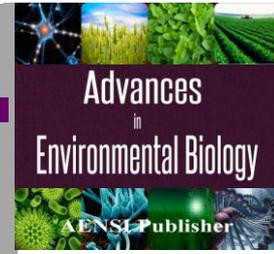




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The Relationship between Financial Flexibility, Growth Opportunities and Future Values of The Firms Listed On The Tehran Stock Exchange

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ABSTRACT

The present study mainly aims to examine the relationship between financial flexibility, growth opportunities and future values of the firms listed on the Tehran Stock Exchange. In doing so, the whole listed firms with the publicly available information over 2005 to 2010 are examined. In all, 567 firm-year observations are selected from different industries. Then, the information related to the leverage over a six-year period has been annually collected. To test the hypotheses, the multivariate regression method is used and its significance is tested by using t or F statistics. Further, Durbin-Watson statistics is applied to detect the autocorrelation of the model. The results reveal that the financial flexibility, firm size and profitability are not significantly associated with the growth opportunities and future values.

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INTRODUCTION

Most of the top managers consider the financial flexibility as the most significant determinant of the capital structure and investment decisions. The incentives of the financial flexibility depends on the abilities and future needs of the firms for earning revenue from the outside resources by spending little costs [4]. The point is that the business entities with the financial flexibilities are unconstrained in their access to the outside capital markets in order to finance their monetary needs resulted from the deficiency of the unpredicted earnings or new opportunities. The financial flexibility will also help in preventing the situation in which the unsatisfactory decisions are made and the firm value is alleviated. Market deficiencies will create a link between the financial decisions and investment decisions. The financial flexibility describes the company's ability to use growth opportunities and carry on net present value projects and finally increase the firm value. This ability is achieved by using accumulated internal funds and the capacity of outside financing. Financial flexibility plays a key role in some financial problems. From the perspective of the researchers on the capital structure, the financial flexibility (debt capacity preservation) is the main factor in decisions corresponding with the debts to net assets ratio. For example, De Angelo and De Angelo [4] believe that the financial flexibility is the main lost loop of a sustainable empirical theory (capital structure). The behaviorist suppliers have considered the business costs of under-and overinvestment and they have taken financial flexibility as a way to mitigate the principal-agent conflict. In addition, the company which could change the debt to assets ratio in response to the changes in the market or individual situation might also improve the firm value. Since financial flexibility increases the ability of the managers in attracting the growth opportunities and increasing firm value, then the value of the real alternatives will increase and this will lead to an increase in the firms value [19].

1. Statement of the problem:

Financial flexibility represents the ability of the firms for confronting with the unexpected breaks in cash flows. This means the ability for borrowing from different sources, increasing capital, selling assets and directing operations are used to confront with the varying situations. The borrowing capacity of the firms depends on the profitability, stability, industry, compound of the assets and capital structure. Based on the accounting standards, however, the financial flexibility is the ability of the enterprise to take effective actions to

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change the amount and timing of the cash flows so that it could react to the unexpected events. The development of the markets all around the world and the diversity of the financial instruments have caused the financial flexibility to be developed in the short-term periods and have finally mitigated the need to hold huge amounts of liquid assets. In the banking environment or the developed financial markets, the liquid assets constitute only 5 percent of the total assets [19]. The ability to finance in the short-term, receive information about the unpredicted financial requirements or find an appropriate investment opportunities are the significant issues. The problem that many firms borrow lower than their real predicted ability is an experimental legal issue in the capital structure literature. In his effective study, Graham found that the amount, liquidity and profitability of the firms with the mandatory expected costs result in the conservative application of the debts. This conservative behavior also seemed to be permanent. Some others such as Minton and Vorouk and Sterboulaf and Young have discussed about similar topics. The recent studies are considered as a light in this issue [2]. These studies suggest that there is a financial flexibility which is mainly derived from the leverage selections of the top financial directors. The advocators argue that the financial flexibility is very significant in making the firms capable of accepting future investments in the situation in which the asymmetric information and contractual problems force the companies to avoid the growth opportunities and profitability. In other words, the companies might adopt a conservative leverage policy to maintain the main reserves of the borrowing power [16]. They believe that it will cause the companies to have unconstrained access to the positive shocks for establishing the investment opportunities. Based on the above mentioned points, it can be concluded that the highly flexible firms have higher growth opportunities and their financial flexibility have positive effects on the firm value. Therefore, this study mainly seeks to find the type and the intensity of the financial flexibility of the firms along with their growth opportunities and value.

2. Literature and Research Background:

2.1. Financial Flexibility:

Twenty years after the emergence of the hierarchy theory, the financial flexibility was ignored, but it was revitalized after the publication of the survey results by Graham and Harvey. These two authors conducted a survey about the cost of capital, capital budgeting and capital structure by a comprehensive questionnaire distributed among 329 CFOs of the United States. The findings revealed that the tendency of the directors to financial flexibility is the most effective factor of the debt decisions of the firms and is not impacted by the elements of the hierarchy theory. The findings of this survey have been verified by other studies, such as Bancel and Mittoo [1] and Bronen *et al*. The financial flexibility represents the ability in finance their needs in order to take effective actions in confronting with the future unexpected events in order to maximize the firm value. As shown by the definition, the financial flexibility plays a key role in some financial problems. Based on the opinions of the authors of capital structure, the financial flexibility (debt capacity preservation) is the main element of the decisions related to the ratio of debts to the net assets. The behaviorist fund suppliers consider the under-and overinvestment costs and define the financial flexibility (the ability to adjust the capital structure in future) as a way to mitigate the principal-agent conflict. Furthermore, they believe that the ability to change the amount of debt to assets ratio in response to the changes in the market situation and the ability to decrease the depreciation of capital will increase the firm value. The financial flexibility can improve the ability of the managers in attracting the growth opportunities and will increase the value of the real choices. If the investor prediction about the growth is well reflected in the stocks rate, the increase in the real choices will result in the increase of the firm value [2].

