Investigation of the Effects of Capital Structure on Value of Listed Companies in Tehran Stock Exchange

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Abstract

The objective of present study is to investigate the effects of capital structure on the value of listed companies in Tehran Stock Exchange. The statistical population of present study consisted of listed companies in Tehran Stock Exchange during 2009-2013 and the sample size was equal to 113 companies selected after applying criteria-filtering technique and elimination of outliers and irrelevant observations. In the present study, earnings per share, ratio of dividends per share, fixed assets turnover ratio, current ratio and financial leverage are considered as independent variables to investigate their effects on value of companies. Compiled data as well as panel data are used as fixed effects are supposed. The results of data analysis of different companies through multivariate regression showed 95 percent level of confidence.

Keywords: capital structure, company value, earnings per share, financial leverage, current ratio

1. Introduction

1.1 Problem Statement

Reference to studies and literature of financial management shows that one of the major reasons of failure of different companies is lack or insufficiency of investment and improper financing (Clark, 2010). For example, owners of these companies might choose an unsuitable composition of resources (Debt to Equity), obtain resources of high financial commitments and liquidity constraints or sign contracts which lead to costly commitments. They might even meet financiers who are hard to deal with. Therefore, the existing weaknesses might lead to improper investments that threaten the survival of companies (Kumar, 2004). In this regard, defining the value of companies is among important factors of investment process. The value of each company is defined based on the value of its shares. Therefore, the investor defines its investment priorities based on the value of each companies. Of significant factors which influence the stock value of a company, one can point to financial decision-making, capital structure and dividend policy (Chowdhury & Paul, 2010). In addition, improper investment structure in a company influences all fields of activity and can result in issues such as inefficiency of product marketing, inefficiency, inability to use human resources and similar cases (Hashemi & Akhlaghi, 2011). Decisions regarding capital structure have two aspects: First, the value of needed capital and second, financing mix. It is supposed that economic institutes are better aware of their needed level of investment. In such a case, the problem is that what kind of resources can be used to finance. In other words, how many bonds should be issued and how much investment is supplied from issuing more shares (Adam & Goyal, 2008).

Review of previous studies shows that association between value of the company and financial decision-making is a serious and contemporary subject of financial and investment markets. But in most of these studies, the effects of capital structure are ignored (Chowdhury & Paul, 2010). This is especially significant in Iran because it can lead to increase of conflicts of interests between major shareholders (controller of the company) and minor ones in economic unit. This conflict of interest is one of the most influential factors in defining dividend policy.
and financial leverage. Due to the fact that one of the main tasks of managers is to maximize the wealth of shareholders, the effects of financing methods and using the benefits of these methods to improve value of the company are highly significant for them (Roakli, 1999). Also, financing method might influence earnings per share, financial risk, and increase of sales as well as size of the company (Chowdhury & Paul, 2010). The present study endeavors to investigate the financing methods of companies and how it influences the value of companies. Therefore, main problem of present study is to investigate the association between capital structure and value of companies listed in Tehran Stock Exchange and define the type of association.

