Investigating the effective indexes on investment and stocks abnormal return increasing of accepted firms in Tehran Stock Exchange

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Abstract: This study is an attempt to investigate the abnormal return and effective indexes on capital increasing in Tehran Stock Exchange. The sample size of the present study includes 296 firms in the period of 1998to 2008. The findings of this study show that abnormal return is affected by effective factors on capital increasing in accepted firms in Tehran Stock Exchange and basically affected by variables like capital increasing resulted from stock liquidity, cash and claims, rate of ownership centralization, firm size, debt ratio and firm size. Also, announcement of capital increasing from cash and claims at the end of announcement week had positive cumulative return for stockholders which was 2.72. The results of this study revealed that in Iran market the stockholders in reaction to this announcement pay more attention to capital increasing than other mentioned factors.

Key Words: abnormal return, percentage of equity financing, the firm's stock liquidity, rate of ownership centralization, size of firm, firm debt ratio, kind of industry

Introduction

Establishing the priority as a way of financing in accepted firms in Tehran Stock Exchange is more common in comparison to stock dividend. The conducted studies showed that the decision making on financing and establishing the common stocks predict better future of firms. The investors expect the dividend increases after capital increasing. In this study, deciding to establish the stocks sends some signals to market and if these signals have significant content, they have positive effect on stock volume. Consequently, the stockholders will face with positive return in announced date and capital increasing as well. The studies also showed that if the announcement of capital increasing does not contain significant message of high profit of firms, this type of financial decision making lacks abnormal return.

There are different types of financing methods such as bonds establishing, stock dividend, banking loan and capital increasing through priority. One of the most common methods of financing in Iran, i.e. establishing stocks through priority was focused in this study.

What is important for stockholders is "what effect does management decision making to increase capital have on stockholders wealth? and what is the value of priority certificate for them?"

In the condition of asymmetric information, the exposure and announcement of priority establishment can affect the return ratio of stockholders in stock exchanges.

As the result of priority passing, along with stock exchange of common stocks, there will be a market for priority certificate. The value of priority certificate depends on common stock price. Boyant (1983) suggested that the effect of deciding to establish stocks on price should be separated from the effects of priority establishing and guaranteed public stock providing. Selecting every method of providing and selling the stocks have expenses for firms. If it is supposed that other factors do not change, it is expected that the market react positively to that method which has less expense. Since the announcement of stock establishing and selling method selection are simultaneous, the stock price change is the result of combination of five following effects:

1. Investment project effect: if it is expected that the capital increasing be invested on new projects with theoretical and positive value, then the stock price will increase at the time of establishing.
2. Symbol effects: Managers my disclose the private and secrete information through financial decision making and capital structure changing.
3. The effects resulted from changes in capital structure: the effects of stock price can be resulted from revenue and wealth added tax, expected expenses, broke up, and dividing the wealth among stockholders and those have bonds.
4. Management motivation effects: the representative expense model predicts that the capital structure of firms affects the management

motivation to decide about stockholders' properties.

5. The effects caused by financing expenses of securities: it should be taken into account that the first four effects are the same for two methods of priority establishing and the guaranteed public providing method and there is no systematic difference between two forms based on the method type. The only difference between these two methods of stock selling is related to the financing and establishing expense.

Research Background

Different hypotheses were presented to justify lack of reflecting the firms borrowing in financing completely which are presented below in details:

1. Information asymmetry hypothesis: managers have more and better information about firms in comparison to market in the world of information asymmetry.Managers know more about the firms because they have more private and secret information,that is, they access to particular type of more firm information before the market become aware of it.For example, Meyers and Major (1984) suggest that if investors have less information about the actual value of firm, they may misprice the shares of the firm. If the firm has to financial the new projects through stocks selling, the pricing may be less that market value and new investors gain more that the net present value of the project and the previous stockholders face with losing.The rare, in such a situation the firm has to ignore the new project investment with positive net present value (Harris and Rio, 1991).

