

The effect of financial structure on Tobin Q value using the index on the Stock Exchange.

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Abstract:

The research on the effect of financial structure on Tobin Q value of the index was Index represents the value of the company's Tobin Q ratio as a measure of long-term debt mess term financial structure of company. Data collected by reference to Stock Exchange

Tehran to use the report contains financial information companies have been benefited. A survey of 248 companies listed in Tehran Stock Exchange for the period of 1381 to 1385, among which 37 Member companies were selected as samples.

The data for the analysis of regression and ANOVA tests that provide total SPSS software have been used. Also

Samples of the formula used for sampling is Cochran. In this study, the relationship between variables and their impact on short-term debt and long-term value of the company is analyzed, the results Research shows that short-term and long-term debt on the value of firms in the Tehran Stock Exchange has a positive effect.

Keywords:

Structured finance short-term and long-term debt, firm value, Tobin Q index, stock exchange

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Introduction:

Financial managers to maximize firm value should always take note of the type of financing methods. Investment is consistent and reasonable use of leverage in order to maximize the company's value and avoid the high financial risk of adverse consequences. It's always been a concern among economists, investors

Investors and corporate managers have a how capital structure affects firm value and market value changes. However, investors need to invest in the stock value of a company's stock. Consider. The efficient market hypothesis indicates the estimated market price of a share of stock is a share value and share price data are used to determine an efficient market. Since the company's financial resources and capital structure is called Objective of maximizing shareholder wealth management, capital structure and capital cost minimization may lead to changes in the cost of capital, changes in share prices in the market. The purpose of this study is to Tobin index (the index value of the company) the effect of financial structure on firm value is determined to know the behavior of stock prices or stock value against changes in the financial structure will be changed.

This research aims to investigate the theoretical and practical issues associated with providing the necessary evidence through Answer questions from users of this financial information is used for decision making. The purpose of this study The relationship between financial structure and firm value, whether or not the

financial structure on firm value, which could lead to financial managers for decision making use of debt and how it affects the value of the company.

Literature :

In this study, some research has been done in some cases are discussed:

Among the early research done in the field of capital structure research, "David Durand" in 1952. It is. After the 1958 paper by two professors called "Modigliani and Miller" was published in the ,A new theory of capital structure provides the starting point for a broader discussion. (Theory MM) in addition to a series of articles that were published by other people in their later years as "Frdvstvn", "David Durand," and "Mazvlys" and others confirm or criticize the MM theory is discussed.

Modigliani and Miller capital structure of the firm value is initially believed, but later admitted that the tax savings resulting from the use of debt increases the value of the company is And suggested that the combined company may use debt to finance its maximum., In 1976, "Scott Martin" In a study conducted in the United States concluded that the capital structure of the industry and an important factor in determining

The financial structure of firms. Having done research in this field, we have the conclusion that there is an optimal capital structure for the Company will determine the optimal degree of financial leverage.

(Scot, David F, and Martin, Jhon D; "Evidence on the importanc of financial structure"; Financial Management; vol 4, (1976)).

Rajan and Zingales of the study (1995) entitled, "What do you know about capital structure?, Some international evidence" a model of the determinants of capital structure of the company has an international perspective.

In another study by Mark. Ones. Ale (1988) and McConnell and Srvaays (1990) was found to have a nonlinear relationship between capital structure and firm value there.

In a foreign article by " Myy Ang - Hyy Ann Chow " as "capital structure, investment, and corporate value" to examine the relationship between capital structure and firm value has been found to have no significant relationship between these two there.

"McConnell and Mvskarla" (1985) and "chan" (1990) as applied to the relationship between investment and firm value discussed And have provided evidence that the effect on the value of the investment firm testified. In this study, the relationship between ownership structure and firm value of investments accounted for under the assumption that the Investment property is determined, the following conclusions have been studied in the ownership structure affects investment and therefore affect the value of the company.

Research by "Kung mew place" in 1999 to determine the relationship between market structure and Q Tobin was the conclusion reached is that the market of the state of perfect competition, Q Tobin has grown into a company's value increases increases [7].

1 - Anderson in 1990 and the relationship between capital structure of companies and their technology and capital-intensive companies have come to the conclusion that user firms have higher debt ratios [5].

2 - "Barreli" and others in connection with an investigation of the factors affecting the financial structure of firms optimal capital structure elaborated. In this study, a significant effect on the type of industry and business risk. Financial structure of

the companies studied and it was found that the industry has had a significant impact on the company's debt ratio [6].

3 - Research conducted by "Mohammad Maleki poor Gharbi" examines the impact of leverage on profitability. In this study on 50 companies listed in Tehran Stock Exchange took this result is that Financial leverage has no effect on the profitability of firms and companies have not been able to use leverage to increase earnings per share. (Mohammad Maleki poor Gharbi)

4 - Alayanys and Weston (2001) study of 720 companies in Latin America between 1990 and 1995 was performed. Their own investigation of the company was used as a measure of Tobin Q ratio and concluded that of companies with leverage up Q higher.

