INTRODUCTION

Following growth of companies and Technology Development, the need of requires large sums of capital and financial resources intensified and developed various financial markets. In this condition, capital budgeting and financing decisions were considered the main areas of financial managers making decisions of public company. The decision must be taken to shareholders in order to maximize firm value. For example, what, plays a key role in capital budgeting decisions is company expense [1] because cost of capital as the discount rate, [2] cash flows from investment projects are used. Therefore, accept or rejection of proposed investment projects depends on most appropriate choice of discount rate or cost of capital. Whereas, the company's cost of capital is a function of its capital structure. Therefore, it is expected that changes in the composition of financial resources (capital structure) on the cost of capital and consequently firm value (due to accept or rejection of investment projects with positive or negative net present value) impact on society. So the question is what factors are involved in determining the capital structure? There are various theories regarding the company's capital structure. Some of these theories consider existence of liability in company’s capital structure as increasing factor of company values and some other, decreasing factor of the company value. Also the theoretically it seems that managers will have Contexts to change the capital structure. Therefore, with respect to the role of capital structure in wealth creation for the company, Survey of factors effecting on it are of special important. In different research, several factors have been introduced as factors influencing on firms’ capital structure company. Among the important and affecting on company's capital structure, are taxes and their interest expense. In this research, we attempt to study relationship between capital structure and tax and interest payments; of companies in Tehran Stock Exchange. A basic question of research is whether between capital structure and tax and interest expense of accepted companies in Tehran Stock Exchange, in there is a significant relationship?

Hypotheses:

Today, successful companies, companies are that identifying factors influencing on optimal and favorite capital structure, you have supplied your required financial Fund from the correct sources of financing, so that
the cost of capital of the company approaches minimum and the wealth of the shareholders to the maximum. According to Object research, the hypotheses are examined:

Hypothesis 1: there is meaningful relation between the capital structure (financial leverage) and tax of companies.

Hypothesis 2: there is meaning relation between the capital structure (financial leverage) and interest expense of companies.

Various theories about the relationship between capital structure and taxes of corporate:
theory of fixed or stable balance:
This theory argues that the tax benefits resulting from liability, increases value of firm with significant debt. On the other hand, costs of financial distress and possible bankruptcy due to non-fulfillment of obligations in a timely manner decrease the value of firm with significant debt. Therefore, the company capital structure can be viewed as a balance between the tax benefits of debt and costs of financial distress and possible bankruptcy due to debt be considered. Hence, these two factors neutralizing each other (the balance of benefits and expenditure of debt) lead to the optimal use of debt in the capital structure. One of the common topics in the theory of fixed or stable balance about American companies is that this theory predicts high leverage rates for the companies while American companies usually have low leverage rates and often relevant research to determinative factors of capital structure of companies in this the country Provide little support for the theory of stable balance and meseems that tax doesn’t play main role in determination of capital structure of companies.

The theory of agency costs:
According to this theory that was presented by Jensen and Mklyng, for the first time in 1976 the company capital structure is determined by, agency costs from of conflicts interest between different stakeholders company. The two researches identify two types of conflicts of interest in the framework of economic units: (a) Conflict of interest between managers and shareholders, and (b) a conflict of interest between shareholders and debt holders of the company. According view to Jensen and Mklyng, we can achieve a balance between the benefits of debt, such as tax benefits and agency costs of debt as an optimal capital structure [4].

Research literature:
Garbi Malekpour, Mahmud, examined the effect of financial leverage on returns per share companies in Tehran Stock Exchange by using the correlation coefficient examined and concluded that financial leverage on returns per share companies didn't influence.

Modigliani and Miller [8] presenting the views expressed that under certain assumptions, such as perfect competition market, no income taxes, no bankruptcy costs, no agency costs and the existence of information symmetry between actives of investment market and managers can't change value of company only because of creating change in composition of financing sources. In other words, the value of the independent firm is of its capital structure.

Myers [10], Fisher, Haynkl Vzychr [2] Leyland studied determinant factors of financial leverage, and found that variables such as firm size and taking risk of the firm's bankruptcy costs and interest rate effect on the level of use of financial leverage.

