Research Article

THE STUDY OF EFFECT OF ENVIRONMENTAL FACTORS ON FUNDING OF COMPANIES LISTED IN TEHRAN STOCK EXCHANGE

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ABSTRACT
Economic environment of firms has definite and undeniable role on the funding of company. Environment risk is defined based on the types of risks that firms face them as a result of their activities. Risks and hazards that have influence on the absorption of capitals by firms are caused by uncertainty caused by internal or external environment of firm. Risk can cause by policies and macroeconomic factors of country like privatization, gross domestic production and etc. or policies taken at the level of firms including funding, liquidity policies and etc. Among this, firm funding structure indicates that how firm provides its required financial resources: debt or equity? Main purpose of this thesis is investigating the effect of environment on the funding of firms accepted in stock exchange during 2008-2012. Independent variable used in this study is environment risk which includes economic risk and market risk. Used criteria for firm capital structure (dependent variable) are debt ratio. This is descriptive research and data gathering method is library methods and its data obtained from stock exchange organization and reports f firms. Multiple regression tests were used to determine significance of relationship between independent and dependent variables. Results of research indicate that there is significant relationship between environmental factors and funding of firm. Research hypothesis showed that there is positive and direct relationship between economic risk and market risk with debt ratio.

Keywords: *Environment, Market Risk, Economic Risk, Financial Fund*

INTORDUCTION
Investment under uncertainty is one of the most important categories that have attracted financial management experts. Investors consider different factors during taking investment decision. Development of each country's economy depends on appropriate investment and planning. Correct directing of cash flows toward suitable investments causes economic development, increase in gross domestic production, employment, increase in per capita income and finally, public welfare. Undoubtedly, the major action for encouraging people to investment or buying share of firms, improving performance indices and reducing risk of firms (Chathooth and Olsen, 2007).

Therefore, the major action for encouraging people for investing in production activities or buying firms' shares is creating balance between efficiency and risk of these investments compared to non-productive investments. In capital market, investors try to spend their savings in the investments that have highest efficiency. But in this regard, they consider the risks related to the investment and they bear risk when they will have more income. In this case, developing a suitable environment for correct and productive investment and enhancing capital market are practices that can be done by economic authorities. Firms' economic environment has definite and unbelievable role in influencing the performance of fir. Environment risk is defined based on the kinds of risks which firm encounters it during its activity. Types of risks and hazards that threaten a firm are caused by uncertainty of internal and external environment. Risk can derive from policies and macroeconomic factors of a country like privatization, gross domestic production or etc. or policies taken in the level of firms including funding, liquidity policies, company development potential and etc. (Sinai, 2007).

In this regard, capital structure indicates that how a firm provides its fund: debt or equity? It is important that managers determine capital structure such that in addition to maximizing value of firm, the cost of firm minimizes. Of course, it should be noted that funding of firms is influenced by external environment

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and policy of firm. Capital structure has considerable effect on the profitability and optimal performance of companies (Ross, 1999). Today, ranking firms regarding their credit is largely depends on their capital structure and in fact, the basis of production and services, is dependent on providing and spending financial cashes. On the other hand, capital structure of each firm is initial warning about financial deficit of firm and it is necessary to consider it in strategic planning of firms and determining effective factors on efficiency of funding. Therefore, this research by considering mediator role of capital structure in influencing performance of firms, investigates that whether environment factor or environment risk have which effect on the capital structure of firms (Chathooth and Olsen, 2007).

Research Background
Foreign Research
Chathooth and Olsen (2007) have conducted a study about the effect of different factors on the performance titled "the study of environment risk effect, firm policy and capital structure on the performance of firm". They conducted this research in 48 selected restaurants in US and concluded that major part of deviations in performance of restaurants is explained by these variables.

Disimsak *et al.,* (2008) studied the effective factors on the capital structure of middle-east Asia firms and concluded that capital structure is influenced by environment and space in which firms operate. They believe that different political and economic crisis including financial crisis of 1997 and different economic and cultural spaces governing activities of firms determine the type and amount of governing variables on the performance of firms.

Tarek *et al.,* (2009) investigated that who firms change funding strategies in systematic risk classes? Statistical technique used for testing hypothesis is regression coefficient. In this research, firms divided into high, moderate and low classes based on the mean change of systematic risk (β) and capital structure factors effective on funding by long-term and short-term debts were selected based on static, hierarchal and free cash flow balance theory.

This research has six hypotheses that results showed that firms with moderate and low risk use short-term and long-term debts and companies with high risks use long-term debts more than short-term debt. Therefore, companies with high risk did not intend to raise fund by common share. Results show that firms with high risk are influenced by hierarchal order theory and companies with moderate risk are influenced by free cash flow assumptions.

Mahmud *et al.,* (2010) studied factors determining the capital structure of firms in Japan, Malaysia and Pakistan. Results indicated that GNP development for Japan and Malaysia relates to capital structure is important and the higher economic development, they use more long-term debts but this relationship was not confirmed in Pakistan.

MATERIALS AND METHODS
Research Methodology
Many recent researches about economy have used tabulated and pooled data for study such that several firms, household, country and etc. were analyzed. Analyzing tabulated and pooled data is a new and practical topic in econometric because it provides a rich environment for developing estimation method and theoretical results.

