

Full Length Research Paper

The relationship between the percentages of free float shares and liquidity of shares in the companies accepted in Tehran Stock Exchange

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Free float share is a percentage of total company's capital which is available to stock market transactions. In this study, past information of the sample companies in Tehran Stock Exchange was used to investigate the relationship between percentage of free float shares and share market liquidity, number of buyers, number of transactions and turnover ratio of shares. The aim of this study is to assist investors and stock exchange companies to discover the relation between free float shares and share market liquidity of the stock exchange companies in different amplitudes of free float stock, and make an awareness decision according to the result of this research. For this purpose, the information of about 63 companies in Tehran Stock Exchange has been used. To examine the relationship between the variables, the seasonal variables' data of the model were calculated and used in twenty periods, each consisting of three months from the beginning of 2005 to the end of 2009. Finally, the research result shows a direct relationship between free float shares and the number of buyers, number of transactions and turnover ratio of shares. This shows direct and positive relationship between liquidity and free float shares.

Key words: Percentage of free float shares, the number of buyers, shares turnover ratio, the number of transactions.

INTRODUCTION

Achieving economic growth and increasing the tendency of people to invest require adopting substantial policies in order to obtain appropriate efficiency in new investments. Facilitating further transaction possibility of securities has been the main motivation to create the stock market as the fundamental pillar of financial resources. Thus, the private sector distributed capital should be collected and allocated as it will improve the economy and provide benefits to investors. The role of the private sector should be more prominent and this requires that the government decreases its ownership role on the shares of the companies accepted in stock exchange. Government's intervention in the market and low float shares market

leads to reductions in turnover and increase of liquidity in the market. In this regard, it is necessary to consider the strategies that many of the world exchanges apply.

To attract capital investment and encourage investors to buy shares, companies need to have some information in order to compete with other companies and lead investors to their business. They need to follow incentive policies to achieve this. Free float share is one of the tools that managers can access in this regard so that they can know the amount of free float shares they can use to attract more investors and also increase the liquidity of their shares. Investors also look for shares of companies that can easily be traded and enjoy high

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liquidity. As a result, the free float shares may be of a great importance to both investors and managers.

Share liquidity is increased if the stock market, not cash and liquid market, will create incentives for attracting investment. Increased liquidity is necessary for companies to increase the percentage of free float share. And most countries are adjusting exchange index on the basis of free float shares. If the free float share company and the market potential liquidity are high, with lower price fluctuations then investment risk will be reduced. The relationship itself is increasing demand. Therefore, this study identifies those companies with higher (minimum 20%) percentage of free float shares, and compares them with companies having less percentage. Has this amount been able to improve their liquidity standards? And what is the relationship between the percentage of free float and liquidity indicators? The purpose of this research is: to understand the effects of free float share on stock liquidity and liquidity indicators. And since market liquidity of the shares is defined by three factors: the number of buyers, the number of transactions and the ratio of shares turnover, therefore for this study, one main hypothesis and three sub-hypotheses were designed and tested using appropriate statistical methods.

LITERATURE REVIEW

Definition of free float shares

Free-floating share is a percentage of the total capital of a company that is available for trading in the stock market or part of a company's shares that are tradable without limitation. And it is a figure that is obtained from deduction of non-tradable shares from the total number of shares of the company. This definition was first presented by Salmon (1989). In other definitions, free float shares do not include the part of stock owned by the government or company-managing shareholders who are never willing to sell their shares. In India, this type of share that is not used in the calculation of free float shares is called strategic-shareholder-owned shares Ideo Shingo (2001). Strategic share-holders include:

1. Governments: including companies and government agencies.
2. Companies: the stocks of companies that were held by themselves. It means mainly the treasury stock.
3. Shares of others, including shares of managers and board members and family members that have management roles in the company and/ or those individuals and managers who are dependent on it.
4. Shares of workers.
5. Shares of the foundations.
6. Shares of the pension funds (it is sometimes considered in the definition of free float shares).
7. Shares of the banks (it is sometimes considered in the

definition of free float shares).