Long Chen and Xinlei Zhao [7] in an article were examining the relationship between market value and book value of three independent variables: the cost of financing through debt and financial decisions and ratio of financial leverage. They expected that firms with a high ratio of market value to book value faced, with a lower cost of debt. In contrast, these companies use more debt, but firms with ratio market value to low book value; they pay back most of their debts.

Wu and Yu [18] are proceeding in their research to Investigation of this subject how accepted companies in china’s stock exchange correct its capital structure in response to increase of tax rate. Wu and Yu, in his study, are examining increase of tax rate on capital structure of firms that was grated tax discount to them previously by the Chinese government. The results of this study indicate that the companies with increase tax rate, increase their financial leverage. This is evidence that the highest increase in leverage is relevant to companies that have highly access to bank loans.

De Angelo and Masulis [1] in relation with the effect of taxation on capital structure suggest that we can determine optimal capital structure, depending on the balance between the interests from the tax liability and related financial risks. Companies that benefits of tax from their liability is less the costs of the financial risks caused by debt, they pay less to finance through making debt.

Plesko [13] in their study focuses on the tax savings resulting from increasing leverage studies the effect of changes in tax rate on capital structure of U.S. companies. Reform of tax structure in the United States in 1986, provides the practical conditions for test of the effect of taxation on corporate leverage decisions. Main part related to reform of tax structure was reduction of highest, reducing the top tax rate from 46 % to 34% due to extensive changes in the corporate tax base. The results of research show that reform of the tax structure in 1986
to an average has caused reduction of 5 per cent rate of tax and reduces tax distribution between different industries and effects on decisions of company financing. Evidences show positive relationship between tax rates and leverage it means that reform of tax structure has led to a reduction in the rate of corporate leverage.

Shieh [15] showed that the tax liabilities effect on company's capital structure. He is testing the effect of tax liabilities on corporate financial leverage. His results of research show that the tax liabilities is inversely related with to the firm's financial leverage. High risk relating to tax liabilities causes to reduce the use of financial leverage.

The results of Gordon and Lee's research shows that tax has a strong and significant relationship with level of corporate debt. In particular, differences in tax rates of large corporate, tax rates of small firms (34 percent against 15 percent) cause that large companies with higher tax rates than small firms with lower tax rates use financing by making debt to finance their asset.

Stephen Ross and others, according to the theory's and empirical evidence, know tax considerations from effective factors on capital structure of firms, and they state that firms with involved rely on debt more, in comparison to firms with benefit involved.

Najd Malayeri [12] showed that the correlation between efficiency of assets and interest rates are separate, interest rates are still affected by optimal capital structure. Favorable leverage positively correlated with interest rates in the short term and negative correlation with rate and volatilities of efficiency curve in the long term.

Group [5] was examining effects of the expected effective tax rate on financing of U.S. companies using combined data. His selective sample consisted of 1,300 industrial firms New York stock exchange for the period of 1979 to 1991 and in other word it is 16,930 years - company. He concluded that the expected effective tax rate has significant positive relationship with financing by making debt.

Method and model of research:

Method of research is integration Correlation that is actually combination of cross-sectional Correlation and time-series. Research methodology of casual and using past information. In the cases that it is considered studying relation between a dependent variable and several independent variables. Goal of this research is based this relationship and using historical data parameters (parameters) for the independent variable (variables), are estimated and are predicted by presenting model. Goal of this research is to develop a framework based on the relationship between capital structure and tax and costs of interest. The model used in this research is including a regression model two-variable. That using two-variable regression, we are examining the relationship between capital structure and tax and interest expense of listed companies in Tehran Stock Exchange. Regression methods used in this research is cross-sectional regression and combinational.

The operational variables of research:

Dependent variable, financial leverage and the independent variables are corporate, tax and interest expense.

