Analysis of The Effect of Inflation, Operating Cycle and Operating Cash Flow on Debt’s Term Structure

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ABSTRACT
Structure of capital is one of the important matters in every company. Choosing an appropriate capital structure is an important matter in determining the value of every company and this structure, is the combination of the company’s supply of the financial resources. Debts and the rights of the stock holder are components of capital structure. Type of debt used in the Company has influence on the company's risk. Some of the companies for the supplying required financial resources use current debts and financial risk is increased naturally, and some of them use non-current debts. In this study the effect of operating’s cycle, operating cash flow and inflation during 1385 to 1392 is analyzed. The number of observations of this study including 98 companies and by using OLS method the hypotheses of the study is tested. The results suggest there is a significant relationship between operating cash flow and time deadline and there is no significant relation between operating cycle and inflation with the time deadline of the debts.

Keyword:
Debt’s Time structure, Inflation, Operations Cycle, Operating Cash flow

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INTRODUCTION
The recent global financial crisis, reaffirmed the importance of debt’s time structure of the corporations for financial stability and remind the rules and standards providers that at the present there is no suitable framework for time compliance. [1] Researches show that the deadline or maturity of the company’s resources prepare the areas of pre-crisis for the global financial crisis.
Most corporations use some form of debt in their capital structure [2] debt structure is one of the most important criteria in determining the company’s success and provide sustainable growth for the company in this point decisions related to structure is survival of a company’s business. Focused on the IOS are critical for the However, the structure of debt is not an easy matter and wrong decisions guide the company into crisis and bankruptcy [3]. Analysis provide some effective and direct evidences on the effects of inflation rate on the cash policies provide. Because usually the inflation induct the government to strengthen the financial policies and influence the cost and value of the capital resources[4].
Operating cycle of a company is the indicator for speed and scale of the business liquidity cycle gain of a company, then influence the costs and the benefits of internal liquidity of a company. A trading company is not separable from outer environment. In financial providing by using debts the vital point, is the type of debts for financial providing. [5]. By using current debts the costs of financial providing reduced and the financial risk increased but in financial providing by non-trading debts the financial risk reduced but the financial providing cast increased. Selecting the type of debt used by the company may be affected by many factors including risk-taking of the managers [6]. If the managers take low risk for finance providing, choose debts including less financing costs, so use current debts more than others. In this study we examine whether the operating cycle, cash flow and inflation is effective on debt maturities? Is the company's size or age of the company affect this relationship?
Comparison of cost rate of common and preferred stock’s capital, Retained earnings, and debt
1- Cost of capital rate in common stock is greater than the preferred stock, retained earnings and debt because the expected return on ordinary shares is higher than preferred stock and debt. (Because the risk of ordinary shares is higher)
2- Cost rate debt capital (loan) is less than common and preferred stock retained earning and debt. Because A, the expected return is lower than expected return on investment (because loan has lower risk), B interest expense, is acceptable tax expense that the tax rate will decrease interest expense.
3- If the new share issue with the cost of publication, the rate of cost of equity capital is more than the cost of earning income [7].
If the new share issued with the publication, by comparison of these two relation we concluded:
Important Notes about the cost of capital and leverage effect on the cost of debt
Companies are required to adopt new decisions when faced with economic fluctuations, according to the environmental factors some of the important points are mentioned below:
\[ \text{Ke} > \text{Kd} \]
Under circumstances where the risk of corporate debt should not be placed because by use of cheaper sources possibility of increased earning per share and also increased the value of share in the mid-term, that consequently reduce dependence on foreign [8].
Inflation of the market may affect the rate of money supply and demand of capital fee. As a result of the impact the capital cast. If market fluctuations increase demand of production of the company it will increase product prices and corporate profits. Thus, the use of financing retained earnings reduced the cost of capital cost. As expected the companies should be considered investigated cost of capital and tried to make a suitable capital structure with minimum capital cast for expected manual budget and long-term financial providing for their projects. Leverage effect on the cost of debt (financial management Hampton, Warren and translation doctor Hamid Reza Vakili Fard).
More leverage used under circumstances where the Company has adhered to a more risk-taking by creditors (lenders) so the cost of debt increased. In cases where the company decided to get more loans and debt ratio is higher than the industry average, usually banks will refrain from giving financial facilities, which consequently companies in the case of more financial need, companies should use other financial resources. So we find that using more leverage, (more than mean of industry) increase the debt cost. (10)
As companies with high debt ratio should cost more debt, companies with lower in contrast they incurred the debt ratio below the industry average companies with lower debt than mean industry (20%-30%) and from the trade location point have advantage are more suitable for banks and are offered minimum benefit. (11)

