Investigating the relation between refinancing, profitability, and capital structure in companies listed in Tehran Stock Exchange

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Abstract

Inappropriate capital structure influences all areas of activity in every company or particularly in every small company. It can also result in incidence of problems like inefficiency in marketing of products, inefficiency and inability in suitably employing human resources, and so on. The present study was aimed at investigating the relationship between refinancing, profitability, and capital structure of the companies listed in Tehran Stock Exchange. The statistical sample was selected by the systematic removal method during 2009-2014. The study hypotheses were examined through linear regression; the results of which indicated that refinancing had a significant effect on financial leverage and profitability.

Keywords: refinancing; profitability; financial leverage.
Introduction

There is a remarkable difference among active companies in different industries in terms of capital structure. Due to the existence of several effective factors in decisions related to capital structure of a company, the judgments made by the person who determines the capital structure are highly significant. If the judgment of the decision-makers is different regarding the importance of different effective factors on capital structure, then the capital structures of two similar companies may differ. These effective factors are to a large extent psychological, complicated, and qualitative, and capital markets are not complete and the decisions are accompanied with hazards and insufficient knowledge; therefore, they do not always adhere to an accepted theory. In general, companies are willing to supply all necessary financial resources with minimum cost (Nikmaram, 2009).

Companies have to plan their initial capital structure while establishing their profit unit, then, capital structure decisions will be influence whenever financing is needed for investment. In this chapter, an overview of the research design is presented, including statement of the problem, the significance of the study, statistical population and sample, and definition of the study variables.

Statement of the problem

There are outstanding differences between the capital structures of active companies in different industries. Due to the existence of several effective factors in decisions related to capital structure of a company, the judgments made by the person who determines the capital structure are highly significant. If the judgment of the decision-makers is different regarding the importance of different effective factors on capital structure, then the capital structures of two similar companies may differ. These effective factors are to a large extent psychological, complicated, and qualitative, and capital markets are not complete and the decisions are accompanied with hazards and insufficient knowledge; therefore, they do not always adhere to an accepted theory. In general, companies are willing to supply all necessary financial resources with minimum cost (Nikmaram, 2009). Capital structure has always been one of the financial management challenges. Moreover, enhancing the shareholders’ wealth in long run is one of the most important goals of companies. In order to maximize their value, the companies need to implement profitable projects. Conducting profitable projects, in turn, requires financing. Strategies available for financing capital expenditures affect the capital structure of companies. In order to optimize the capital structure of companies, it is essentially necessary for their financial managers to understand and know their different financial resources and the expenditures they would bear for finance purposes, so that they can make decisions on financing so as to maximize the value of the company and its profitability. In this regard, liquid factors and variables affecting capital structure can influence the profitability and efficiency of companies under the coverage of the abovementioned goals and in the form of representation theory and observance of hierarchy theory (Mehrani & Rasaian, 2007). Companies need capital in order to
develop and progress. A part of the capital inside a company is supplied through retained profit that is resulted from the company’s profitability and is not shared among the shareholders, and the rest can be supplied through capital markets or loans. If a company does not have any debts, its capital structure is composed of the shareholders’ equity. As shareholders’ representatives, companies’ managers need to constantly try to regulate the capital structure of the company in a way that the company’s capital cost will be minimum and its value and profitability will be maximum. The issue of capital structure in each company is one of the challenging financial issues which have always been paid special attention by managers due to the proportion of debts and assets. In general, capital structure of companies in Iran is composed of two parts: first, shareholders’ capital contribution (common stock) and second, financial borrowing which are utilized by the managers to achieve profit in the future and accomplish their obligations to the funders. Therefore, the managers of companies try to gain maximum efficiency and profit by combining these two parts. In this regard, one of the goals of capital market is to optimally and correctly allocate financial resources, i.e. financial resources are devoted to the most appropriate and profitable sectors of the market. Therefore and because of the investors’ interest in and need for achieving appropriate criteria for evaluating highly profitable stocks and investing in companies with better financial future, it is quite common to use financial leverage particularly using market proportions in capital markets of different countries. It is necessary for the investors to understand these criteria and the level of their relationship with the future return of the companies and their stocks. (Brigam et al, 1999). Development of the activity range of business units has brought about new financial needs which can be met through internal and external resources. Internal financial resources include retained profit and reserves. And external resources include interest-bearing debts and shareholders’ equity. Employing external resources involves advantages and hazards in regard to capital cost and the rate of interest or dividends, which can affect the price of the stocks and accounting profit. In general, recognizing the policies of combining capital structure and financial resources is important in meeting the needs of the companies in order to ensure their profitability (Hashemi et al, 2010). In the present study, the relationship among refinance, profitability, and capital structure was investigated.

