The Effect of Auditor opinion and Earnings Management on Bankruptcy Prediction of Companies Listed on Tehran Stock Exchange (TSE)

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ABSTRACT

This study intends mainly to examine the effect of auditor opinion and earnings management on bankruptcy prediction of companies listed on Tehran Stock Exchange (TSE). Hence, the present study seeks to answer the question whether there is a relationship between auditor opinion, earnings management and bankruptcy prediction. For that purpose, the criteria of conditional and accepted statements were employed to assess the auditor opinion and discretionary accruals for earnings management test. Furthermore, Altman’s Z-score was employed as a criterion for bankruptcy prediction. The statistical sample consists of 67 companies listed on Tehran Stock Exchange during 2004-2012. The results indicated that there is a negative relationship between the conditional auditor opinion and earnings management in case of healthy companies exposed to risk of bankruptcy. This implies that as the acceptable opinion of independent auditor increases, earnings manipulation decreases. Moreover, the results suggest that there is a positive relationship regarding the acceptable auditor opinion on accruals in healthy companies at risk of bankruptcy, which implies that as the acceptable opinion of independent auditor increases, the CEO is more encouraged to manipulate earnings.

INTRODUCTION

In today’s economic environment, the auditor’s role in gaining the trust of financial statements and audit report users has been significant. Therefore, it is important to assess the relationship between auditor opinion and earnings manipulation in an environment where managers tend to smooth out earnings so as to increase their interests. Some companies attempt to evade taxes, which can be fulfilled through earnings manipulation, thus leading to lower tax payment and providing the CEO with more benefits [25]. Ballas et al. [3] argued that earnings management would decrease reliability, transparency and comparability of financial statements. However, audited financial statements from independent auditors would be an excellent means for reliable data transfer. As an unbiased person, the independent auditor is most competent for expressing opinion concerning the correctness of financial reports prepared by the economic unit (p. 944). On the other hand, a grave threat against business companies today is bankruptcy. There is huge amount of evidence indicating that bankruptcy over the last two decades has intensified more than any other period since the early 1930s. Therefore, the bankruptcy prediction is a factor contributing to classification of companies in a competitive market. The stakeholders are interested in assessment of corporate financial assessment [12]. The global financial crises facing many scandals have emphasized the importance of auditing, particularly auditor opinion confirming financial statements. Therefore, it has led to increased concentration on auditor opinion concerning corporate distress. Investors and company owners are highly interested in prediction of corporate status, so as to be able to respond in case of emergency and financial crises. After all, they consider the auditor opinion as a warning about bankruptcy risk [10].

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2. Theoretical background:

