The Effect of Stock Market Situation on Investment among Iranian Firms

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Abstract

This study investigates the effect of stock market on the firm's investment in Iran from the price informativeness perspective. The objective of this study is to explain the effect of the stock market performance, including corporate governance and informative roles on the firm's investment in Iran using the price informativeness criterion and to explain the effect of basic principles of the firm on investment. This study was conducted using multivariate regression Change model. The price informativeness was estimated using price synchronization combined with the transparency of information. The population included the firms listed in Tehran Stock Exchange during 2004 to 2011. Systematic elimination method was used to determine the samples, and finally, 77 firms were studied. The data were analyzed by using analyzed different statistical tests, including t , f and wong tests. The results indicated that the stock market performance has no effect on firm's investment from the price informativeness perspective.

Keywords: Investment Changes, Price Synchronization, information, corporate governance

Introduction

Investors are one of the important elements of capital market. The investor's objective of capital flowing is maximizing profit and return. The return of these assets should be greater than the other options to encourage investors to invest in financial assets (Mehrani & Bahramfar, 2004).

Investors seek to maximize their wealth. Opportunities for growth are the driving forces that motivate investors and are considered as rewards. Enhancing professional knowledge on investment associated with the development of communication technology led suppliers of capital to invest their funds in firms that enable them to gain more profit. Efficient use of available investment opportunities leads to success in present situation (Shoorvarzy, 2010).

The value of a firm depends on the profit function of that firm investment; thus, the managers should interact between the expectations of shareholders and the firm favorable investment opportunities, aiming at maximizing shareholder wealth and recognizing the factors affecting the level of investment (Fazzari, 2000).

Recitation

In economic sector, the most important factor involving in increasing the investment and consequently the economic development and growth is having strong and efficient financial markets as well as appropriate financial institutions in these markets. Attracting the capital, managers provide resources needed to finance projects with positive net present value for the firm; but many factors can influence the firm's investment decisions. Affecting the selection of investment projects, the factors can affect the capital cost, profit, profit anticipated by shareholder, and the future value of the firm's stocks (Majluf & Myers, 1984).

If the stock market is efficient, the stock price will intellectually reflect the final product of investor because the firm's investment decisions are based on the stock market valuation of real capital assets which are more than the cost of replacing them. So, there should be a positive relationship between investment and stock prices.

Roll (1998) stated price informativeness perspective based on the efficient market hypothesis. According to this perspective, since the stock price changed due to unanticipated changes in the economic envi-

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ronment of a firm, the efficiency ratio of the firm could not be explained by market returns. More information about special events of the firm reflected in firm stock price called price information. Roll used two criteria for measuring the worth of the price including concurrency and transparency of prices . He also argued that concurrency was associated with firm-specific information and prices have increased by new information. This information affected stock prices in two forms including re-evaluation after releasing public information and risk arbitrage trading activity that collected personal information and presented to the managers.

The purpose of the study

Purpose of this study was to investigate the effect of stock market on the firm's investment in Iran (Price Informativeness Perspective).

Review of literature

Panahyan and Sadeghi (2010) in their research entitled "Comparative Study of Perceptions of Financial Information Transparency in Explaining the Behavior of Investors in Tehran Stock Exchange and Taiwan Stock Exchange" studied comparatively the effect of perceptions of financial information transparency in explaining the behavior of investors in Tehran Stock Exchange and Taiwan Stock Exchange. The results showed that the improved transparency of financial information on Tehran Stock Exchange could enhance public confidence and increase investor's activities.

Shourvarzi and Azadvar (2010), in another study entitled "Analysis of Investment Opportunities and firms' Performance", evaluated the relation between the investment opportunities and the performance of firms listed in the stock market. For this, 85 firms listed in Tehran Stock Exchange was reviewed for a six-year period (from 2003 to 2008). Finally, regression models were used to test the hypotheses. Results of the study showed that there is a significant and positive relation between the investment opportunities and the firms' performance.

Namazi and Kermani (2008) in their research entitled "Impact of Ownership Structure on the Performance of the Listed firms in the Tehran Stock Exchange" studied the impact of ownership structure on the performance of the listed firms in the Tehran Stock Exchange. The main hypothesis of this research was based on the significant relationship between ownership structure and their performance and specific hypotheses was based on the relationship between own-

ership structure and firm performance. The sample included 66 firms during 2003 to 2007. Statistical method for testing suggested hypotheses in this study was combined data. Findings showed that there was a significant negative relationship between "institutional ownership" and the firm performance and there was a significant positive relationship between the "corporate ownership" and firm performance.