1.2 Literature Review
Modigliani and Miller (1958) did a study called “Impact on the Value of the Company’s Capital Structure and Cost of Capital”. The variables of this study were debt ratio and weighted average cost of capital. They concluded that using such debts has a positive effect upon value of the company and limited effect upon weighted average cost of capital. Fama and French (1992) did a study called “Test of Patterns Provided by the Theory of Parallel and Preferred Dividends and Debt in America” the statistical population of which consisted of US companies during 1965-1999 of which financing and public companies were excluded. The patterns of preference and compromise theory are from preferred theory model (Masulis, 1983). By controlling the variable of investment opportunities, companies which have higher assets pay more dividend and have low ratio of financial leverage to market/book value. By controlling the variable of profitability, companies of high current and expected investment pay more dividend. Based on the simple model of this theory, companies which invest more have high ratio of leverage to book value. In the complex model of this theory, when companies balance their current and future financing costs, companies which face more net cash flow fluctuations pay less dividend and maintain less financial leverage. Companies (especially those that pay dividend) of higher expected investment have lower short-term leverage. Financial leverage is negatively associated with dividend. Booth et al. (2001) did a study called “Capital structure in Developing Countries” and investigated the influential factors upon capital structure of ten developing countries. They provided evidence of this fact that decisions in of capital structure in these countries are influenced by developed countries. The obtained results showed that more profitable companies have higher debt ratios. Dimitrov and Jain (2005) did a study called “The Effect of Financial Leverage on Stock Returns and Performance Evaluation based on the Profit”. They used the ratio of debt to pay and stock return and concluded that there is a negative association between debt to pay ratio of shareholders and stock return. Zou and Xiao (2006) in a study called “The effects of Industry Concentration and Average Stock Returns” used the variables of size, the ration of book to market value, regression method and correlative analysis. They concluded that companies obtain higher stock returns in competitive industries. Sivaprasad and Muradoglu (2007) in a study called “The Effect of Capital Structure on the Cumulative Abnormal Return” analyzed variables such as cumulative abnormal returns, firm size, financial leverage, interest rate, B/M and P/E and used the statistical methods of regression and correlative analysis to conclude that stock return of shareholders increases with increase of financial leverage in some risk groups and decreases in some others. Yang, Qu and Kim (2009) in a study called “The Relationship between Abnormal Returns and the Correlation of Excess Returns by Hospital Combination” selected the variables of size, abnormal returns, the expected return on a stock and cash payments and applied statistical regression and correlative analysis to investigate the association between abnormal returns by hospital combination as well as the association of return excesses, financing methods and size. They concluded that hospital combination leads to abnormally positive return in the next twelve months. Chowdhury and Paul (2010) in his study called “The Effect of Capital Structure on Firm Size in Firms of Bangladesh” considered the stock value as an equivalent of company value and concluded that despite of the study of Modigliani and Miller (1958), the structure of debt and profit has a significant effect on the value of the company.

1.3 Research Hypotheses
Primary Hypothesis:
Capital Structure influences the company value.
Secondary Hypotheses:
1) Earnings per share influences company value.
2) The dividend per share (Dps ratio) influences company value.
3) The ratio of fixed assets turnover influences company value.
4) Current ration influences company value.
5) Financial leverage influences company value.
6) Growth of sales influences company value.

1.3.1 Regression Model

In the present model, a basic model of Chaudhry et al. (2010) is provided in the following manner:

\[
Firm_{value_{,t}} = \alpha_0 + \beta_1 Eps_{i,t} + \beta_2 Dpsratio_{i,t} + \beta_3 Fato_{i,t} + \beta_4 Curatio_{i,t} + \beta_5 Finlev_{i,t} \\
+ \beta_6 Salesgr_{i,t} + \beta_7 Ltdebtas_{i,t} + \varepsilon_{i,t}
\]

(1)

1.4 Conceptual Model

![Conceptual Model](image)

Figure 1. Conceptual Model

2. Method

The present study is of correlative and descriptive type (i.e. in a descriptive study of correlative type, the researcher investigates the associations between two or more variables). The argument in the present study is of inductive-deductive type. It is inductive based on theoretical background and literature through library, essay and internet. The argument is deductive because data collection is done by using primary data to deny or support hypotheses. In the present study, the method of panel data is used based on type of data and methods of data collection because to study the effects of capital structure on company value, estimating and estimated values are analyzed from two different aspects. From one aspect, this variables are analyzed for different companies and from another aspect, they are tested during 2009-2013.

2.1 Statistical Population and Sample of Present Study

The statistical population of present study consists of all listed companies of Tehran Stock Exchange from 2009-2013. To select the sample, criteria-filtering method was used. To do this, the following criteria were considered and if a company has all items, it is selected as one of the companies of the sample. The procedure of selection is detailed in Table 1.
Table 1. Process of selecting statistical sample of present study

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>All companies listed in stock exchange till 2013/03/19</td>
<td>474</td>
</tr>
<tr>
<td>Companies listed since 2009</td>
<td>44</td>
</tr>
<tr>
<td>Companies suspended during present research or unlisted</td>
<td>124</td>
</tr>
<tr>
<td>Companies whose financial year doesn’t end in March, 19 or have changed their financial years</td>
<td>92</td>
</tr>
<tr>
<td>Financial intermediation companies (investment holding, leasing and bank)</td>
<td>18</td>
</tr>
<tr>
<td>Companies that did their last business in February</td>
<td>58</td>
</tr>
<tr>
<td>Companies that didn’t issue their financial statements in 2013</td>
<td>3</td>
</tr>
<tr>
<td>Companies with insufficient information in some research variables</td>
<td>68</td>
</tr>
<tr>
<td>All test table statistical population when pre-conditions are considered</td>
<td>113</td>
</tr>
</tbody>
</table>