Background of Study
Falkner (2002) analyses the friction caused by financial pressure, information unsymmetrical, and conflicts between shareholders and managers, Tax and its impact on liquidity conditions in small firms. In the companies in which costs of the financial burden of based on research and development the liquidity is higher. Companies with financial high leverage have higher liquidity for deterrence. Companies with more information asymmetry when they need money, have higher liquidity in contrast with companies with lower information asymmetry. This matter is contrary to the companies have difficulty in fund-raising and the lower liquidity in the past. This shows that these companies may work less than optimal level of liquidity. Older corporations have more liquidity, Even if in the future they reach more liquidity. Liquidity decrease in accordance with the size of the company that represents the economies of scale liquidity. Writer also find that property management influence the cash and liquidity, but the property does not have any impact in this regard. Pynkovytz, Williamson, 2001 by use of industrial companies in America, Germany and Japan Authors of paper explore that Japanese companies have more cash assets than American and German companies also the Authors show that Japanese companies remain liquidity affected by power of monopoly of the banks. The authors...
also find out that strong Japanese banks encourage companies to have higher liquidity.

This matter is against popular believe about Japanese management.

Hussein Karim said the usefulness of the information in their study depends on the financial statements and explanatory power of the corporation. The value of the company is directly affected by future returns. stock returns depend on two factors: changes in stock prices at the end of the first period And the amount of cash dividends. The aim of this study is investigating the relationship between operating cash flow and liquidity ratios (quick ratio and ratio of net capital to total of liquidity) with Stock returns of companies listed in Tehran Stock Exchange. Population of this study consists of companies listed in Tehran Stock Exchange and sample of study are active corporation between the years 1380 till 1386 Data for this study were collected from the database Tadbirpardaz software processing strategy. In this study the relationship between the hypothesis are Correlation and regression used To test the hypothesis, Excel and SPSS used to calculate and estimate the regression model. The result of hypothesis testing showed that As expected, between operating cash flow and quick ratio and stock returns, there was a significant positive correlation but there was no any relation between the ratio of net working capital to total assets and return of stock which the reason of this case is weak work of Iran’s stock bazar which causes that the information does not reflect to stock price and as a result to the stock return.

Davar and Peirovani assess the effect of uncertainty on inflation and economic growth in the period 1353-1386 taking into account the structural break point for ran's economy and provides answers to questions. For estimation of inflation uncertainty, conditional dissimilar variance models, expanded regression is used and according to data analysis of the study, break structural point in inflation rate of 20% is used. In this study the pattern of economic growth is a function of the rate of inflation, money growth rate, the growth rate of real and fixed gross capital and inflation uncertainty. The results suggest that the effect of Inflation on economic growth is negative. At levels, less than 20% of these negative effects, the lowest and the higher rates, increases. The effect of inflation uncertainty, during the period under study was negative.

Research Methods

The present research purpose, is applied purpose. This study is in the category of quantitative research. Since the method of study is quantitative, so this research is in the category of survey research. Statistical Population and Sample Capacity

Statistical Population of this study Including productive companies listed on the Tehran Stock Exchange during 1385 to 1392. In this study, for sampling method, purposeful sampling method (systematic elimination) is used. For this purpose, the entire population of companies that have chosen which have the following conditions. Others have been removed from the list.