2.2. Firm Value:

In a study by RahnamaRoudposhti *et al* [20], it was found that the very extensive concept of value is derived from the social scope at the individual level and will extend to the group level including family, organization, society and the globe. Business achievement and its consistency based on the values of the whole stakeholders are known as the new paradigms. This paradigm is a symbol of the renaissance in business. Devaluation of the social relations is so absolute that the social conversations are clearly identified in any place. The objective effects of this devaluation in the economic business are reflected in some items such as supplying inferior or non-competitive goods and services. This point is an axiom which requires renaissance of value. The evaluation process includes the following steps:

1. *Identifying the company*: This includes the industry evaluation, the competitive position of the industry and the firm strategy. The financial analyst uses this information along with the financial reports of the firms to predict the future performance.
2. *Predicting the future performance*: sale, earnings and future financial position
3. *Selecting the evaluation model*
4. *Calculating the firm value*

Value theory provides a joint framework for evaluating the whole investments. Different applications of this theory create different estimated values for investment approaches which will be used as the bases for the investment in the financial properties.

2.3. Growth Opportunity:

Debt financing is one of the significant elements of the investment decisions made at macro and micro levels [5]. Assuming the available growth opportunities, the debts play a mutual role in the firm value which might be explained by two views of the underinvestment or overinvestment. The former view has been first introduced by Myers [18] who emphasized that the high level of debts will have negative impact on the firm value and will motivate the managers to invest in the profitable projects. Due to the priority of the bondholders (creditors) in receiving the cash flows, the projects with positive net present values are previously determined. As a result, by assuming the existence of the growth opportunities, a negative association between the debts and firm value is expected. The overinvestment theory is used when the company has no growth opportunity. This approach emphasizes on the negative consequences of the high level of the cash flows controlled by the managers (Jensen, 1993). Therefore, debt financing supports the firm value and will mitigate the inefficiency of the managers through limited access to the free cash flows. In other words, in this perspective, a positive relationship between the debts and firm value is expected in the situations without any growth opportunities (Sinayi *et al*, 2011).

2.4. Research Background:

Hasan Pour and Bahramfar [7] examined the relationship between the changes in the capital structure and changes in the value of 47 listed firms on the Tehran Stock Exchange. They found that the changes of the capital structure have no consistent impact on the firm value among different industries. Based on the data of 93 firms, Kordestani and Najafi [12] investigated the determinants of the capital structure. Their findings revealed that there is a significant positive association between firm size and debt ratio based on the book value. Furthermore, a significant negative relationship between the non-tax savings and the debt ratio based on the book value and the market value was documented. Khodayi and Zare [12] explored the effect of financial flexibility on the decisions of the investors in the firms listed on the Tehran Stock Exchange. They concluded that the financial flexibility has no impact on the investment costs; it was also found that there is no relationship between cash flows and capital costs of the selected firms. Sinayi *et al* [21] examined the impact of growth opportunities on the relationship between capital structure, dividends and ownership structure of the firms listed on the Tehran Stock Exchange. A non-linear significant relationship was suggested between the ownership structure and firm value.

Haghighat and Bashiri [6] investigated the effect of financial flexibility on the capital structure of the Tehran listed firms over a period from 1999 to 2007. They concluded that the firms at birth level should issue low-risk debt securities; the firms at growth step should use debt financing and high leverage ratios and the adult firms are also suggested to rely on the internal finance. Modigliani and Miller [17] introduced the capital structure for the first time. They examined whether using debts in the capital structure impacts the firm value and cost of capital. Their findings showed that using debts have positive and limited impact on the firm value and weighted average of the cost of capital, respectively. Beaver *et al* investigated the relation of the cash and accrual components of the earnings to the firm value. Their findings showed that the prediction error of the market value decreases by considering the abnormal earnings and firm value as the dependent variables and also by segregating the accrual earnings to its components. DeAngelo explains that the high leverage mitigates the agency costs and reduces the financial flexibility, because the utility of the loan capacity is interpreted as the lower availability in the future. DeAngelo [3] defines the financial flexibility as the lost critical relationship for the consistent capital structure. The recent studies examine whether the capital structure choices provide strong evidences for the financial flexibility. Lopez and Vecente [13] documented a positive relationship between dividends and firm value at the situations with the lack of growth opportunities.