2.2 Methods and Tools of Data Collection

Data collection is highly significant for each research. In the present study, studying theoretical principles and review of literature are done through library method by using associated Persian and English books, papers and dissertations. Due to the fact that information of variables of present study includes accounting items of audited financial statements of companies, necessary data were extracted from existing financial statement in websites of management and development of Islamic studies associated with Securities and Exchange Organization of Iran (i.e. www.rdis.ir), Codal network or comprehensive information systems for Publishers (i.e. www.codal.ir), Financial Information Processing Center of Iran (i.e. www.Fipiran.com) and compact disks of Securities and Exchange Organization of Iran which have been manually extracted. To analysis data and test the hypotheses, initial computations were done in broadsheet of Excel Software to prepare data for further analysis. To do final analysis, SPSS Software (version. 20), Eviews (version.7) and Minitab (version.16) were use.

3. Results

3.1 Descriptive Statistics

The summary of descriptive statistics associated with variables of the model is detailed after applying criteria-filtering technique and removal of outlier observations by using SPSS Software (version.20) as shown in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Observations</th>
<th>Mean</th>
<th>SD</th>
<th>Min Value</th>
<th>Max Value</th>
<th>Skewedness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Value</td>
<td>565</td>
<td>17.765</td>
<td>2.128</td>
<td>15.667</td>
<td>24.2030</td>
<td>4.123</td>
<td>2.156</td>
</tr>
<tr>
<td>Earnings per Share</td>
<td>565</td>
<td>2688</td>
<td>1.745</td>
<td>1185</td>
<td>7845</td>
<td>-1.564</td>
<td>1.711</td>
</tr>
<tr>
<td>Dividend per share (Dps ratio)</td>
<td>565</td>
<td>0.4786</td>
<td>2.0864</td>
<td>0.000</td>
<td>0.8234</td>
<td>2.911</td>
<td>3.565</td>
</tr>
<tr>
<td>Ratio of Fixed Asset Turnover</td>
<td>565</td>
<td>0.6923</td>
<td>1.3623</td>
<td>0.2867</td>
<td>0.9858</td>
<td>-3.677</td>
<td>3.446</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>565</td>
<td>1.5674</td>
<td>1.5133</td>
<td>0.1380</td>
<td>2.8123</td>
<td>-2.909</td>
<td>2.976</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>565</td>
<td>0.5685</td>
<td>1.0846</td>
<td>0.2892</td>
<td>0.8932</td>
<td>3.556</td>
<td>1.845</td>
</tr>
<tr>
<td>Growth of Sales</td>
<td>565</td>
<td>0.3427</td>
<td>2.7119</td>
<td>-0.2814</td>
<td>0.7841</td>
<td>2.909</td>
<td>2.834</td>
</tr>
<tr>
<td>Ratio of Long-term Debts to Assets</td>
<td>565</td>
<td>0.4128</td>
<td>1.4841</td>
<td>0.1783</td>
<td>0.6893</td>
<td>-2.192</td>
<td>2.743</td>
</tr>
</tbody>
</table>

3.2 Analysis of Association between Research Variables

In this section, Pearson correlation coefficient is used to investigate the association between research variables and correlation among them. Matrix of correlation coefficients for research variables is shown in Table 3.
Based on the results of Pearson statistics, value of the companies is positively and significantly associated with earnings per share (Eps) and dividend per share ratio (Dps ratio) but it has negative and significant association with growth of sales. Earnings per share (Eps) has a significant and positive association with dividend per share (Dps ratio) and growth of sale. The ratio of fixed assets turnover has a positive and significant association with current ratio and financial leverage. Current ratio is positively and significantly associated with financial leverage and ratio of long-term debts to assets.

In regard to financial leverage, this variable has a significant and negative association with ratio of long-term debts to assets.