The significance and necessity of the study

Since financial management is aimed at maximizing the shareholders’ wealth, the capital structure or debt ratio needs to be evaluated in regard to its effect on the value of the company. If the debt ratio affects the value of the company, the management will be after capital structure, so that it can minimize the capital cost and maximize the value of the company. In order to maximize the value of their companies, managers intend to implement profitable projects. In financial and accounting literature, the expenditure of implementing profitable projects is named as capital expenditure. Such expenditure requires financing in order to implement such projects. Financing strategy in companies is one of the most important issues that financial and accounting scholars have focused on. An important goal of financing is to invest in companies for further profits. Different methods of financing include internal financing, external financing, or a
combination of these two (Jahankhahi & Kan’ani, 2006). Supplying resources means to maintain service accountability and at the same time delivery of that service to an external organization, which is typically carried out under a contract with standards, costs, and precise conditions (Misagh Translation Team, 2006). In fact, financing means to provide financial resources and funds in order to continue the company’s activity and create and establish development and profitable projects in these economic units. Financing is mostly carried out through stock dividends (splits), sale of bonds, and credit. Companies can use each of these methods for financing and forming their capital structure. Capital structure has been introduced as the most important parameter for valuating companies and orientating them in capital markets. The current ever-changing environment has caused the ranking of companies to some extent be reliant on their capital structure in regard to credit. This helps their strategic planning approach selecting more effective resources on the goal (maximizing the shareholders’ wealth) (Mighani, 2010). Therefore, fluid factors and variables effective on capital structure can influence the companies’ profitability and efficiency within the representative theory and observance of hierarchy theory (Warnd, 1977). It is obvious that financial managers’ decision-making regarding the observance of matching principle during financing is considered as a certain approach in modifying the decisions according to the requirements of the economic environment, and it is considered as a suitable model for the development and effectiveness of the ideology governing the performance of companies (Sinayi & Rezaeei, 2007).

According to the financing resources, companies have different efficiency and risk regarding capital supply markets. Therefore, decisions on capital structure play an effective role in efficiency and credit of companies in the view of financing organizations. However, the importance of companies regarding the extent of their performance, profitability, development facilities, and size and type of activity determines their various financial needs. Here the resources obtained from debts along with enhancing the fixed expenditure cause an increase in leverage and systematic risk. At the same time, focusing on capital expenditure of different financing methods and paying attention to it have caused the emergence of suitable profitable opportunities or incidence of financial crisis in companies (Booth et al, 2001). Therefore, according to the characteristics dominating the capital structure managers’ financial thinking, the right place of the companies in financial markets will be fixed and their precise ranking will be accomplished by creditors of capital markets. Making decisions on capital structure is one of the most challenging and difficult problems faced by companies while they are the most essential for their survival. Determining optimal capital structure is an essential issue of companies’ financing. This important issue has an important use in decision-making on financing the current operations and investment projects of the companies. The issue of capital structure was first proposed by Modigliani and Miller (1961). They believed that knowing and valuating companies based on their assets and financing method are dependent on capital structure. In this regard, research indicates that capital structure is an essential factor in determining the value and profitability of a company (Singh & Hodder, 2000). In this regard, no studies were found in the
field of refinancing of companies, profitability, and capital structure, which was investigated in the present study. Based on the abovementioned issues, capital structure, financing, and profitability and the relationship among them are highly important for companies, shareholders, and investors. Therefore, due to the importance of the issue and its novelty in the country, it was investigated in the present study.