The most effective factor of debt decisions is the tendency of the managers to be financially flexible. The financial flexibility is gradually known as the main focus of the empirical studies. There are several issues in terms of the financial flexibility. These issues include: the effect of financial flexibility on the capital structure, its role in the entity theory, the optimization characteristics of the firms with financial flexibility, interaction with the growth opportunities, investment decisions and increasing firm value. However, the financial flexibility has not been much debated. How can we identify the firms with financial flexibility? What is the value of the financial flexibility? Does the financial flexibility improve the investment ability? Finally, is the financial flexibility known as a strategy for increasing firm value? The financial flexibility might improve the ability of the managers in attracting the growth opportunities and increasing the firm value. That is why the value of the real selections will increase and the correct reflection of the investor's prediction about the growth on the stock rate will result in increasing firm value. Therefore, this study examines whether there is a relationship between the financial flexibility, growth opportunities and future values of the Tehran listed firms.

3. Methodology:

This is a deductive-inductive study because it uses the theoretical framework and research background through the library studies, journals and web sites to collect data in order to test the hypotheses through inductive approaches. This is also an applied study, using correlation method to collect the data. This is useful for the studies aiming at discovering the relationship between the variables. The present study seeks to examine the correlation between the research variables. The previous data are used to test the hypotheses. This study uses the periodic data (2005 to 2010) in terms of cross-sectional and time series. The present study is based on the real data and is classified as an empirical study. Generally, two statistical methods are used in this study:

The descriptive statistics: A set of methods used to collect, arrange and disclose the distribution forms of the variables. The descriptive statistics include the calculation of mean, median, mode and standard deviation.

The inferential statistics: This statistics is used to interpret the characteristic of a population from the observations of one or more samples. Two methods are used in the inferential statistics. At first, Pearson correlation method is used to measure the magnitude of the relationship between different variables. As the next step, regression analysis is used to estimate the relationship between the variables.

3.1. Population and Sample:

The population of this study is composed of the whole firms listed on the Tehran Stock Exchange. This population is selected because the financial information of these firms is publicly available and this information is homogenous due to the regulations of the stock exchange. The sample firms should not be classified as the investment or financial intermediaries and they should have the four following characteristics:

1. The end of their fiscal year should be consistent with the calendar year.
2. The firms should have been listed on the exchange from 2005 to 2010.
3. There should be no changes in the fiscal year over the given period.
4. Their financial reports should be available.

Considering the above criteria, 430 firms at the end of 2010 are selected as the sample and 567 firm-year observations are used.

4.2. Hypotheses :

The research hypotheses are developed as below:

The first main hypothesis: There is a positive significant relationship between financial flexibility and growth opportunities.

The first subsidiary hypothesis: There is a positive significant relationship between firm size and the growth opportunities.

The second subsidiary hypothesis: There is a positive significant relationship between firm's profitability and growth opportunities.

The second main hypothesis: There is a positive significant relationship between financial flexibility and the future values of the firms.

The third subsidiary hypothesis: There is a positive significant relationship between firm's profitability and future values of the firms.

4.3. Research Variables:

To examine the hypotheses, Marchica and Mura [15] adjusted models are used as follows:

The first model is based on the study by Marchica and Mura [15] and is used to determine the financially flexible and non-flexible firms and also used to predict the firm's leverage. In doing so, the firm's leverage is first estimated by using the provided regression model. By comparing the predicted and the real leverage, the deviation is used to classify the firms into financially flexible (FF) firms. When the deviation of the real leverage from the predicted one is negative for three consecutive years, this is known as FF.

$$Lev_{it} = \alpha Lev_{it-1} + \beta_1 Mtbv + \beta_2 Size + \beta_3 Collateral + \beta_4 Profitability + \beta_5 Cash + \beta_6 Debt Maturity + \beta_7 Dividends + \beta_8 Tax + \beta_9 Ndt + \epsilon$$

Where in it;

Lev: The ratio of total debts to total assets

Mtbv: The ratio of book value of the total assets minus the book value of the owners' equity plus the market value of the owners' equity divided by the book value of the total assets

Size: Natural logarithm of the total assets

Collateral: The ratio of total fixed assets to the total assets

Profitability: The ratio of earnings before interest and tax and depreciation to the total assets

Cash: The ratio of total cash and cash equivalent to the total assets

DebtMaturity: The ratio of Total loans repayable after one year to the total debts

Dividends: The ratio of common dividends to the total assets

Tax: Total tax to the total assets

Ndts: The depreciation appropriate to the total assets

The second model (model 2) is used to measure the relationship between financial flexibility and growth opportunities:

$$MTB_{it} = \beta_0 + \beta_1 F_{it} + \beta_2 Lev_{it} + \beta_3 (Lev_{it} \times FF_{it}) + \beta_4 Size_{it} + \beta_5 Profit_{it} + \beta_6 Cash_{it} + \beta_7 Q_{it} + \varepsilon$$

Where in it;

FF= The is a dummy variable used to measure the financially flexible firms. This variables takes one if the deviation of the real values from the predicted ones are negative for three consecutive firms; and takes zero for the other firms (non-flexible firms)

MTB= Based on Hain, market to book value of the owner's equity is an appropriate measure for the growth opportunities. The greater its value, the greater is the growth opportunity. This variable is stated in terms of a ratio and it does not need to be homogenized.

Q= The ratio of book values of total assets minus the book value of the owner's equity plus the market value of the owners' equity to the capital stock.

The other variables have been described in model 1.

Model (3) is used to measure the relationship between the financial flexibility and future values of the firms.

