

Relationship between size corporate and the overinvestment of IPO firms

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Abstract: Today, the corporation governance is concept emerging concern in the world of business. Corporate governance is the foundation of relations with beneficiary groups. The difference in attitudes is related to the firms' relations range with beneficiaries. Corporate governance at the micro level and macro level considers the achieving the company's objectives and optimal allocation of society's resources respectively. The present study seeks to examine the relationship between corporate governance mechanisms and overinvestment of IPO firms. The population of this study is composed of the firms listed on the Tehran Stock Exchange, which has been initially listed on the stock exchange. The sample constitutes of the listed firms from 2005 to 2012. The collected data is analyzed by using the multivariate regression method. The findings reveal that there is a significant direct relationship between size corporate and the overinvestment of IPO firms.

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Introduction:

One of the main factors for improving economic performance is corporation governance system (corporate governance), which involves a collection of relationships between a company's management, board, shareholders and other beneficiary groups. Corporation governance system provides the structure through which the aims of the corporation are set up and the means to achieve the objectives and monitoring the performance are determined. This system creates the necessary motivation for achieving the goals and provides the effective supervising context. In this way the firms employ the resources with a more effectiveness. (Mokarrami, 2006).

Quality of corporate governance can explain the firm's performance. Drobetz and et al (2004) considered the legal environment as a factor for the quality of corporation governance system and by selecting samples of German public company showed that there is a positive relationship between firm's performance and the quality of corporation governance system.

Today, the corporation governance is concept emerging concern in the world of business. Corporate governance is the foundation of relations with beneficiary groups. The difference in attitudes is related to the firms' relations range with beneficiaries. Corporate governance at the micro level and macro level considers the achieving the company's objectives and optimal allocation of society's resources respectively. (Rezai Shoroki and et al, 2012).

According to privatization and increasing interest to this issue and implementation of 44th article of constitution, having suitable infrastructure for this article and its success is necessary. Therefore, IPO

companies regarding the firm's future and implementation of suitable systems in order to achieve the aims can take an effective step towards implementing the firm's goals.

Literature review:

Ghanbari (2007) has tested the relationship between the presence of irresponsible members in the board, internal audit, information clarity, institutional investment and the company performance during the sample period of 1993-1995 and concluded that the ratio of irresponsible members in board doesn't have any effect on performance, internal audit has a direct relationship with performance. The information clarity doesn't have any relation with performance and institutional investment has a direct relationship with performance.

Vakili fard & Bavandpour (2010) studied the relationship between corporation governance variables and firms performance and in this research they used the variables of institutional shareholders, main shareholders, irresponsible members of board and the quality of financial information and the corporation governance mechanisms. Their sample consisted of 94 companies during a 5 years period between 2004 and 2008 and finally concluded that the presence of irresponsible members in the board has a significant and revers relationship with the company's performance.

Dihaen and al & et al in 2001 selected a sample including 122 companies and using linear regression analysis examined the relationship between company's performance and composition of board in Belgian companies. The results showed that there is no significant relationship between the composition of board and performance.

Colman and Baikopi inspected the relationship between board members and its dichotomy and the company's performance in stock exchange during the 1990-2001 in Ghana companies. The analysis results showed that there is a negative relationship between management board and company's performance and a positive relationship between the board's roles and manager and firms performance in Ghana.

Cheng (2008) examined the relationship between board composition and company's performance. The project's sample included 1252 companies' during 1996 and 2006. In this study they used the return on assets and return on equity as a performance measurement criteria and the ratio of directory board and irresponsible managers for measuring the composition of directors' board. The results showed that there is positive relationship between the ratios of irresponsible managers to the company's performance.

Data analysis

Descriptive statistics are used to describe data and to analyze the assumptions, multivariate regression statistical techniques were used. In this study after gathering the data in Excel software, Eviews statistical software was used to analyze the data.

To analyze the data and at the result to test the project's assumptions following model was used:

$$OI_{t+1} = \alpha_0 + \alpha_1 SIZE_t + \alpha_2 Dirsize_t + \alpha_3 Z_t + \alpha_4 Eps_t + \alpha_5 Control_t + \epsilon$$

Hypotheses Development

The research hypotheses are classified into one categories:

1. There is a significant relationship between size corporate and overinvestment of IPO firms.

Testing hypothesis

Procedures of hypothesis testing

Descriptive statistics are used to describe data and to analyze the assumptions multivariate regression statistical techniques were used. Also in this study to analyze the data, Eviews statistical software was used. Using this software increase the accuracy of the results.

The research procedure included data normality test, Manaei test of project variables, F test and Husmen to specify the estimate model. (Zare et al 2010).

Significant test of the hypothesis

To test the general and basic characteristics of variables for estimating and analyzing the model, familiarity with descriptive statistics is necessary.

Inspecting descriptive statistics

Descriptive statistics has some indicators that are used for analyzing data. Actually these statistics describe the data and information in the research and gives a n overall scheme or pattern to a better and fast usage.