In many cases, researchers can use tabulated data for cases in which problems that cannot be studied in series or cross-sectional form. For example, there is a problem in production function that technology changes can be differentiated from gains from scale. In these cases, cross-sectional data provide only information for the profits obtained by scale, while time-series data show effects without differentiation. Combining series time statistics with cross-sectional statistics not only provide profitable information for estimating econometric models but based on the results obtained, we can have policy-making inferences. In this research, data related to 78 firms during 5-year period were studied as tabulated and pooled data. When tabulated data were used for the estimation, F_{Leamer} test is needed for detecting the method and estimation. If the result indicates using pooled data method, model estimation will be done by pooled data method and if the result was for tabulated data, Hussmann test was used for detecting fixed or random

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effects of model such that if obtained F_{Leamer} was higher than F-table or in other words, if probability of test was lower than 0.05, we should use tabulated data. Otherwise, pooled method will be used. In order to determine the use of fixed or random effects, Hussmann test will be conducted. If test statistic was large than χ_k^2, fixed effects methods is used; otherwise random effects method is used.

Calculating Research Variables

Environmental factors are defined in environment risk frame. Environment risk measured via 2 dimensions economic risk and market risk. These factors indicate the effect of environment uncertainty of the capital structure of firms.

Economic risk measures via gross domestic production (GDP) and sale growth rate of firm. Gross domestic production is sum of products and services produced during one year inside of the country (Nazari, 2006). GDP covariance and firm sale growth gives a number that indicates economic risk. Economic risk indicates how sale growth changes according to GDP growth rate. Market risk is measured via covariance between firm share price and mean market share price of 30 big firms (Chathooth and Olsen, 2007).

In this research, in order to quantitate capital structure, we used mean debts divided to book value of assets which is called debt ratio (Chathooth and Olsen, 2007). Using debt ratio, percent of amounts that have been provided by creditors or debtors can be calculated;

Debt ratio=mean firm debt/asset's book value

Mean firm debts=initial period debt + end period debt

Creditors prefer low debt ratio because low debt ratio means that debtors and creditors have higher immunity in the case of bankruptcy (Berigam *et al.,* 2003).

Research Hypotheses

Because environment factors include economic and market risks, research hypothesis is as following:
There is a relationship between economic risk and market risk with firms funding.

RESULTS AND DISCUSSION

Research Findings

In model (1), there is a relationship between economic risk and market risk and debt ratio and expresses that:

There is relationship between economic risk and market risk with debt ratio of firm.

$$DEBTRAT_{i,t}= b_0 + b_1\ ECONBETA_{i\ t+}\ b_2 MBETA_{i,t} +e_{i,t} \qquad\qquad 1)$$

As we stated in the research methodology, if obtained F is higher that table-f or its probability is lower than 0.05, we use tabulated data; otherwise, we use pooled data. According to below table, we observe that F-Leamer test is 0.0000 which is lower than 0.05; therefore, we use tabulated data. Then, we implement Hussmann test to determine whether to use random effects of fixes effects method.

Hussmann Test Results

In this section, Hussmann test was conducted to determine using fixed or random effects. Regarding test results, we see that calculated F is 0.607; therefore, we use random effects methods.

Regression Analysis Test

As seen in table 1, probability of F-statistics is lower than standard error, H_0 was rejected with 95% confidence and H_1 indicating significant relationship between economic risk and market risk and independent variable is confirmed. Determination factor is 0.35.

In this time period, economic risk and market risk was significant with 95% confidence and has significant relationship with debt ratio.

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Table 1:

Method/variable	Tabulated data method (random effects)		
	Coefficient	t-statistics	Probability
Intercept	0/0001	3/9237	1/2612
Economic risk	0/0301	1/951	3/2111
Market risk	0/03	2/9104	2/0688
R-squared (R2)	0/35		
F	4/8556		
Prob F	0.03553		
Durbin-Watson	2.4409		
F-Leamer	55.7447		
	0.0000		
Hussmann test	0.2739		

Source: research findings

Compared to Chathooth and Olsen research and Fernandez research, results of this research are consistent with their results. Chathooth and Olsen concluded that there is significant and positive relationship between economic risk and market risk with firms' risk debts.

Conclusion

What encourages financial suppliers to use their resources in certain activities is the desired performance of that activity which increases the value of firm and wealth of investors. One of the features of emerging markets is attention to capital parameter and effective methods for preserving and developing firm value and firm risk management in financial fund markets. Necessity of this issue is having information about position of firm in financial markets and effective environment on different firms' performance.

Regression result indicates that by increasing economic risk and market risk, funding by dents increases. Following increase in debt in capital structure of firm, risk of firm increase; therefore, we can say that there is bidirectional relationship between market risk and debt ratio. Regarding research results, we see that macro policies of firm like gross domestic production influences on capital structure of firms; therefore, it is recommended to economic authorities of country that they take effective steps in national production and by discovering new markets and relationship with world trade organization, open new doors for economy. Because oil is a major effective factor in gross domestic production of Iran, it is suggested that contribution of manufacturing company increase via creating suitable environment for production.

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