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THE IMPACT OF SHARES LIQUIDITY ON THE ORIENTATION OF PART AND AUTOMOTIVE ACCEPTED COMPANIES LISTED IN TEHRAN STOCK EXCHANGE TO INCREASE FINANCING THROUGH THE DEBT

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ABSTRACT

Better understanding the positive impact of shares liquidity can lead the efficiency of capital market to improve the resources allocation by that and before that, obtaining the increase in production and national income and it is also important to study the impact of liquidity on financing. According to unknown aspect of the impact of shares liquidity on the orientation of industrial automotive companies of Iran to increase financing through the debt, this research seeks to answer the following two questions:

Do the part and automotive companies those have shares with higher liquidity power, have more orientation to increase financing through the debt? Do the part and automotive companies those have shares with higher liquidity power, in the period that they have performed the abnormal investment (higher than normal); have more orientation to increase financing through the debt?

According to F Limer statistical, panel data method is used and also, according to the Hasman, accidental effect method is used during the period of 2001 to 2012. The results show that the effect of variables of shares liquidity and last year debt on dependent variable of the ratio of company debts to market value is positive and significant. The effect of company size on the amount of debt is positive and significant. The effect of company efficiency ability variable which is defined operationally with using of the ratio of efficiency before interest and tax to total assets, on dependent variable of the ratio of company debts to market value is negative and

significant. The effect of company growth opportunities index variable which is the ratio of company market value (debt book value in addition shares market value) to its assets book value, on debt changes is positive and significant.

Keywords: Liquidity, Capital structure, Financing through debt, Part and automotive companies listed in Tehran Stock Exchange

INTRODUCTION

Financing hierarchy theory as one of the theories that affect the companies financing, presents that in company financing, a hierarchy is observed and companies do their financing first from the place of internal resources and then from the place of debt and capital. **Myers and Majlov (1984)** stated that the problems associated with the absence of information asymmetry lead these hierarchies of financing. Therefore, the managers will attempt to use financial resources which needs less information disclosure so, they will use first from the internal resources and then from financing through the debt and finally, they publish new shares because financing through the shares publication requires a lot of financial information publication.

Lack of information asymmetry among internal users and external users as well as investors and creditors has been effective on the amount of shares liquidity. Previous researches show that companies with higher liquidity have had lower problems associated with lack of information asymmetry among informed asymmetry and less informed asymmetry. Therefore, it is expected that the shares price of companies with higher liquidity has more information loading.

Research model and research variables

For testing the research hypotheses, below regression models will be used **(Band, 2013)**.

$$\Delta Lev_{it} = \alpha_0 + \alpha_1 Lev_{it-1} + \alpha_2 LIQ_{it-1} + \alpha_3 Size_{it-1} + \alpha_4 Profitability_{it-1} + \alpha_5 MTB_{it-1} + \alpha_6 Fix\_Assets_{it-1} + \varepsilon_{it}$$

For investigating how to use a lot financing through the debt (unusual borrowing) in companies with high liquidity and in time of doing unusual investment, regression model in below is used **(Band, 2013)**.

$$\Delta Lev_{it} = \alpha_0 + \alpha_1 Lev_{it-1} + \alpha_2 LIQ_{it-1} + \alpha_3 Size_{it-1} + \alpha_4 Profitability_{it-1} + \alpha_5 MTB_{it-1} + \alpha_6 Fix\_Assets_{it-1} + \alpha_7 Abnorm\_Inv_{it} + \alpha_8 Abnorm\_Inv_{it} \times High\_LIQ + \varepsilon_{it}$$

In models above:

Lev: The ratio of company debts to company market value

LIQ_{it-1}: Shares liquidity index at the beginning of the period

$Size$: Company size which is measured by natural logarithm of total assets of company

$Profitability$: Company efficiency ability which is defined operationally by using the ratio of efficiency before interest and tax to total assets (EBIT)

MTB: Company growth opportunities which is consisted of the ratio of company market value (debt book value in addition the shares market value) to its assets book value

Fix_Assets: The ratio of evident fix assets to total assets

$High\_LIQ$: If company shares liquidity index at the beginning the period is bigger than sample company liquidity index, the amount will be 1 and otherwise, it will be considered zero.

$Abnorm\_Inv$: The amount of abnormal investment (higher than normal) which is measured as follow **(Marchika, 2010)**.