1- Listed on the Tehran Stock Exchange and symbols are active. 2- For the purpose of comparability, the end of the financial year should be 29 Sfand. 3- in the mentioned period don’t change their financial year, 4- The data of the selected variables in this study should me reachable.

The main hypothesis of the first test

Main hypothesis 1- There is a significant relationship between company's cycle of operation and debt time structure.

H: There is no significant relationship between company's cycle of operation and debt time structure.

H1: There is a significant relationship between company's cycle of operation and debt time structure.

Before study hypothesis test, it is necessary that about stages and methods of relation estimate method (1) some explanation is provided. As we mentioned before this study is done in the form of data combination (The combination of time series data and interrupted data), executed. The necessity of application of this method is mostly due to an increase in the number of observations, increase of free degree, decrease of asymmetric variance and decrease of in linearity variables. Estimation of mentioned relation with Application of combined data for all companies in the sample have been performed in the interval 1385 to 1392. Then, according to our estimates, and the application of statistical tests T-student, probability of estimated P value and index of mean absolute of percentage of wrongness, about hypothesis of the study is analyzed, regression are also tested.

Flimer Test

In order to select one of the table data methods or data compilation, F Limer statistics were used. In other words, the test statistic F Limer determined that if we have intercept separately for each of the companies or not. If the observations, if we have heterogeneity or individual differences in our observation table data is used, otherwise combined data is used because only the data are gathered and there is no difference between them. In F limer test, The zero hypothesis reflects the same intercept (combined data) and the alternative hypothesis indicates inconsistency intercept (table data). So, if you reject the zero hypothesis, table data method is accepted. Table (4-3) F Limer test results shows (homogenies of intercept) to (1). As we observed related to this equation sections of the heterogeneity and individual differences and table data method is more appropriate.

F Flimer Test

| Degree of | F statistic | P Value | Result of test |
| freedom | 8.04311 | 0.0 | zero hypothesis is rejected |

Hasman Test

If after Flimer test, is rejected, we faced with the question whether relationship can be in the form as a fixed effects or random effects methods? Hausman test it specifies mentioned matter. Zero hypothesis (random effects methods) in this test means that between disrupting components related to intercept and explanative variable there is no relation and are separate. While opposite hypothesis fixed results means that between interrupting component and explanative variable we have relation. If we reject zero hypothesis we used random results, (table 4-4) . Hawsman results shows that statistic value for relation (1) is
significant. 95% Reliability for zero hypothesis and reject of opposite hypothesis (fixed results) is accepted. Table (4-4) Results of HAWSMAN (Selection between fixed and random Results)

<table>
<thead>
<tr>
<th>Zero hypothesis</th>
<th>Study Relation</th>
<th>Degree of freedom</th>
<th>F statistic</th>
<th>P value</th>
<th>Result of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>interrupting component of intercept and explanatory variable are independent</td>
<td>Model 1</td>
<td>5</td>
<td>23.364268</td>
<td>0.0003</td>
<td>Zero hypothesis is rejected</td>
</tr>
</tbody>
</table>

The results of the regression equation (1) at the time of return from 1392 to 1385, in order to test the first hypothesis as the following table.

