Study The Relationship between financial flexibility and firm's ownership structure in Tehran Stock Exchange.

Mohammad Hassan Rajaei and Mona batuteh
M.A degree accounting

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ABSTRACT
The most important driver of firms' capital structure decisions is the desire to attain and preserve financial flexibility. Financial flexibility can be an important "missing link" in existing capital structure theories. Financial Flexibility is one of the significant issues in management theories and issues. Factors like increased costs, fluctuations due to rapid changes of environment and the rise of highly competitive markets are all indicative of the fact that, without the ability to adapt to market changes, companies cannot be survive let alone be successful. The financial flexibility enables a unit to use unexpected investment opportunities and survive in times of low or possibly negative cash flow due to unexpected decrease in demand for the business product. Flexibility plays an important role in making directors capable of investing in the future. Capital market problems have made it necessary for corporations to maintain flexibility in order to use the profitable opportunities. Evaluating the capability to provide cash is facilitated through focusing on financial status, financial performance and cash flows of the enterprise and their function is foreseeing the expected cash flows and assessing the financial flexibility. Ownership structure one of determiner for corporate governance. Companies' ownership structure is defined as the degree of the influence of institutional stockholders and natural stockholders. In this study, the ownership percentage of the firm's main stockholder will be used to evaluate the ownership concentration. So we investigated the relationship between the financial flexibility and ownership structure. To achieve this goal we have selected 109 corporation from Tehran stock exchange from 1382 to 1388. In this study financial flexibility is independent variable, ownership structure is dependent variable and cash holdings, firm size, dividend payout to total assets ratio are control variables. To statistical analysis and for testing hypothesis we use coefficient of correlation and multiple regression model. We didn't find out significant relationship between financial flexibility and ownership structure.

INTRODUCTION

Financial managers' responsibilities include trying to improve the value of the enterprise, providing financial resources, proper investment in profitable projects, and optimal appropriation of the available resources. In fact, considering and evaluating different investment projects, a company's director should make the best possible decision in the competitive world of business.

Institutional investors play the main role in financial markets. Since, due to privatizing policies accepted by different countries, their authority in corporate governance has increased, it can be concluded that institutional investors are significant in several corporate governance systems [4].

Therefore, the study of the relationships among financial flexibility and ownership structure in Iran can be a significant step for future researches.

Privatization, technology development, financial market liberalization, developing the role of financial intermediaries, and transferring the authority to institutional investors are among the factors which have influenced the capital market. Capital budgeting and financing decisions are considered the main areas of decision making for public companies' finance directors. These decisions should be made in line with maximizing the company's value for the stockholders.

Economic decision making requires the evaluation of the enterprise in order to provide cash, time, and certainty. This ability eventually determines the business capacity to make payments such as paying goods and service providers, paying expenditures, investing, repayment of loans, and distributing the profit among the capital owners.

Corresponding Author: Mohammad Hassan Rajaei, M.A degree accounting
Companies' ownership structure:

One of the main groups using financial data is stockholders. Stockholders can be divided into natural persons and legal persons called institutional investors in financial literature [7]. Since they own most of a company's stocks, institutional investors including investment institutes and other businesses have strong influence in these companies and have access to different data regarding future outlooks and programs and in some cases future contracts of the company. On the other hand, these investors are considered professional stockholders and are counted on in the decisions about firm's stocks. Institutional investors create one of the powerful corporate governance who can monitor company's management as they can have a great influence on the management of a company. They also can get management interests in line with group interests. The major ownership by institutional investors controls agency problems and improves the possibility to support investors' interests [7].

Institutional ownership:

Institutional ownership is defined as firms' ownership by institutions, public sector, quasi-governmental entities, charities, and investment firms (legal persons).

Natural ownership:

Ownership of firm staff, people, directors and firm founders or families is called natural ownership. Therefore, the research question of this paper is: 'Is there a significant relationship among companies’ ownership structure and financial flexibility?'

Literature background:

Noravesh and Ebrahim kordlor studied the relationships among stockholders combination, information symmetry and the usefulness of performance accounting criteria. The findings indicated that stock prices in companies with more institutional ownership compared to companies with less institutional ownership involve more useful information regarding future profits. These findings are consistent with the relative advantage of institutional stockholders in collecting and processing data [4].

Mohammad Namazi and Kermani studied the influence of ownership structure on firms' performance and concluded that there is a significant relationship between a firm's performance and ownership structure [4].

In his study, Gholamreza Karami tested the relationship between institutional ownership and Information content of earnings and concluded that institutional ownership does not promote the information content of earning and may even reduce it [7].

Clark explored the relationship between leverage and financial flexibility. In this study, leverage instruments based on considered variables were of high significance. The results showed that there is a negative relationship between financial flexibility and cash, and leverage [1].

Tsai and Gu investigated the relationship between institutional ownership and company performance in casino industry from 1999 to 2003. Institutional ownership is the percentage of shares held by state-owned firms of total capital stock which include insurance companies, financial institutes, banks, government departments, and other government sectors. They showed that institutional investment in casinos may help the investors reduce issues resulted from separating management and ownership [6].