**Study objectives**

The present study was conducted in order to investigate the relationship among refinancing, profitability, and capital structure of the companies listed in Tehran Stock Exchange.

**Study questions**

1. Does refinancing have a significant effect on profitability?
2. Does refinancing have a significant effect on financial leverage?

**Study hypotheses**

1. Refinancing has a significant effect on profitability.
2. Refinancing has a significant effect on financial leverage.

**Review of the literature**

Since financial management is aimed at maximizing the shareholders’ wealth, the capital structure or debt ratio needs to be evaluated in regard to its effect on the value of the company. If the debt ratio affects the value of the company, the management will be after capital structure, so that it can minimize the capital cost and maximize the value of the company. In order to maximize the value of their companies, managers intend to implement profitable projects. In financial and accounting literature, the expenditure of implementing profitable projects is named as capital expenditure. Such expenditure requires financing in order to implement such projects. Financing strategy in companies is one of the most important issues that financial and accounting scholars have focused on. An important goal of financing is to invest in companies for further profits. Different methods of financing include internal financing, external financing, or a combination of these two (Jahankhani & Kan’ani, 2006). Supplying resources means to maintain service accountability and at the same time delivery of that service to an external organization, which is typically carried out under a contract with standards, costs, and precise conditions (Misagh Translation Team, 2006). In fact, financing means to provide financial resources and funds in order to continue the company’s activity and create and establish development and profitable projects in these economic units. Financing is mostly carried out through stock dividends (splits), sale of bonds, and credit. Companies can use each of these methods for financing and forming their capital structure. Capital structure has been introduced as the most
important parameter for valuating companies and orientating them in capital markets. The current ever-changing environment has caused the ranking of companies to some extent be reliant on their capital structure in regard to credit. This helps their strategic planning approach selecting more effective resources on the goal (maximizing the shareholders’ wealth) (Mighani, 2010). Therefore, fluid factors and variables effective on capital structure can influence the companies’ profitability and efficiency within the representative theory and observance of hierarchy theory (Warnd, 1977). It is obvious that financial managers’ decision-making regarding the observance of matching principle during financing is considered as a certain approach in modifying the decisions according to the requirements of the economic environment, and it is considered as a suitable model for the development and effectiveness of the ideology governing the performance of companies (Sinayi & Rezaeei, 2007). According to the financing resources, companies have different efficiency and risk regarding capital supply markets. Therefore, decisions on capital structure play an effective role in efficiency and credit of companies in the view of financing organizations. However, the importance of companies regarding the extent of their performance, profitability, development facilities, and size and type of activity determines their various financial needs. Here the resources obtained from debts along with enhancing the fixed expenditure cause an increase in leverage and systematic risk. At the same time, focusing on capital expenditure of different financing methods and paying attention to it have caused the emergence of suitable profitable opportunities or incidence of financial crisis in companies (Booth et al, 2001). Therefore, according to the characteristics dominating the capital structure managers’ financial thinking, the right place of the companies in financial markets will be fixed and their precise ranking will be accomplished by creditors of capital markets. Making decisions on capital structure is one of the most challenging and difficult problems faced by companies while they are the most essential for their survival. Determining optimal capital structure is an essential issue of companies’ financing. This important issue has an important use in decision-making on financing the current operations and investment projects of the companies. The issue of capital structure was first proposed by Modigliani and Miller (1961). They believed that knowing and valuating companies based on their assets and financing method are dependent on capital structure. In this regard, research indicates that capital structure is an essential factor in determining the value and profitability of a company (Singh & Hodder, 2000). In this regard, no studies were found in the field of refinancing of companies, profitability, and capital structure, which was investigated in the present study. Based on the abovementioned issues, capital structure, financing, and profitability and the relationship among them are highly important for companies, shareholders, and investors. Therefore, due to the importance of the issue and its novelty in the country, it was investigated in the present study.