Capital structure (financial leverage): In this research, we use the ratio of total debt to total assets adjusted for evaluating the company's financial leverage as the dependent variable. You need to explain that to calculate the adjusted assets are deducted from book value of equity and then the market value of equity is added to it. Or in easiest definition, the amount of debt is called financial leverage that a company uses to finance its assets, [6]; the following formula is used to calculate the financial leverage.

\[
F_{Li} = \frac{T_L}{N_S + M_S}
\]

\(F_{Li}\) = Financial leverage of firm \(i\) in year \(t\)
\(T_L\) = The total Liability of firm \(i\) in year \(t\)
\(N_S\) = Book value of total Assets of firm \(i\) in year \(t\)
\(M_S\) = Market value of equity of firm \(i\) in year \(t\)

Interest expense: Interest rate is the rate that is paid to avoid decrease of value of paid money in today and receivable in the future (due to inflation rate) is received of borrower. Also at the fair conditions of market, in order to compensate lender's investment opportunities it, may be added amount to this rate as lender's minimum expected profit.

But Fisher has defined the interest rate: the interest rate is percentage of reward paid on money, in terms of money at a specified date, usually one year after the given date. That interest expense is calculated as follows.

Interest expense = Amount of borrowings * annual interest rate

Tax: Modigliani and Miller in 1963 argue that while tax on benefits companies cause to reduce payments in the calculation of taxable income, so the more debt in capital structure is greater, tax commitment of corporate is
less, the cash flows after tax is more and market value of firm will increase. Tax in this research has obtained from, natural logarithm of tax of firms.

According to the above mentioned contents about explanatory variables, the research models are shown as follows:

\[ y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k + e \]

In the above equation, y is dependent variable or response and x_k is independent or predictor variables or regression variables and \( \beta_k \) is regression coefficients and e is statistical or residual error. According to the independent variables and the dependent variable in this study, the model is presented as follows:

Regression model of the first research hypothesis:  
Financial Leverage = \( \alpha + \beta \) (interest expense)

Regression model of the second research hypothesis:  
Financial Leverage = \( \alpha + \beta \) (tax)

Finally, a multiple linear regression model without considering the different fiscal years is given to the dependent variable (financial leverage) and the fitted independent variables that model is as below.

Financial Leverage = \( \beta_0 + \beta_1 \) (interest expense) + \( \beta_2 \) (tax)

**Results of test:**

**Table 1:** Main hypothesis test of dependent variable of capital structure (financial leverage).

<table>
<thead>
<tr>
<th>Significant level</th>
<th>T-statistics</th>
<th>Standard error</th>
<th>Coefficient regression</th>
<th>variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/000</td>
<td>52/026</td>
<td>0/007</td>
<td>0/351</td>
<td>Intercept</td>
</tr>
<tr>
<td>0/000</td>
<td>6/694</td>
<td>0/021</td>
<td>0/139</td>
<td>Interest expense</td>
</tr>
<tr>
<td>0/000</td>
<td>-6/604</td>
<td>-0/07</td>
<td>-0/07</td>
<td>tax</td>
</tr>
<tr>
<td>31/012 (0/000)</td>
<td>F-statistics</td>
<td>0/09</td>
<td>coefficient of determination</td>
<td></td>
</tr>
<tr>
<td>1/5</td>
<td>Durbin Watson</td>
<td>0/087</td>
<td>Adjusted determination coefficient</td>
<td></td>
</tr>
</tbody>
</table>

Results of main hypothesis of the research have shown in Table 1. Survey of determination coefficient of a fitted case shows that, the variables of interest expense and taxes of, 9% of the dependent variables changes have namely explained capital structure (financial leverage). These results show that 9% of the company's capital structure changes has explained by interest expense and tax and rest of changes is affected by other variables out of model (91 percent). The results show a being significant of regression model, amount of F-statistics (31/012) in the error level of 5%, is less than 5% and is significant, it means that there is a significant relationship between interest expense and taxes with capital structure. Hence we can reject H_0 with confidence higher than 95 percent and accept H_1 hypothesis of research H_1. Thus the assumption of being linear of regression model, of research hypothesis is confirmed. These results indicate that the independent variables have high explaining power explained over power and well are capable of measuring changes of Variance in the dependent variable explained. In other words, the first regression model (main hypothesis) has the necessary competence. Also check of variables regression coefficient of fitted shows that model interest expense (0/139) and tax (0/07) in the level of 1% error, respectively has, a significant positive and negative impact on the capital structure of companies. These results suggest that if interest expense and tax of one unit increases, the capital structure in the company as much as 0/139 of unit increases and 0/07 reduces.