Percentage of free float shares of each company is calculated based on the information existing in combination of shareholders in the last annual meeting. And throughout the year, changes in ownership structure are modified with new information. One of the problems in emerging markets, particularly in Tehran Stock Exchange is the low floating shares. Low free float shares increase the possibility of price manipulation by large traders and can lead to serious events such as loss of market and formation of price bubble which ultimately leads to reduced investors' confidence on the capital market. For this reason in many world markets, companies that have less than a certain amount of free float shares are eliminated from exchange companies lists. The Stock Exchange Council has also considered the problem of free float shares. According to the requirements, major shareholders of the Stock Exchange companies are required to offer at least 20% of their shares extensively within 2 years from the date the company is listed, so that at the end of this period, the company must have a minimum of 20% of free float shares. Now concerning some companies in Tehran Stock Exchange, amount of tradable shares on the market is limited, and this increases the risk of price making and misuse of this problem. This phenomenon is more acute in companies that are newcomers to Stock Exchange. Because of the lack of historical information in these new companies, the spread of gossip and unprecedented stocks price growth is higher.

The goal to comply with the minimum amount of free float shares is of open market operations. In fact, stock exchange of countries that enjoy a lower amount of free float shares has less depth and is very fragile. It should be noted that floating share is a good approximation of the real stock supply. If floating shares of a company are high, its stock market will be potentially more cash and its price fluctuations will be lower. As a result, there will be less investment risk, and this will increase the demand (Venkatesh, 2000). Tehran Stock Exchange is also recently calculating and publishing coefficient of the free float shares of the companies whose deals are accepted. This ratio indicates dominance of strategic shareholders in this market. In other words, main stockholders who are generally governmental or quasi-governmental have over 70% of Iran stock market.

In many world stock exchanges, companies with free float shares of less than 25% of their stocks are eliminated from the list of exchange companies. In applying this criterion to Tehran Stock Exchange, more than 50% of exchange companies will be removed from the list of approved companies.

On motivation to keep stock for management purposes, many studies have been done at the international level. Tendency to keep managerial stock is an incentive for maintaining more control over the company's capital and

votes in meetings to decide upon the financial performance or even the company's overall goal. On the other hand, the major shareholders or holders of shares in management would like the company's internal information to remain closed. Infact, this point is not achievable except through limiting the supply of shares in the stock market (Gayant, 2001). For instance, NTT Company in Japan for management purposes has always preferred to keep 67% of the shares of NTT closed so that it can count on it as an investment in the stock exchange market. Elsewhere, it has been noted that many small family shareholders have large amounts of the capital and use it to control the company's aims (Sibel, 1995). In another article, reference is made to the point that many of the shareholders will attempt to maintain or trade the company's stock based on the management system of the company. Yield or expected profit of shares is formed in the shareholders' mind based on the company's general condition (Allen et al., 2000). Another batch of stock monopoly is known as the great capitalists who are motivated to maintain the stock to increase the value of capital in the long term. These investors have immediate communication with the owners of the company's internal information (Gvrtn et al., 2002). About the behavior of owners in releasing or monopolizing stock, a lot of research has been done. In Hong Kong, coinciding with decision making about changing stock index, an important paper entitled "A new look at the stock index in Asia" was published in the University of Hong Kong. In that article, the extent of cross ownership in Asian companies was studied. Family ownership and pyramidal structures of companies are other types of cross ownership. In these conditions, the profits of the parent company are transmitted to new private and family companies and the pyramid structure is extended.

This complex structure affects the index in two different aspects: one is the strong attachment of the pyramid members to the stock, and other aspects are the repetitive calculations of volatility of stock price. Chain companies and their subsidiary companies operating in these conditions will be the major factors in creating an unrealistic large coefficient in index.

Concerning the behavior of small shareholders to the stock, many of these shareholders maintain the good shares of the previous period and release the bad shares of the previous period.

Factors that are known to influence the decisions of the owners of capital include risk and yield, general characteristics of the factory or company, situation of the industry or the group affiliated with the companies and management method of the company, especially the financial sector and the stock, in distribution and maintenance of dividends and financial future of the company (Gayant et al., 2003). The overall performance of the owners of capital is divided into two types. The first group is the shareholders that pay attention to only the profit of each share and optimization of their portfolio, and the other group is those who attempt to obtain

information and control profits of the share.

Another point of concern is foreign investors who are attracted to the stock market based on security of investment in the country and management system of companies and will have a different performance about the maintenance or transaction of shares. In addition, many investing firms with considerable offer of shares of a company attract the public attention and after price drop re-buy the shares at the lowest level of price. And the condition for investors is be able to have a high percentage of the share for trading.