Amarjit Gill *et al* (2012) in their research entitled "Relationship between Corporate Governance and Investment Decisions in Small Firms in India" concluded that investment decisions in small firms had a positive relation with Chief Executive Officer (CEO) tenure, size of board of directors, total assets and firm performance.

Porras & Lopus (2011) in their research titled "Corporate Governance, Market Competition and Investment Decisions in Mexican firms" concluded that separation of ownership encouraged investment decisions and cash flow had a positive effect on the firm investment decisions.

Aldridge *et al* (2011) in their research titled "Corporate Governance and Financial Constraints on Firm Investment Decisions" concluded that the ownership and management structure had a significant effect on firm investment decisions.

Hagard *et al.* (2008) found that firms with higher disclosure quality grades have higher price synchronization. This research directly supports the idea of price synchronization as a measurement for the relative amount of firm-specific information reflected in the price.

Wong *et al* (2006) in their research titled "Turnover of Chief Executive Office and Chinese Firm Performance" concluded that performance of Chinese firms Stock Market did not have a considerable negative effect on management turnover for there is no market for professional managers in China because the Chinese government owned a significant portion of the stocks of public firms.

Baker *et al* (2003) in their research titled "The Price of Shares and Investments in firms Equity Affiliates" studied the price of shares and investments in firms equity affiliates and found that investing in different firms responded the stock market due to the financial constraints.

Research Variables

In this research, market performance, market information and corporate governance are independent variables and investment changes are dependent variables.

Research hypotheses

1. Stock Market has a significant effect on changes in the firm investment.

2. Stock market performance has a significant effect on changes in the firm investment considering the role of corporate governance.

3. Stock market performance has a significant effect on changes in the firm investment considering the role of information.

Population

The survey of all listed firms on Tehran Stock Exchange (Capital Market) Iran other than investment firms, insurance firms and banks are examined. The study period was from 2004 to 2011.

Methodology

The quasi-experimental study of the category of casual study based on real data and stock market Financial statements of listed firms in Tehran stock exchange was performed. Also, to gather data from a library, field methods were used by using data from 77 financial statements of firms listed in Tehran Stock Exchange during the period 2004 to 2011. Finally, multiple linear regression analysis was used through the software Eviews results.

Testing first hypothesis

The first model of the research is as follows:

$$\Delta I_{i,t} = \beta_0 + \beta_1 \Delta CF + \beta_2 \Delta S + \beta_3 C + \varepsilon_{i,t}$$

The model has three independent variables. The results of the model are given in table 1.

Table 1. Change Model

Sig.	t	Coefficients	Independent variable: Changes investment
0.000	-4.73	-0.0609	β_0
0.000	5.028	0.161	DCF
0.000	6.12	0.063	ΔS
0.000	-9.32	-14.07	R
		0.350	R^2
		0.34	adjR^2
		1.91	Durbin−Watson
		68.51	F−statistic
		0.000	Prob (F−statistic)

As shown in Table 1, the F statistic and its significance level indicate that the null hypothesis which means the whole model is insignificant (all coefficients are zero) is rejected and the estimated regression model is significant.

Furthermore, the significance level for all variables are less than 0.05, thus the hypothesis H_0 is rejected and with 0.95 confidence, it can be said that independent variables have a significant effect on the dependent variable. Moreover, the relationship direction is positive for variables of cash flow changes and sales changes and is negative for C_{it}.

