

Örgütsel Davranış Araştırmaları Dergisi

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## INVESTIGATING DETERMINANTS OF DEBT FINANCING AND THEIR MODERATING ROLE TO LEVERAGE-PERFORMANCE RELATION

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#### ABSTRACT

Capital structure is defined as mix of debt and equity, which is used to meet firm's financing needs. From the last few decades, these financial decisions have been given special attention due to their relation with firm value. The literature of capital structure primarily focuses on two research objectives. First category tried to explore the consequences of capital structure, while others dealt with determinants of capital structure. In the present study, using data of 126 firms listed on the Tehran Stock Exchange during 2011-2015 as well as multivariate regression, we aimed to explore the effect of financial characteristics on the relationship between financial leverage and firm's profitability, besides investigating the effect of firm's financial characteristics on debt ratio or its financial leverage. The results of significance of coefficients test on the basis of fitted regression equations showed that firm size can increase financial leverage, and undermines the inverse effect of financial leverage, but at the same time it reinforces the inverse effect of financial leverage on profitability. In contrast, current ratio is inversely related to financial leverage and yet it reduces the inverse effect of financial leverage on profitability.

Keywords: Financial Leverage, Firm's Financial Characteristics, Profitability

### **INTRODUCTION**

Financing strategy in firms is one of the important issues of financial and accounting researchers. A major goal of financing is to make investment in companies for greater profitability. Various forms of financing include internal and external financing, or a blend of these two types. In the current age, with constraints on financial resources, especially in the world trade arena, and competition being intense, managers of enterprises are under increasing pressure to reduce operating and final costs, and opt for the least expensive type of capital structure in order to conduct business activities in line with increasing firm value, timely payment of debts, consistent activity and further presence on domestic and foreign markets. These pressures to enterprise managers are often exerted by different groups such as shareholders, consumers and other stakeholders. To achieve the foregoing goals, managers' strategies encompasses favorable financing with the lowest cost for the economic growth and development of enterprises' activities, profit increase and maximization of shareholders' wealth (Ghanizadeh and Rainy, 2015). On the other hand, findings of other studies, including Myers (1984), suggest that

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financial leverage positively affects firm performance. He believes that debt financing can equalize firm managers' and owners' rights to the proceeds of investment, as well as a determinant to the promotion of firm's performance (Rezae and Azem, 2012).

## THEORETICAL FOUNDATION

Financing strategy in companies is one of the important debates among financial and accounting. One of the major goals of financing is to invest in companies for greater profitability. A major goal of financing is to make investment in companies for greater profitability. Various forms of financing include internal and external financing, or a blend of these two types. In the current age, with constraints on financial resources, especially in the world trade arena, and competition being intense, managers of enterprises are under increasing pressure to reduce operating and final costs, and opt for the least expensive type of capital structure in order to conduct business activities in line with increasing firm value, timely payment of debts, consistent activity and further presence on domestic and foreign markets (Abdu, 2015). Hierarchical theory is believed to be among theories associated with the choice between debt and share in capital structure, and is based on information asymmetry between management and external organizational investors of a company. for the first time put forward debt instrument as a signaling mechanism and argued that this tool could be used when there is information asymmetry between management and external organizational investors of a company. That is to say, as opposed to external organizational investors, management has more information about financial situation and results of firm' current and future performance and attempts not to turn to debt when company has a poor performance, because the likelihood of firm's downturn and bankruptcy is high. Later on, Myers (1984) came up with a more complex form of this model, and stated that what can lead to a structure of capital is firm's tendency for required financing. To this end, firm initially focuses on domestic resources, and if they do not meet the firm's financial needs, it turns to riskfree debt or debt with small risk and risky liabilities and share, and again it prefers preferred share to ordinary share. This hierarchy of financing is formed when the cost of issuing new securities overrides other costs, dividend and debt advantages. This theory is preferred when above all the cost of issuing a financial asset is high, and then stock market is in a state of recession. In this case, bonds are preferred to stocks, and if stock market is in a state of boom, stock issue is preferred to bonds. If firm's stock price is low and price of bonds is set on low, stock market is in a recession, and if stock price and price of bonds are set on low, stock market is in a boom. Thirdly, market has an inverse reaction to issues of share (Modares and Abdollahzadeh, 1999).