The competition among companies reduces management weaknesses, because managers in the competitive environment are doomed to strive to evade bankruptcy and expulsion from the market. Hence, corporate managers sometimes attempt certain frauds in financial statements so as to tackle such weaknesses, such as manipulating and smoothing out earnings [11]. Thus, as the actual operating activities separate from anticipated operating activities, the motives for earnings management are encouraged. The more actual operating activities deviate from user expectations, the greater becomes motives for smoothing earnings. Accordingly, based on the CEO’s motives for smoothing the earnings and separation of ownership from management, it becomes possible for CEOs make decisions aligned with their interests and opposed to what stakeholder’s desire. Concerning the theory of representativeness based on managers/owners conflict of interests, it can be argued that managers of economic units can be sufficiently motivated to manipulate earnings so as to maximize their interests. According to Watts and Zimmerman [27] there are three hypotheses including managerial reward, debt and political costs employed in the theoretical literature of positive accounting for explanation and prediction of organizational behavior in implementation of accounting procedures. Therefore, the question arisen in this regard is how investors can be supported against earnings management and manipulation, which is according to Schipper [23], systematic intervention of managers in the intra organizational process of financial reporting aimed at gaining personal interests. In previous studies on earnings management, discretionary accruals play a key role and refer to items that can be manipulated by the management. Accruals make the difference between profit and cash flow. As a result, the only way to manipulate earnings is to either increase or decrease the discretionary accruals, assuming that cash flows are not manipulated (p. 94). One of the effective strategies to control the managerial manipulation of discretionary accruals lies in audit management. In this way, there is a connection built between auditor’s findings and individuals inside and outside the company in the form of auditor opinion, which plays a key role in warning financial statement users with regard to identification of problems faced by the company. On this basis, Morellec et al. [22] argued that limitation in financial supply of companies significantly contributes to adjustment of the relationship between competition in product market and corporate cash funds. Some scholars have examined the role of auditors and earnings management in two areas of relationship between the auditing institution and earnings management and the relationship between the type of auditing report and earnings management. Ming [21] believes that large auditing companies play a huge role in discouraging companies from earnings manipulation, i.e. bringing in smaller auditing companies might be a sign of earnings low quality. Johl et al. [14] similarly examined the discretionary accruals of audited companies and concluded that large auditing institutions are more competent than control auditing institutions. As it was mentioned earlier, the type of reports prepared by auditors and professional opinion of audits may be associated with earnings management. For instance, any unaccepted auditor opinion concerning the unreliability of continued corporate activity is accompanied by earnings management [9]. In fact, as earnings management increases, it is more likely to receive such opinions. Most recently, numerous studies have been conducted on the relationship between earnings management and auditor opinion, testing certain hypotheses arguing that increased earnings management is more likely to bring about unaccepted opinion and clauses. Lai & Gul (2008) similarly in their research into the causes of bankruptcy in CPA Lavntal Horvath, an auditing firm, concluded that CPA tended to deliver adjusted opinions to its clients who did not possess discretionary accruals more or less as compared to clients from other auditing institutions (p. 236). Bartov et al. [4] also argued that conditional auditor opinion is in a direct relationship with discretionary accruals, i.e. the likelihood of receiving conditional opinion would be high as earnings management will increases. (p. 450). In contrast, Bradashaw et al. [7] believe that any company with acceptable opinion will have more discretionary accruals as compared to a company with adjusted opinion. It can therefore be deduced that the current auditing process might have been ineffective in warning investors about corporate earnings management (p. 54). Given what has been discussed so far, it can be stated that auditor opinion is an important factor contributing to reduction of earnings smoothing by managers. Because, according to Schmit [24], the conditions of competitive market fear of being expelled from the market leads shareholders toward less tolerance in face of managerial mistakes. On the other hand, as managerial performance and productiveness strengthens, bankruptcy becomes less likely. Accordingly, it can be argued that auditor opinion usefully contributes to reduction of motives for earnings management. Moreover, reduced earnings smoothing by managers can eliminate the chances of bankruptcy and expulsion from competitive markets.

3. Literature review:

In their study, Lajili and Zeghal [19] concluded that companies facing a crisis and financial distress tend to have lower level of financial and business health. In a similar study, Boateng [6] examined the relationship between financial distress and earnings smoothing only to conclude that ethical values and individual situations overshadow their decision during financial crises. Alexeey and Kim examined the relationship between bankruptcy and financial institutions. They concluded that the cumulative profit and ownership concentration were two determinants in corporate bankruptcy, while there is a negative correlation between bankruptcy and
quality of institutions. Furthermore, Zhou, investigated several bankruptcy models, pointing out that the employment of sampling techniques in development of bankruptcy prediction models depends on the number of companies selected as bankruptcy cases. In their study, Zhang et al concluded that accounting standards are the most important factors in earnings management. In addition, they concluded that individuals inside the organization are rather motivated to manipulate earnings. Results obtained from Tsipouridou and Spadies research (2013) suggest that there is no significant relationship between earnings management and auditor opinion. Moreover, corporate characteristics (for example, profitability and size) will affect the auditor opinion. In another study, Augustine [1] concluded that the auditor’s and independent auditor’s tenure leaves a significant impact on the amount of accruals. Liao and Liu [20] argue that local governments greatly tend to increase financial distress in order to raise revenue.

4. Research hypotheses:
This study intends to answer the question whether or not the auditor opinion affects earnings management. Furthermore, is it true that the auditor opinion is effective in corporate bankruptcy? Concerning the literature review and research background, several hypotheses have been formulated below:

Hypothesis 1: There is a significant relationship between conditional auditor opinion and discretionary accruals.

Hypothesis 2: There is a significant relationship between accepted auditor opinion and discretionary accruals.