Hashemi and Akhlaghi (2010) studied the effect of financial leverage, dividend policy, and profitability on the future value of companies. The results of their study indicated that there was a significant relationship between the value of companies and financial leverage, dividend policy, and profitability. There was also a positive significant relationship between future value
of companies and the studied variables. Moreover, the results of their study indicated that the value of companies might increase if there is an increase in the ratios of financial leverage, dividend policy, and profitability.

Seyyed Nourani et al (2012) investigated the causal relationship between bank capital and profitability with an emphasis on supervisory aspect of capital structure. The results of their study indicated that there was a positive relationship between financial leverages and capital return. Moreover, analyzing the relationship between return on assets and capital structure proved it to be a positive one.

In a study, Yahyazadeh et al (2014) investigated the relationship between working capital management and profitability of companies listed in Tehran Stock Exchange. As opposed to previous studies, that study focused on the nonlinear second-order relationship between king capital management and profitability of companies. The results of their study indicated that there was no relationship between nonlinear relationship between working capital management and profitability. This indicates that there is not an optimal level of working capital in which the level of profitability is maximum. Other results of their study showed that in regard to the three industries of automobile, production of parts, and chemical products and non-metallic mineral products indicates that there is a nonlinear relationship between working capital management and profitability only in the industry of chemical productions.

Ghosh (2008) studied the effect of financial leverage, dividend policy, and profitability on the future value of companies in India. The results of that study show that there is a nonlinear relationship among financial leverage, profitably, and the increase probability of the companies’ future value. The probability of increase in future value of companies will drop exponentially with an increase in financial leverage while it increases with a rise in payment of stock interest and profitability.

In their investigation, Lipson and Mortal (2009) studied the relationship between stock liquidity and capital structure in NASDAQ Stock Market. They proved a significant relationship between these two variables and concluded that shareholders’ equity would decrease with an increase in liquidity of stock cost and that companies prefer to finance through stocks.

Clark (2010) investigated the effect of flexibility on decisions on capital structure. In that study, Clark utilized the data published by American companies over 1971-2006. The results of that study indicated that when the final value of flexibility is examined in regard to capital structure decisions, other effective variables in capital structure lose their importance to a large extent. In better words, flexibility is the most important effective factor in capital structure. Clark also showed that companies with a higher final rate of flexibility are more willing to maintain their debt capacity for later years.
In their study entitled, “Refinancing, profitability, and capital structure”, Danis et al (2014) studied the data of the sample companies over 1984-2011. They concluded that when the degree of financial leverage rises, the relationship between profitability and financial leverage will be positive and significant, and otherwise this relationship is negative.

**Method**

Based on the type of its objective, the present study is an applied research in which the relationship between a dependent variable and some other variables was considered. Data analysis was carried out using EVIEWS Software. Data analysis was carried out in two sections: descriptive and inferential. In descriptive statistics, the demographic situation of the samples was analyzed, and the study hypotheses and model were examined in inferential statistics. In order to fit the study’s models, OLS linear regression and logistic regression methods were employed. In order to examine the significant relationship between the study’s variables and the significance of the model, t and F statistics were employed, respectively. Durbin-Watson test was also used to examine the autocorrelation between the model’s residuals. The coefficient of determination indicates the model’s efficiency strength, which was investigated.

**Statistical population and sample and sampling method**

Due to the extensiveness of the statistical population and lack of coordination among the society’s members, systematic removal method was utilized. After this method was used, 89 companies were selected as the study sample.

