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Study the Relationship Between Capital Structure and Product Market Competition in the Tehran Stock Exchange

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Abstract: The aim of this study was to investigate the relationship between capital structure is the extent of product market competition in the Tehran Stock Exchange. The 5-year study period the companies listed in Tehran Stock Exchange during 2010-2015 were studied. Between the 90 companies surveyed using multivariable linear regression analysis, the software 17 SPSS the product market competition under two criteria Tobin's Q and Herfindahl Hirschman was measured. The three indicators: growth, debt-size companies was considered as a control variable, the test results indicate that there is a significant relationship between capital structure Tobin's Q index but there is a significant relationship between capital structure and Hirschman index was not confirmed Herfindahl-Hirschman.

Key words: Capital structure, scope of product market competition, tobin’s Q, herfindahl-hirschman, growth, leverage, firm size.

INTRODUCTION

The industrial revolution in Europe and the expansion of automotive and industrial production was followed by the first two outcomes identified in various markets by increasing production volume, increased between businesses and compete for market And on the other by reducing the share of wage costs and cost savings resulting from large-scale production the price of finished products declined. Investors joint venture provides financial resources to set up such units and they came stakeholder discussions. Manufacturers to maintain its market share due to lower product cost their products their product sales prices decreased. Traditional manufacturers continued to produce a product that the old ways were driven from the market. And, the only solution in the purchase and deployment of industrial machines and turning to industrial production. With the development of science and technology production process complicate and prolong News on the left; Investors joint venture provides financial resources to set up such units and they came stakeholder discussions.

Due to the large volume of capital needed to set up such units Much of the producers of the financing of the units failed and had resorted to partnerships. Due to problems caused by joint managing business units from among a group of shareholders or outside the company chose to run the company. And at this point in history was the separation of management from ownership.

Management as a discipline has the task of coordinating, controlling and planning and directing the business units in order to achieve the objectives of their shareholders. In this regard financial management as a separate discipline of management science duty commercial activity of providing financial resources required to determine the optimal mix of resources and assets inexpensive way to track the environmental factors Enterprise business unit to the way special financial management tips done and is doing well. Today, the company's capital markets as the heart of economies of different countries as a thermometer duty collected and equip individuals conducting capital and small savings and investment in high-yield projects is responsible. Given the importance of this subject, professional references and legislation of most countries are trying to trace and identify factors affecting these markets and regulated activities of this area. With the passage of time in this context special attention to the management of the business units and in particular finance management and several studies are ongoing in this regard. The company’s capital structure in any controversial issues in the field of finance companies that are always on the ratio of debt to assets is taken by managers especially careful. In general, companies in the Iranian capital structure of two parts, First brought on equity (equity) and secondly financial debt that they are already thinking managers employing a profit in the future and act on its commitment to act funders, corporate managers the combination of these two

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types are seeking to obtain the maximum efficiency and profitability .Capital structure and return on equity are matters the most attention in the field of financial management to account. Myers in 1984, two types of thinking about capital structure as "static parallel framework" anof static parallel, the company has a debt ratio (ideal) determines the beginning of works towards achieving it. Within the framework of preferential enterprise internal finance and external financing in the form of securities, debt securities and capital securities, preferred.

An essential task of financial managers in companies determine the best combination of financial resources or the capital structure. The decision regarding the capital structure must be to increase the value of the company. To maximize corporate value should be about the best combinations of them and the ways of financing their investments decide. Financing can be created through the use of debt and leverage, either through shareholders' equity. There liabilities in the financial structure on the one hand due to tax effects increased earnings and stock returns is consequently increase The increase in interest expenses and the probability of default at maturity increased financial risk and thus, lowering prices in the stock market which consequently reduces the return on equity. Therefore, one of the major concerns of financial managers is to determine the optimum composition of the capital structure The term capital structure, type and ratio of different types of securities issued by the unit profit. Optimal capital structure that would maximize the overall value of the portion of profit geared purpose of determining the capital structure, determine the composition of financial resources in order to maximize shareholder wealth. Although, the theoretical framework presented in the financial management is a good source for this work but in practice there is no doubt that we will be faced with problems because many factors affect shareholder wealth takes the capital structure of one of them are because the purpose of financial management, maximizing shareholders wealth, capital structure or debt ratio should be evaluated in terms of its effect on firm value basic aim of this research is to follow it is whether the structure there is a range of capital and market competition