To calculate the firm value, Tobin's Q is used. It must be mentioned that this method has been used by Sajjadi and GorgoZadeh (2010) in Iran.

$$Tobin's\ Q_{it+1} = \beta_0 + \beta_1 F_{it} + \beta_2 Lev_{it} + \beta_3 (Lev_{it} \times FF_{it}) + \beta_4 Size_{it} + \beta_5 Profitability_{it} + \beta_6 Cash_{it} + \beta_7 Q_{it} + \varepsilon$$

Where in it;

Tobin's Q: The following equation is used to calculate the Tobin's Q and this is the index of the future values:

$$Q_s = \frac{MVCS + MVPS + BVLTD + BVSTD}{BVA}$$

Q_s = Simple Tobin's Q

MVCS= The market value of the common stocks at the end of the year

MVPS= The market value of the preferred stocks at the end of the year

BVLTD= The book value of the long-term debts at the end of the year

BVSTD= The book value of the short-term debts

BVA= The book value of the total assets

5. Findings:

5.1. Descriptive Statistics:

This statistics describes the data and information and provides a general plan or model to be better used. Table 1 shows the descriptive statistics related to the selected sample:

Table 1: The central and dispersion indexes of the variables.

| Variables | Observations | Minimum | Maximum | Mean | Std. deviation | Variance |
|----------------------------|--------------|---------|---------|--------|----------------|----------|
| Debt leverage | 546 | 0.04 | 2.36 | 0.6350 | 0.22841 | 0.052 |
| Tobin's Q | 567 | 0.29 | 8.76 | 1.7566 | 0.91522 | 0.838 |
| Growth opportunities | 567 | 0.56 | 59.00 | 2.4004 | 3.50463 | 12.282 |
| Financial flexibility | 567 | 0 | 1 | 0.17 | 0.372 | 0.139 |
| Book value of total assets | 567 | 0.19 | 11.80 | 1.7843 | 1.38910 | 1.930 |
| Firm size | 567 | 4.43 | 7.20 | 5.5634 | 0.50843 | 0.258 |
| Total fixed assets | 567 | 0 | 0.89 | 0.2529 | 0.18651 | 0.035 |
| Profitability | 567 | -0.58 | 1.18 | 0.1978 | 0.16797 | 0.028 |
| Cash | 567 | 0.001 | 0.279 | 0.0261 | 32036.315 | 1.026 |
| Repayable loans | 567 | 0.00 | 0.67 | 0.0455 | 0.09985 | 0.010 |
| Dividends | 567 | 0.00 | 3.55 | 0.1491 | 0.22248 | 0.049 |
| Tax | 567 | 0.00 | 0.15 | 0.0200 | 0.02482 | 0.001 |
| Depreciation | 567 | -0.04 | 0.62 | 0.0462 | 0.06909 | 0.005 |

Source: Findings of the researcher

The "Debt leverage" has a mean of 0.635; the greatest number is 2.36 and the lowest is 0.04; the standard deviation and the variance of the leverage are 0.22 and 0.0529, respectively. The "Cash" has a mean of 0.026

which is between 0.001 and 0.279. The “Size”, calculated as the natural logarithm of the total assets, has a mean of 5.56 and the greatest number is 7.20 and the lowest is 4.43 which is found to have the average size. In addition, “tax” which is used to measure the amount of the paid taxes and is calculated by dividing the paid tax by the total assets, has an average of 0.020 and it means that on average, the sample firms pay only 2 percent of their assets as the taxes. The minimum and maximum are 0.15 and the standard deviation is 0.024 which shows that the paid taxes of the sample firms have low spreads.

5.2. Inferential Statistics:

The model coefficients are determined based on model (1) used to estimate the leverage. Finally, the leverage of the firms is estimated by the final model. The estimated leverage is compared to the real leverage and the firms are classified into financially flexible (FF) and financially non-flexible firms.

$$\text{Lev}_{it} = \alpha \text{Lev}_{it-1} + \beta_1 \text{Mtbv} + \beta_2 \text{Size} + \beta_3 \text{Collateral} + \beta_4 \text{Profitability} + \beta_5 \text{Cash} + \beta_6 \text{Debt Maturity} + \beta_7 \text{Dividends} + \beta_8 \text{Tax} + e_{it}$$

As shown in table 2, the correlation coefficient of the model is 0.901 and it shows that there is a very strong correlation between the variables. In addition, R^2 of the model is 0.812 and it means that 80 percent of the changes in the dependent variable are explained by the model variables. The last column of the table also indicates that Durbin-Watson statistics is 1.792 which is between 1.5 and 2.5 and the independence of the errors is confirmed.

Table 2: A summary of model 1.

| Model | Correlation Coefficient | R^2 | Adj. R^2 | Estimation error | Durbin-Watson |
|---|-------------------------|-------|------------|------------------|---------------|
| 1 | 0.901 | 0.812 | 0.808 | 0.106012 | 1.792 |
| a. Predictors: (Constant), Collateral, SIZE, MTVB, LEVt1, Cash, Dividends, Tax, Debtmaturity, Profitability | | | | | |
| b. Dependent Variable: LEVt | | | | | |

Source: Findings of the researcher

Examining the Linear relationship between the independent and dependent variables:

As shown in table 3, the significance level of the F-statistics is lower than one percent and it is concluded that there is a linear relationship between the independent and dependent variables of the study and a linear relationship in model 1.