So many companies monopolize a high percentage of their shares in order to prevent a trade. A case of this event was exercised in Hong Kong by the government in 1998. The government purchased a considerable share of the index- member companies so as to lower the trade in the market.

Far (2005), in an article entitled, "Points about Base Volume and Offering a proposal" investigated the role of floating hire in calculation of base volume. In this article, he first explains the current method of calculating base volume and shows that free float shares have verse relationship with basis volume. And the higher the percentage of free float shares of the company, the lower the base volume limitation for it and the easier the price management of companies' shares will be.

Nasotifard (2006), in an article entitled, "Low Percentage of Float Shares and Price Manipulation" expressed that in companies with low free float shares, offer and demand determine the price, and the price will change only according to the will and intention of major shareholders.

Abdoh Tabrizi (2003), in an article entitled, "Free float shares and Base volume" studied Market Index of Iran and stated that free float shares have to be considered in calculating the index. However, due to the difficulty of calculating the float shares, for the appropriate adjustment of index as base volume, the minimum number of transactions that forms share price change in index is used".

One of the problems of markets like Tehran Stock Exchange is the existence of low floating shares. Low rates of free floating shares increase the possibility of manipulation of prices by powerful dealers and this can result in dangers such as marked aberration and price bubbles formation which finally result in the decrease of the investors' reliance on the capital market. Because of this, companies which have less free floating shares than the specified amount are omitted from the stock market all over the world.

Hypotheses

According to the research objectives and literature review subject, the hypotheses can be expressed as follows:

The main hypothesis: the percentage of free float shares in companies accepted in Tehran Stock Exchange

correlates with liquidity of companies shares.

The first sub-hypothesis: The percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the turnover ratio of shares.

The second sub-hypothesis: The percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of stock transactions.

The third sub-hypothesis: the percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of stock buyers.

METHODOLOGY

The type of this research is applied research. The research methodology is deductive and inductive because it is first designed based on the macro model of the deductive method, and then using the inductive method of data collection it moves towards conclusion.

The statistical population of this study included all the companies accepted in Tehran Stock Exchange up to 21/03/2005. This is because the time scope of this study is from 21/03/2005 to 21/03/2009. The total number of these companies is 322. All these companies are divided into twenty groups so that the percentage of free float shares of these companies has been rounded. For instance, companies that have between zero to 5% of free float shares are placed in the class of 5%. Therefore, all the companies are classified into twenty percentage classes as follows: 5-10-15-20-25-30-35-40-45-50-55-60-65-70-75-80-85-90-95-100

However, no company was placed in the class of 95%. Since no company from the classes of 85, 75, 60% had a major activity in these years, the statistical population related to these classes was omitted from the study. Generally, the total statistical population covered 322 companies. The statistical sample of this study included 63 companies that were selected through removal method and according to the following conditions:

- 1) First the companies of the free float shares of which had remained stable during the study period were eliminated. Consequently 142 companies remained.
- 2) Then the sample was selected from among the companies with the float shares rate of which had changed in at least 3 periods out of the 20 periods of study. This sample selection procedure was followed because when the amount of float shares of a company remains fixed, it does not make any sense to investigate the relationship between float shares and other variables. This led to the selection of a sample consisting of 63 companies which are listed in Table 1.

Research variables

Dependent variables

- 1) The number of buyers: the number of buyers of the

shares of companies during one year

- 2) The number of transactions: the number of transactions during one year

- 3) The stock turnover ratio: the ratio is obtained by dividing the volume of transactions in company stock during a year by the fire value of company stock during a year.

For calculating these variables, the TADBIRPARDAZ software existing in the Stock Exchange will be used.

Independent variables

The free float shares: It is the percentage of free float shares of companies during twenty three-month periods from 2005 to 2009.

Hypothesis testing

The first sub-hypothesis: The percentages of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the turnover ratio of stocks.

H_0 : The percentage of free float shares in companies accepted in Tehran Stock Exchange does not have a direct relationship with the turnover ratio of stocks.

H_1 : The percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the turnover ratio of stocks.

Considering the significance level given in Table 2(a) of Pearson correlation coefficient, which is 0.22, and comparing error of 5% and confidence of 95%, we can reject H_0 hypothesis. Therefore, the percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the turnover ratio of shares. And considering the sign and amount Coefficient of Pearson correlation (0.129), it can be concluded that the relationship is direct and positive and with the increase of the percentage of free float shares, the turnover ratio of shares also increases.