Hypothesis 3: There is a significant relationship between conditional auditor opinion and discretionary accruals in case of companies at danger of bankruptcy.

Hypothesis 4: There is a significant relationship between accepted auditor opinion and discretionary accruals in case of companies at danger of bankruptcy.

5. Model overview:
For testing hypothesis 1 and 2, the following model was applied (Jones, 1999; Dichou et al, 1995; Tsipouridou and Spadies, 2013).

\[ DA_{it} = \alpha_0 + \alpha_1 AO_{1it} + \alpha_2 AO_{2it} + \alpha_3 PROF_{it} + \alpha_4 EPS_{it} + \alpha_5 ROA_{it} + \alpha_6 SIZE_{it} + \alpha_7 LEV_{it} + \epsilon_{1it} \]

For testing hypothesis 3 and 4, the following model was applied (Jones, 1999; Dichou et al, 1995; Tsipouridou and Spadies, 2013).

\[ DA_{it} = \beta_0 + \beta_1 AO_{1it} + \beta_2 AO_{2it} + \beta_3 PROF_{it} + \beta_4 EPS_{it} + \beta_5 ROA_{it} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \epsilon_{2it} \]

6. Data analysis and hypothesis testing:
For data analysis, several descriptive and inferential statistical measures were employed. Descriptive statistics was used to demonstrate the central tendency and dispersion statistics while inferential statistics was used to test the research hypotheses. In this study, the regression model was used for testing the hypotheses. In analysis of the research data, Eviews 7 was employed and for regression analysis, the combinational data method was employed. The statistical methods included Panel data, Kolmogorov-Smirnov test and statistic test. Since the data collection procedure was through the data provided by stock exchange companies, it covers a period from 2004 to 2012 spanning eight fiscal years.

7. Statistical population/sample and sample selection procedure:
The companies listed on Tehran Stock Exchange constitute the statistical population in this study. There are no statistical samples selected in this study, but the sampling requires several admission criteria including accessibility to data, corporate fiscal years, etc. Considering the mentioned restrictions, a total of 67 companies were selected and evaluated.

8. Independent, dependent and control variables:
The variables in this study were divided into independent, dependent and control. The independent variable included the auditor opinion on companies at the risk of bankruptcy and companies with normal activity. The dependent variable is the earnings management, the effect of which on auditor opinion is examined. The control variable includes profitability, stockholder’s return rate, assets return rate and company’s size, the effect of which on the independent and dependent variables are measured. In this study, the independent variable is the auditor opinion. If the auditor opinion is acceptable, it takes number 1, if the auditor opinion is conditional, it takes zero, and if the auditor opinion on the companies with bankruptcy risk is acceptable, 1 is checked. And if the auditor opinion on companies with bankruptcy risk is conditional, zero is checked. Moreover, for bankruptcy prediction model, Altman Z-score was used as follows.

Equation (1):

\[ Z = 0.717 x_1 + 0.847 x_2 + 3.107 x_3 + 0.420 x_4 + 0.998 x_5 \]
In this model, the lower the Z means higher the degree of the financial crisis. In other words, companies with Z-scale of more than 2.9 are non-bankrupt while values lower than 1.23 is indicative of bankrupt companies. The distance between these two areas is grey and should be interpreted with caution. Earnings management is the dependent variable in this research. Similar to previous studies \[15,13,26\] earnings management was determined through the discretionary accruals model proposed by Dichou et al \[13\] known as the Jones modified model. At the first phase, the total accruals are calculated in the following.

**Equation 2:**  
\[TA_{it} = NI_{it} - CFO_{it}\]

Moreover, the non-discretionary accruals section is calculated as follows:

**Equation 3:**  
\[NDA_{it} = \beta_1 (1/T.AST_{it-1}) + \beta_2 (\Delta REV_{it} - \Delta R.A_{it}/T.AST_{it-1}) + \beta_3 (\Delta F.A_{it}/T.AST_{it-1}) + \epsilon_{it}\]

Where \(\beta_1, \beta_2, \text{ and } \beta_3\) are calculated based on Jones modified model according to Equation 4 below:

**Equation 4:**  
\[TA_{it} = \beta_1 (1/T.AST_{it-1}) + \beta_2 (\Delta REV_{it} - \Delta R.A_{it}/T.AST_{it-1}) + \beta_3 (\Delta F.A_{it}/T.AST_{it-1}) + \epsilon_{it}\]

Having calculated the total accruals and non-discretionary accruals, the discretionary accruals are calculated based on Equation 5.