In static trade-off theory (Myers, 1984), an optimal capital structure is assumed. This structure is accessible through mix of different resources of financing that balance costs and the proceeds of debt financing. It is also assumed in this theory that there is an optimal or targeted financial leverage ratio, and market considers any deviation (whether increasing or decreasing) from this ratio an unfavorable news. This optimal financial leverage can be identified by balancing costs and the proceeds of debt surpluses. Furthermore, according to Modigliani–Miller theorem, capital structure does not affect firm value at all, but in accordance with agency theory, even though the assumptions of Miller Modigliani model are true, proper mix of debt and equity is an important subject from corporate governance point of view (Modigliani and Miller, 1958).

In this regard, Abdu (2015) attempted to examine the impact of debt-to-equity ratio on the performance of Nigerian capital market firms. The results of the research showed that there is a significant and inverse relationship between debt-to-equity ratio and the performance of the firms under study. Ukaegbu and Ukaegbu (2015) also strived to test trade-off theory and the hierarchical theory of finanincing using the data of Nigerian companies. The results of their research showed that there is an inverse and significant relation between profitability and firms' financial leverage and the adaptation pace of Nigerian companies is 47% faster than that of companies in the developed countries. In another study, Abdi and Ibrahim Ali (2016) investigated the impact of capital structure on the financial performance of Somali commercial banks. The results showed that equity, financial liabilities and optimal capital structure have a direct and significant effect on the financial performance of Somali commercial banks. Siddik et al. (2017) also investigated the effects of capital structure on bank performance in Bangladesh's developing economy. The results suggest an inverse influence of capital structure on the performance of banks. The results of this study encourage bank managers and policy makers to focus on a policy of debt dependency reduction in order to achieve a desired level of capital structure.

In Iran, Shoja and Davodifar (2015) explored debt financing and dividend policy. The results showed that firm managers have no choice but to make four types of decisions on operational investment financing and ultimately how to divide profits with the aim of maximizing shareholders' wealth in firm management. Among the above decisions, the decision on profit division. allocating profit per share to two parts namely dividend and retained earnings, is one of the most important decisions that managers make. As such, managers are obliged to finance investment projects by sources outside firm, or eventually they are required to disregard part of the investments in case of the failure to provide the necessary resources. Jalalian et al. (2015) also examined the effect of financial structure and financial leverage on stock market value of listed companies on Tehran Stock Exchange. Their results showed that there is no significant relationship between financial structure, financial leverage and stock market value. Ebrahimi et al. (2016) also examined the relationship between financial leverage and various types of earnings management. Using multivariate regression model and panel data method, the results of this study showed a negative relationship between Jones and Kotari's financial leverage, accruals management, and overall level of profit management. They also found that there is a positive relationship between financial leverage and real income management. In another study, Farmanara et al., (2016) examined the effect of working capital management and financial leverage on the profitability of some firms listed on the Tehran Stock Exchange. The regression results showed a positive and significant relationship between working capital and economic value added in companies listed on the Tehran Stock Exchange, and this relationship was forged inversely with the mediating effect of financial leverage, but this relationship was not seen among companies active on Over-the-counter (OTC) trading. Also, the results showed that mix of working capital makes no significant difference to financial leverage variables and return on equity ratio in companies that have shares admitted to trading on the Tehran Stock Exchange and Iran's OTC during the period under study. Shirgholami and Sadeghzadeh (2016) also examined the relationship between capital structure and firm performance.

The results of research hypotheses test show that there is a negative and significant relationship between capital structure and firm performance in companies with low performance.

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## **RESEARCH METHODOLOGY**

Eviews 9 was used for data analysis. There are a variety of practices to determine an appropriate method for analyzing panel data. A common approach is to use Chow test in an effort to apply panel data and determine their homogeneity or heterogeneity. If the results of the test concerning the application of data come to use as panel data, we are required to use either fixed effect (EM) or random effect model (REM). In doing so, Hausman's test need to be run. According to what has been said in previous section, the hypotheses are as follows;

H<sub>1</sub>: firm's financial characteristics have an effect on its financial leverage.