Theoretical and research background: Revolutionary ideas of Miller and Modigliani in 1958 and 1963 and contradictory behavior of companies with the theoretical prediction Miller and Modigliani, numerous theories about capital structure model in their countries of developed capital market provided that any particular factor or factors choose the optimal capital structure in appropriate debt ratio persistent. But almost spent more than four decades of publishing the views of Miller and Modigliani has not developed a unified theory that is able to solve the puzzle of capital structure. For example, studies in the field despite optimal structure of Myers and Majluf (1984), Griffiths (2001) have done research in the field of installation and optimum capital structure has been introduced.

But none could comprehensive theory of capital structure provider. For example Diasmak and coauthors determinants of the capital structure of companies in the region of Central Asia to the conclusion that the capital structure is influenced by the environment in which the company is involved.

Michaely and Roberts (2012), the relationship between product market competition and conflict Deputies examined. They showed that the product market competition reduce agency cost. Companies that operate in industries with low competition level of competition than firms in industries with high-performance (productivity) less. Also showed that competition in the market of corporate governance mechanisms and alternative products for other companies in the industry with little competition is likely to be a stronger mechanism to align the interests of corporate governance and other stakeholders will apply.

The relationship between capital structure and product market competition, Chinese companies have examined the market structure. Using unbalanced panel model and application control variables profitability, company size, collateral value of assets, growth, uniqueness assets, non-debt tax shield, the ability to create internal resources and current ratio to analyze the relationship between capital structure and market structure paid for static and dynamic. The findings indicate the existence of parabolic relationship between capital structure and market structure (Guney *et al*., 2011).

Chou *et al*. (2011) examined the relationship between product market competition and corporate governance have in this study they found that companies in competitive industries or with weak market power tend to have weak corporate governance structure. In addition, they showed that the quality of corporate governance only when product market competition is weak, significant impact on performance. Finally, they reported that a controlled force on the competition management, product market competition and cost out of fear of liquidation.

Li (2010) in their study to investigate the relationship between competition and product market with the quantity and quality of disclosure of payment. In this study, to measure the competitiveness of the Herfindahl Hirschman to compete actual and potential competition Barriers to Entry criteria were used. His findings indicate the existence of potential competitors to increase the quantity of disclosure while competing due to potential competitors decreases the amount of information to be disclosed. He also showed that increasing competition mainly improves the quality of corporate disclosures.

Marciukaityte, the relationship between product market competition, corporate governance and policy cash payment. In this study he found that the cash value is positively associated with good corporate governance, only for the companies that operate in an environment with a high level of competition. Also showed that high levels of funds available can lead to yield losses for companies that operate in industries with high competition, although good corporate governance resulting from negative cash yield decreases.

Laksmana and Yang (2010) with the aim of knowledge in the research as "the relationship between market competition and product profitability and earnings management" began. The results of their study showed that companies are more competitive than companies with less competition on accrual basis are more likely to manage earnings.

MATERIALS AND METHODS

This study is a classification based on objective of applied research. The aim of applied research, development of practical knowledge in a particular field. The research, methodology and the nature of the correlation. The study aimed to determine the relationships between them. For this purpose, according to the scale of measurement variables, appropriate indicators being optional.

The study population and sample: The study population study encompasses companies in Tehran Stock Exchange is 92-88 years. The systematic elimination method is used to select the sample and the number of firms that were selected by systematic sampling of 90 companies in 450 years-company.

financial years 1388-1392 have participated in the exchange. the end of their financial year end of March each year and during the above mentioned period in fiscal year have not changed. In all the years studied during the fiscal year that required data is available. Company, one of the investment companies, banks, insurance companies and financial intermediaries not wing. Companies that do not interrupt the trading more than 4 month.

Hypotheses: The main hypothesis of this study include first and second hypothesis is: The main hypothesis: there is a significant relationship between capital structure and market competition.