2. Fixed or stable balance theory: This theory says that tax debt advantage increases the value of a firm which has debt. On the other hand, bankruptcy and financial crisis costs resulted from not doing obligations on time decreases the firm value. So we can consider the capital structure of the firm as the balance between tax debt advantage and probable bankruptcy and financial crisis cost

resulted from debt (Braila and Mayors, 2004).

3. Free cash flow theory: is another theory which explains the capital structure and has a suitable back ground.studies which was introduced in 1986 by Michel Jenson.They theory has important reactions for capital structure. According this hypothesis paying dividends to the shareholders increases the free cash flow of the firm. Therefore, it is expected that increasing the payable dividends with reduction manager's ability to follow the goals or activities which are in conflict with stockholders interest, the interest of stockholders increases.

Reviewing the studies conducted in other countries:

Hans (1988) estimated the average abnormal return for a period of two days for providing stocks by industrial firms as -2.61 and for public firms as -1.21 in which guaranteed priority providing had a significant abnormal reduction in stock price before providing of stocks, but there was no abnormal reduction in stock price in provision or current periods of presenting stocks.

Schools (1972) investigated the price effects of providing of stocks based on comprehensive abnormal return for 696 cases of stocks in New York Stock Exchange from 1926-1966. The average abnormal return of the date before providing was positive and in providing month reduced about 3 percent, but after providing month, there was no abnormal benefit or loss. Therefore, these findings rejected the hypothesis of price pressure and considered the little reduction of price as the information effect. He suggested that stock selling does not provide proper information about the future of firm.

Tesangarakiss (1996) analyzed the price reaction of stocks to priority establishing in Greece for the period of 1980-1990 and the findings were different from findings resulted in the U.S.A. There was no organized second market for priority establishing in Greece during the period. In Greece most of stocks belong to government or special families which follow the limitation of ownership. Providing the stocks in Greece is in the form of priority method. One of the differences between these two methods is the possibility of property transfer from new stockholders to old ones as the result of information asymmetry among managers and external investors.

In spite of public providing method, if all stockholders use their priority right, then the effect of wealth transferring explained by Mayers and Mayolf(1984) will be unrelated. As a result, the stock price effect in relation to priority establishing announcement cannot be considered the result of information effect. In this study the priority establishing of stock daily return of every case for a period of 211 days was calculated. The average abnormal return

on announcement day was 2.45. The average abnormal return for 2 days before announcement was 3.97, for all days before announcement was 11.52. Tesangarakiss suggested that these abnormal returns before announcement are due to the management decision disclosing about priority providing suggestion. Another reason is the information of individuals inside the organization because dealing with secret information was not forbidden.

The negative hypothesis was that abnormal return around announcement date was zero. His findings showed that this hypothesis can be accepted. He concluded that priority establishing announcement of stocks has negative effect on price stock. These findings are consistent with findings of Kang (1990) and to some extent with Zimmerman and Loader (1988). The findings of the study on priority method in Greece showed that:

a. The findings in Aten stock exchange cannot justify the information asymmetry hypothesis of Heller and Rock (1985). In return this hypothesis predicts good news about investment. In other word, the stockholders believed that the firms establish new shares with current positive net price for financing.
b. The findings of price pressure hypothesis did not support the dividing of the wealth for the second time.
c. The shareholders are indifferent about price of subscription in regard to priority establishing.
d. The symbols effect hypothesis was verified because market reacts positively to centralized ownership as the signs about future perspectives of firm. These findings are consistent with the findings of Velen (1985) about the relationship between stock providing and higher centralized ownership with less representative effect.
e. Stock establishing has less relationship with selection effects' these findings also are consistent with findings of Masolaz and Nada (1993).

Hypotheses
1. There is a relationship between capital increasing from cash and claims and abnormal return ratio.
2. There is a relationship between stock liquidity and abnormal return ratio.
3. There is a significant relationship between ownership centralization rate and abnormal return ratio.
4. There is a significant relationship between firm size and abnormal return ratio.
5. There is a significant relationship between firm debt ratio and abnormal return ratio.
6. There is a significant relationship between type of firm industry and abnormal return ratio.