**Equation 5:**  
\[DA_{it} = TA_{it} - NDA_{it}\]

In order to control other variables contributing somehow to the problem analysis, the control variables including profitability, stockholder’s return rate, asset return rate and company size were taken into account.

9. **Findings:**

9.1 Descriptive statistics:

Table 1 indicates the descriptive statistics for the selected period. Descriptive statistics demonstrates the skewness, mean, standard deviation, minimum and maximum of observed items. It shows how the level of variable skewness is mainly low, suggesting that variables are symmetric and approximate to normal distribution. After evaluating the skewness of data distribution, the Kolmogorov-Smirnov test and Shapiro-Wilk test were used to ensure normality of the data. Should the significance level in the Kolmogorov-Smirnov or Shapiro-Wilk test be higher than 0.05, then the data can be confidently assumed at normal distribution.

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Earnings Per Share</th>
<th>Return on Equity</th>
<th>Return on Assets</th>
<th>Financial Leverage</th>
<th>Company Size</th>
<th>Profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.036</td>
<td>0.68</td>
<td>0.16</td>
<td>0.63</td>
<td>5.74</td>
<td>46197</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.33</td>
<td>1.36</td>
<td>0.7</td>
<td>2.75</td>
<td>7.98</td>
<td>3032832</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.0003-</td>
<td>0.16-</td>
<td>0.04</td>
<td>0.09</td>
<td>4.25</td>
<td>104</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.03</td>
<td>0.15</td>
<td>0.14</td>
<td>0.2</td>
<td>0.6</td>
<td>2028</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.38</td>
<td>0.21</td>
<td>0.13</td>
<td>1.6</td>
<td>0.86</td>
<td>0.32</td>
</tr>
</tbody>
</table>
According to Table 2, it could be argued that the data are normally distributed. Furthermore, prior to estimating the function for ensuring the non-spurious regression and consequently the uncertain outcomes, it is necessary to test the variable statics. Hence, the Brytang test was used, since it has determined the optimal pauses by Schwartz set. According to Tables 3 and 4, the assumption of zero is rejected based on the presence of single root for the examined variable. Thus, all the variables in the model are static.

Table 2: Kolmogorov Smirnov Test Result

<table>
<thead>
<tr>
<th>Variables</th>
<th>Computational Statistics</th>
<th>Significance Level</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discretionary accruals</td>
<td>0.3</td>
<td>0.796</td>
<td>Normally Distributed</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.05</td>
<td>0.982</td>
<td>Normally Distributed</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>0.9</td>
<td>0.497</td>
<td>Normally Distributed</td>
</tr>
<tr>
<td>Company size</td>
<td>0.94</td>
<td>0.491</td>
<td>Normally Distributed</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>0.07</td>
<td>0.927</td>
<td>Normally Distributed</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>0.04</td>
<td>0.996</td>
<td>Normally Distributed</td>
</tr>
<tr>
<td>Return on assets</td>
<td>0.45</td>
<td>0.517</td>
<td>Normally Distributed</td>
</tr>
</tbody>
</table>

Table 3: Reliable Test Results of the Variables at the Intercept

<table>
<thead>
<tr>
<th>Variable</th>
<th>Computational Statistics</th>
<th>pause</th>
<th>Significance Level</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discretionary Accruals</td>
<td>3.23</td>
<td>0</td>
<td>0.0000</td>
<td>Resident</td>
</tr>
<tr>
<td>Profitability</td>
<td>3.72</td>
<td>0</td>
<td>0.0000</td>
<td>Resident</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>6.98</td>
<td>0</td>
<td>0.0000</td>
<td>Resident</td>
</tr>
<tr>
<td>Company Size</td>
<td>4.72</td>
<td>0</td>
<td>0.0000</td>
<td>Resident</td>
</tr>
<tr>
<td>Earnings Per Share</td>
<td>3.9</td>
<td>0</td>
<td>0.0000</td>
<td>Resident</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>3.56</td>
<td>0</td>
<td>0.0000</td>
<td>Resident</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>3.87</td>
<td>0</td>
<td>0.0000</td>
<td>Resident</td>
</tr>
</tbody>
</table>