Sub assumptions:

- Hypothesis: There is a significant relationship between capital structure Tobin's Q index
- Hypothesis: There is a significant relationship between Herfindahl-Hirschman index any and capital structure

Research model and the introduction of variables

Dependent variable: In this research, product market competition as the dependent variable is intended that each of the two Herfindahl Hirschman index Tobin's Q is used as a measure of market competition. Eq 1.

$$\text{Tobin's Q} \qquad (1)$$

The total book value of assets / (liabilities book value + market value of equity) =

In markets with perfect competition, Tobin's Q ratio will be equal to all companies. It is expected that Tobin's Q firms with more than one, of the competitive advantage they will be reduced. That means that the index is, the less competition in the industry represents more focus and vice versa.

Herfindahl Hirschman index:

This index is the sum of squared market shares of all firms in an industry can be obtained

Eq 2:

$$HH1 = \sum_{i=1}^{k} S_i^2$$

Where:

k = Number of firms in the market.

Si = My company's market share

$$S_i = \frac{x_j}{\sum_{i=1}^{n} x_j}$$

Where:

Xi = Sales

IEI = Types

Herfindahl-Hirschman index a measure of industry concentration. In this index, the index has been calculated is higher the higher the concentration is less competition in the industry and vice versa.

Independent variable: capital structure consists of a combination of debt and equity in the capital structure of the equities and debt obtained

Control variable:

- Company size: the natural logarithm of total assets
- Leverage: is calculated by dividing total debt by total assets

Table 1: Descriptive statistical analysis variable

Variable	N	Mean	Middle	Std	min	max
Capital Structure	450	54.23	53.61	682.38	51.36	55.62
Tobin's Q index	450	8.44432	8.36638	0.677035	10.7437	10.74375
The Herfindahl-Hirschman	450	8.3	0.603	63.52	15.91	168.58
$LEV_{i,t}$	450	0.6213	0.6433	0.1648	0.0964	1.0364
$Grow_{i,t}$	450	13.04	1.02	73.8	4.42-	5.85
SIZE	450	12.28	12.12	2.23	9	18.74

- Company growth: that is considered to be equal to the logarithm of sales

Analysis data: The required data to test the hypothesis the software management of ATMs, as well as financial statements were extracted and after data preparation software Excel, analysis and estimation and testing of hypothesis by using SPSS17 was done.

Descriptive statistics data: To evaluate the general and basic variables (series) for sizing up the template (model) and a detailed analysis they estimate the descriptive statistics of the variables is required (Table 1).

Be deemed in this case, the data distribution is skewed to the right. And the proximity of the median and mean values indicate normality of the data and sample data consistency between variables. In skewed distributions of the bid and sell more of the other variables, the most strain on the bid and sell the mean and median values of variables. in some of these cases are nearly symmetrical distribution of variables.

RESULTS AND DISCUSSION

The results of the research hypothesis: The main hypothesis: there is a significant relationship between capital structure and market competition hypothesis presented in the form of two sub-hypothesis is as follows: Hypothesis: There is a significant relationship between capital structure Tobin's Q index (Table 2).

The coefficient of determination is equal to 0. 33%, about 33% of dependent variable (Tobin's Q index) is expressed by model. One of the regression assumptions of independence of errors if the hypothesis is rejected independence errors and errors are correlated with each other there is the possibility of using There isnt regression .Watson camera used to evaluate independence from each other errors that if the value of Durbin-Watson is at a distance of 1/5 to 2/5 hypothesis is rejected and the correlation between the errors of the regression can be used. Watson camera statistic value of the image 1.98. This number indicates that errors are independent of each other and there is no correlation between their errors and the assumption is rejected and the correlation between the errors of the regression can be used. Model coefficients are given in the following inscription in Table 3.

As in Table 3 can be seen, according to the calculated t value and the likelihood of their estimated coefficients for the variable model of capital structure, company size and level of 5% significance is the company's growth and its presence in the model It is however, given the significant level of financial leverage variable the variable is removed from the regression model is not significant because the level of 5 percent. The foregoing represents a direct linear relationship between capital structure and Tobin's Q index at Tehran Stock Exchange. Therefore, according to the description, version 1 is expressed as follows:

$Qi,t = 3.118+0.72Ca\ si,t+0.013\ SIZE\ i,t +0.28\ Growi,t +\varepsilon$

The regression equation is assumed to be normally distributed errors with zero mean and standard deviation above graph shows that a normal distribution of the errors. VIF statistics were used to assess multi collinearity Since this statistic is less than 1. This suggests lack of multi collinearity between independent variables.