MATERIALS AND METHODS

The hypothes of this paper is:

There is a significant relationship between financial flexibility and ownership structure in companies registered in Tehran stock exchange market.

Scope of the study: understanding the relationships among financial flexibility and ownership structure in companies registered in Tehran stock exchange market.

Time period: the data were gathered from 2003 to 2009.

Location: Tehran stock exchange market is a center for collecting deposits and cash from private sector in order to finance long term investment projects. On the other hand, it is an official and safe place where people with stagnant deposits can invest their money. Therefore, companies registered in Tehran stock exchange market are the target of this study.

The following issues were considered in selecting companies:
1. The selected companies’ financial year ends by the end of March.
2. In case financial statements of the selected years have been revised, the revised version has been used
3. They had to be production companies (investment companies, banks, and financial institutes were omitted). The stockholders should not have negative equity and also, they should not have intermediary and investment roles.
4. This study is a descriptive (non-experimental) with multivariate correlation in which the relationships among the variables are analyzed based on the objective of the study. The research objective is to study the pairwise relationship of the variables.

The methodology involves related correlation and deals with the companies’ real data. The available journals and resources are libraries, and also accessible sources of domestic and international journals were used to collect data.

Required raw data are collected through softwares and also referring directly to companies’ financial statements which are available in form of compact disks (CD) published by Tehran stock exchange and the companies’ related websites.

**Multivariate Analysis:**

In order to test the hypotheses and to prove or reject them, it should be determined whether there is a linear relationship between independent variables and the dependent variable. Since the goal of the research is to determine the relationship between financial flexibility and ownership structure, correlation and regression analysis are used to test the hypotheses. Collinearity tests, F, t, and correlation coefficient test are used. Also, Dorbin watson statistic is used to determine that there is no variable autocorrelation. For the hypothesis, there is a model.

The model is as follows:

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

\( x_1 \) : companies’ ownership structure

\( x_2 \) : firm’s size

\( x_3 \) : cash

\( x_4 \) : dividends paid/total assets

\( y \) : financial flexibility

Indicators used to calculate the variables are shown in Table 1:

<table>
<thead>
<tr>
<th>Formula</th>
<th>Index</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cash−short term investment)/short term debt</td>
<td>Liquid ratio</td>
<td>Financial flexibility</td>
</tr>
<tr>
<td>Chief shareholders/total shareholders</td>
<td>Ownership concentration</td>
<td>Ownership structure</td>
</tr>
<tr>
<td>Log( total asset)</td>
<td>---</td>
<td>firm’s size</td>
</tr>
<tr>
<td>total assets/(short investment+cash)</td>
<td>---</td>
<td>Cash</td>
</tr>
<tr>
<td>dividends paid/total assets</td>
<td>---</td>
<td>dividends paid/total assets</td>
</tr>
</tbody>
</table>

**Chow F statistic:**

Since the data belong to 109 companies from 2003 to 2009 and it is intended to find one model for all these years in order to determine the factors affecting the dependent variable, it is assumed that one equation is correct for all time periods. A test is needed to prove this assumption. F statistic is used which is explained as follows:

\[ H_0 : \alpha_1 = \alpha_2 = ... = \alpha_n \]

\[ H_1 : \alpha_1 \neq \alpha_2 \neq ... \neq \alpha_n \]

The test statistic has F distribution. In fact, this study deals with two models of dependent and independent. In the dependent model, the intercept is fixed.

\[ F = \frac{(SSR_{\text{UR}} - SSR_{\text{UR}})}{(SSR_{\text{UR}} - SSR_{\text{UR}})} \]

SSR: Sum of square numbers of the remainings of the dependent model
SSR_{UR}: Sum of square numbers of the remainings of independent model
N: Time periods
K: the number of independent variables of the model
NT: the number of adjusted observations (multiplying the number of time periods and years)

Now the test statistic is calculated and compared with the statistic from the table. If the calculated statistic is lower than the table statistic with the 5% error and the model’s degree of freedom (df) which involves two
degrees of freedom – numerator degree of freedom (N-1) and denominator degree of freedom (NT- N- K ) – the H0 is proved and consequently, data aggregation method can be used.

The results showed that this method can be used.

Chow F statistic:

Table 2:

<table>
<thead>
<tr>
<th>Result of table statistic with the 5% error</th>
<th>Result of model</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/36</td>
<td>0/2799479</td>
<td>1</td>
</tr>
</tbody>
</table>

A) Normality statistic:

One of the assumptions considered in regression is that the errors have normal distribution with zero mean. It is obvious that without this assumption, regression cannot be used.

Null hypothesis and alternative hypothesis are defined as follows:

H0 :the errors have normal distribution
H1 :the errors don’t have normal distribution

The result showed that disturbing elements have normal distribution.

B) Durbin Watson statistic:

The other assumption considered in regression is error independence. If the error independence hypothesis is rejected and the errors are correlated, regression cannot be used. According to [3], If the statistic is at 1.5 to 2.5 interval, the null hypothesis is proved (errors are not coefficient).