Table 3: Analysis of variance.

| Model | Total squares | Degree of freedom | Average squares | F | Significance |
|------------|---------------|-------------------|-----------------|---------|--------------|
| Regression | 23.088 | 9 | 2.565 | 228.258 | 0.00 |
| Residual | 5.350 | 476 | 0.011 | | |
| Total | 28.437 | 485 | | | |

Source: Findings of the researcher

The significance of the estimated coefficients of model 1:

Table 4 represents that the estimated coefficients of “Debt Leverage” of the previous year (Lev_{t-1}) is 0.837 which is found to be significant at the 95 percent level of significance. Therefore, it is confirmed that there is a relationship between the current leverage and the leverage of the previous year. The estimated coefficients of MTVB and firm size and profitability are 0.030, 0.003 and -0.547, respectively. Based on the significance column of these variables, the coefficient of “Size” is found to be non-significant (the significance level is higher than 5 percent) and this variable should be excluded from the model. As shown in the significance column of table 5, it is found that the total loans, the dividend rate, the tax and the rate of total fixed assets are not significant at the 95 percent level of significance.

The final model to estimate the leverage is as follows:

$$\text{Lev}_{it} = 0/139 + 0/837 \text{Lev}_{it-1} + 0/030 \text{Mtbv} + 0/003 \text{Size} - 0/024 \text{Collateral} - 0/547 \text{Profitability} - 0/435 \text{Cash} + 0/031 \text{Debt Maturity} + 0/047 \text{Dividends} + 0/510 \text{Tax} + e_{it}$$

Using the final model and based on the significance of the estimated coefficients, the predicted leverage of the firms is calculated. By comparing the estimated and the real leverage, the firms are divided into financially flexible (FF) and financially non-flexible firms. The research hypotheses are then examined by the provided models.

Table 4: Coefficients of the variables of model 1.

| Model | | Non-standard coefficients | | Normalized coefficients | t | Significance |
|-----------------------------|---------------|---------------------------|-------|-------------------------|---------|--------------|
| | | Coefficients | Error | Beta | | |
| Constant | (Constant) | 0.139 | 0.070 | | 1.985 | 0.048 |
| Debt leverage | LEV t-1 | 0.837 | 0.024 | 0.769 | 35.49 | 0.00 |
| | MTVB | 0.03 | 0.06 | 0.13 | 5.158 | 0.00 |
| Firm size | SIZE | 0.03 | 0.011 | 0.006 | 0.278 | 0.781 |
| Profitability | Profitability | -0.584 | 0.038 | -0.39 | -14.536 | 0.00 |
| Repayable loans | Debtmaturity | 0.031 | 0.056 | 0.014 | 0.555 | 0.579 |
| Dividends | Dividends | 0.047 | 0.028 | 0.041 | 1.65 | 0.1 |
| Tax | Tax | 0.51 | 0.26 | 0.051 | 1.595 | 0.051 |
| Cash | Cash | -0.435 | 0.162 | -0.057 | -2.69 | 0.007 |
| Total fixed assets | Collateral | -0.024 | 0.023 | -0.018 | -0.792 | 0.428 |
| a. Dependent Variable: LEVt | | | | | | |

Source: Findings of the researcher

5.3. Testing the Hypotheses:

5.3.1. Testing the First Main Hypothesis:

To test the first main hypothesis and the first and second subsidiary hypotheses, the multivariate regression model is used:

Model (2)

$$MTB_{it} = \beta_0 + \beta_1 FF_{it} + \beta_2 Lev_{it} + \beta_3 (Lev_{it} \times FF_{it}) + \beta_4 Size_{it} + \beta_5 Profitability_{it} + \beta_6 Cash_{it} + \beta_7 Q_{it} + \varepsilon$$

Autocorrelation Test:

As shown in table 5, the calculated Durbin-Watson statistic is 1.784 which is between 1.5 and 2.5; as a result, the autocorrelation assumption is confirmed.

Table 5: A summary of model 2.

| Model | Correlation Coefficient | R ² | Adj. R ² | Estimation error | Durbin-Watson |
|-------|-------------------------|----------------|---------------------|------------------|---------------|
| 1 | 0.181 | 0.033 | 0.020 | 3.52201 | 1.784 |

Table 5 represents that the correlation coefficient is 0.181 and this confirms the weak correlation between the dependent and independent variables. The value of the standard R² is 0.033 and it is concluded that 0.3 percent of the changes in the dependent variable is explained by the changes in the independent variables.

The Linear Relationship between the Independent and Dependent Variables:

As shown in table 6, the F-statistics is lower than 1 percent (0.012) and it is found that there is a linear relationship between the independent and dependent variables and also there is a linear relationship in model 2.

Table 6: Analysis of variance.

| Model | Total squares | Degree of freedom | Average squares | F | Significance |
|------------|---------------|-------------------|-----------------|-------|--------------|
| Regression | 224.794 | 7 | 32.113 | 2.589 | 0.12 |
| Residuals | 6673.645 | 538 | 12.405 | | |
| Total | 6898.44 | 545 | | | |

Examining the Significance of the Estimated Coefficient of Model 2:

As shown in table 7, the estimated coefficient of "Leverage" (IKT-1) is -0.048 which shows that the estimated coefficient is not significant at the 95 percent. As a result, the significant relationship between the leverage and the growth opportunities is not confirmed. It is also observed that the estimated coefficient for the flexibility of the firms is 2.873 which found to be insignificant at the 95 percent. Therefore, it is confirmed that there is no positive significant association between the flexibility of the firms and the growth opportunities. The first main hypothesis is not confirmed (It must be mentioned that if alpha is 10 percent, the first main hypothesis is confirmed).