Hypothesis 1: tax on financial leverage has a significant impact.

Survey of results of first research hypothesis shows that tax variable has a significant and negative impact on error level of 5% on capital structure. Hence it can be rejected hypothesis H_0 and accepted hypothesis H_1 with assurance higher than 95 percent. Thus the assumption of being linear of regression model to the first research hypothesis is confirmed. Also survey of coefficient determining fitted model shows that tax in cooperates could explain 2/5 percent of total changes in the capital structure of companies.

**Table 2:** The first hypothesis test of dependent variable of capital structure (financial leverage).

<table>
<thead>
<tr>
<th>Significant level</th>
<th>T-statistics</th>
<th>Standard error</th>
<th>Coefficient regression</th>
<th>variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/000</td>
<td>52/607</td>
<td>0/007</td>
<td>0/36</td>
<td>Intercept</td>
</tr>
<tr>
<td>0/000</td>
<td>-4/11</td>
<td>0/01</td>
<td>-0/04</td>
<td>Tax</td>
</tr>
<tr>
<td>16/089 (0/000)</td>
<td>F-statistics</td>
<td>0/025</td>
<td>coefficient of determination</td>
<td></td>
</tr>
<tr>
<td>1/5</td>
<td>Durbin Watson</td>
<td>0/023</td>
<td>Adjusted determination coefficient</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 2: Interest expense on financial leverage has a significant impact.

Survey of results of second research hypothesis show that, in the error level of 5% Interest expense has a significant positive impact on the capital structure. It can be rejected the hypothesis H_0 and accepted hypothesis H_1 of research with assurance higher than 95 percent. Thus the assumption of being linear of regression model to the second hypothesis is confirmed. Also survey of coefficient determining fitted model shows that interest expense in the Company could explain 2/7 percent of total changes in the capital structure of companies.
Conclusion:

In this research, proposed hypothesis based on a significant relationship between financial leverage and tax and interest expense of companies of Tehran Stock Exchange were analyzed. The results from test of the first research hypothesis using model in technique was of combined regression for period time of research shows a negative relationship between capital structure and companies tax accepted on the Tehran stock exchange. These results with results [1,13,15,3] are Stephen Ross and others, Wu and Yu [18] in contradiction.

Namely unlike the existing theories, change in tax of companies accepted in Tehran stock exchange has no effect on the capital structure of companies listed in Tehran Stock Exchange. Thus Managers of companies don’t consider tax benefits of debts in their financing decisions. Therefore, in the Iranian capital market, the company’s capital structure cannot be considered as a balance between the tax benefits of debt and costs of financial distress and possible bankruptcy due to debt. Thus, our results are consistent with findings Verschuren [17].

The results from second research hypothesis test was analyzed using model in the method of combined regression for time period of research shows positive relationship between structure of capital and interest expense, companies accepted on Tehran stock exchange. Because management in order to determine suitable financial resource should determine the cost of various financial resources and specify affects that these sources have on return and operational risks of company. What important are in decisions related to financing are, fluctuations of interest rates and the tax impacts that finally have effect on efficiency and overall value of the company. Fluctuations of interest rates of bonds and short-and long-term and short term debts on supply and demand. If the interest rate is high, firms delay financing of companies through debt and finance through short-term debt until long-term debts rate will be reduced or through finance equity. Currently, interest will be deducted from profits before calculation of tax and dividend after calculation tax will be announced. This Tax policy will cause that dividends has cost higher than payments of interest and causes that issuance of preferred stock is reduced in recent years.

REFERENCES