Data analysis

In this sector, first of all the require pattern for estimating the model is determined for each question of research and then the research model is estimated and the obtained results will be described. For each question also, its related statistical hypotheses test contains of studying the normality of residuals, identical of residuals variance, independence of residuals and model linear along with explanation and obtained results are presented. At the end, the research questions are formulated as follow:

First question: Do the part and automotive companies those have shares with higher liquidity power, have more orientation to increase financing through the debt?

Second question: Do the part and automotive companies those have shares with higher liquidity power, in the period that they have performed the abnormal investment (higher than normal); have more orientation to increase financing through the debt?

The results of the test of first research question

In order to determine whether using of panel data in estimating the model is efficient or not, F Limer test is used and for determining which method (fix effects and or accidental effects) is more suitable for estimating (understanding fix or accidental of differences sectional units), Hasman test is used. The obtained results of these tests are presented in **Table 1**.

According to the results of F Limer test and its P-value (0/0066), the H0 hypothesis which

is based on panel data, in the significant level of 95% is rejected and it indicates that panel data method can be used. Also, according to the results of Hasman test and its P-value (0/226) which is bigger than 0/05, the H0 hypothesis which is based on selecting accidental effect is not rejected in significant level of 95%, therefore, it is required to estimate model with accidental effect method.

Model 1 of research is estimated by panel data method as accidental effect. The results of model estimation are presented in **Table 2**.

In study the significant of total model, according to the statistical F probability which is below 0/05 (0/0001), the significant of the model is confirmed in significant level of 95%. The determine coefficient of the model also mentions that 73 percent of the financing index through company's debts is explained by inserted variables in model.

One percent change in debt variable causes to increase in amount of 0/000299 unit in financing variable through debt in part and automotive industry companies.

One percent change in liquidity variable causes to increase in amount of 41/08109 unit in financing variable through debt in part and automotive industry companies.

One percent change in company size variable causes to increase in amount of 943/3441 unit in financing variable through debt in part and automotive industry companies.

One percent change in efficiency ability variable causes to decrease in amount of -3/096808 unit in financing variable through debt in part and automotive industry companies.

One percent change in growth opportunity variable causes to increase in amount of 1/87E+10 units in financing variable through debt in part and automotive industry companies.

One percent change in evident fix assets variable causes to increase in amount of 867/8150 unit in financing variable through debt in part and automotive industry companies.

According to the results of **Table 2**, liquidity is effective on financing through the debt and so, the first hypothesis of research is not rejected.

The results of second question test of research

The results related to Chav tests (to determine using of panel data method or combinational) and Hasman (to determine using of fix effect method or accidental in panel data) for model 2 in **Table 3** are presented.

According to the results of F Limer test and its P-value (0/0000), the H0 hypothesis based on lack of panel data in significant level of

95% is rejected and it indicates that panel data method can be used. Also, according to the results of Hasman test and its probability (0/4367) which is below than 0/05, the H0 hypothesis based on selecting accidental effect is not rejected in significant level of 95% and therefore, panel data method with using of accidental effect method is selected.

Model 2 of research is estimated by panel data method as accidental effect. The results of model estimation are presented in **Table 4**.

In study the significant of total model, according to the statistical F probability which is below 0/05 (0/0001), the significant of the model is confirmed in significant level of 95%. The determine coefficient of the model also mentions that 71 percent of the financing index through company's debts is explained by inserted variables in model.

One percent change in debt variable causes to increase in amount of 0/000267 unit in financing variable through debt in part and automotive industry companies.

One percent change in liquidity variable causes to increase in amount of 38/54009 unit in financing variable through debt in part and automotive industry companies.

One percent change in company size variable causes to increase in amount of 913/0939 unit in financing variable through debt in part and automotive industry companies.

One percent change in efficiency ability variable causes to decrease in amount of -7/218226 unit in financing variable through debt in part and automotive industry companies.

One percent change in growth opportunity variable causes to increase in amount of 1/689903 units in financing variable through debt in part and automotive industry companies.

One percent change in evident fix assets variable causes to increase in amount of 822/2097 unit in financing variable through debt in part and automotive industry companies.

One percent change in first dummy variable (abnormal investment) evident causes to decrease in amount of -184/0185 units in financing variable through debt in part and automotive industry companies.