5 - "Communication of economic added value of Tobin's Q Performance Evaluation" study "by A. Kavos," Determining the relationship between Tobin Q and value in trying to assess the company's performance has been (Economic Value Added is a measure of the opportunity cost of all resources used in the company considers. Positive economic value added statement shows the allocation of resources, the creation of corporate value and shareholder wealth is increased).

Materials and Methods :

Choice of method depends on the nature of the research objectives, assumptions or hypotheses are formulated. This study is a descriptive research method was applied and the results of investigations on samples of the total population Has been extended. Variables in terms of quantitative and statistical methods are examined. In this study to calculate the financial structure of certain financial ratios such as debt ratio is used, the software Tobin q (spss) software between financial structure is characterized by a correlation test. Regression model to test the significance of the overall regression variables used to measure effectiveness.

Variables include :

Independent variables:

financial structure which includes proportions of debt (short and long) is.

The dependent variable is :

the value of a company is measured by Tobin q sha private.

$$Q = \frac{\text{Market Value}}{\text{Book Value}}$$

$$Q = \frac{\text{Book Value Of Debt} + \text{The Value Of Stock Market}}{\text{Book Value Of assets}}$$

Population :

The aim of this study was to investigate the effect of financial structure on firm value during a period of 5 years. From 1381 until the end of 1385, the population of companies in 1381 Tehran Stock Exchange was active until the end of 1385, the company's shares are actively buying and selling. Due to the limited number of firms in a population of 248. Given that there were similar among companies and industries to analyze the relationship between the variables mentioned in the hypotheses, industries were grouped as follows:

- 1- Iranian automotive industry, including automotive, Iran Khodro Diesel, Pars Khodro, Tractor, Zamyad, Saipa Diesel, Bahman, auto motive power and propulsion.
- 2- Ceramic tiles and related industries including pars ceramic tiles Pars.

- 3- Pertaining Tehran pharmaceutical drugs, medicine cups, medicine Aboureihan, examples of drugs, medicines, trusted, drug elixir, drugs, hops, Luqman drugs, drug Kosar, Jabir ibn Hayyan drugs, drug distribution, drug distribution and drug chemistry Daroupakhsh.
- 4- Cement and related industries of cement, concrete and cement Elam West.
- 5 - Sugar and Spice and related industries include Iran, honey, sugar and sugar Torbatjam Quhistan.
- 6- Manufacture of automotive parts and related industries including bearings, Iran, Iranian radiator, auto parts, brake and carburetor Iran.
- 7 - other companies include Abadan Petrochemical Industrial Mehrabad, appliances and Vrzyran. The last group includes industries that were the same company.

The sample :

To determine the sample size of this study, we used simple random sampling formulas using samples Cochran was a member of a sample of 37 companies in Tehran Stock Exchange has been selected and tested. Cochran's sampling formula is as follows :

$$n = \frac{\frac{z_{\alpha}^2}{d^2} pq}{1 + \frac{\frac{z_{\alpha}^2}{d^2} pq^{-1}}{N}} = \frac{\left[\frac{1.96}{0.13}\right]^2 \times 0.25 \times 0.75}{1 + \frac{\left[\frac{1.96}{0.13}\right]^2 \times 0.25 \times 0.75 - 1}{248}}$$

Methods of data analysis :

The data refer to the library to check the Tehran Stock Exchange, gathering financial statements and Excel file format of the data processing software measures have been extracted by the average market value for each firm. Akstyl programming environment was calculated and divided by their indices Tobin Q (value companies), debt (short and long), respectively. Book value of debt and the book value of corporate assets in the balance sheet of the company's fiscal year end were collected and calculations to determine Q Tobin was performed. Then divided computation and data analysis during the second phase was analyzed by (SPSS) software.

First, descriptive statistics is that the average ratio of debt (short and long) to separate groups and charts are also calculated and plotted for years.

Then the regression model assumptions made in the study were examined. For each hypothesis separately the effect of each variable on Tobin Q is measured. Statistical models used in this study was obtained from the regression of the following ways:

$$y = \alpha + \beta_1 x_1$$

$$y = \alpha + \beta_1 x + \beta_2 x^2$$

$$y = \alpha + \beta_1 x + \beta_2 x^2 + \beta_3 x^3$$

$$Y = \beta \ln x$$

Inferences about the significance is not high, so inferences about the population parameters we derive the limit.

The implications of this research for the book value and market value of the company stock is used. Book value is an accounting concept Using these criteria, the asset value of each item is determined based on historical data. Market value is the market price of the asset.

Hypothesis

The main hypothesis:

Financial structure of firms in the Tehran Stock Exchange has a positive effect on their market value.