In conclusion, suitable usage of descriptive statistics, characteristics of some of data are recognizable. Central and dispersion parameters are used in this regard. Descriptive statistics of research include mean, median, standard deviation, skewness coefficient and stretch coefficient. (Zare & et al. 2010).

Significance test of independent variable

Before estimating the model it is required to inspect the Manaei (reliability) of the variables. To be reliable means mean, variance and autocorrelation coefficient remain constant during the time. In this research Dickey-Fuller test Fisher (ADF) is used to determine the reliability.

The variables that their testing estimate is fewer than 5% are reliable and if the result is more than 5% the variable is unreliable and in this case we have the log of all data of that variable.

In testing model, F statistics and Hausman statistics test the significant relationship of every independent variable with independent one. In this test we will study the significance level and determine the F statistics. If the significance level is less than 5%, then the assumption is accepted.

Fitting of regression model

In statistical testing, accepting or denying the assumptions are due to estimation amount. Therefore, to verify the significance relationship between independent and dependent variable we use F statistics. Using Eviews statistical software we determine the significance level of F statistics.

Significance test of coefficient determining R2

The coefficient of determination indicates how the regression line of sample fit the data. If all the observations are on the line the perfect fit has happened that is very rare. Generally remaining components are positive and others negative. What we expect is that the residuals around the regression line be small as much as possible.

The coefficient of determination, is a criterion that indicates how well the regression line fitted to the data sample.

The amount will be between zero and one ($0 \leq R^2 \leq 1$) and if the $R^2 = 0$ indicating no association between independent variables and the dependent variable, and if the $R^2 = 1$ indicates perfect correlation between independent variables with the dependent variable. On the other hand, coefficient of determination R^2 state the recognizing power of the model. (Zare & et al, 2010).

Reliability test of project variables

Before estimating the model, it is necessary to study the reliability of the variables. A variable is reliable if the mean, variance and autocorrelation remain constant during the time. In present study,

Dickey-Fuller Fisher (ADF) test is used to determine the reliability.

Central and dispersion parameters:

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
Mean	0.266000	92.90400	86.99200	13.00800	52.60000	0.104000	0.483899	0.008173	0.670000	5.338000
Median	0.250000	92.80000	86.90000	13.10000	55.00000	0.120000	0.510609	0.011788	0.690000	5.330000
Maximum	0.470000	93.06000	87.13000	13.10000	79.00000	0.160000	0.575438	0.079275	0.700000	5.490000
Minimum	0.130000	92.80000	86.90000	12.87000	28.00000	0.030000	0.406078	-0.046325	0.620000	5.180000
Std. Dev.	0.127972	0.127501	0.112789	0.112789	17.32167	0.043217	0.065341	0.048887	0.030362	0.098770
Skewness	0.418761	0.408248	0.408248	-0.408248	0.091514	-0.557082	-0.018307	0.144025	-0.645046	-0.088039
Kurtosis	1.764029	1.166667	1.166667	1.166667	1.947509	2.301949	1.487936	1.527172	1.781664	2.441697
Jarque-Bera	46.43893	83.91204	83.91204	83.91204	23.77579	36.01328	47.65993	46.92073	65.59754	7.139707
Probability	0.000000	0.000000	0.000000	0.000000	0.000007	0.000000	0.000000	0.000000	0.000000	0.028160
Sum	133.0000	46452.00	43496.00	6504.000	26300.00	52.00000	241.9495	4.086667	335.0000	2669.000
Sum Sq. Dev.	8.172000	8.112000	6.348000	6.348000	149720.0	0.932000	2.130467	1.192565	0.460000	4.868000

Reliability tests:

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-16.3314	0.0000	99	396
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-9.23745	0.0000	99	396
ADF - Fisher Chi-square	333.250	0.0000	99	396
PP - Fisher Chi-square	385.790	0.0000	99	396

The size of the board

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-12.9123	0.0000	38	152
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-9.60640	0.0000	38	152
ADF - Fisher Chi-square	133.665	0.0000	38	152
PP - Fisher Chi-square	133.817	0.0000	38	152

Ratio of independent managers:

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-16.9247	0.0000	50	200
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-6.30888	0.0000	50	200
ADF - Fisher Chi-square	149.257	0.0010	50	200
PP - Fisher Chi-square	158.133	0.0001	49	196

The nature of owner control

Cross-				
Method	Statistic	Prob.**	sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-16.9247	0.0000	50	200
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-6.30888	0.0000	50	200
ADF - Fisher Chi-square	149.257	0.0010	50	200
PP - Fisher Chi-square	158.983	0.0002	50	200
return per share				

Method	Statistic	Prob.**	sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-46.9082	0.0000	100	400
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-12.1252	0.0000	100	400
ADF - Fisher Chi-square	384.922	0.0000	100	400
PP - Fisher Chi-square	473.636	0.0000	100	400

Growth opportunity:

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-11.8425	0.0000	97	388
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.38380	0.0832	97	388
ADF - Fisher Chi-square	193.429	0.4981	97	388
PP - Fisher Chi-square	207.600	0.2393	97	388

The ratio of irresponsible members to total board members

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-19.7118	0.0000	100	400
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.50557	0.0000	100	400
ADF - Fisher Chi-square	274.525	0.0004	100	400
PP - Fisher Chi-square	337.549	0.0000	100	400

Size of the company:

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-24.5531	0.0000	100	400
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-9.99040	0.0000	100	400
ADF - Fisher Chi-square	375.207	0.0000	100	400
PP - Fisher Chi-square	460.779	0.0000	100	400

Duality of managing director's responsibility:

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-8.54634	0.0000	99	396
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.43396	0.0758	99	396
ADF - Fisher Chi-square	213.544	0.2133	99	396
PP - Fisher Chi-square	272.325	0.0004	99	396

The percentage of managing director's ownership

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-19.6989	0.0000	100	400
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-6.10473	0.0000	100	400
ADF - Fisher Chi-square	298.740	0.0000	100	400
PP - Fisher Chi-square	404.061	0.0000	100	400

Assumptions test:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
B1	-0.007262	0.005511	-1.317931	0.0143
B2	-0.001043	0.001610	-0.647821	0.0304
B3	0.013180	0.008346	1.579198	0.0426
B4	0.000117	0.000825	0.141793	0.0898
B5	-2.09E-06	1.68E-06	-1.244906	0.2390
B6	-5.69E-05	8.28E-05	-0.686900	0.0064
B7	0.001219	0.002710	0.449736	0.0616
B8	0.001857	0.002158	0.860365	0.0079
B9	0.001655	0.004997	0.331189	0.0467
C	-0.003782	0.016220	-0.233167	0.8199
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.468385	Mean dependent var	0.002352	
Adjusted R-squared	0.259886	S.D. dependent var	0.006581	
S.E. of regression	0.007088	Akaike info criterion	-6.761848	
Sum squared resid	0.000553	Schwarz criterion	-6.079278	
Log likelihood	98.52311	Hannan-Quinn criter.	-6.572532	
F-statistic	2.745514	Durbin-Watson stat	2.139073	
Prob(F-statistic)	0.006319			

The variables that their estimate test is fewer than 5%, that variable is called reliable. If this amount is more than 5% the variable is unreliable in this case we will have the log of that variable. The results of reliability are observed in table.2.4

Table 2.4 test of variables reliability

variable	statistics	estimate
Financial investment	333	0/0000
board size	133	0/0000
Ratio of independent managers	149	0/001
Nature of ownership control	149	0/001
Return per share	384	0/000

Growth opportunity	193	0/49
Ratio of irresponsible members to board members	274	0/0004
Company size	375	0/0000
Duality of managers responsibility	213	0/21
Ratio of managers ownership	298	0/0000

As it is observable, all the variables except growth opportunity and duality of managers responsibility, have an estimation fewer than 5% in Dickey- Fuller test which indicates that static variables are reliable, so using these variables doesn't cause false regression in the model. The growth opportunity and duality of managers' responsibility is not reliable, so their log is computed to make them reliable.

Variables normality test

According to the nearness of mean and median, we can understand that the data dispersion is normal. However, in this study, we test the normality of

independent and dependent variables with the Jarkova-Bra to determine if they are normal or not. As table 3.4 shows all the variables are fewer than 5% (normal).

Testing the hypotheses

The first hypothesis: There is a significant relationship between size corporate and overinvestment of IPO firms.

The following model is developed to examine the first hypothesis:

$$y_{it} = \alpha_0 + \alpha_1 A_{it} + \alpha_2 E_{it} + \alpha_3 F_{it} + \alpha_4 G_{it} + \alpha_5 H_{it} + \epsilon_{it}$$

Wherein it;

A_{it} - size corporate

E_{it} - Earnings per share

F_{it} - The owner's control

G_{it} - The ratio of the independent directors

H_{it} - Board size

ϵ_{it} - Error term

The significance level of the ownership is 0.0467 which is lower than 0.05, and it confirms the positive significant association between size corporate and the overinvestment. In addition, the R^2 of the model is 0.46 and indicates that about 46 percent of the changes in the dependent variable is explained by the independent and control variables. Durbin-Watson statistics for the firms with high growth opportunity and the ones with the low growth opportunity indicate that there is no autocorrelation between the variables.

Suggestions

Over finance and corporate governance have been much debated in different settings and play significant roles in increasing the firm value and improving the performance. Therefore, it seems necessary to pay special attention to these topics and conduct studies about these subjects. The following suggestions are provided for the future studies:

1. The time limitations might change the results of the hypotheses and it is suggested to conduct a

study in another time period in order to compare the findings with the present results.

2. Future studies might be concentrated on examining the relationship between dividend policy and IPO firms.

3. In the future studies, the production volume, size and performance might be considered as the control variables.

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