Table (4-5): Results of the first main hypothesis based on a pattern

\[
y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \varepsilon
\]

<table>
<thead>
<tr>
<th>Operating cycle</th>
<th>1.180364</th>
<th>0.002101</th>
<th>0.2383</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating cash</td>
<td>3.076382</td>
<td>0.089325</td>
<td>0.0022</td>
</tr>
<tr>
<td>Rate of inflation</td>
<td>-0.150788</td>
<td>-0.002267</td>
<td>0.8802</td>
</tr>
<tr>
<td>Size of company</td>
<td>4.557896</td>
<td>0.292101</td>
<td>0.0</td>
</tr>
<tr>
<td>Age of company</td>
<td>2.349629</td>
<td>0.486908</td>
<td>0.0191</td>
</tr>
<tr>
<td>intercept</td>
<td>0.246773</td>
<td>0.654471</td>
<td>0.8052</td>
</tr>
<tr>
<td>Determining coefficient</td>
<td>Watson camera</td>
<td>0.921640</td>
<td>1.589885</td>
</tr>
<tr>
<td>F statistic</td>
<td>Significant level</td>
<td>78.41102</td>
<td>0.0</td>
</tr>
<tr>
<td>Jark &amp; Bra test</td>
<td>0.0674</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Self-Correlation
For assessment of this hypothesis Watson Camera is used. If the statistic is at a distance of 5/1 to 5/2 self correlation between sentences is rejected. By remaining to the results The statistics is 1/589885 so, in the remain sentences of the regression model, so there is no correlation.

Normality of the remains
Since the model’s remains linear are combination of dependent variables and normal distribution are linearity, so, to test normality of remains we test normality of dependent variable. This hypothesis is analyzed by Jark & bra and significiation level is 0/0674 and more than 0/5 so zero hypothesis for normality of remains is accepted. Assesment of validiy and power of pattern

F fisher statistic
For acceptance of a significant assumption for the adoption of the model or in other word a significant linear relationship between the dependent and F Fisher test is done. Zero hypothesis suggests the lack of a linear relationship between independent and dependent variables. Results table with a significance level of zero (under 5)

Rejecting the null hypothesis suggests 99 percent, in other words , there generally linear relationship between independent and dependent variables and models for analysis is valid .

Determining coefficient
The coefficient of determination changes in variable is explained by variables in independent pattern . In this model coefficient is equal to 92 percent , which means that , pattern has the power to describe the results.

The result of main hypothesis
The main hypothesis was first expressed by the cycle of the company's operations and structure of debt when there is a significant relationship. This hypothesis is tested by panel data model (1) and results are shown in the table 5-4. For ratify or reject of first hypothesis coefficient b1 in model 1 is recognized. If b1 is significant first hypothesis is ratified and if not the first hypothesis is rejected. In this test b1 is equal to 0/21010 which with significant level 0/2383 and more than 0 but it is not significant. So the relation between debt level and operating cycle is not significant and first hypothesis is rejected.

Test of second main hypothesis
Second main hypothesis: there is significant relation between operating cash and debt’s term structure.

H.: there is no significant relation between operating cash and debt’s term structure.

H1: there is significant relation between operating cash and debt’s term structure.

RESULT OF second MAIN HYPOTHESIS
According to second main hypothesis there is significant relation between operating cash and debt’s term structure. H1: there is significant relation between operating cash and debt’s term structure.

RESULT OF second MAIN HYPOTHESIS
According to second main hypothesis there is significant relation between operating cash and debt’s term structure. Mentioned hypothesis use model 1 and results shown in table 4-5. For ratify or reject of this hypothesis b2 coefficient is used in model 1. If the coefficient is significant, hypothesis is ratified. If not the hypothesis is rejected. In this case b2 is equal to significant level of 0.089325 which is more than zero and equal to /0022. So it show there is significant relation between operating cash and debt’s term structure and hypothesis is ratified.

2-1-3Therd main hypothesis
H0:There is no significant relation between inflation and term structure of debt.
H1: There is a significant relation between inflation and term structure of debt.

Result of third hypothesis:

According to third hypothesis, there is a significant relation between inflation and term structure of debt. Mentioned third hypothesis in table data use model 1 and results are shown in table 5-4. For ratify or reject of the hypothesis we use coefficient b3 in model 1. If b3 is significant the hypothesis is ratified, and if not the hypothesis is rejected. B3 which is inflation of the company is equal to 0.002267 and it is lower than zero and equal to 0.8802, but it is not significant. So it shows that there is no significant relation between inflation and term structure of debt and the hypothesis is rejected.