It is also observed that the coefficient of the profitability is -0.877 which is not significant at the 95 percent level. As a consequence, it is found that there is no significant association between the firms' profitability and growth opportunity. The second subsidiary hypothesis is not then confirmed. However, based on the coefficient of "Size" (-0.624), it is interpreted that there is no significant relationship between firm size and growth opportunity at the 95 percent. It is concluded that the first subsidiary hypothesis is not confirmed (If the alpha is equal to 10%, the first subsidiary hypothesis is confirmed).

Table 7: Coefficients of the variables of model 2.

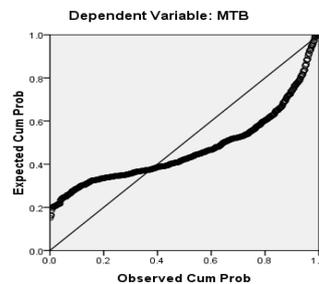
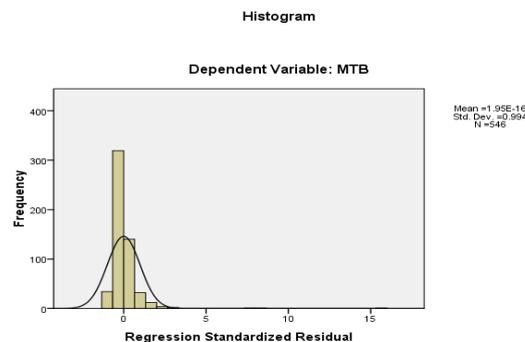
| Model | Non-standard coefficients | | Normalized coefficients | t | Significance | Multicollinearity | |
|--|---------------------------|-------|-------------------------|--------|--------------|-------------------|--------|
| | Coefficients | Error | Beta | | | Tolerance | VIF |
| Constant | 5.479 | 2.071 | | 2.646 | 0.008 | | |
| Flexibility | 2.873 | 1.55 | 0.304 | 1.854 | 0.064 | 0.067 | 14.944 |
| Debt leverage | -0.048 | 0.843 | -0.003 | -0.057 | 0.955 | 0.614 | 1.628 |
| Financial leverage of the flexible firms | -2.465 | 2.367 | -0.171 | -1.042 | 0.298 | 0.067 | 15.021 |
| Profitability | -0.877 | 1.139 | -0.042 | -0.77 | 0.442 | 0.618 | 1.617 |
| Firm size | -0.624 | 0.355 | -0.089 | -1.76 | 0.079 | 0.697 | 1.434 |
| Cash | 5.476 | 0.00 | 0.049 | 0.976 | 0.329 | 0.7 | 1.429 |
| Q | 0.025 | 0.013 | 0101 | 1.938 | 0.053 | 0.667 | 1.499 |

Source: Findings of the researcher

The Normality of the Residuals through the Normal Chart of the Residuals (P-P):

Based on charts 1 and 2, it is concluded that the residuals are normally distributed and the histogram also confirms this issue.

Normal P-P Plot of Regression Standardized Residual

**Chart 1:** Distribution of the residuals.**Chart 2:** Histogram of the distribution of the residuals.*Multicollinearity of the Independent Variables:*

In examining the multicollinearity of the independent variables in table8, the variance inflation factors (VIF) of most of the variables are greater than 0.2 and lower than 10; therefore, it is concluded that there is no multicollinearity between the independent variables of this regression model. As a result, there is no limitation for using multivariate regression model.

Based on the research findings, it is observed that there is no significant relationship between the financial flexibility of the firms and their growth opportunities. That is, the more financially flexible firms have no more growth opportunities than the other firms. However, the first main hypothesis is confirmed at the 90 percent and this is consistent with the theoretical bases. In addition, the findings are consistent with the results of Marchica and Mura and Muleki *et al*. The estimated coefficient for the firm size is -0.624 and its significance (0.079) show that the estimated coefficient is not significant at the 95 percent. Because the error level is higher than 5% (0.355), the first subsidiary hypothesis is rejected and it is found that there is a positive significant relationship between firm size and growth opportunities. However, this is a negative relationship because the estimated

coefficient is negative. The findings of this study are inconsistent with our expectations based on the theoretical basis. The results of this study are not also consistent with the findings of Marchika and Mura and Muleki *et al.* In addition, there is no positive significant relationship found between the growth opportunities and the profitability of the firms. The second subsidiary hypothesis is not then confirmed. This is not consistent with our expectations from the theoretical basis. Furthermore, the findings of this study are inconsistent with the results of Marchika and Mura and Muleji *et al.*

5.3.2. Testing the Second Main Hypothesis:

To test these hypotheses, model 3 is used:

$$\text{tobin's } Q_{it+1} = \beta_0 + \beta_1 \text{Ffit} + \beta_2 \text{Levit} + \beta_3 (\text{Levit} \times \text{Ffit}) + \beta_4 \text{Size}_{it} + \beta_5 \text{Profitability}_{it} + \beta_6 \text{Cash}_{it} + \beta_7 Q_{it} + \varepsilon$$

Autocorrelation Test:

As shown in table 8, Durbin-Watson statistics is 1/789 which is between 1.5 and 2.5 and the autocorrelation is confirmed.