**Data analysis**

In order to analyze the data appropriately and consistently, descriptive and inferential statistical methods were employed. First, mean, median, maximum, minimum, standard deviation, skewness and kurtosis were used as descriptive statistical criteria for the study’s variables. Jarque-Bera statistics was employed to check the distribution normality of the disturbing elements. In order to examine the hypotheses of the study simple and multiple regression models were used. The data needed for analyzing the hypotheses were combined ones which were retrieved from the data of other companies in different years and were considered as companies-year observations. Such data have advantages like providing more information, limited variance inconsistency, lower linearity among the variables, more degrees of freedom, and higher efficiency. In order to select an appropriate model, Chow Test (F Stat) was employed to select the combined model with constant effects as opposed to the combined method without effects, and Hausman Test (X2 Stat.) was used to select model with fixed effects as opposed to random effects. After the regression models were fitted, Fisher statistics was used in order to check the significance of the whole model. T Student statistics was employed to check the significance of the coefficients of the model’s explanatory variables. Durbin-Watson test was used to examine the serial autocorrelation between the model’s residuals. And Adjusted R-
squared statistics was utilized to examine the explanatory power of the model. In regard to the different proposed statistics, decision was made based on the comparison of the obtained statistics with critical values. Moreover, the comparison between the probability obtained from the statistics at an error level of 5% (confidence level of 95%).

**The study model**

![Fig. 1. The study’s conceptual model](image)

**The study’s regression models**

1. \( \text{ROA}_t = \alpha_0 + \alpha_1 \text{RF}_t + \varepsilon_t \)
2. \( \text{LEV}_t = \alpha_0 + \alpha_1 \text{RF}_t + \varepsilon_t \)

Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sign</th>
<th>LEV</th>
<th>ROA</th>
<th>( \Delta\text{FIN}_t = \Delta\text{EQUITY}_t + \Delta\text{DEBT}_t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial leverage</td>
<td>LEV</td>
<td>( \text{LEV} = \frac{\text{Earning before tax}}{\text{Earning before interest and tax}} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>ROA</td>
<td>( \text{ROA} = \frac{\text{Net earning before tax}}{\text{Total assets}} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refinancing</td>
<td>RF</td>
<td>( \Delta\text{FIN}_t = \Delta\text{EQUITY}_t + \Delta\text{DEBT}_t )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Financial leverage**

Financial Leverage = earnings before taxes (EBT)/earnings before interest and taxes (EBIT)

**Profitability**

Profitability = Net income before taxes/Total assets

**Refinancing**

\( \Delta\text{FIN}_t = \Delta\text{EQUITY}_t + \Delta\text{DEBT}_t \)
Equity means financing through stock dividend (splits). Its effect can be measured through the average ratio of the shareholders’ equity to the company’s assets that try to raise their assets.

$$EQUITY = \frac{\sum_{t=1}^{n} e_t}{A_n}$$

Where, $e$ is the sum of shareholders’ equity, $A$ is the total assets, and $n$ is the number of years.

Debt means financing through long-term debts, whose effect is measured using the mean ratio of debts to the assets of companies that try to absorb debt.

$$DEBT = \frac{\sum_{t=1}^{n} L_t}{A_n}$$

Where, $L$ is the total long-term debts, $A$ is total assets, and $n$ is the number of years.

**Data analysis**

**Descriptive statistics**

Table 3. Descriptive statistics of the study’s data

<table>
<thead>
<tr>
<th></th>
<th>LLEV</th>
<th>LRF</th>
<th>LROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>-1.985369</td>
<td>11.40918</td>
<td>2.058083</td>
</tr>
<tr>
<td>Median</td>
<td>-1.969760</td>
<td>11.43939</td>
<td>2.315501</td>
</tr>
<tr>
<td>Maximum</td>
<td>2.045990</td>
<td>16.51265</td>
<td>3.947390</td>
</tr>
<tr>
<td>Minimum</td>
<td>-7.785922</td>
<td>3.713572</td>
<td>-2.407946</td>
</tr>
<tr>
<td>SD</td>
<td>1.239926</td>
<td>2.020647</td>
<td>1.152601</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.717714</td>
<td>-0.025260</td>
<td>-1.386260</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>5.843884</td>
<td>3.150547</td>
<td>5.224230</td>
</tr>
</tbody>
</table>

The mean of logarithm of return on assets is 2.058. The median of logarithm of return on assets is 2.31 which indicates that the logarithm of return on assets of half of the companies is over 2.31 and the other half is below this amount.