Table 3. Matrix of pearson correlation coefficients among research variables

<table>
<thead>
<tr>
<th></th>
<th>Company Value</th>
<th>Earnings per Share (Eps)</th>
<th>Dividend per Share (Dps ratio)</th>
<th>Ratio of Fixed Assets Turnover</th>
<th>Current Ratio</th>
<th>Financial Leverage</th>
<th>Growth of Sales</th>
<th>Ratio of Long-term Debt to Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Value (P-Value)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earnings per Share</td>
<td>0.367</td>
<td>0.041</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P-value)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dividend per Share</td>
<td>0.421</td>
<td>0.015</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P-value)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of Fixed Assets</td>
<td>-0.083</td>
<td>0.376</td>
<td>0.227</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover (P-value)</td>
<td>(0.411)</td>
<td>(0.376)</td>
<td>(0.227)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current ratio (P-value)</td>
<td>0.037</td>
<td>0.114</td>
<td>0.376</td>
<td>0.0037</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>-0.058</td>
<td>0.288</td>
<td>0.0455</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P-value)</td>
<td>(0.166)</td>
<td>(0.376)</td>
<td>(0.0037)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth of Sales (P-value)</td>
<td>0.0832</td>
<td>0.177</td>
<td>0.476</td>
<td>0.045</td>
<td>0.063</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.023)</td>
<td>(0.266)</td>
<td>(0.129)</td>
<td>(0.427)</td>
<td>(0.071)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term Debts to</td>
<td>0.096</td>
<td>0.027</td>
<td>-0.038</td>
<td>0.518</td>
<td>-0.419</td>
<td>0.084</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Assets (P-Value)</td>
<td>(0.177)</td>
<td>(0.265)</td>
<td>(0.644)</td>
<td>(0.0018)</td>
<td>(0.0026)</td>
<td>(0.041)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3 Results of Testing Hypotheses

In this section, the necessary pattern to predict the model for each hypothesis of present study is defined. Then, research model is provided and its results are analyzed. Also, statistical hypotheses of each hypothesis including normality of residuals, homogeneity of variance residuals, independence of residuals and linearity of the models as well as descriptions and results are provided. Hypotheses of present study are estimated by using the following model in panel data. If $Bi$ coefficient is significant in 95 percent level of confidence, it is supported.
\[ Firm_{t,d} = \alpha_0 + \beta_1 Eps_{t,d} + \beta_2 Dpsratio_{t,d} + \beta_3 Fato_{t,d} + \beta_4 Curatio_{t,d} + \beta_5 Finlev_{t,d} + \beta_6 Salesgr_{t,d} + \beta_7 Ltdebtas_{t,d} + \varepsilon_{t,d} \]  

(2)

To define whether using panel data method is efficient in estimating the desired model, Chow-test (or F-test) is used and to highlight which method (fixed or random effects) is more suitable for estimation (fixed or randomized differences of sectional units), Hausman test is used. The results of this statistic is shown in Table 4.

Table 4. Results of Chow and Hausman test for research variable

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Number</th>
<th>Statistics</th>
<th>Value of Statistics</th>
<th>Degree of Freedom</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow</td>
<td>565</td>
<td>F</td>
<td>8.9432</td>
<td>(432/8298)</td>
<td>0.0019</td>
</tr>
<tr>
<td>Hausman</td>
<td>565</td>
<td>(\chi^2)</td>
<td>4.7291</td>
<td>9</td>
<td>0.03823</td>
</tr>
</tbody>
</table>

Based on the results of Chow test and its P-value (0.0019), H0 hypothesis is denied with 95 percent level of confidence. It shows that panel data method can be used. Also, results of Hausman test and its P-value (0.03823) which is less than 0.05, H0 hypothesis is denied in 95 percent level of confidence and H1 hypothesis is supported. Therefore, the present model is estimated by using fixed effect method.