Results of Model 2

The second model is the same as model 1; the only difference is entering the market performance variable. The model is as follows:

$$\Delta I_{i,t} = \beta_0 + \beta_1 \Delta CF + \beta_2 \Delta S + \beta_3 R_{i,t} + \beta_4 C_{i,t} + \varepsilon_{i,t} \quad 2$$

Table 2. Change Model

Sig.	t	Coefficients	Independent variable: Change investment variables
0.1892	-1.315	-0.029	β_0
0.000	5.08	0.162	DCF
0.000	6.27	0.065	ΔS
0.0885	-1.707	-0.0304	$R_{i,t}$
0.000	-9.48	-14.39	$C_{i,t}$
		0.355	R^2
		0.348	adjR^2
		1.915	Durbin−Watson
		52.37	F−statistic
		0.000	Prob (F−statistic)

As shown in Table 2, the F statistic and its significance level indicate that the null hypothesis which means the whole model is insignificant (all coefficients are zero) is rejected and the estimated regression model is significant. Regarding the relations between the independent variables and the dependent variable, the t-test significance level for all variables is less than 0.05, except for the market performance variable consequently and it can be said, by 0.95 confidence, all the independent variables except market performance variables have significant effect on the dependent variable. The relationship direction is positive for variables of cash flow changes and sales changes and is negative for C_{it}.

According to the second model, the independent variable of market performance does not have a significant effect on the dependent variable of changes in the firm investment. Wong tests are used for comparing the two coefficients of determination of models 1 and 2 to ensure the impact of market performance variable on investment changes, the results are given in Table 3.

Table 3.Wong tests

0.35	R^2_1
0.355	R^2_2
1.308	Statistic- Wong
0.1929	Sig.

The significance level of the test is greater than 0.05, consequently, it can be said that there is a significant difference between the two models determination coefficient.

Little difference between the coefficients of the two models, insignificancy of relationship between market performance variable and the dependent variable, and the results of Wong Test indicated that market performance variable entering is not affected by changes in the firm investment. Consequently, the first hypothesis, that is, the significant impact of the stock market in firm investment changes was rejected.

Testing second and third hypothesis
The following regression model is used to test hypotheses 2 and 3:

The results of model 3 in the two groups of firms with high transparency and low transparency are given in table 4.

$$\Delta I_{i,t} = \beta_0 + \beta_1 \Delta CF + \beta_2 \Delta S + \beta_3 R_{i,t} + \beta_4 R_{i,t-1} G_{i,t-1} + \beta_5 R_{i,t-1} In_{i,t-1} + \beta_6 C_{i,t} + \varepsilon_{i,t}$$

Table 4. Change Model

Sig.	t	Coefficients		Dependent variables: investment level
0.377	-0.88	-0.045	transparent	β_0
0.3099	-1.017	-0.025	non- transparent	
0.031	2.186	0.117	transparent	DCF
0.000	5.070	0.215	Non- transparent	
0.0002	3.800	0.065	transparent	ΔS
0.000	4.19	0.057	Non- transparent	
0.5232	-0.64	-0.037	transparent	R
0.103	-1.58	-0.069	Non- transparent	
0.675	0.419	0.017	transparent	(R*G)
0.1310	1.514	0.0311	Non- transparent	
0.3292	0.98	0.085	transparent	(R*ln)
0.2664	1.11	0.049	Non- transparent	
0.000	-6.608	-15.93	transparent	$C_{i,t}$
0.000	-6.44	-13.30	Non- transparent	
	0.468		transparent	R^2
	0.314		Non- transparent	
	0.437		transparent	adjR2
	0.299		Non- transparent	
	1.802		transparent	Durbin−Watson
	1.78		Non- transparent	
	15.005		transparent	F−statistic
	20.56		Non- transparent	
	0.000		transparent	Prob (F−statistic)
	0.000		Non- transparent	

As shown in Table 4, the F statistic and its significance level indicate that the null hypothesis which means the whole model is insignificant (all coefficients are zero) is rejected and the estimated regression model is significant.

As can be seen in the table, the significance level for all variables, except the market return (R), market return in corporate governance variable (corporate governance performance of the stock market) and market returns variable in information valuation (stock market information performance) are less than 0.05.

Consequently, the second and third hypotheses, that is, the significant impact of information performance and the stock market corporate governance on firm investment changes cannot be accepted.

Conclusions

According to the results of the hypotheses test of the role of corporate governance and stock market information and rejecting these hypotheses, we can conclude that the stock market does not affect the firm investment in Iran. The inefficiency of market is the reason of ineffectiveness of the role of market information in firm investment in terms of information and challenges of facing the capital market in Iran. An efficient market with the broad concept of efficiency is not proved in Iran.

Finally, it is also suggested that the stock market increases the decentralization of firm control, decreases manager's power pursuing personal interests, and improves the firm performance using effective control and monitoring over managers decisions and administrators.

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