Ho: firm's financial characteristics have no effect on its financial leverage.

H<sub>1</sub>: firm size has an effect on its financial leverage.

Ho: firm size has no effect on its financial leverage.

H<sub>1</sub>: tangibility of firm assets has an effect on its financial leverage.

Ho: tangibility of firm assets has no effect on its financial leverage.

H<sub>1</sub>: firm's current ratio has an effect on its financial leverage.

Ho: firm's current ratio has no effect on its financial leverage.

H1: firm's non debt tax shield has an effect on its financial leverage.

Ho: firm's non debt tax shield has no effect on its financial leverage.

H<sub>1</sub>: firm's sale growth has an effect on its financial leverage.

H<sub>0</sub>: firm's sale growth has no effect on its financial leverage.

H<sub>1</sub>: firm's financial characteristics have an effect on the relationship between its financial leverage and profitability.

H<sub>0</sub>: firm's financial characteristics have no effect on the relationship between its financial leverage and profitability.

H1: firm size has an effect on the relationship between its financial leverage and profitability.

Ho: firm size has no effect on the relationship between its financial leverage and profitability.

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H<sub>1</sub>: firm's non debt tax shield has an effect on the relationship between its financial leverage and profitability.

H<sub>0</sub>: firm's non debt tax shield has no effect on the relationship between its financial leverage and profitability.

H<sub>1</sub>: firm's sale growth has an effect on the relationship between its financial leverage and profitability.

Ho: firm's sale growth has no effect on the relationship between its financial leverage and profitability.

## Statistical population and screened population

The population of this research consisted of all companies listed on the Tehran Stock Exchange during 2011-2015. In this research, the screened population was selected through screening



the statistical population, in that the sample consists of all existing firms in the statistical population with the following criteria;

Selection conditions	Number of firms
The number of firms listed on the Tehran Stock Exchange	47.
Firms not trading on the Stock Exchange	(144)
Firms with change in their fiscal period	(۴۹)
Firms active in financial activities	(?٣)
Firms whose data were not fully accessible	(۴۵)
Firms whose fiscal period did not end by 3/20	(44)
Remaining firms	179

## Table 1. Selection conditions and number of firms

Given the above, 126 firms were selected as the research sample.

## Research model and variables

The following model is used for testing the first main research hypothesis and its subsidiary hypothesis;

$$\begin{split} DR_{i,\,t} &= \beta_0 + \beta_1 \ TS_{i,\,t} + \beta_2 \ LS_{i,\,t} + \beta_3 \ TCR_{i,\,t} + \beta_4 \ LCR_{i,\,t} + \beta_5 \ TT_{i,\,t} + \beta_6 \ LT_{i,\,t} + \beta_7 \ TN_{i,\,t} + \beta_8 \ LN_{i,\,t} + \beta_8 \ LN_{i,\,t} + \beta_8 \ LN_{i,\,t} + \beta_8 \ LR_{i,\,t} + \beta_8 \$$

Where

Dependent variable:

 $DR_{i,t}$  = capital structure (debt financing) of company i in year t, which is equal to total debt-to-total asset ratio

 $TS_{i,t}$  top size of firm i in year t; if the firm-year in question sits the top one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that the natural algorithm of total assets is used for calculating firm size.

 $LS_{i,t^2}$ : low size of firm *i* in year t; if the firm-year in question sits the bottom one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that the natural algorithm of total assets is used for calculating firm size.

TCR<sub>i,t</sub><sup>3</sup>: top current ratio of firm *i* in year t; if the firm-year in question sits the top one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that current asset-to-current debt ratio is used for calculating current ratio.

 $LCR_{i,t}^4$ : low current ratio of firm *i* in year t; if the firm-year in question sits the bottom one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that current asset-to-current debt ratio is used for calculating current ratio.



<sup>&</sup>lt;sup>1</sup> TOP SIZE

<sup>&</sup>lt;sup>2</sup> LOW SIZE

<sup>&</sup>lt;sup>3</sup> TOP CR

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 $TT_{i,t}^5$ : top tangibility of firm *i* in year t; if the firm-year in question sits the top one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that fixed asset-to-total asset ratio is used for calculating tangibility.