To measure the validity of the model and analyze the hypotheses of classic regression, it is necessary to define lack of linearity of independent model variables as well as doing tests in regard to normality of residuals, homogeneity of variances, independence of residuals and lack of explicit error model (linear model). To test the normality of error sentences, different tests can be used. One of these tests is Jarque-Bera test used in the present study. The results of Jarque-Bera test showed that residuals of estimating present research model have normal distribution with 95 percent level of confidence so that possibility of this test is more than 0.05 (0.5189). One of the statistical hypotheses of classic regression is homogeneity of residuals variance. If the variances aren’t homogeneous, linear estimator is unbiased and will not have the least variance. In the present study, homogeneity of variances is defined by Breusch-Pagan test. Based on the level of significance in the present study which is less than 0.05 (i.e. 0.0007), zero hypothesis on homogeneity of variance is denied and one can say that the model has the problem of variance heterogeneity. In the present study, this problem is solved by applying generalized least squares (GLS). Based on initial results of estimating the model, the value of Durbin-Watson statistics is 2.188. Because this value is between 1.5 and 2.5, one can conclude that residuals are independent in addition, to test that whether the model has a linear association and whether the desired research model is properly defined in terms of linearity, Ramsey test is used. Due to the fact that level of significance for Ramsey test (0.0945) is more than 0.05, the zero hypothesis of this test regarding linearity of the model was supported and the model hasn’t specification error. The summary of results for the above tests is shown in Table 5.

Table 5. Results of testing statistical hypotheses of research model

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(\chi^2)</td>
<td>P-Value</td>
<td>F</td>
<td>P-Value</td>
<td>D</td>
<td>F</td>
<td>P-Value</td>
</tr>
<tr>
<td>1.8126</td>
<td>0.5189</td>
<td>6.361</td>
<td>0.0007</td>
<td>2.188</td>
<td>28.7342</td>
<td>0.0945</td>
</tr>
</tbody>
</table>

Based on the results of Chow and Hausman test and results of testing statistical hypotheses of classic regression, research model is estimated by using panel-data method and supposition of fixed effects. The results of model estimation are shown in Table 6.
Table 6. Results of testing research hypotheses by using fixed-effect method

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>T-statistics</th>
<th>P-value</th>
<th>Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Element</td>
<td>0.7453</td>
<td>2.8196</td>
<td>0.028</td>
<td>Positive</td>
</tr>
<tr>
<td>Earnings per Share</td>
<td>0.1188</td>
<td>2.7115</td>
<td>0.0321</td>
<td>Positive</td>
</tr>
<tr>
<td>Dividend per Share (Dps ratio)</td>
<td>0.0877</td>
<td>3.1219</td>
<td>0.011</td>
<td>Positive</td>
</tr>
<tr>
<td>Ratio of Fixed Assets Turnover</td>
<td>0.0093</td>
<td>0.9378</td>
<td>0.4114</td>
<td>Insignificant</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>0.0145</td>
<td>2.3881</td>
<td>0.0446</td>
<td>Positive</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>-0.057</td>
<td>1.8574</td>
<td>0.082</td>
<td>Insignificant</td>
</tr>
<tr>
<td>Growth of Sales</td>
<td>0.0275</td>
<td>2.8341</td>
<td>0.011</td>
<td>Positive</td>
</tr>
<tr>
<td>Ratio of Long-term Debts to Assets</td>
<td>0.116</td>
<td>1.4881</td>
<td>0.267</td>
<td>Insignificant</td>
</tr>
</tbody>
</table>

To define the significance of the whole model, due to the fact that value of F is less than 0.05 (i.e. 0.0021), the significant of model is supported with 95 percent level of confidence. Determination coefficient of the model shows that 53.91 percent of the company value is defined by variables of the present model.

3.3.1 Results of Testing the First Hypothesis

The objective of testing the first hypothesis is to investigate the association between earning per share (Eps) and value of the company the statistical hypothesis of which is defined in the following:

H0: Earnings per share doesn’t influence company value.

H1: Earnings per share influences company value.

This hypothesis is estimated by using research model in the form of panel data. If $B_1$ coefficient is significant in 95 percent level of confidence, this hypothesis is supported.

$$\begin{cases} 
H_0 : \beta_1 = 0 \\
H_1 : \beta_1 \neq 0
\end{cases} \quad (4)$$

To analyze the significance of coefficients as shown in Table 5, due to the fact that possibility of t statistics for the variable of earnings per share (Eps) is less than 0.05 (0.0321), a significant association between earnings per share (Eps) and company value is supported in 95 percent level of confidence. Therefore, the first hypothesis of present study is supported and with 95 percent confidence, one can say that there is a significant association between earnings per share (Eps) and company value. Positive value of this coefficient (0.1188) shows direct association between earnings per share and company value so that one-unit increase of earnings per share (Eps) is followed by 0.1188 unit increase of company value. Therefore, based on analyses of the association and confirmation of the first hypothesis, it can be concluded that earning per share (Eps) has a direct and significant influence upon company value.