Table 3: Durbin-Watson

<table>
<thead>
<tr>
<th>Durbin Watson</th>
<th>Adjusted R Square</th>
<th>R Square</th>
<th>R</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/902</td>
<td>0/202</td>
<td>0/206</td>
<td>0/454</td>
<td>1</td>
</tr>
</tbody>
</table>

According to Durbin Watson statistic which shows no autocorrelation among variables, regression can be used

Collinearity:

Collinearity is a state which shows that an independent variable is a linear function of other independent variables. If collinearity of a regression equation is high, it means that there is high correlation among independent variable and despite the high R², the model may not have high reliability. In other words, although the model appears to be good, it lacks significant independent variables. The data show one coefficient output and one collinearity detection output. In coefficient output, the lower the tolerance, the lesser the data on variables which would lead to problems in using regression. The factor causing inflation is inverse variance of tolerance and the more it rises, the more regression coefficient variance increases which makes regression an unsuited choice to forecast.

Collinearity detection output shows Eigenvalues and status index. The Eigenvalues close to zero shows the internal correlation of forecasting is high and small changes in data values will lead to large changes in evaluating regression equation coefficients. Status indices higher than 15 are indicative of the probability of collinearity among independent variables and those higher than 30 are indicative of more serious problems in using regression in the current situation.

According to the results, there is no collinearity among independent variables and therefore, no problem in using regression.

ANOVA:

\[ H_0 = \beta_1 = \beta_2 = \ldots = \beta \]
\[ H_1 = \beta_i \neq 0 \text{ (i= 1,2, ...,k)} \]

If, in the confidence level of 95% (α=5% error) the calculated F statistic from regression is lower than the F resulted from the table, the null hypothesis cannot be rejected; otherwise, the null hypothesis is rejected. It is clear that regression can only be used when the regression equation is significant. According to results, model was significant

ANOVA:

Table 4

<table>
<thead>
<tr>
<th>Sig</th>
<th>F</th>
<th>Mean Square</th>
<th>Df</th>
<th>Sum of Squares</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/000</td>
<td>49/246</td>
<td>0/001</td>
<td>4758</td>
<td>0/003</td>
<td>Regression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0/000</td>
<td>762</td>
<td>0/013</td>
<td>Residual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0/017</td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>
Coefficients:

After regression significance test, the significance of each coefficient should be tested. This test is used to gain research results so that it is proved that the regression model is useful. The test objective is to understand whether the calculated coefficient is the opposite of zero in the specified confidence level. The test assumptions are as follows:

\[ H_0 = \beta_1 = \beta_2 = \ldots = \beta_k = 0 \]
\[ H_1 = \beta_i \neq 0 \quad (i= 1,2,\ldots,k) \]

If, on the certainty level of 95%, the statistic from the test is lower than the t from the table with the same degree of freedom (df), the null hypothesis cannot be rejected, otherwise, it is rejected.

Coefficients:

<table>
<thead>
<tr>
<th>Sig</th>
<th>T</th>
<th>Standardized Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/003</td>
<td>3/019</td>
<td>0/000</td>
<td>0/001</td>
<td>Constant</td>
</tr>
<tr>
<td>0/121</td>
<td>-1/551</td>
<td>-0/050</td>
<td>0/002</td>
<td>Ownership concentration</td>
</tr>
<tr>
<td>0/119</td>
<td>1/560</td>
<td>0/343</td>
<td>0/004</td>
<td>firm’s size</td>
</tr>
<tr>
<td>0/383</td>
<td>-0/872</td>
<td>-0/195</td>
<td>0/053</td>
<td>cash</td>
</tr>
<tr>
<td>0/000</td>
<td>9/847</td>
<td>0/365</td>
<td>0/040</td>
<td>dividends paid/total assets</td>
</tr>
</tbody>
</table>

As it can be observed in the image, the column showing the level of significance of the ownership focus variables, the firm size and the amount of cash holdings is more than 5% error level. Therefore, the coefficient of these variables is not significant for the model. In this model, the significance level of the dividend payout ratio to the total assets is lower than 5% which shows that there is a significant relationship among the variables. In this model, the significance level of the distributed profit ratio to whole assets is less than 5% which shows the significant relationship of this variable. Distributed profit ratio coefficient to whole assets is positive which indicates a positive and direct relationship between variation percentage of this variance and variation percentage of financial flexibility. The second regression model is defined as follows:

\[ y = 0/003 + 0/398 X_4 + \varepsilon \]

Results:

The result of hypothesis:

The results of the data analysis did not reject this hypothesis since according to the assumptions presented in methodology chapter, there is no significant relationship between the ownership structure variable coefficient and financial flexibility and therefore, the hypothesis is rejected despite the significance of the model.

Suggestion for future research:

1. It is proposed that the relationship among other effective indicators on financial flexibility, financial and ownership structure (such as investment rate of return, interest cost, facility rate) be investigated.
2. Duplicating the research in other countries
3. This research can be carried out in different industries and the data can be analyzed.

Other suggestions:

1. Since some of the data from financial statements whose historical price with current values make it difficult to analyze financial leverage, asset rate of return, and etc., it is proposed that companies be encouraged to present the related figures based on current value through promoting policies.
2. Designing comprehensible regulations for capital market

REFERENCES