Table 4: The End Result of Testing the Reliability of the Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>The reliability of the test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discretionary Accruals</td>
<td>Resident</td>
</tr>
<tr>
<td>Profitability</td>
<td>Resident</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>Resident</td>
</tr>
<tr>
<td>Company Size</td>
<td>Resident</td>
</tr>
<tr>
<td>Earnings Per Share</td>
<td>Resident</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>Resident</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>Resident</td>
</tr>
</tbody>
</table>

9.2 Inferential Statistics:
9.2.1 Findings of Hypothesis 1 and 2:

For testing these hypotheses, the following equation was estimated.

\[ DA_{it} = \alpha_0 + \alpha_1 A_1 + \alpha_2 A_0^1 + \alpha_3 A_2 + \alpha_4 ROE + \alpha_5 EPS + \alpha_6 SIZE + \alpha_7 LEV + \epsilon_{it} \]

The results obtained from Eviews for discretionary accruals have been illustrated in Table 5.

Table 5: The Result of Accruals Regression by Fixed Effects Method

<table>
<thead>
<tr>
<th>F test</th>
<th>F test in LM test</th>
<th>F test Computational Methods</th>
<th>Durbin-Watson</th>
<th>Adjusted R Squared</th>
<th>Significance</th>
<th>T test</th>
<th>Coefficient</th>
<th>Independent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.37</td>
<td>0.93</td>
<td>0.27</td>
<td>1.98</td>
<td>0.73</td>
<td>0.0000</td>
<td>9.72</td>
<td>8.15</td>
<td>Intercept</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>2.66</td>
<td>0.47</td>
<td>Unqualified Auditor’s Statement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>3.08</td>
<td>0.17</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>8.3</td>
<td>0.182</td>
<td>Financial Leverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>3.4</td>
<td>0.011</td>
<td>Company Size</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>4.5</td>
<td>0.23</td>
<td>Earnings Per Share</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>2.89</td>
<td>0.21</td>
<td>Return on Equity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>4.98</td>
<td>0.51</td>
<td>Return on Assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>2.8</td>
<td>0.23</td>
<td>Conditional Auditor’s Statement</td>
</tr>
</tbody>
</table>

The results from Table 5 regarding the t-score indicate the significance of independent variable coefficient at 5%. On the other hand, all the estimated coefficients have been checked a reasonable values, i.e. the results for variables can be trusted.
One of the classic assumptions involves lack of relationship in different periods. In other words, if we have \( i \neq j \), then there will be \( E(U_i, U_j) = 0 \). The fault in this assumption leads to an autocorrelation problem. Among the methods to detect autocorrelation is Durbin-Watson test. If the result of the formula is close to 2, there will be no autocorrelation. The results of statistical test from Durbin-Watson test in Table 5 demonstrate that there is no autocorrelation in the models. Moreover, the LM test attributed to Goodfrey’s method is a perfect autocorrelation test. The test results show that the value of arithmetic LM is 0.93, which is lower than 4.37 for F-scale at 5% significant level. Hence, the null hypothesis concerning no autocorrelation is proved. Thus, using this test, there is no autocorrelation in the model. Another classic assumption involves the equality of disruptive variance components in different periods. With regard to the results of the tests in Table 5, the arithmetic White scale (0.27) is lower than F-scale, which is 4.37 at 5% significant level. Consequently, the assumption of variance homogeneity or H0 is proved and the classic assumption is true. At the bottom of the table, \( \bar{R}^2 \) or the adjusted coefficient of determination is 0.73. It implies that 73% of the variability in the dependent variable, i.e. the discretionary accruals, has been explained by independent variables. Since all significant coefficients in the model have been proved significant, it can be concluded that the coefficient of determination had taken a high value. Therefore, there is no alignment problem in the model.