Study of linear relationship between the percentage of free float shares and turnover ratio of shares

To investigate the linear relationship between the percentage of free float shares (independent variable) and turnover ratio of shares (dependent variable), we make use of linear regression.

Considering the F amount obtained more than the F table, with 1 and 1-n degrees of freedom and significance level is less than 0.05, we can reject H_0 hypothesis. Therefore, the significance level given in Table 3(a-d) for the analysis of variance, which is 0.22, and comparing it with the permissible error rate, we can conclude that there is relationship between the independent variable and dependent variable with 95% confidence. And this is a linear relationship. A linear regression line has an

Table 1. List of the sample companies of the research.

Row	Companies name	Row	Companies name
1	Tabriz Tractor Manufacturing Co.	33	Bahonar Copper Industry
2	Heavy Equipment Production Co.	34	Iran Pack Co.
3	Iran Tractor Manufacturing Co.	35	JaamDarou Industrial Co.
4	Iran Combine Manufacturing Co.	36	Iran Mineral Processing Research Center
5	Technotar Engineering Co.	37	Rolling Mill & Steel Production Co.
6	Sakhtemane Esfahan	38	SabetSuger of Khorasan
7	Fars Construction & Development Co.	39	Shaker
8	Housing Investment Co.	40	Shahde (KhoySuger)
9	I. T. FORGING Co.	41	EsfahanSuger Co.
10	IAPCO	42	MarvdashtSuger Co.
11	Saipa Co.	43	Bama
12	ElktroKhodroShargh	44	Italran
13	Sadra	45	Iran Plaster
14	JaberEbneHayyan Pharmaceutical Co.	46	Ardakan Industrial Ceramics Co.
15	Farabi Pharmaceutical Co.	47	NeginTabas Coal Co.
16	Shahroud Cement Co.	48	Silica Sand MFG. Co.
17	Sofian Cement Co.	49	Hamadan Glass
18	Fars &KhozestanCement Co.	50	Absal
19	DoroudFarsit Co.	51	Beton Industry
20	Amlah co.	52	Behshahr Industrial development Co.
21	Pars carbon Black	53	Insurance Industry Invest Co.
22	TajhizNiroyeZangan	54	Persian Bank
23	Esfahan Petrochemical Co.	55	Sarmayegozaritoseshahritos
24	Farabi Petrochemical Co.	56	Iran Construction Investment Co.
25	Iran Chemical Industrial Investment Co.	57	Sepah Invest Co.
26	PaK Petrochemical Co.	58	KarAfarin Bank
27	Pars Minoo Industrial Grope	59	Leasing Iran co.
28	Azarbayjan Peghah Dairy Co.	60	Toos Investment Company of Mashhad
29	Esfahan Peghah dairy co	61	Mellat Invest Co.
30	Glucose	62	National Investment Company of Iran (NICI)
31	Azarab	63	Boali Invest Co.
32	Alometik		

Table 2a. Significance level of Pearson correlation coefficient.

Percentage of free float shares	Shares turnover ratio
Pearson correlation coefficient	0.129
Significance	0.22
The sample size	63

equation of the form $Y = a + bX$, where X is the Independent variable and Y is the dependent variable. The slope of the line is b , and a is the intercept (the value of y when $x = 0$).

Linear regression attempts to explain this relationship by fitting a curve to the data. The linear regression model postulates that:

$$Y = b_0 + b_1 x_1 + \dots + b_n x_n + e,$$

Where the x_i is independent variables and the "residual" e is a random variable with mean zero. In this applet, we consider the simplest example of fitting a straight line:

$$Y = a + bx + e.$$

The coefficients a and b are determined by the condition that the sum of the square residuals is as small as possible.

Table 2b. Significance level of Pearson correlation coefficient.

	Regression coefficient	t	The significant level
Constant	B0=2.399	17.986	0.00
Free float shares	B1=8.259e-03	2.143	0.22

Table 2b. Significance level of Pearson correlation coefficient.

	Regression coefficient	t	The significant level
Constant	B0=2.399	17.986	0.00
Free float shares	B1=8.259e-03	2.143	0.22

Table 2c. Significance level of Pearson correlation coefficient.

