange.

**Limitations of the research:**

Every researcher faces obstacles and limitations in their research, and this research is no exception, and has faced many limitations as stated below:

Access to information of companies have had many problems and spending a great deal of time.

Lack of access to articles and related thesis at the place of research has been one of the problems leading to time consumption.

The Tehran SE does not have a comprehensive data bank, and the financial reports of companies are kept in an incoherent and irregular fashion, and this makes accessibility to companies’ data difficult and time consuming.

Since for calculating research variables, information from financial statements based on used historical cost price have been used, in case of adjusting the said information, we may obtain results different to present ones.

Sampling limitations in activities have led to lack of representation of some industries in samples. Therefore, adjusting the research results to such industries must be with outmost care.

The research time domain was limited to intervals between 2002 and 2010, which may cause problem in adjusting results to other periods.

**Suggestion based on hypothesis result:**

Considering the research hypothesis which expressed that there is significant correlation between conservatism and bankruptcy risk in Tehran Stock Exchange companies, when this hypothesis was confirmed by data from companies in TSE, investors are suggested that when buying and selling shares of Tehran Stock Exchange companies, to consider the level of conservatism in order to estimate the bankruptcy risk in these companies. It is also recommended to managers to increase spending to increase conservatism in order to reduce their chance of bankruptcy risk, because a significant and inverse correlation was found between accounting conservatism and bankruptcy risk in Iran’s capital market.

**Suggestions regarding research results:**

In this section, some suggestions based on studies undertaken and results from the research, are presented for future research.

9.1-Considering the inverse and significant correlation between accounting conservatism and bankruptcy risk, we found that companies can reduce bankruptcy risk by increasing conservatism. Shareholders/investors can also obtain useful data about companies’ bankruptcy risk by reviewing the level of conservatism.

9.2-Considering the need for increasing knowledge of ordinary shareholders regarding investment in stock exchange, we suggest to TSE and other related parties to plan an elevation of potential investors’ knowledge by organizing training and educational programmers and the media.

9.3-Considering the researchers have spent much time calculating the variables, it is suggested that in order to facilitate research in the field of capital market, the Tehran Stock Exchange as the most important institution in Iran’s capital market, to calculate these variables and place them at the disposal of researchers. This will lead to uniformity of data used by the researchers as well as speeding the research process.

**Suggestions for future research:**

10.1- Review effect of corporate governance mechanism on bankruptcy risk of companies.

10.2- Review of type of ownership on bankruptcy risk of companies.

10.3- Study the review of effect of other components which in accounting literature have the potential to effect bankruptcy risk, such as company capital structure, structure of board of directors and …

10.4- undertaking similar reviews for a longer period of time and with more samples.

10.5- Conducting this research in various industries and comparing the results.

10.6- Considering the deletion of financial and monetary institutions and companies, similar research to be undertaken for such bodies.

**REFERENCE**


[4] Are ethics, important for professional accountant's article by amama javeed – 1355525.