After estimating the function above, the following hypothesis test was conducted so as to examine whether or not "there is a significant relationship between conditional auditor opinion and discretionary accruals ".

\[
\begin{align*}
H_0 &: \beta_1 = 0 \\
H_1 &: \beta_1 \neq 0
\end{align*}
\]

As it can be seen in results of Table 5, the t-value, the coefficient of conditional auditor opinion on discretionary accruals is 2.8 which is greater than the value in the table, i.e. 2. Therefore, the hypothesis H0 is rejected and the alternative hypothesis is proved, i.e. there is a significant relationship between discretionary accruals and conditional auditor opinion. Hence, hypothesis 1 is proved. In order to examine the significance of relationship between accepted auditor opinion and the discretionary accruals, the following hypothesis test was carried out.

\[
\begin{align*}
H_0 &: \beta_2 = 0 \\
H_1 &: \beta_2 \neq 0
\end{align*}
\]

As it can be seen in results of Table 5, the t-value, the coefficient of accepted auditor opinion on discretionary accruals is 2.66 which is greater than the value in the table, i.e. 2. Therefore, the hypothesis H0 is rejected and the alternative hypothesis is proved, i.e. there is a significant relationship between discretionary accruals and accepted auditor opinion. Hence, hypothesis 2 is proved.

9.2.2 Findings of hypotheses 3 and 4:

In order to test hypotheses 3 and 4, the Altman z-scale was first formulated for companies, i.e. those with a score less than 2.9 were considered bankrupt and those with a score greater than 2.9 were considered healthy. Based on the collected data, a total of 42 companies are bankrupt. The following equation has been estimated for bankrupt companies.

\[
D_A = \beta_0 + \beta_1 \text{AO}_{1_{st}} + \beta_2 \text{AO}_{2_{nd}} + \beta_3 \text{ROE}_{1_{st}} + \beta_4 \text{EPS}_{1_{st}} + \beta_5 \text{ROE}_{2_{nd}} + \beta_6 \text{ROA}_{1_{st}} + \beta_7 \text{SIZE}_{1_{st}} + \beta_8 \text{LEV}_{1_{st}} + \epsilon_2_{1_{st}}
\]

The results obtained from Eviews for discretionary accruals in companies at risk of bankruptcy have been illustrated in Table 6.

<table>
<thead>
<tr>
<th>F test</th>
<th>F test in M test</th>
<th>F test white Computational Methods</th>
<th>Durbin-Watson</th>
<th>Adjusted R Squared</th>
<th>Significance</th>
<th>T test</th>
<th>Coefficient</th>
<th>Independent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.13</td>
<td>0.69</td>
<td>0.41</td>
<td>1.96</td>
<td>0.69</td>
<td>0.0000</td>
<td>12.72</td>
<td>0.15</td>
<td>Intercept</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>2.8</td>
<td>0.009</td>
<td>Unqualified Auditor’s Statement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>5.4</td>
<td>0.14</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>6.7</td>
<td>0.32</td>
<td>Financial Leverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>3.2</td>
<td>0.19*</td>
<td>Company Size</td>
</tr>
<tr>
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<td></td>
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<td>0.0000</td>
<td>4.93</td>
<td>0.102</td>
<td>Earnings Per Share</td>
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<td>4.56</td>
<td>0.37</td>
<td>Return on Equity</td>
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<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>2.99</td>
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<td>Return on Assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
<td>3.48</td>
<td>0.91</td>
<td>Conditional Auditor’s Statement</td>
</tr>
</tbody>
</table>

The results presented in Table 6 and relationship with t-value suggest the fact that coefficient of with the fact that the coefficient of the independent variable is significant at the 5% level. All the estimated coefficients have been checked at reasonable values. Thus, the results obtained for the variables can be trusted.
In this study, the Durbin-Watson scale is 1.96. Since this scale is close to 2, it indicates the lack of autocorrelation in the model. Therefore, there is no autocorrelation in the models. Furthermore, the arithmetic LM value is 0.69, which is lower than the F-value, i.e. 5.13 in the table at the 5% significant level. In other words, the null hypothesis is proved implying that there is no autocorrelation involved. Furthermore, the arithmetic White statistics is 0.41, which is lower than F-value, i.e. 5.13 in the table at 5% significant level. Now, it can be concluded that the null hypothesis concerning variance homogeneity is proved and the classic assumption is true.