Minor premise:

- 1 - the ratio of short-term debt to total debt has an effect on the value of firms in the Tehran Stock Exchange.
- 2 - The ratio of long-term debt to total debt has an effect on the value of firms in the Tehran Stock Exchange.
- 3 - ratio of short term debt to long-term value of companies on the stock exchange is Thrn.
- 4 - Ratio of short-term debt has an effect on the value of firms in the Tehran Stock Exchange.
- 5 - Ratio of long-term debt has an effect on the value of firms in the Tehran Stock Exchange.

Test the hypothesis :

It models the utility of the model variance table, R^2 , MSE was evaluated.

The first sub-hypothesis:

the ratio of short-term debt to total debt to firm value Tasyrdard.

H 0 = the ratio of short-term debt to total debt is the firm value.

H1 = the ratio of short-term debt to total debt is affected by the evil coats.

Due to the sig or significant regression coefficients for the table, for each group of companies, sig = 0 <0.05 is the significance of the regression coefficient is Vnshandhndh can be concluded , Per unit increase in short-term debt to total debt ratio, Tobin Q value of the index will increase. In fact, the effect of short-term debt to total debt ratio on Tobin Q is the assumption has been confirmed.

The second sub-hypothesis :

the ratio of long-term debt to total debt is the firm value.

H 0 = the ratio of long-term debt to total debt is the firm value.

H1 = the ratio of long-term debt to total debt is the firm value.

Due to the sig or significant regression coefficients for the table, for each group of companies, sig = 0 <0.05 is the significance of the regression coefficient is indicated.

In other words, for every one unit increase in long-term debt to total debt ratio, Tobin Q value of the Index will increase. In fact, the positive effects of long-term debt to total debt ratio on Tobin Q is the assumption has been confirmed.

The third sub-hypothesis :

the ratio of short term debt to long-term firm value.

H 0 = the ratio of short term debt to long-term firm value is not affected.

H 1 = the ratio of short term debt to long-term firm value.

Due to the sig or significant regression coefficients for the table, for each group of companies, $\text{sig} = 0 < 0.05$ is the significance of the regression coefficient is indicated. In other words, for every A unit increase in the proportion of short term debt to long-term, it will increase the value of Q Tobin. In fact, the ratio of short term debt to long-term positive effect on Tobin Q is based on the assumption has been confirmed.

The fourth sub-hypothesis :

short-term debt to assets ratio of firm value is.

H_0 = proportion of short term debt to assets does not affect firm value.

H_1 = is the ratio of short-term debt to assets on firm value.

Due to the sig or significant regression coefficients for the table, for each group of companies, $\text{sig} = 0 < 0.05$ is indicative of a regression coefficient is significant. In other words, Per unit increase in short-term debt to assets ratio, will increase the value of Tobin Q In fact, the positive effect of short-term debt to assets, the Tobin Q is based on the assumption has been confirmed.

The fifth sub-hypothesis :

Long-term debt to assets is the ratio of firm value.

H_0 = the ratio of long-term debt to assets does not affect firm value.

H_1 = Ratio of long-term debt is the firm value.

Due to the sig Yasth significant regression coefficients for the table, for each group of companies, $\text{sig} = 0 < 0.05$ is indicative of a regression coefficient is significant. In other words, for every one unit increase in long-term debt to assets ratio, Tobin Q value of the Index will increase. In fact, the positive effects of long-term debt to assets, the Tobin Q is based on the assumption has been confirmed.

Conclusions :

Considering that the aim of this study was to investigate the impact of financial structure on firm value in proving hypotheses have to be searched Financial managers to use in decision making and how it affects the value of corporate debt We supplement. The purpose of this study was to use the Tobin Q index (the index value of the company) the effect of financial structure (short term and long term liabilities) is determined by the value of companies To understand the behavior of stock prices or stock value against changes in the financial structure will change. Present study examined the hypothesis that (R 7) group of companies in Tehran Stock Exchange discussed the following results were obtained:

-- For every one unit increase in the proportion of short-term debt to total debt, long term debt to total debt ratio, the ratio of short term debt to long-term, short-term debt to assets ratio and the ratio of long-term debt to assets in the group of companies Tobin Q value of the index will increase. In fact, the effect of each of the Tobin Q ratio is confirmed.

-- Selected companies in Tehran Stock Exchange for the 5-year period 1381-1385 the financial structure ratios higher than that of short-term debt, use utilization ratio varies according to many finance companies that elect more than methods of short-term financing with a maturity of less than one year, but each of them (short-term and long-term debt ratio) alone caused an increase in the amount and value of Tobin's Q have increased.

Considering the experiences obtained in this study suggest that further research in the following steps :

1 - Considering the differences in each industry research and their possible effect on the expected results.

2 - Despite the increased risk of liability increases and decreases in value, the results of this research disproves this theory, increasing debt increases firm value. Therefore, more research in this area seems necessary.

3 - 5 years of the study period has been the subject of extensive research can be conducted in a time range of more to be used.

4 - to reach a level of research (much) better use of debt.

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