One percent change in second dummy variable (unusual percussion investment variable and high liquidity companies) evident causes to decrease in amount of -40/35757 units in financing variable through debt in part and automotive industry companies.

Table 1: the results of F Limer and Hasman test for model 1

Probability	Statistical amount	Statistical	Test
0/0066	1/4258	F	**F Limer**
0/226	11/2388	χ^2	**Hasman**

Table 2: the results of first hypothesis of research with using of GLS method

Dependent variable: financing through the debt The number of companies: 31 companies member in part and automotive industry				
Effect	**Probability**	**Statistical t**	**Coefficient**	**Variable**
Negative	**0/0001**	**-9/145424**	**-12446/59**	**Intercept**
Positive	**0/0273**	**2/218426**	**0/000299**	**Debt**
Positive	**0/0001**	**8/751424**	**41/08109**	**Liquidity**
Positive	**0/0001**	**9/262544**	**943/3441**	**Company size**
Negative	**0/0056**	**-3/378316**	**-3/096808**	**Efficiency ability**
Positive	**0/0001**	**5/330270**	**1/87E+10**	**Growth opportunity**
Positive	**0/0230**	**2/290095**	**867/8150**	**Evidentfix assets**
0/7360	**Model determine coefficient**			
1/6560 (0/0001)	**Statistical F (Probability)**			

Table 3: the results of F Limer and Hasman test for model 2

Statistical amount	Statistical	Number	Test
0/00001	1/6713	F	**F Limer**
0/4367	8/4139	χ^2	**Hasman**

Table 4: the results of second hypothesis test of research with using of accidental effect method				
Effect	**Probability**	**Statistical t**	**Coefficient**	**Variable**
Negative	**0/0001**	**-8/685856**	**-11922/20**	**Intercept**
Positive	**/0045**	**2/190103**	**0/000267**	**Debt**
Positive	**0/0001**	**7/680746**	**38/54009**	**Liquidity**
Positive	**0/0001**	**8/802162**	**913/0939**	**Company size**
Negative	**0/0094**	**-3/862533**	**-7/218226**	**Efficiency ability**
Positive	**0/0001**	**4/784301**	**1/689903**	**Growth opportunity**
Positive	**0/0205**	**2/334888**	**822/2097**	**Evidentfix assets**
Negative	**0/0306**	**-2/202380**	**-184/0185**	**The first dummy variable(abnormal investment)**
Negative	**0/0423**	**-2/329186**	**-40/35757**	**The second dummy variable (unusual percussion investment variable and high liquidity companies)**
0/7178	**Model determine coefficient**			
1/9261 (0/0001)	**Statistical F (probability)**			

CONCLUSION

The results show that the effect of share liquidity variable on dependent variable of debt changes is positive and significant and therefore, in the present research, the effect of shares liquidity amount on orientation of parts and automotive companies to increasing financing through debt is positive and

significant, it can be suggested that companies for increasing borrowing power for financing, increase their liquidity power. With regard to the issue that for measuring the amount of shares liquidity, Amihood liquidity criterion which is based on trade criterion is used, therefore, for increasing liquidity power and as a result of borrowing power, the policies are suggested as follow:

- Increasing the number of days which shares are trading
- Increasing the capacity of shares trading which are done

Also, according to the results of research which show the effect of last year debt variable on debt changes is positive and significant, in order to decrease the debt amount, last year debt should be decreased.

Also, the results indicate that the effect of company size variable on debt amount is positive and significant and it is suggested that for increasing borrowing through debt, company should have more assets.

Also, the results show that the effect of company efficiency ability variable which is defined by the ratio of efficiency before interest and tax (EBIT) to total assets, on dependent variable of debt changes is negative and significant, to decrease the ratio of debt, it can consider the policy of increasing the company efficiency .

Also, the results show the effect of company growth opportunities index variable which is included the ratio of company market value (debt book value in addition of shares market value) to its assets book value, on debt changes is positive and significant, using the policies based on increasing growth opportunities for increasing borrowing opportunity is recommended.

At the end, the results show the effect of variable of the ratio of evident fix assets to total assets on dependent variable of debt changes is positive and significant, it is suggested to use policies of increasing evident fix assets for company in order to increase borrowing for financing.

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