3-1- test of subsidiary hypothesis 1

Subsidiary hypothesis 1: the effect of operating cycle on the debt’s term structure is more in bigger companies.

H0: the effect of operating cycle on the debt’s term structure is not more in bigger companies.

H1: the effect of operating cycle on the debt’s term structure is not more in bigger companies.

Table 6-4: the results of F-limer test (homogenies intercept)

<table>
<thead>
<tr>
<th>Zero hypothesis</th>
<th>Study relation</th>
<th>Freedom degree</th>
<th>F statistic</th>
<th>P value</th>
<th>Result of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept of all sections are equal</td>
<td>Pattern2</td>
<td>97.679</td>
<td>29.633625</td>
<td>0.0</td>
<td>Zero hypothesis is rejected</td>
</tr>
</tbody>
</table>

Table 7-4: results of Hawsman (selection between fixed & random results)

<table>
<thead>
<tr>
<th>Zero hypothesis</th>
<th>Study relation</th>
<th>Freedom degree</th>
<th>F statistic</th>
<th>P value</th>
<th>Result of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrupting components of intercept are dependent from explanatory variable</td>
<td>pattern 2</td>
<td>6</td>
<td>23.942277</td>
<td>0.0005</td>
<td>Zero hypothesis is rejected</td>
</tr>
</tbody>
</table>

Table 8-4 Results of subsidiary hypothesis 1 according to model 2

\[ y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_5 * x_4 + \epsilon \]

<table>
<thead>
<tr>
<th>variables</th>
<th>statistic t</th>
<th>Amount of coefficient</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating cycle(x1)</td>
<td>2.564713</td>
<td>0.009805</td>
<td>0.0105</td>
</tr>
<tr>
<td>Operating cash(x2)</td>
<td>3.124932</td>
<td>0.089675</td>
<td>0.0016</td>
</tr>
<tr>
<td>Inflation rate(x3)</td>
<td>-0.409320</td>
<td>-0.001669</td>
<td>0.9130</td>
</tr>
<tr>
<td>Size of company</td>
<td>6.313726</td>
<td>0.342535</td>
<td>0.0</td>
</tr>
<tr>
<td>Age of company</td>
<td>2.479441</td>
<td>0.496415</td>
<td>0.0134</td>
</tr>
<tr>
<td>X1*x4</td>
<td>-1.575873</td>
<td>-0.000208</td>
<td>0.1155</td>
</tr>
<tr>
<td>intercept</td>
<td>-0.511968</td>
<td>-1.155147</td>
<td>0.6088</td>
</tr>
<tr>
<td>Determining coefficient</td>
<td>Watson camera</td>
<td>0.929406</td>
<td>1.580836</td>
</tr>
</tbody>
</table>

Analysis of validity of remains

Self-correlation

For analyzing this hypothesis we use Watson camera. If the rate of this statistic is within 1.5 to 2.5 correlation in remained sentences is rejected. To the table statistic is 1.580836 so there is no correlation between regression model.

Normality of the remains

Because the remains of the linear model are a part of dependent variable and in other hand they have linear effect, so we analyze normality of the dependent variables to find the normality of remains. We use Jarck and Bra to analyze the theory in eviews and significant level is 0.885 and more than 5% so zero hypothesis for this case is accepted. Analyze of validity and power of pattern

F fisher statistic

To accept of significant level of the whole model or exist of linear relation in dependent and independent variables F FISHER test is used. Assumption of zero hypothesis in this case show lack of relation in dependent and independent variables. Results of the table with significant level of zero (under 5%) shows reject of zero hypothesis by 99% reliability. In other word, there is a significant linear relationship between dependent and independent variables and pattern has the power to analyze the results.