3.3.2 Results of Testing Second Hypothesis

The objective of testing the second hypothesis is to investigate the association between dividend per share (Dps) and value of the company the statistical hypothesis of which is defined in the following:

H0: Dividend per share (Dps) doesn’t influence company value.

H1: Dividend per share (Dps) influences company value.

This hypothesis is estimated by using research model in the form of panel data. If $B_2$ coefficient is significant in 95 percent level of confidence, this hypothesis is supported.
To analyze the significance of coefficients as shown in Table 5, due to the fact that possibility of t statistics for the variable of dividend per share (Dps) is less than 0.05 (0.0887), a significant association between dividend per share (Dps) and company value is supported in 95 percent level of confidence. Therefore, the second hypothesis of present study is supported and with 95 percent confidence, one can say that there is a significant association between dividend per share (Dps) and company value. Negative value of this coefficient (0.0887) shows direct association between dividend per share (Dps) and company value so that one-unit increase of dividend per share (Dps) is followed by 0.0877 unit increase of company value. Therefore, based on analyses of the association and confirmation of the second hypothesis, it can be concluded that dividend per share (Dps) has a direct and significant influence upon company value.

3.3.3 Results of Testing Third Hypothesis

The objective of testing the third hypothesis is to investigate the association ratio of fixed assets turnover and value of the company the statistical hypothesis of which is defined in the following:

H0: Ratio of fixed assets turnover doesn’t influence company value.
H1: Ratio of fixed assets turnover influences company value.

This hypothesis is estimated by using research model in the form of panel data. If $\beta_3$ coefficient is significant in 95 percent level of confidence, this hypothesis is supported.

\[
\begin{align*}
H_0 &: \beta_3 = 0 \\
H_1 &: \beta_3 \neq 0
\end{align*}
\]  

(6)

To analyze the significance of coefficients as shown in Table 5, due to the fact that possibility of t statistics for the ratio of fixed assets turnover is less than 0.05 (0.4114), a significant association between ratio of fixed assets turnover and company value is denied in 95 percent level of confidence. Therefore, the second hypothesis of present study is denied and with 95 percent confidence, one can say that there is no significant association between ratios of fixed assets turnover and company value. Therefore, based on analyses of the association and denial of the third hypothesis, it can be concluded that ratio of fixed assets turnover has no significant influence upon company value.

3.3.4 Results of Testing the Fourth Hypothesis

The objective of testing the fourth hypothesis is to investigate the association between current ratio and value of the company the statistical hypothesis of which is defined in the following:

H0: Current ratio doesn’t influence company value.
H1: Current ratio influences company value.

This hypothesis is estimated by using research model in the form of panel data. If $\beta_4$ coefficient is significant in 95 percent level of confidence, this hypothesis is supported.

\[
\begin{align*}
H_0 &: \beta_4 = 0 \\
H_1 &: \beta_4 \neq 0
\end{align*}
\]  

(7)

To analyze the significance of coefficients as shown in Table 5, due to the fact that possibility of t statistics for the variable of variable ratio to current ratio is less than 0.05 (0.0446), a significant association between current ratio and company value is supported in 95 percent level of confidence. Therefore, the fourth hypothesis of present study is supported and with 95 percent confidence, one can say that there is a significant association between current ratio and company value. Positive value of this coefficient (0.0145) shows direct association between current ratio and company value so that one-unit increase of current ratio is followed by 0.0145 unit increase of company value. Therefore, based on analyses of the association and confirmation of the fourth hypothesis, it can be concluded that current ratio has a direct and significant influence upon company value.
3.3.5 Results of Testing the Fifth Hypothesis

The objective of testing the fifth hypothesis is to investigate the association between financial leverage and value of the company the statistical hypothesis of which is defined in the following:

H0: Financial leverage doesn’t influence company value.