Research Variables
Capital Increasing

According to article 157 of trading law, the firm capital can be increased through establishing new par value stocks or increasing the current price of stocks and also based on article 158 of trading law, confirming the price of new par value stocks is possible in one of the following ways:
1. Paying the par value in cash.
2. Changing updated claims of firm's individuals into new stocks.
3. Transferring the non –divided profit or savings into firm's capital
4. Changing bonds into stocks.

The form of capital increasing in this study is increasing through cash and claims.

Abnormal Return

Abnormal return is the difference between real return of firm (Rj.t) and real return of market (Rm.t) and calculated through the following equation:

$ARj.t=Rj.t-Rm.t$

In this formula:

$ARj.t$= abnormal return of firm j in the week of t

$Rj.t$= real return of firm j in the week of t

$Rm.t$= real return of market in week of t

The real return of firm ($Rj.t$) is calculated as:

$Rj.t = \frac{\Delta Rj.t + Dj.t}{Pj.(t-1)}$ -15‹t‹12 j=1,2,……n

$Rj.t$ = real return of firm j in week t

$Pj.(t-1)$= the price of stock market of firm j at the end of week t

$Dj.t$= advantages resulted from priority

The advantages resulted from priority ($Dj.t$) is calculated via:

$Dj.t = PPR (PAMj - 1000)$

In this formula:

PPR= capital increasing from cash and claims

PAM= the first stock market price of firm j after board meeting extra ordinary

1000= par value of every share accepted in Tehran Stock Exchange

Real return of market is calculated through:

$Rm.t = \frac{\Delta t}{I(t-1)} = \frac{It - I(t-1)}{I(t-1)}$

In this formula: $Rm.t$= real return in week t

It= total stock market index at the end of week t

$I(t-1)$= total stock market index at the end of week before week t

Capital increasing percent

Amount of capital increasing is calculated through the following equation:

Capital

Increasing=

$$\frac{Number\ of\ shares\ after\ capital\ increasing - number\ of\ shares\ beforecapital\ increasing}{Number\ of\ shares\ before\ capital\ Increasing}$$

Stock Liquidity of firm

Stock liquidity of firm is the ratio of exchanges of firm stock during one year before increasing to average number of stocks of shareholders during one year before capital increasing.

Rate of Ownership Centralization

It is the way of dividing stock ownership among stockholders. In other words, if the main part of stocks is allocated to a limited number of stockholders, the firm will be centralized.

Firm Size

In this study, the firm size means the market value of the firm which is calculated through:

$S_j = \log(N_j \times p_j)$

Firm Debt Ratio

Firm debt ratio is the ratio of firm debt to total properties based on the last balance sheet before capital increasing.

Kind of Industries

It means the industry that focused firm in this study is active and works in this field.

Methodology

The required data of the present study obtained from annual financial statements (income statement, balance sheet, cash flow statement) of nonfinancial firms selected at the end financial year. The period of this study is 10 years which is from 1998-2008. The research data are obtained from all nonfinancial firms accepted in Tehran Stock Exchange and the sample size of this study includes 296 firms using the Criteria-filtering technique. Table1. shows the frequency of every industry and Table2. shows the frequency of centralized and semi-centralized firms of the samples in the present study. Table3. Shows some of central indexes and research variable scattering.

Table 1. Frequency of every industry in study

Industry Code	Industry Name	Frequency	Percentage
1	Food Industries	37	12.5
2	Chemical and oil Industries	40	13.5
3	Basic metals and marbles	52	17.6
4	Mine extraction and metals	34	11.49
5	Equipment	37	12.5
6	Trafficking facilities	20	6.76
7	Financial mediating	29	9.8
8	Telecommunication and electric sets	20	6.76
9	Textile	9	3
10	Paper and publication	6	2
11	Plastic and tire	12	4.09
Total		296	100

Table2. Frequency of centralized and non-centralized firms in study

Centralization degree	description	Frequency	percentage
1	centralized	238	80
2	Non-centralized	58	20
	Total	296	100

