

## **The relationship between capital structures, product market competition and performance sensitivity in listed companies in Tehran Stock Exchange**

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### **Abstract**

According to changes in the world today, the countries, are facing with many threats, particularly in developing countries. They need to solve economic problems to perfect solution to make better use of resources and wealth. One of the main solutions is development of investment. The purpose of this research investigates the relationship between capital structure, product market competition and performance sensitivity in listed companies in Tehran Stock Exchange during the 2010 to 2014. The study statistical society in this research is all companies in listed companies in Tehran Stock Exchange. We used the removed method and create conditions for selected society and sample. Of total industry selected 90 companies. For testing research hypotheses used descriptive statistical method and analytical test method and software Eviews. Finally, the results showed there is significant relationship between capital structure, product market competition and performance sensitivity in Tehran Stock Exchange.

*Keywords:* Capital structure, product market competition, performance sensitivity.

### **1. Introduction**

One of the important tasks of financial management is offering the perfect solution to use present financial resources in the society for better performance and access to forecasted goals at a lower cost and the higher desirability. One of the most important issues providing good condition for optimum selection investment projects with this knowledge, increase efficiency and public wealth due to honoring the divine blessings. (Rahnama Roodposhte, 2008).

The operational techniques of management accounting used for analysis and interpret the financial information entity to plan and control and better management. This resulted in increased power production and reduces costs. In recent years, this technique was strong growth due to technology changes and customer needs. So, the impact is not covered the effect of these tools on efficiency and performance of the company. (Andersen, 2005).

Decision time must specify every business the cost of different sources of financing to use the new funding and identify effects of these resources on returns and operational risk and finally recognized company value to survive, and development activates. Companies need for development activities in the help capital and rely heavily in financial markets. The role of in the market is providing capital in institutions and companies. Method of financing is one of the main points considered by financial managers. (Zahmatkesh, 2005).

Therefore, this topic is important than considering the importance of capital structure, product market competition and sensitivity performance. So, this research trying, considers the relationship between capital structure, product market competition and performance sensitivity in listed companies in Tehran Stock Exchange.

## 2. Review of literature

Huang and Song (2006) examined 1200 companies in their study and tested capital structure and debt ratio they showed debt ratio increases with the increase in profitability and increasing the share ownership management reduction in failure with the increasing size of the company also tangible assets are the positive effects on the debt ratio. Furthermore, the survey showed government ownership and organizational no significant impact on company's capital structure policy.

Céspedes et al (2010) tested relationship between capital structure and ownership at seven countries in Latin America. The results showed there is a positive relationship between leverage and concentration of ownership also the results showed there is a positive relationship between leverage and growth variables and there is a negative relationship between leverage and profitability, and larger companies have tangible assets more.

Paligorova and Zhaoxia (2012) in research in the name "complex ownership and capital structure" tested company leverage and motivate them on financing by debt. They found company leverage significantly to have a higher leverage compared to non-leveraged companies and the use of debt on company leveraged there is risk of expropriation. They did not evidence to improve control, discipline and Tax Research for using the financing results showed them capital structure is under the influence activities, final owners. That can have the right to control more.

Bigler (2006) investigates the relationship between capital structure and firm performance property on Tehran Stock Exchange results of the survey approved the impact of capital structure on corporate financial performance from all components of related to capital structure and connect with performance market value and the adjusted value and after them the book value the most important.

## 3. The research hypothesis

*H1. There is a significant relationship between product market competition and sensitivity performance pay in listed companies in Tehran Stock Exchange private firms under control.*

## 4. Methodology

This research the method in terms of reasoning is a posteriori and statistically is descriptive correlational and in terms of aim is practical and its pattern is experimental. For achieve the desired information used the software of modern RAHAVARD NOVEN and all the sites associated with the Stock Exchange used software Eviews and to test the coefficient significance in hypotheses used multiple regression correlation analyses for determine the type and the relationship between the variables. That is the method collect data to measure the research variables:

1. Information the Stock Exchange.
2. The use of internet sites, including: Exchange Companysite, the notification exchange site, information and report of stock site and management research and development of stock site and used of software to exchange information such as RAHAVARD NOVEN, DENA SAHM, TADBER PARDAZ.

## 5. Statistical society and statistical sample

The statistical society of this research is all public companies accepted in Tehran Stock Exchange during years 2010 – 2014. Furthermore, Sample after limitations is 90 companies.

## 6. Empirical results

### *Hypothesis test*

$H_0$ : There isn't a significant relationship between product market competition and sensitivity performance pay in listed companies in Tehran Stock Exchange private firms under control.

$H_1$ : There is a significant relationship between product market competition and sensitivity performance pay in listed companies in Tehran Stock Exchange private firms under control.