Determining coefficient:

The rate of determining coefficient is a percentage of independent variable. In this pattern coefficient is 92% so it shows that independent determine 92% of the independent variable and has the power to determine the results.

The result of hypothesis
To subsidiary hypothesis 1, the effect of operating cycle on debt’s term structure is more in bigger companies and is tested by model 2 in table 8-4. To ratify or reject of thesis coefficient b6 in model 2, if coefficient b6 is significant, subsidiary hypothesis 1 is ratified and if it is less than zero the hypothesis is rejected. The test of b6 coefficient is that variable between size of the company and operating cycle is 0.000208 with significant level of 0.1155 and less than zero and shows that the effect of operating cycle on debt’s term structure is not more than others in bigger companies and the hypothesis is rejected.

4-1- Subsidiary hypothesis 2
Subsidiary hypothesis 2: The effect of operating cycle on debt’s term-structure is more in older companies.

H0: The effect of operating cycle on debt’s term-structure is not more in older companies.
H1: The effect of operating cycle on debt’s term-structure is more in older companies.

Table 9-4 results of \( f \) limar (homogenies of intercepts of the companies)

<table>
<thead>
<tr>
<th>Zero hypothesis</th>
<th>Study relation</th>
<th>Freedom degree</th>
<th>F statistic</th>
<th>P value</th>
<th>Result of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept of all sections are equal</td>
<td>Model 3</td>
<td>97.697</td>
<td>29.615183</td>
<td>0.0</td>
<td>Zero hypothesis is rejected</td>
</tr>
</tbody>
</table>

Table 10-4 results of Hawsman (selection between fixed and random results)

<table>
<thead>
<tr>
<th>Zero hypothesis</th>
<th>Study relation</th>
<th>Freedom degree</th>
<th>statistic F</th>
<th>P value</th>
<th>Result of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrupting components of intercepts and explanatory variables are independent</td>
<td>Model 3</td>
<td>6</td>
<td>29.195583</td>
<td>0.0003</td>
<td>Zero hypothesis is rejected</td>
</tr>
</tbody>
</table>

The results of the regression of model 3 during 1385-1392 to test of subsidiary hypothesis 2 are as we see bellow:

Table 11-4, results of subsidiary hypothesis 2 according model 3

\[
y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 \times x_5 + \epsilon
\]

<table>
<thead>
<tr>
<th>variables</th>
<th>t Statistic</th>
<th>Amount of coefficient</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating cycle</td>
<td>0.152056</td>
<td>0.001528</td>
<td>0.8792</td>
</tr>
<tr>
<td>Operating cash</td>
<td>2.979877</td>
<td>0.089638</td>
<td>0.003</td>
</tr>
<tr>
<td>Rate of inflation</td>
<td>-0.135631</td>
<td>-0.002043</td>
<td>0.8922</td>
</tr>
<tr>
<td>Size of company</td>
<td>4.485812</td>
<td>0.292525</td>
<td>0.0</td>
</tr>
<tr>
<td>Age of company</td>
<td>1.917187</td>
<td>0.491502</td>
<td>0.0556</td>
</tr>
<tr>
<td>X1*x5</td>
<td>0.057716</td>
<td>9.941505</td>
<td>0.9540</td>
</tr>
<tr>
<td>intercept</td>
<td>0.206556</td>
<td>0.608444</td>
<td>0.8364</td>
</tr>
<tr>
<td>Determining coefficient</td>
<td>Watson camera</td>
<td>0.921893</td>
<td>1.590648</td>
</tr>
<tr>
<td>F statistic</td>
<td></td>
<td>77.80778</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Analyze of validity of remains

Self-correlation
To analyze this hypothesis we use Watson camera, if the statistic is within 1.5 to 2.5 correlation in the remain sentences is rejected. The mentioned amount is 1.590648 so there is no correlation in regression pattern in remained sentences.