Table 8: A summary of model 3.

| Model | Correlation Coefficient | R ² | Adj. R ² | Estimation error | Durbin-Watson |
|-------|-------------------------|----------------|---------------------|------------------|---------------|
| 1 | 0.159 | 0.025 | 0.012 | 0.91964 | 1.798 |

Source: Findings of the researcher

Table 8 represents that the calculated correlation coefficient is 0.159 which confirms a high correlation between the dependent and independent variables. The value of R² is 0.025 and shows that about 2 percent of the changes in the dependent variable are resulted from the changes in the independent variables of model 3.

The Linear Relationship between the Independent and Dependent Variables:

To examine the linearity of the relationship between the dependent and independent variables, ANOVA and F tests are used. As shown in table 9, the significance level of F test is 0.045 which is lower than 5% and confirms the linear relationship between the independent and dependent variables of model 3.

Table 9: Analysis of Variance.

| Model | Total squares | Degree of freedom | Average scores | F | Significance | |
|-------|-------------------|-------------------|----------------|-------|--------------|------|
| 1 | <i>Regression</i> | 11.754 | 7 | 1.679 | 1.985 | 5.05 |
| | <i>Residuals</i> | 455.012 | 538 | 0.846 | | |
| | <i>Total</i> | 466.766 | 545 | | | |

Source: Findings of the researcher

Examining the Significance of the Estimated Coefficients of the Model:

Table 10 indicates that the estimated coefficient of "Flexibility" is 0.2888 which is not significant at the 95 percent and the error level is higher than 5% (0.477) which rejects the second main hypothesis about the existence of a significant relationship between the future values and the firm's flexibility.

Table 10: Coefficients of the variables of model 3.

| Model | Non-standard coefficients | | Normalized coefficients | t | Significance | Multicollinearity | |
|----------|---|--------|-------------------------|--------|--------------|-------------------|--------------|
| | Coefficients | Error | Beta | | | | Coefficients |
| 1 | <i>Constant</i> | 2.044 | 0.541 | | 3.781 | 0.00 | |
| | <i>Flexibility</i> | 0.288 | 0.405 | 0.117 | 0.712 | 0.477 | 0.067 |
| | <i>Debt leverage</i> | 0.04 | 0.22 | 0.01 | 0.18 | 0.857 | 0.614 |
| | <i>Financial leverage of the flexible firms</i> | -0.076 | 0.618 | -0.02 | -0.122 | 0.903 | 0.067 |
| | <i>Profitability</i> | -0.251 | 0.298 | -0.046 | -0.844 | 0.399 | 0.618 |
| | <i>Firm size</i> | -0.077 | 0.093 | -0.042 | -0.829 | 0.407 | 0.697 |
| | <i>Cash</i> | 2.76 | 0.00 | 0.096 | 1.884 | 0.06 | 0.7 |
| <i>Q</i> | 0.007 | 0.003 | 0.111 | 2.138 | 0.033 | 0.667 | |

Source: Findings of the researcher

It is further shown that the coefficient of "Profitability" is -0.251 which is not significant at the 95 percent. As a result, the significant relationship between the firms' profitability and future value of the firms is rejected and the third subsidiary hypothesis is not also confirmed.

The Normality of the Residuals through the Normal Chart of the Residuals (P-P):

Based on charts 3 and 4, it is concluded that the residuals have a normal distribution and the histogram also confirms this normality.

Normal P-P Plot of Regression Standardized Residual

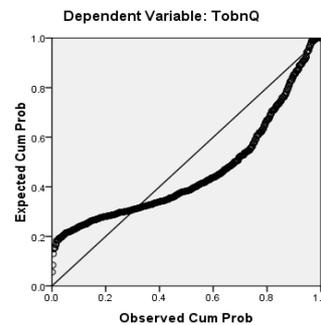


Chart 3: Distribution of the residuals.

Histogram

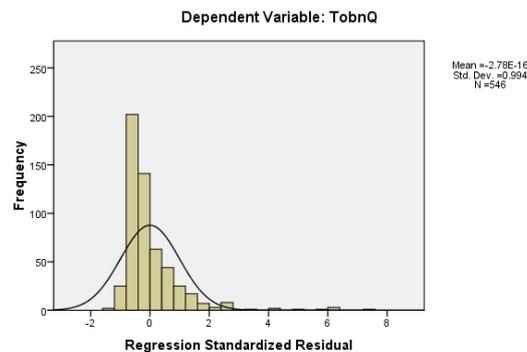


Chart 4: Histogram of the distribution of the residuals.

Multicollinearity of the Independent Variable:

The multicollinearity of the independent variables in table 11, variance inflation factors of most variables are greater than 0.2 and lower than 10; therefore, it is concluded that there is no multicollinearity between the independent variables of this regression model. As a result, there is no limitation in using the multivariate regression model.

The findings reveal that the estimated coefficient of the firm's flexibility in model 3 is 0.288 and this coefficient is significant at the 95 percent level. Because the error level is greater than 5% (0.477), the second main hypothesis is rejected and it is found that there is no positive significant relationship between future values of the firms and firm's flexibility. In addition, the estimated coefficient of "Profitability" is -0.251 and its significance shows that the estimated coefficient is not significant at the 95 percent. Therefore, the third subsidiary hypothesis is rejected and it is concluded that there is a positive significant association between the profitability and firm flexibility. This relationship is found to be negative.