Table (4-8) the dependent variable: Sensitivity performance pay

variable	Coefficient	T -statistic	prob
PAT	312.5	16.78438	0.0000
FAMD	11.213	18.27910	0.0000
ENTCOS	21.57814	32.0617	0.0000
DIFF	17.1124	20.137	0.0000
Lev	1.92	7.090860	0.0000
OWNERSHIP	3.56	17.95767	0.0000
SIZE	0.003	5.391902	0.0000
MTB	1.2348	31.78124	0.0001
GNP/Capita	11.2487	25.2457	0.0000
INF	18.2476	14.4871	0.0000
R-squared		0.79	
F-statistic		175.62	
prob		0.000	
Durbin-Watson stat		2.04	

Source: the calculations research.

According to table T-statistic product market competition variable and sensitivity performance pay variable in private companies under their control that the absolute value greater than 1.96 is significant and shows significant relationship independent variable with dependent variable. Also, the probability is 0.000 this means that overall model is significant, because the probability is smaller than 5%. The determination coefficient is 0.79 that mean independent variable show 79 percent the sensitivity performance pay in private firms under control. Therefore, the null hypothesis is rejected. So, there is a significant relationship between the variables at the confidence level 95%. T-statistics and probability variables shows a significant relationship between variables. Also, Durbin-Watson is 2.04. Then, there isn't autocorrelation in the model. Thus the first hypothesis accepted.

## 7. The research model

$$\text{Log } PAT_{i,t} = \beta_0 + \beta_1 \text{DIFF}_{i,t} + \beta_2 \text{MKTSIZE}_{i,t} + \beta_3 \text{ENTCOST}_{i,t} + \beta_4 \text{HH}_{i,t} + \beta_5 \text{PERF}_{i,t} + \beta_6 \text{DIFF}_{i,t} \times \text{PERF}_{i,t} + \beta_7 \text{MKTSIZE}_{i,t} \times \text{PERF}_{i,t} + \beta_8 \text{ENTCOST}_{i,t} \times \text{PERF}_{i,t} + \beta_9 \text{HH}_{i,t} \times \text{PERF}_{i,t} + \text{FIRM}_{i,t} - \text{Level control}_{i,t} + \text{country-level control}_{i,t} + \text{contry dummy} + \text{industry dummy} + \text{year dummy} + \epsilon_{i,t}$$

PAT: The averagedirect payments, the natural logarithmtotaldirect paymentsboard.

DIFF: Value alternative product in industry, cost of sales (operating) includes: cost of goods sold, selling, general and office costs, depreciation cost and loss the devaluation.

MKTSIZE: The marketsize ofthe industry, the natural logarithm ofindustry sales,industry salesincludealoperational costscompaniesinparts ofthe industry.

NETCOS: costsrecorded inindustry, the natural logarithm ofthe weighted averagethe grossvalueassets, designsandequipmentin the industry.

HH<sub>i,t</sub>: Totalmarketsquare ofcompeting entitiesinanyindustry, country variable.

PERF = RoA: return on assets, net incomebeforeunusualitemsdivided bytotal assets.

FAMD: private ownership(dummy variable), if the stockcontrolbystakeholdersismore than20% 1 andotherwise is 0.

Log ASSETS: total assets, the natural logarithm oftotal assets. (Variable controlat thecorporate level).

LEV: Averagereturn on debts, the short and long termdebtdivided bytotalequity.(Variable controlat the corporate level).

Log MTB: The rate of market value to book value, the natural logarithm of(1+ the total book value debts and the market value of equity divided by book value total assets). (Variable controlat the corporate level).

Log R & D: R & D costs, the natural logarithm of(1+R&D costs Divided by sales).(Variable controlat the corporate level).

Log FIRMAGE: The number of financial years, the natural logarithm of the number of financial year present company in Stock Exchange.(Variable controlat the corporate level).

Log GNP / Capita: Basic gross domestic product each capital, the natural logarithm of the value of goods and services output end to the state.(Variable controlat the country level).

SMGDP: Stock market, listed stock exchange.(Variable controlat the country level).

INF: Inflation.(Variable controlat the country level).

$\epsilon_{i,t}$ : Error regression model.

## 8. Conclusion

One of the most challenging and difficult problems for company's decision making about capital structure, but at the same time is the most critical decision about Survival Company. (Sajade and Jafare, 2008). Theory of structures shows every company, there is a favorable structure from capital. This structure can be maximizing performance and corporate value and to minimize cost of capital, but there are several problems for determine exactly the capital structure, so can't be used the theory carefully. According to the importance of this issue, the aim of this study is the relationship between capital structure, product market competition and performance sensitivity in listed companies in Tehran Stock Exchange. According to the test results in this relationship is significant at 95%. In the other words, there is a significant relationship between product market competition and sensitivity performance pay in listed companies in Tehran Stock Exchange private firms under control.

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