Normality of remains
Because the remains have linear component pattern and normal distribution have linear effect, so to test the normality of remains we test normality of independent variables. We use Jark & Bra in eviews test and significant level is 0.0637 and more than 5% so the test of normality of the remains is accepted.

Analyze of the validity and power of the pattern

FFisher statistic
To accept the significant level of whole model or significant linear relation in dependent and independent variables we use F Fisher test. Assumption of hypothesis shows lack of linear relation in dependent and independent variables. Results in the table show significant level under 5% and reject hypothesis by 99% reliability. So there is significant linear relation between dependent and independent variables and pattern has validity for analyzing the results.

The results of the hypothesis
To the second subsidiary hypothesis 2 the effect of operating cycle on the debt’s term structure in older companies is more than others. The mentioned thesis is tested in model 3 and its results are shown in table 11-4. To ratify or reject the hypothesis we use b6 in pattern 3. If b6 is significant and positive the hypothesis is ratified and if not and its amount is less than zero the hypothesis is rejected. The amount is equal to 9.941505 and significant level is...
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0.9540 and more than zero. So it shows that the effect of operating cycle on debt’s term-structure is more but its not significant. So this hypothesis on model 3 is rejected.

Subsidiary hypothesis 3: The effect of operating cash flow on debt’s term-structure in bigger sized companies is more than others.

H0: The effect of operating cash flow on debt’s term-structure in bigger sized companies is not more than others.

H1: The effect of operating cash flow on debt’s term-structure in bigger sized companies is more than others.

Table 12-4 Flimar (Homogenies intercepts in companies)

<table>
<thead>
<tr>
<th>Zero Hypothesis</th>
<th>Study Relation</th>
<th>F statistic</th>
<th>Freedom Degree</th>
<th>P Value</th>
<th>Result of the test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercepts in every sections is equal</td>
<td>Model 4</td>
<td>28.918986</td>
<td>97.679</td>
<td>model p</td>
<td>Zero hypothesis is rejected</td>
</tr>
</tbody>
</table>

Table 13-4 results Hawsman result (selection between fixed & random results)

<table>
<thead>
<tr>
<th>Zero Hypothesis</th>
<th>Study relation</th>
<th>F statistic</th>
<th>Freedom degree</th>
<th>P Value</th>
<th>Results of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrupting component of intercepts and explanatory variable are independent</td>
<td>Model 4</td>
<td>23.822239</td>
<td>6</td>
<td>0.0007</td>
<td>Zero hypothesis is rejected</td>
</tr>
</tbody>
</table>

Results of regression model (4) during 1385-1392 to test subsidiary hypothesis 3 are as bellow:

Table 14.4: results of subsidiary hypothesis 3 according to model 4

\[
y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \varepsilon
\]

<table>
<thead>
<tr>
<th>variables</th>
<th>T Statistic</th>
<th>Amount of coefficient</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating cycle</td>
<td>1.280034</td>
<td>0.002529</td>
<td>0.1982</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>1.040564</td>
<td>2.335448</td>
<td>0.1603</td>
</tr>
<tr>
<td>Rate of inflation</td>
<td>0.1740564</td>
<td>0.002598</td>
<td>0.8615</td>
</tr>
<tr>
<td>Size of company</td>
<td>4.505779</td>
<td>0.287089</td>
<td>0.0</td>
</tr>
<tr>
<td>Age of company</td>
<td>2.429096</td>
<td>0.450128</td>
<td>0.0154</td>
</tr>
<tr>
<td>(x_2 \times x_4)</td>
<td>1.452453</td>
<td>0.074793</td>
<td>0.1468</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.393101</td>
<td>0.982818</td>
<td>0.6944</td>
</tr>
<tr>
<td>Determining coefficient</td>
<td>Watson camera</td>
<td>0.921458</td>
<td>1.598470</td>
</tr>
<tr>
<td>F statistic</td>
<td>significance level</td>
<td>77.34015</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Remains:

Self-correlation:

To investigate this hypothesis, the Durbin-Watson statistic is used, if the amount of this statistic is approximately 5/1 to 5/2 to be given the correlation between the remaining sentences is rejected. According to the statistics of the result of the table this statistic is 598470/1 so there is no correlation in regression model for remains.