Percentage of free float shares	Shares number of transactions
Pearson correlation coefficient	0.214
Significance	0.011
The sample size	63

$$y = a + bx \quad b = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n\bar{x}^2} \quad a = \bar{y} - b\bar{x}$$

Considering the correlation coefficient (Table 2(b) that shows b_0, b_1 ($b_0 = a$ and $b_1 = b$), we can state the linear relationship is as follows:

Y = Ratio of stock turnover (Dependent Variables)
 X = Percentage of free float (Independent variables)
 Ratio of stock turnover = 2.399 + 0.008*Percentage of free float shares

The second sub-hypothesis: The percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of transactions.

H₀: the percentage of free float shares in companies accepted in Tehran Stock Exchange does not have a direct relationship with the number of transactions.

H₁: The percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of transactions.

Considering the significance level given in Table 2(c) of Pearson correlation coefficient, which is 0.011, and comparing it with error of 5% and confidence of 95%, we reject the H₀ hypothesis. Therefore, percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of transactions of shares. And considering sign and Pearson correlation coefficient, which is 0.214, we can conclude that the relationship is direct and positive. And with the

increase of the percentage of free float shares, the number of transactions of shares also increases.

Study of linear relationship between the percentage of free float shares and the number of shares transactions

To investigate the linear relationship between the percentage of free float shares (independent variable) and the number of shares transactions (dependent variable), we make use of linear regression of the charges.

Considering the F amount obtained more than the F table, with 1 and 1-n degrees of freedom and significance level is less than 0.05, we can reject H₀ hypothesis. Therefore, the significance level given in Table 3 of analysis of variance, which is 0.011, and comparing it with the permissible error rate, we can conclude that there is a relationship between the independent variable and dependent variable with 95% confidence. And this is a linear relationship. Considering the correlation coefficient table (Table 2(d)), we can state the linear relationship as follows:

$$y = a + bx \quad b = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n\bar{x}^2} \quad a = \bar{y} - b\bar{x}$$

Y = Number of transactions (Dependent variables)
 X = Percentage of free float (Independent variables)
 Number of transactions = 25.858+0.0045*Percentage of free float shares.

Table 2d. Significance level of Pearson correlation coefficient.

	Regression coefficient	t	The significant level
Constant	Bo =25. 858	19.408	0.00
Free float shares	B1= 4. 552 e - 04	30774	0.011

Table 2e. Significance level of Pearson correlation coefficient.

Percentage of free float shares	Shares number of buyers
Pearson correlation coefficient	0.212
Significance	0.00
The sample size	63

Table 2f. Significance level of Pearson correlation coefficient.

	Regression coefficient	t	The significant level
Constant	Bo = 949.81	1.784	0.076
Free float shares	B1=55.034	3.577	0.00

The third sub-hypothesis: the percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of stock buyers.

H₀: the percentage of free float shares in companies accepted in Tehran Stock Exchange does not have a direct relationship with the number of stock buyers.

H₁: The percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of stock buyers.

Considering the significance level given in the Table 2(e) of Pearson correlation coefficient, which is 0.00%, and comparing it with error of 5% and confidence of 95%, we can reject the H₀ hypothesis. Therefore, the percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with the number of stock buyers. And considering sign and Pearson correlation coefficient, which is 0.212, we can conclude that the relationship is direct and positive and that with the increase in the percentage of free float shares, the number of stock buyers also increases.

Study of linear relationship between the percentage of free float shares and the number of stock buyers

To investigate the linear relationship between the percentage of free float shares (independent variable) and the number of stock buyers (dependent variable), we can use linear regression.

Considering the F amount obtained more than the F table, with 1 and 1-n degrees of freedom and significance

level is less than 0.05, we can reject H₀ hypothesis. Therefore, the significance level given in Table 2(f) of analysis of variance, which is 0.00%, and comparing it with the permissible error rate, we can conclude that there is relationship between the independent variable and dependent variable with 95% confidence. And this is a linear relationship. Considering the correlation coefficient table, we can state the linear relationship is as follows:

$$y = a + bx \quad b = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n\bar{x}^2} \quad a = \bar{y} - b\bar{x}$$

Y= Number of stock buyers (Dependent variables)

X= Percentage of free float (Independent variables)

Number of stock buyers = 949.8+0.055%* 1Percentage of free float shares

The main hypothesis: the percentage of free float shares in companies accepted in Tehran Stock Exchange correlates with the liquidity of companies share.

H₀: the percentage of free float shares in companies accepted in Tehran Stock Exchange does not have a direct relationship with the liquidity of companies share.