Likewise, variables of logarithm of refinancing and logarithm of financial leverage have means of 11.4 and -1.98 and medians of 11.43 and -1.96. Skewness of all variables was negative which indicates that the long tail of the skewness toward left side. Moreover, kurtosis was positive in all variables which show that the shape of the variables is higher than normal distribution.
Inferential statistics

Examining the correlation among the study’s variables

In this section, correlation coefficient was used to examine the relationship among the study’s variables and the correlation among them. The matrix of correlation coefficients is presented in Table 4.

Table 4. Correlation among the study’s variables

<table>
<thead>
<tr>
<th></th>
<th>LLE V</th>
<th>LRO A</th>
<th>LRF</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLE V</td>
<td>1</td>
<td>-0.463</td>
<td>-0.061</td>
</tr>
<tr>
<td>LRO A</td>
<td>-0.463</td>
<td>1</td>
<td>0.11</td>
</tr>
<tr>
<td>LRF</td>
<td>-0.061</td>
<td>0.11</td>
<td>1</td>
</tr>
</tbody>
</table>

The results of analyzing the correlation among the independent variables indicated no strong correlation among them; therefore, the probability of fake regression would drop.

Chow and Hausman tests

Since we decided to use Panel Data Method in order to investigate the correlation; therefore, first, Chow test was employed.

Null hypothesis: Equality of intercepts (Intercepts are equal.)
Opposite hypothesis: Inequality of intercepts

Table 5. Chow and Hausman tests related to the hypotheses

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Chow Sig.</th>
<th>Hausman Sig.</th>
<th>Fitting Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>0.000</td>
<td>0.2918</td>
<td>Panel model with random effects</td>
</tr>
<tr>
<td>2nd</td>
<td>0.000</td>
<td>0.2152</td>
<td>Panel model with random effects</td>
</tr>
</tbody>
</table>
The value of Chow statistics is 0.000 in both hypotheses, and since it is below 0.05, the null hypothesis is not accepted. Panel model was selected as a superior model compared to the other ones (the model of fixed effects was selected as the superior model). Now, the results of Hausman test needed to be examined in order to investigate the model of the fixed effects compared to random effects, and the Hausman statistics was over 0.05 for the 1st and 2nd hypotheses, which finally led to selection of panel model with random effects was chosen.

**Examining the study’s hypotheses**

**First hypothesis**: Refinancing has a significant effect on profitability.

**Second hypothesis**: Refinancing does not have a significant effect on profitability.

**Opposite hypothesis**: Refinancing has a significant effect on profitability.

**First hypothesis model**:

\[ LROA_{it} = \alpha_0 + \alpha_1 LRF_{it} + \varepsilon_{it} \]

Table 6. The results of examining the 1st hypothesis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficients</th>
<th>t statistics</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.147352</td>
<td>0.478437</td>
<td>0.6327</td>
</tr>
<tr>
<td>LRF</td>
<td>0.092959</td>
<td>3.645860</td>
<td>0.0003</td>
</tr>
<tr>
<td>LROA (-1)</td>
<td>0.413048</td>
<td>9.113171</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Table 6: The results of examining the 1st hypothesis

<table>
<thead>
<tr>
<th>Weighted Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient of determination</td>
</tr>
<tr>
<td>Sig of F statistics</td>
</tr>
<tr>
<td>Durbin-Watson statistics</td>
</tr>
</tbody>
</table>

The absolute values of t statistics related to the independent variable in this hypothesis is more than absolute variable of 2, which cause the null hypothesis not to be accepted and the logarithm of refinancing has a direct and significant effect on the logarithm of return on assets. The model is significant, because the significance level of F statistics was below 5% at a confidence level of 95%. Durbin-Watson statistics indicated that there was no correlation among the model’s residuals.

**First hypothesis**: Refinancing has a significant effect on financial leverage.
First hypothesis: Refinancing does not have a significant effect on financial leverage.

Opposite hypothesis: Refinancing has a significant effect on financial leverage.