 $LT_{i,t}^{6}$ : low tangibility of firm *i* in year t; if the firm-year in question sits the bottom one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that fixed asset-to-total asset ratio is used for calculating tangibility.

 $TN_{i,t}$ ?: top non debt tax shield of firm *i* in year t; if the firm-year in question sits the top one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that amortization cost-to-total asset ratio is used for calculating non debt tax shield.

 $LN_{i,t}^8$ : low non debt tax shield of firm *i* in year t; if the firm-year in question sits the bottom one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that amortization cost-to-total asset ratio is used for calculating non debt tax shield.

 $TS_{i,t}^9$ : top sale growth of firm *i* in year t; if the firm-year in question sits the top one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that the difference between sale earnings in current year (t) and previous year (t-1), divided by sale earnings in previous year (t-1), was used for calculating sale growth.

 $LS_{i,t}^{10}$ : top sale growth of firm *i* in year t; if the firm-year in question sits the bottom one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that the difference between sale earnings in current year (t) and previous year (t-1), divided by sale earnings in previous year (t-1), was used for calculating sale growth.

 $TR_{i,t}^{11}$ : top profitability of firm *i* in year t; if the firm-year in question sits the top one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that earnings before tax-to- total asset is used for calculating profitability.

 $LR_{i,t}^{12}$ :low profitability of firm *i* in year t; if the firm-year in question sits the bottom one-fourth of the sample, the variable is equal to 1, or else it is zero. It should be noted that earnings before tax-to- total asset is used for calculating profitability.

• The following model is used to test the second hypothesis of and its subsidiary hypotheses; t = 82 + 81 DB: t = 82 DB\*TC: t = 82 DB\*LC: t = 84 DB\*TCP: t = 87 DB\*LCP: t = 82

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Ri, t = \beta 0 + \beta 1 DRi, t + \beta 2 DR*TSi, t + \beta 3 DR*LSi, t + \beta 4 DR*TCRi, t + \beta 5 DR*LCRi, t + \beta 8
DR*TTi, t
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+ \beta9 DR*LTi, t + \beta10 DR*TNi, t + \beta11 DR*LNi, t + \beta12 DR*TSi, t + \beta13 DR*LSi, t + \epsiloni, t
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Where

The dependent variable:

- <sup>6</sup> LOW TANG
- <sup>7</sup> TOP NDTS <sup>8</sup> LOW NDTS
- ° LOW NDTS 9 TOP SG
- <sup>10</sup> LOW SG
- <sup>11</sup> TOP ROA
- 12 LOW ROA

<sup>&</sup>lt;sup>5</sup> TOP TANG

 $^{13}$ R<sub>i</sub>, t: profitability of firm i in year t

The independent variable:

DR<sub>i, t</sub>: capital structure of firm i in year t.

Moderator variable:

 $TS_{i,t}^{14}$ : top size of firm *i* in year t.

 $LS_{i,t}^{15}$ : low size of firm *i* in year t.

TCR<sub>i,t</sub><sup>16</sup>: top current ratio of firm i in year t.

 $LCR_{i,t}^{17}$ : low current ratio of firm *i* in year t.

 $TT_{i,t}^{18}$ : top tangibility of firm *i* in year t.

 $LT_{i,t}^{19}$ : low tangibility of firm *i* in year t.

 $TN_{i,t}^{20}$ : top non debt tax shield of firm *i* in year t.

 $LN_{i,t}^{21}$ : low non debt tax shield of firm *i* in year t.

TS<sub>i,t</sub><sup>22</sup>: top sale growth of firm i in year t.

 $LS_{i,t}^{23}$ : low sale growth of firm *i* in year t.

### **RESEARCH FINDINGS**

In what follows, the research findings are presented in two parts, descriptive and inferential static.

#### Descriptive statistic

The sample consisted of 115 firms during the study period 2011-2015. In this section, mean, median (central criteria), standard deviation, maximum, minimum (measures of dispersion), variables of interest are calculated and presented in Table 1.