Second sub-hypothesis: Herfindaleh Hirschman index any significant relationship between capital structure and there Table 4 estimate the relation between capital structure and Her findaleh Hirschman index every second sub-hypothesis: Her findaleh Hirschman index any significant relationship between capital structure and there.

As shown in Table 4 can be seen, the coefficient of determination 0.007 equal to the value of this parameter, the lack of explanatory power of the model is shown. One of the regression assumptions of independence of errors, if the hypothesis is rejected independence errors and errors are correlated with each other, there is the possibility of regression. Watson camera statistic used to evaluate independence from each other errors that if the value of Durbin-Watson is at a distance of 1.5-2.5 hypothesis is rejected and the correlation between the errors of the regression can be used. Durbin-Watson statistic value is 2.011 and the above table shows the number of errors are independent of each other and there is no correlation between their errors and assume a correlation between the errors of the regression is rejected and can be used t calculated according to the amount and the likelihood of them, none of the variables of the model coefficients of the estimated model at the level of 5% is significant and it is not necessary in the model.

Table 2: Multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination and Camera-Watson test between capital structure and tobin's Q index

Model	Multiple correlation coefficient	R^2	Adjusted coefficient of determination	estimates of standard errors	Durbin-Watson
1	0.36	0.33	0.328	590.55	1.98

Table 3: Regression coefficients for the variables of capital structure and tobin's Q index

The relationship between capital structure and Tobin's Q index

Variables	Beta	t	p value	Collinearity statistics Tolerances	Vif
C	3.118	4.125	0.001		
Capital structure	0.72	6.302	0.000	1	1
Growth	0.28	7.236	0.046	0.995	1.041
Size	0.013	0.341	0.033	0.997	1.003
Lev.	-0.016	-0.411	0.061	0.999	1.001

Table 4: The relationship between capital structure and Herfindahl-Hirschman

Variables	Beta	t statistics	p value	R^2 Adjusted	Durbin-Watson
C	50.130	0.320	0.749		2.011
Capital structure	-21.780	-0.383	0.702	0.007	
Growth	0.260	0.070	0.044		
Size	0.086	0.860	0.051		
Lev.	-0.107	-0.286	0.775		

The foregoing reflects the absence of significant models between model in companies operating in the securities market. Therefore, the structure of the capital Tehran and Herfidaleh Hirschman index any significant linear relationship was not found.

CONCLUSION

According to the hypothesis that the relationship between capital structure and support the Tobin's Q index, investors are recommended: in their decisions to Tobin's Q index which is more profit more attention, as well as by the type of investment is the key factor in determining the type of industry it is recommended that decision makers hat (c) investments in industries mother filed their decisions. In addition to investors, analysts and other stakeholders is recommended, especially industry sales than the quality of published information and have it on their models in their decision making.

REFERENCES

Chou, J., L. Ng, V. Sibilkov and Q. Wang, 2011. Product market competition and corporate governance. Rev. Develop. Finance, 1: 114-130.

Griffiths, R., 2001. Product Market Competition, Efficiency and Agency Costs: An Empirical Analysis. Institute for Fiscal Studies, London, UK.,.

Guney, Y., L. Li and R. Fairchild, 2011. The relationship between product market competition and capital structure in Chinese listed firms. Intl. Rev. Financial Anal., 20: 41-51.

Laksmana, I. and Y.W. Yang, 2010. Product Market Competition and Earnings Management to Meet EarningsTargets. American Accounting Association, USA.,.

Li, X., 2010. The impacts of product market competition on the quantity and quality of voluntary disclosures. Rev. Accounting Stud., 15: 663-711.

Michaely, R. and M.R. Roberts, 2012. Corporate dividend policies: Lessons from private firms. Rev. Financial Stud., 25: 711-746.

Myers, S. and N. Majluf, 1984. Corporate financing and investment decisions when firms have information that investors do not have. J. Financial Econ., 13: 187-221.