At the bottom of the table, the \( R^2 \) or adjusted coefficient of determination is 0.69. Hence, 69% of the variability in the discretionary accruals in companies at risk of bankruptcy is explained by the independent variables. In order to investigate the relationship between conditional auditor opinion and discretionary accruals in companies at risk of bankruptcy, the following hypothesis test was carried out.

\[
\begin{align*}
H_0: \beta_2 &= 0 \\
H_1: \beta_2 &\neq 0
\end{align*}
\]

As it can be seen in results of Table 6, the t-value, the coefficient of conditional auditor opinion on discretionary accruals in companies at bankruptcy risk is 3.48 which is greater than the value in the table, i.e. 2. Therefore, the hypothesis \( H_0 \) is rejected and the alternative hypothesis is proved, i.e. there is a significant relationship between discretionary accruals and conditional auditor opinion in companies at bankruptcy. Hence, hypothesis 3 is proved. In order to examine the significance of relationship between accepted auditor opinion and the discretionary accruals, the following hypothesis test was carried out.

\[
\begin{align*}
H_0: \beta_2 &= 0 \\
H_1: \beta_2 &\neq 0
\end{align*}
\]

As it can be seen in results of Table 6, the t-value, the coefficient of accepted auditor opinion on discretionary accruals in companies at bankruptcy risk is 2.8 which is greater than the value in the table, i.e. 2. Therefore, the hypothesis \( H_0 \) is rejected and the alternative hypothesis is proved, i.e. there is a significant relationship between discretionary accruals and accepted auditor opinion in companies at bankruptcy. Hence, hypothesis 4 is proved.

**Conclusion:**

This study intended to examine the effect of auditor opinion and earnings management on bankruptcy prediction of companies listed on Tehran Stock Exchange (TSE). Concerning that subject matter, the research hypotheses were formulated. In this regard, the information provided in the financial statements of companies listed on Tehran Stock Exchange during 2004 to 2012 was used. The results obtained from hypothesis testing are as follows:

The results of the first hypothesis stating "there is a significant relationship between the conditional auditor opinion and discretionary accruals", suggest there is a negative relationship between conditional auditor opinion and discretionary accruals. That is, by issuing a conditional opinion from an independent auditor, discretionary accruals will decrease. Simply put, the increased conditional opinion from the independent auditor, the company managers will be discouraged from earnings manipulation in financial statements. The results are consistent with those obtained by [18,5,4]. They are, however, inconsistent with the research done by and Tsipouridou and Spadies. Furthermore, the results of the second hypothesis stating "there is no significant relationship between discretionary accruals and conditional auditor opinion", suggest there is a positive relationship between discretionary accruals and accepted auditor opinion. That is, by issuing an accepted opinion from an auditor, discretionary accruals will increase. Simply put, the increased conditional opinion from the independent auditor, the company managers will be encouraged toward earnings manipulation in financial statements. The results are consistent with those obtained by Bani Mahd, 2011. They are, however, inconsistent with research done by Boushi et al [8] and Tsipouridou and Spadies. The results of the third hypothesis stating "there is a significant relationship between conditional auditor opinion and the discretionary accruals in companies at risk of bankruptcy", also suggests there is a negative relationship between discretionary accruals and conditional auditor opinion in companies at risk of bankruptcy. This means that conditional auditor opinion and discretionary accruals are negatively correlated in companies at risk of bankruptcy. The results are consistent with those achieved by Lightenen, [18] Besely et al., [5]; Barreto et al., [4] and Bani Mahd. They are, however, inconsistent with research done by Tsipouridou and Spadies [26]. According to the results from the fourth hypothesis stating "there is a significant relationship between auditor's accepted opinion and the discretionary accruals in companies at risk of bankruptcy", it can be concluded that there is a positive relationship between auditor's accepted opinion and the discretionary accruals in companies at risk of bankruptcy. This means that the auditor's accepted opinion and discretionary accruals have a positive impact on companies at risk of bankruptcy. Finally, Table 10 compares the results from this study and those obtained from other researchers. The results are consistent with Bani Mahd while they are inconsistent with Boushi et al [8] and Tsipouridou and Spadies [26].
REFERENCES