Research variables	mean	median	Max.	Min.	Standard deviation
Capital structure	•/399	•/917	•/9/9	•/149	·/1A9
Firm size	17/104	17/779	19/1.9	1./199	1/429

## Table 2. Descriptive statistic

<sup>13</sup> ROA

<sup>14</sup> TOP SIZE

15 LOW SIZE

<sup>16</sup> TOP CR

<sup>17</sup> LOW CR <sup>18</sup> TOP TANG

<sup>19</sup> LOW TANG

<sup>20</sup> TOP NDTS

<sup>21</sup> LOW NDTS

<sup>22</sup> TOP SG

<sup>23</sup> LOW SG



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Current ratio	١/٣٨٣	۱/۲۳۸	9/.19	٠/١	•/?\4
tangibility	•/٢٥٩	•/٢•٩	•/٨۴٩	•/•77	•/١٧٣
Non debt tax shield	•/• ٣ ٣	•/•1٧	•/•90	۰/۰۰۱	٠/٠١٩
Sale growth	1/19	1/101	۳/۷۴۲	۰/۰۰۱	•/449
profitability	•/117	•/•9٣	•/949	-•/۴۵	•/147

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Mean is the main and most important central index, which represents point of balance and center of distribution. The mean value of the capital structure is 0.599. Median is the point that divides a sample into two equal parts. That is to say, 50% of observations come before and 50% of observations come after it. As has been shown, the median value of the capital structure is 0.612. In general, measures of dispersion are measures that examine and compare dispersion of observations around the mean. One of the most important measures of dispersion is standard deviation. According to the above table, this criterion is 0.186 for capital structure variable. It should be noted that the maximum amount of capital structure variable is equal to 0.986 and the minimum value is 0.146.

### Inferential statistic

## • Testing the sub-hypotheses of the first main hypothesis

Using fixed effect model and estimated generalized least squares (EGLS) estimation, the results of the model test are presented in Table 2.



Table 3. Results of first mod
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variables	coefficients	Standard error	t statistic	Significance level
constant	•/919	•/•?١	1./180	•/•••
Top size of firm	•/• ٢٦	•/••٩	۲/۷۶۵	•/••۵
Low size of firm	_•/•YV	•/• ) )	_7/4.9	•/•19
Top size of firm	_•/•9٣	٠/٠١	_9/741	• / • • •
Low current ratio	•/•۵۵	•/••٨	۶/۴۸۶	•/•••
Top tangibility	•/• ۵۳	•/••٨	۶/۰۱۹	•/•••
Low tangibility	_•/•٣۶	•/••٧	_4/947	•/•••
Top non debt tax shield	-•/•٩١	•/••٨	_) )/• V	•/•••
Low non debt tax shield	•/•٨۵	•/• )	٨/٢٦٢	•/•••
Top sale growth	•/••9	•/••۴	۲/۲۲۴	۰/۰۲۶
Low sale growth	_•/•۵9	•/••?	_//\\ð	•/•••
Top profitability	_•/••9	•/••۵	-1/9V	•/•90
Low profitability	•/•۴۴	•/••?	۶/۹۰۸	•/•••
F statistic		71.119	Adjusted coefficient of determination	•
Significance level of F	statistic	•.000	Durbin-Watson value	1.199

Since t statistic of firm's top size variable is greater +1.965, its significance level is lower than 0.05, t statistic of firm's low size is greater than ~1.965, and its significance level is lower than 0.05, a significant and direct relation exists between top size of firm and financial leverage of firms listed on the Tehran Stock Exchange. Thus, this result is consisted with the first sub-hypothesis of the first main hypothesis (firm size affects its financial leverage). Alternatively, since t statistic of top tangibility is greater than +1.965 and its significance level is lower than 0.05, t statistic of low tangibility is greater than ~1.965 and its significance level is lower than