Normality of remains:

Since the remains of the model are linear a part of dependent variables and on the other hand have normal distribution, to test the normality of the remains we can test the normality of the dependent variables of the model. So by this assumption we use Jark & bra test in eview and significant level is 0.0643 is more than zero and less than 5% and the hypothesis of normality of the remains is accepted.

Analyze of validity and power of the pattern:

F Fisher statistic:

To accept the significant of the whole model or significant linear relation between independent and dependent variables we use F Fisher test. Assumption of zero test show lack of such a relation. Results with zero significant 5% reject the hypothesis by 99% reliability. So there is a significant linear relation between variables and model has the validity to analyze the results.

Determining coefficient:

Coefficient shows that there are some changes in dependent variables which are exploded by independent variables. In this model determining coefficient is 92%, so it describe that independent variable describe 92% of dependent variable and the model has the validity to describe the results.

Results of hypothesis test:

According to subsidiary hypothesis, the effect of operating cash flow on debt’s term-structure is more in bigger companies. The mentioned hypothesis is tested in model 4 and results are shown in table 14-4. To ratify or reject of hypothesis 3-1 coefficient b6 in pattern 4 is recognized. If b6 is significant and positive, the hypothesis if ratified, if not and b6 id less than zero hypothesis is rejected. It is 0.074793 and with significant level of 0.1468 and more than 0 but it is not significant. It show that the effect of operating cash flow on debt’s term structure in companies with bigger size is not more than smaller companies and third subsidiary hypothesis is rejected according to model 4.

Conclusion:

In this study, we analyze the effect of operating cycle, operating cash flow inflation rate on debt’s term structure, first we gathered necessary data from financial list of the
stock market information bank central banks and companies. Then we screened them to computing them in Excel, after those operations we use Eviews to compute the correlation coefficient and regression and related tests.

1- first main hypothesis describe that there is a significant relation between operating cycle and debt’s term structure. The results of the hypothesis shows that there is a positive relation between operating cycle and debt’s term structure but not significant. So first hypothesis is not ratified.

According to second main hypothesis, there is a significant relation between operating cash flow and debt’s term structure. The results of the hypothesis show that operating cash flow’s coefficient is 0.0893 and there is a significant and positive relation between operating cash flow and debt’s term structure. So, the more operating cash flow we have, the tend to use current debt is more.

3- Third main hypothesis describe that there is a significant relation between operating cash flow and debt’s term structure. Coefficient’s inflation rate in table 5-4 shows that there is an opposite relation between them, but it is not significant, so third main hypothesis is not ratified.

Suggestions for future researches:
We suggested that researchers analyze following matters:
1- Analyzing the effect of benefit making on debt’s term structure. 2- Analyzing the effect of credit policies on debt’s term structure. 3- Analyzing the effect of the strategies related to capital cycle on debt’s term structure. 4- Analyzing the effect of risk-taking of managers on debt’s term structure.

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2- Hosseini, Seyed Mohammad & karimi, Farhad, Analyzing the Effect Between Some Main Economic Variables (Inflation Rate Changes, Changes of Internal Gross Production, Money Volume Changes and Interest Rate Changes) with Stock turn of Accepted Companies in Stock Exchanges, Collective Articles, First National Congress on Analyze of Promotion Methods on Management, Accounting & Industrial Engineering in Organizations
3- Davar, Bahare, Peirovani, khosrou, The effect of economic growth by emphasis on unreliability in Iran, growth and development researches journal, 1390, 11th year, no. 1
4- sajadi, Hassan, faramarz, hassn & ali soufi, hashem , analyze of relation of main variables in economy & stock exchanges in Tehran, main economy, 1389, no.39