H1: Financial leverage influences company value.

This hypothesis is estimated by using research model in the form of panel data. If $\beta_5$ coefficient is significant in 95 percent level of confidence, this hypothesis is supported.

$$\begin{align*}
H_0 : \beta_5 &= 0 \\
H_1 : \beta_5 &\neq 0
\end{align*} \tag{8}$$

To analyze the significance of coefficients as shown in Table 5, due to the fact that possibility of t statistics for the variable of financial leverage is less than 0.05 (0.082), a significant association between financial leverage and company value isn’t supported in 95 percent level of confidence. So, a significant association between financial leverage and company value is denied in 95 percent level of confidence. The fifth hypothesis is denied and with 95 percent confidence, one could say there is no significant association between financial leverage and company value.

3.3.6 Results of Testing the Sixth Hypothesis

The objective of testing the sixth hypothesis is to investigate the association between growth of sales and value of the company the statistical hypothesis of which is defined in the following:

H0: Growth of sales doesn’t influence company value.

H1: Growth of sales influences company value.

This hypothesis is estimated by using research model in the form of panel data. If $\beta_6$ coefficient is significant in 95 percent level of confidence, this hypothesis is supported.

$$\begin{align*}
H_0 : \beta_6 &= 0 \\
H_1 : \beta_6 &\neq 0
\end{align*} \tag{9}$$

To analyze the significance of coefficients as shown in Table 5, due to the fact that possibility of t statistics for the variable of variable ratio to current ratio is less than 0.05 (0.011), a significant association between growth of sales and company value is supported in 95 percent level of confidence. Therefore, the sixth hypothesis of present study is supported and with 95 percent confidence, one can say that there is a significant association between growth of sales and company value. Positive value of this coefficient (0.0275) shows direct association between growth of sales and company value so that one-unit increase of growth of sales is followed by 0.0275 unit increase of company value. Therefore, based on analyses of the association and confirmation of the sixth hypothesis, it can be concluded that growth of sales has a direct and significant influence upon company value.

4. Discussion

4.1 Limitations of Present Study

Collected data of present study consists of all listed companies of Tehran Stock Exchange during 2009-2013.

1) Due to the fact that increase of information and number of observation of test results lead to higher validity of results of present study, one might achieve different results by increasing the length of the period.

2) Despite of precision in collection of data, weakness of information sources especially regarding values of the company and ratio of fixed assets turnover, some of these companies were excluded from the sample.

The necessary data to do analytic examination of present study were ignored for 2013 due to major variation of company value so that results of hypotheses in the present study can be supported for the desired period.

4.2 Further Suggestions Based on Results of Present Study

1) Securities and Exchange Organization of Iran can use the results of present study and similar ones to provide more comprehensive information regarding market value of companies and its variations for shareholders.

2) The recommendation of accounting standard organizations to voluntarily provide comprehensive data of level
of data of market value and current ratios of companies

3) Due to the fact that increase of level and amount of fluctuation of sales in different companies can have a significant effect upon decision-making of investors, provision of comprehensive and explicit information by managers regarding the rate of sales increase and effects of fluctuation on market value of the companies will be useful.

4) It is better for active financial analysts of capital market to do distinctive analyses of the status of sales growth, variation of financial leverage and its influential factors as well as effects of these factors on market value of companies based on accounting standards beside of normal analyses and techniques.

4.3 Suggestions for Further Studies

To better use the results of present study and help in clarifying the association between the effects of capital structure on company value, the following items should be paid more attention to in future:

1) Studying the effects of industrial type on the effect of capital structure on company value

2) Using other variables to evaluate the sensitivity of variation of sales growth, current ratio and other evaluation variables such as systematic risk and credit rating of companies to investigation of the association between capital structure and company value

3) Analysis of the effects of macroeconomic variables such as inflation, oil price and currency rate on identification of effects of capital structure on company value

4) Doing similar studies by considering cash currents of political issues and its effects on market value of companies based on variations of financial leverage

5) Due to the fact that companies with intermediate activities were excluded from research sample, it is suggested that a research should be done on the association of the effects of capital structure on company value for these types of companies the results of which can be compared with findings of present study.

Reference


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