0.05, a significant and direct relation exists between top tangibility and financial leverage of firms listed on the Tehran Stock Exchange. Thus, this results is in line with the second sub-hypothesis of the first main hypothesis (tangibility of firm assets affects its financial leverage). In addition to this, since t statistic of firm's top current ratio variable is greater -1.965, its significance level is lower than 0.05, t statistic of firm's low current ratio is greater than +1.965, and its significance level is lower than 0.05, a significant and inverse relation exists between top current ratio and financial leverage of firms listed on the Tehran Stock Exchange. Thus, this result is consisted with the third hypothesis of the first main hypothesis (current ratio of firm affects its financial leverage). Additionally, since t statistic of top non debt tax shield variable is greater than +1.965 and its significance level is lower than 0.05, a significance level is low non debt tax shield variable is greater than +1.965 and its significance level is lower than 0.05, a significance level is low non debt tax shield variable is greater than +1.965 and its significance level is lower than 0.05, a significance level is low non debt tax shield variable is greater than +1.965 and its significance level is lower than 0.05, a significant and inverse relation exists between top non debt tax shield and financial leverage of firms listed on the Tehran Stock Exchange. Thus, this results is in line with the fourth sub-hypothesis of the first main hypothesis (non-debt tax shield of firm affects its financial leverage).

Alternatively, since t statistic of top sale growth variable is greater than +1.965 and its significance level is lower than 0.05, t statistic of low sale growth variable is greater than -1.965 and its significance level is lower than 0.05, a significant and direct relation exists between top sale growth and financial leverage of firms listed on the Tehran Stock Exchange. Thus, this results is in line with the fifth sub-hypothesis of the first main hypothesis (sale growth of firm affects its financial leverage).

## Testing the sub-hypotheses of the second main hypothesis

Using fixed effect model and estimated generalized least squares (EGLS) estimation, the results of the model test are presented in Table 3.

variables	coefficients	Standard error	t statistic	Significance level
Constant	۰/۳۸۱	•/•19	22/222	• / • • •
Capital structure	-•/479	•/•٢٦	-10/998	• / • • •
Capital structure*firm's top size	•/•١٨	•/••٨	۲/۱۸۳	•/•٢٩
Capital structure* firm's low size	-•/•9٣	•/• ۲ ۲	_4/191	• / • • •
Capital structure*top current ratio	•/•01	•/•١٨	۲/۸۴۱	•/••4
Capital structure*low current ratio	-•/•١٩	•/•11	-1/904	•/•٩٨
Capital structure*top tangibility	_•/•V?	•/•14	-0/226	• / • • •
Capital structure*low tangibility	•/•٣٩	•/••٨	4/4.1	• / • • •
Capital structure*top non debt tax shield	•/•47	•/•11	37/202	•/•••
Capital structure*low non debt tax shield	-•/•٣١	•/••٨	_٣/٩٣٢	•/•••
Capital structure*top sale growth	-•/•۴۳	•/••۴	_9/9AV	• / • • •
Capital structure*low sale growth	•/•9٣	•/••۴	10/575	• / • • •
F statistic		۲٧/٩٣	Adjusted coefficient of determination	•/٨٨۴
F Significance level		•/•••	Durbin-Watson value	۲/۰۸

#### Table 4. Results of second model test

Since t statistic of capital structure\*firm's top size variable is greater +1.965, its significance level is lower than 0.05, t statistic of capital structure\* firm's low size is greater than -1.965, and



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its significance level is lower than 0.05, firm size can reduce the inverse influence of capital structure on profitability. Thus, this result is consisted with the first sub-hypothesis of the second main hypothesis (firm size affects the link between its financial leverage and profitability). Alternatively, since t statistic of capital structure\*top tangibility is greater than ~1.965 and its significance level is lower than 0.05, t statistic of capital structure\*low tangibility is greater than +1.965 and its significance level is lower than 0.05, tangibility of asset can reduce the inverse influence of capital structure on profitability. Thus, this results is in line with the second sub-hypothesis of the second main hypothesis (tangibility of firm assets affects the relation between its financial leverage and its profitability).