Table3.central indexes and variable scattering

Variables Description	Abnormal return	Capital Increasing	Stock Liquidity	Ownership centralization rate	Firm size	Firm debt ratio	Kind of industry
Mean	1.052	80.9411	12.1256	67156	.0524	.254	.00245
Median	.9588	51.110	12.1600	.7435	.0404	.0408	.00180
First quarter	.7734	34.23	10.8400	.6217	.0218	.0314	.00070
Third quarter	1.1866	102.10	11.5400	.8309	.667	.0556	.0041
SD	.3760	62.2526	.5263	.1441	.436	.476	.00356
Range	2.23	300.000	3.01	.7091	.2104	.2204	.0158
Minimum	.50	1.1030	9.46	.2818	.0044	.0055	.0002
Maximum	2.80	301.000	13.65	.9712	.2145	.3150	.0169
Scattering Coefficient	37.70	77.62	4.92	20.14	83.25	84.35	105.20

The coefficient matrix of the research variables is shown as the following:

Table 4. The coefficient matrix of the research variables

		Abnormal return	Capital increasing	Stock liquidity	Ownership centralization rate	Firm size	Firm debt ratio	Kind of industry
Abnormal Return	Correlation coefficient	1.000	.752**	-.015	.762	.052	.856	.672
	P-value		.001	.848	.001	.489	.846	.269
Capital Increasing	Correlation coefficient	.752**	1.000	.189*	.421**	-.154*	.316**	.279**
	P-value	.001		.012	.000	.38	.000	.000
Stock liquidity	Correlation coefficient	.015	.189*	1.000	.0152*	-.209**	.094	.752**
	P-value	.848	.012		.37	.005	.217	.001
Ownership centralization rate	Correlation coefficient	.753**	-.15	.0154	1.000	.053	.130	.276
	P-value	.001	.848	.37		.480	.087	.000
Firm size	Correlation coefficient	.052	-.154	.316**	.094	1.000	-.072	.082
	P-value	.489	.038	.000	.217		.342	.318
Firm debt ratio	Correlation coefficient	.130	.316**	-.072	-.094	.209	1.000	.761
	P-value	.87	.000	.342	.217	-.005		.0001
Kind of industry	Correlation coefficient	.015	.189*	-.203**	.023	.094	.544**	1.000
	P-value	.848	.012	.005	.002	.217	.005	

* is significant at the level of.05

** is significant at the level of.01

Research Results and Discussion

This session includes discussion of findings of this study about the hypotheses of study.

First hypothesis: to answer this hypothesis, it should be said that capital increasing from cash and claims and abnormal return have significant and direct relationship and it is consistent with findings of Tesangarakiss Marsh (1979). These findings reject price pressure hypothesis. This hypothesis indicates that new stock providing increasing causes price reduction. These findings show that in Iran market, investors pay attention to capital increasing announcement as an effective variable.

Second hypothesis: to answer the second hypothesis, it could be said that there is no significant relationship between stock liquidity and abnormal return ratio. The findings of this study are consistent with findings of Tesangarakiss and reveals that investors in Iran market pay less attention to exchangeability of stocks to react to capital increasing announcement.

Third hypothesis: to answer to the third hypothesis, it should be said that there is no significant relationship between ownership centralization rate and abnormal return ratio. These findings suggested that in Iran market, firm stock ownership distribution is less paid attention due to

reaction of investors to capital increasing as an effective variable.

Forth hypothesis: to verify or reject this hypothesis, it should be said that there is no significant relationship between firm size and abnormal return ratio. These results are consistent with findings of Tesangarakiss and indicate that investors in Iran market in reacting to capital increasing announcement, pay less attention to firm size.

Fifth hypothesis: to answer fifth hypothesis, it could be said that there is no significant relationship between firm debt ratio and abnormal return ratio. These findings are consistent with findings of Tesangarakiss and indicate that investors in Iran market pay no attention to debt in reacting to capital increasing announcement.

Sixth hypothesis: to reject or verify the last hypothesis, it could be said that there is no significant relationship between kind of industry and abnormal return ratio. This indicates that in Iran market the kind of industry is not paid attention by industry in reacting to capital increasing announcement.

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