6. Discussion and Conclusion:

Financial flexibility can promote the manager's ability to capture growth opportunities and increase in firm value, hence it can increase the value of real options, and if investor predictions about growth be reflected well in stock prices, increase in real options can leads to an increase in firm value.

The researchers have increasingly paid attention to the financial flexibility and the findings of survey reveal that the most effective factor of debt decisions is the tendency of the managers to have financial flexibility. The financial flexibility goes beyond the corporate finance theory and is going to be the focus of empirical and theoretical studies. There are different issues involved in the financial flexibility. These issues include the effect of financial flexibility on the capital structure, its role in the agency theory, the characteristics of the

optimization, interaction with the growth opportunities, investment decisions and firm value. Financial flexibility plays a significant role in some financial problems.

From the perspective of the researchers on the capital structure, the financial flexibility (debt capacity preservation) is the main element of decisions related to the ratio of debts to the net assets. For example, De Angelo and De Angelo (2006) believe that the financial flexibility is the main lost loop of the capital structure. The behaviorist fund suppliers consider the agency costs of under- and overinvestment. They also call the financial flexibility (the ability to adjust the capital structure in future) as a way to mitigate the principal-agent conflict. By improving the ability of the managers in attracting the growth opportunities, the financial flexibility will increase the value of the actual choices. If the investors' predictions about the growth are well reflected in the stock rate, the increase in the actual values will result in the higher firm value. There are many definitions provided for the financial flexibility. In the present study, the financial flexibility is defined as the accumulation of the capital and preservation of debt capacity (Myers, 1984). The relationship between the financial flexibility and growth opportunities and future values are examined in this study. The findings of this study reveal that there is no significant relationship between the financial flexibility and growth opportunities. That is, the more flexible firms do not have much growth opportunities. In addition, there is no positive significant association found between the growth opportunities and their profitability. The summarized results of the hypotheses are shown in table 11.

Table 11: A summary of the hypotheses.

| Number of hypothesis | Hypothesis | Result |
|----------------------------------|--|----------|
| The first main hypothesis | There is a positive significant relationship between the growth opportunities and financial flexibility. | Rejected |
| The first subsidiary hypothesis | There is a positive significant relationship between the firm size and the growth opportunity. | Rejected |
| The second subsidiary hypothesis | There is a positive significant relationship between the firm profitability and the growth opportunity. | Rejected |
| The second main hypothesis | There is a positive significant relationship between the financial flexibility and future values. . | Rejected |
| The third subsidiary hypothesis | There is a positive significant relationship between the firm profitability and the future values. | Rejected |

Source: Findings of the researcher

7. Suggestions:

Applicable Suggestions based on the results:

Based on the findings related to the first main hypothesis, the managers are suggested to consider the lack of relationship between the financial flexibility and growth opportunities in making their capital structure decisions. In addition, the managers should also pay more attention to the functions which will result in creating and increasing the growth opportunities because there is no direct relationship found between these two items.

The findings of the first subsidiary hypothesis show that there is no positive relationship between firm size and growth opportunities. The directors are then suggested to consider the other elements in addition to the firm size for making investment decisions in large firms.

Based on the results of the second subsidiary hypothesis, the positive relationship between the firm's profitability and growth opportunities is rejected and the shareholders are suggested to take other elements into consideration for making investment decisions for the profitable firms.

The positive relationship between the financial flexibility and future values of the firms has been rejected and the directors are suggested to consider this relationship in their decisions about the capital structure. If the board of directors and shareholders seek to increase the firm value in future years, they should consider that only the functions to increase the financial flexibility will not increase the firm value in future.

According to the findings of the third subsidiary hypothesis, the directors are suggested to consider some elements other than the profitability of the firms for making the investment decisions, because it is not true that the firms with high profitability will have great future values.

The significant point is that there is a negative reverse relationship between the firm size and growth opportunities and also between the profitability and future values. The economic entities are then suggested to use profitability and firm size to create an optimal structure of capital and assets. However, the test results of alpha at the 10% level confirm the positive direct relationship between these variables.

Directions for Future Research:

The effect of financial flexibility on the investment decisions might be examined in the future studies to find whether the financially flexible firms have higher abilities of investment. The following hypotheses might be suggested:

H1: There is a significant relationship between the financial flexibility and investment decisions.

H2: There is a significant relationship between the financial flexibility and financial leverage.

In addition, the role of conservatism on the flexibility and financial decisions is a subject which might be further examined and the following hypothesis might be also developed:

H1: There is a significant relationship between the financial flexibility and accounting conservatism.

The effect of financial flexibility on the capital structure might be examined:

H1: There is a significant relationship between the financial flexibility and debt level.

H2: There is a significant relationship between the capital structure and stock issuance.

Furthermore, the effect of ownership structure on the financial flexibility might be examined. In doing so, the effect of some variables, such as ownership concentration, managerial ownership, institutional ownership and corporate ownership on the flexibility could be examined. The following hypotheses might be developed:

H1: There is a significant relationship between the financial flexibility and institutional ownership.

H2: There is a significant relationship between ownership concentration and flexibility.

Due to the direct relationship between the variables at the 10% level, it is suggested to take more samples into consideration. In doing so, the findings might be consistent with the results of Marchica and Mura (2006) and Muleki *et al* (2003).

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