Additionally, since t statistic of capital structure\*firm's top current ratio variable is greater  $\pm 1.965$ , its significance level is lower than 0.05, t statistic of capital structure\* firm's low current ratio is greater than  $\pm/965$ , and its significance level is greater than 0.05, current ratio can undermine the inverse influence of capital structure on profitability. Thus, this result is consisted with the third sub-hypothesis of the second main hypothesis (current ratio affects the link between its financial leverage and profitability). Furthermore, since t statistic of capital structure\*top non debt tax shield is greater than  $\pm 1.965$  and its significance level is lower than 0.05, and t statistic of capital structure\*low non debt tax shield is greater than  $\pm 1.965$  and its significance level is lower than 0.05, non-debt tax shield can reduce the inverse influence of capital structure on profitability. Thus, this results is in line with the fourth sub-hypothesis of the second main hypothesis affects the relation between its financial leverage and profitability as the fourth sub-hypothesis of the second main hypothesis affects the relation between its influence of capital structure\*low non tax shield assets affects the relation between its financial leverage and its profitability).

Alternatively, since t statistic of capital structure\*top sale growth is greater than ~1.965 and its significance level is lower than 0.05, and t statistic of capital structure\*low sale growth is greater than +1.965 and its significance level is lower than 0.05, sale growth can reduce the inverse influence of capital structure on profitability. Thus, this results is in line with the fifth sub-hypothesis of the second main hypothesis (firm's sale growth assets affects the relation between its financial leverage and its profitability).

### CONCLUSION

In this study, with data collected from 126 companies listed on the Tehran Stock Exchange during 2011-2015 and multiple regression analysis, the research hypotheses were tested. In the beginning, descriptive statistics were presented for dependent, independent and control variables. Next, the proposed hypotheses were tested. According to regression equations examined for goodness of fit, the results of the significance test of the coefficients briefly indicate that there is a significant and direct relation between top tangibility and financial leverage of firms listed on the Tehran Stock Exchange, an inverse and significant relation between top current ratio and financial leverage of firms listed on the Tehran Stock Exchange, a significant and direct relationship between sale growth and financial leverage of firms listed on the Tehran Stock Exchange, firm size can reduce the inverse effect of capital structure on profitability, tangibility of assets can boost the inverse effect of capital structure on profitability, and sale growth can undermine the inverse effect of capital structure on profitability, and sale growth can undermine the inverse effect of capital structure on profitability. These results are in line with those of Qamar et al (2016). It should be noted



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that the notion of an inverse relationship between financial leverage and profitability is consistent with the findings of Khaliliiraqi et al. (2009), Sajjadi et al. (2011), Mwangi et al (2014), OKegbu and Okegbu (2015), and inconsistent with the findings of Izadinia (2009), Zeinali and Shilan (2011), Rahimian et al. (2013), Ebaid (2009), Nawaz et al (2011), Fosu (2013). As for the result inconsistency, it should be noted that difference in the sample under study and difference in the time period could cause this inconsistency. Given the results of the present study concerning a direct and significant relationship between firm size and financial leverage of firms listed on the Tehran Stock Exchange, investors in Iran's capital market are recommended to note that asset increase in firms can be a representation of their more ability to use external organizational financing and hence lower financial constraints. Thus, investment in these firms can be useful, though they need to be considered together with other measures. Furthermore, firm managers are recommended to save a good deal of assets in company to make it feasible to use borrowing and financing of projects. Moreover, given the results of the present study concerning a direct and significant relationship between tangibility of assets and financial leverage of firms listed on the Tehran Stock Exchange, firm managers are recommended to save a good deal of tangible assets in firms to make it feasible to use borrowing and financing of projects. Any increase or existence of tangible assets in firms can be a token of their more ability to use external organizational financing and hence lower financial constraints in these firms. Thus, investment in these companies can be useful, though it needs to be considered for investment along with other existing measures. Apart from this, bank managers are also advised not to feel it enough to grant large bonds when granting a banking facility, as they need to pay heed to other criteria in order to measure firm's credit status and make sure that the task of facility repayment is undertaken.

In addition, given the results of the research, i.e. tangibility of assets can bolster up the inverse relationship between financial leverage and profitability, investors in Iran's capital market are recommended to take account of firm's debt level increase as a token of firm's profitability decrease and hence a decline in its position in capital market. Consequently, this can reduce investment utility in company stock, though it needs to be considered together with other variables of investment. Additionally, the investors are recommended to pay attention to collateralizable assets and note that any increase or existence of collateralizable assets in company can bring about negative effects at debt level on firm's profitability.

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