Second hypothesis model:

\[ \text{LLEV}_t = \alpha_0 + \alpha_1 \text{LRF}_t + \varepsilon_t \]

Table 7. The results of examining the 2nd hypothesis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficients</th>
<th>t statistics</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.272069</td>
<td>1.690513</td>
<td>0.0918</td>
</tr>
<tr>
<td>LRF</td>
<td>-0.035488</td>
<td>-2.702009</td>
<td>0.0072</td>
</tr>
<tr>
<td>LLEV (-1)</td>
<td>0.929129</td>
<td>40.30133</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Weighted Statistics

| Coefficient of determination | 0.746 | Sig of F statistics | 0.000 | Durbin-Watson statistics | 2.18 |

Like the first hypothesis, the results of examining the second hypothesis also show that the independent variable (logarithm of refinancing) has a direct significant relationship with the dependent variable, and the null hypothesis is not accepted. In total, the model is significant, and the significance level of F statistics is 0.000 at a confidence level of 95%. Durbin-Watson statistics is between 1.5 and 2.5; therefore, autocorrelation among the model’s residuals is not observed.

Conclusion and suggestions

The results of examining the 1st hypothesis

The effect of refinancing on profitability was examined in the first hypothesis.

The absolute values of t statistics related to the independent variable in this hypothesis is more than absolute variable of 2, which cause the null hypothesis not to be accepted and the logarithm of refinancing has a direct and significant effect on the logarithm of return on assets. The model is significant, because the significance level of F statistics was below 5% at a confidence level of 95%. Durbin-Watson statistics indicates that there was no correlation among the model’s residuals.

The results of examining the 2nd hypothesis
The effect of refinancing on financial leverage was examined in the second hypothesis.

Like the first hypothesis, the results of examining the second hypothesis also show that the independent variable (logarithm of refinancing) has a direct significant relationship with the dependent variable, and the null hypothesis is not accepted. In total, the model is significant, and the significance level of F statistics is 0.000 at a confidence level of 95%. Durbin-Watson statistics is between 1.5 and 2.5; therefore, autocorrelation among the model’s residuals is not observed.

**The summary of the results of examining the hypotheses**

In the current study, two hypotheses were proposed and examined. The total results of examining the hypotheses were presented in previous section. In this section, the final results of examining the study’s hypotheses are presented in Table 8.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesis explanation</th>
<th>The result of null hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Refinancing has a significant effect on profitability.</td>
<td>Not accepted</td>
</tr>
<tr>
<td>2nd</td>
<td>Refinancing has a significant effect on financial leverage.</td>
<td>Not accepted</td>
</tr>
</tbody>
</table>

The results of the study indicated that the companies’ profitability has a significant effect on financial leverage. This finding is in agreement with those the studies carried out by Kurdistani and Najafi Omran (2008), Kimiagari and Anbali (2008), and Danis et al (2014).

**Limitations of the study**

Researchers are always faced with limitations in their studies, and some of them even show themselves in the beginning of their studies. Access to data and information is one of the major elements of research. In this regard, there are some problems that cause research services like access to books, journals, statistics, and databases to be not much easy.

Among the limiting issues are:

- Insufficiency or lack of accessible and usable resources

There are limited scientific resources (at least in Persian) which are directly related to the topic of the present study. Therefore, the researchers had to use English resources, which were accompanied with challenges like limited time of using the university’s Internet service, correct translation into Persian, and their homogenization.
- Unavailability of similar studies

Despite of trying hard, the researchers could not find any study that directly focused on the issue.

Suggestions

The results of the study showed that refinancing had a significant effect on profitability. Through further study and investigation; therefore, can enhance refinancing in order to increase profitability, and studies should be continued as far as refinancing brings about profitability.

The results also showed that refinancing had a significant effect on financial leverage. Therefore, it is suggested that measures be taken in order to refinance by planning and considering the rate of profitability, and that refinancing should be carried out in a way that it is consistent with profitability. In other words, refinancing needs to be carried out in order to enhance profitability.
References