H₁: The percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with liquidity of companies share.

Considering the significance level given in the Table 2(g) of Pearson correlation coefficient, which is 0.001, and comparing it with error of 5% and confidence of 95%, we

Table 2g. Significance level of Pearson correlation coefficient.

Percentage of free float shares	Power Improved liquidity shares
Pearson correlation coefficient	0.376
Significance	0.001
The sample size	63

Table 2h. Significance level of Pearson correlation coefficient.

	Regression coefficient	t	The significant level
Constant	Bo = 4.327	27.946	0.00
Free float shares	B1=984e-02	6.670	0.001

Table 3. ANOVA.

Source of variation	SS	df	Ms	f	Significance
a					
Regression	7.683	1	7.683	1.051	0.22
Residual	453.185	62	7.309		
Total	460.868	63			
b					
Regression	5623.167	1	5623.167	3.258	0.011
Residual	107008.70	62	1725.94		
Total	112631.87	63			
c					
Regression	e3.14+ 08	1	3411343.98	29.156	0.00
Residual	e7.23+ 09	62	11700058.1		
Total	7.57e+09	63			
d					
Regression	100.317	1	100.317	10.18	0.001
Residual	611.001	62	9.854		
Total	711.318	63			

reject the H_0 hypothesis. Therefore, the percentage of free float shares in companies accepted in Tehran Stock Exchange has a direct relationship with liquidity of companies share. And considering sign and Pearson correlation coefficient, which is 0.376, we can conclude that the relationship is direct and positive, and with the increase of free float shares percentage, the liquidity of companies share also increases.

Study of linear relationship between variables

To investigate the linear relationship between the percentage of free float shares (independent variable) and liquidity of companies shares (dependent variable), we can make use of linear regression.

Considering the F amount obtained more than the F table, with 1 and 1-n degrees of freedom and significance level is less than 0.05, we can reject H_0 hypothesis. Therefore, the significance level given in Table 3 of analysis of variance, which is 0.001, and comparing it with the permissible error rate, we can conclude that there is a relationship between the independent variable and the dependent variable with 95% confidence. And this is a linear relationship. Considering the correlation coefficient table (Table 2 (h)), we can state the linear relationship as follows:

$$y = a + bx \quad b = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n\bar{x}^2} \quad a = \bar{y} - b\bar{x}$$

Y = share Market liquidity (Dependent variables)
 X = Percentage of free float (Independent variables)
 Share Market liquidity = $4.327 + 0.0029 * \text{Percentage of free float shares}$.

Conclusion

Due to the fact that the subject of floating shares is a new subject, the relationship between the percentage of free float shares in the companies accepted in Tehran Stock Exchange and liquidity of the stock of these firms was examined, so that through the use of the results of this research both investors and companies accepted in stock Exchange can understand the relation between percentage of free float shares and the liquidity of the stock of companies at different intervals of float shares and also at different industries. Investors and companies can make more informed decisions in investing and the rate of free shares for transaction respectively.

The result of the first hypothesis has confirmed the relationship between the amount of float shares and turnover ratio of shares companies and this relationship is positive.

The result of the second hypothesis has confirmed the relationship between the amount of float shares and number of transactions of company's shares, and this relationship is positive.

The result of the third hypothesis has confirmed the relationship between the amount of float shares and the number of stock buyers, and this relationship is positive.

Based on the obtained results, we find that there is a direct relationship between the free float shares of companies and the liquidity of their stocks. The greater the percentage of free float shares of companies; the greater the liquidity of their stock, the number of buyers and their frequency of transactions will be compared with companies that have a lower percentage of free float shares. And their rate of transactions and as a result the turnover of their stocks and their market value will increase. This is because more people invest in the shares of these companies and their stock purchases and sales are carried out further. Meantime, if free float share is reduced, stock liquidity decreases and causes trading cost (market impact) to be increased. Of course, in this research it is assumed that other factors have no effect on stock reliability and other economic factors have been considered to be ineffective.

Suggestions

This study suggests:

1) The companies increase their free float shares to enhance Stock market liquidity. Because, stock market liquidity may be an important determinant of firms' ability

to access external capital markets. Our results suggest that firms may have an incentive to promote improvements in their stock market liquidity, as it can lower the cost of raising capital. It may also improve firms' ability to raise capital.

2) The companies increase their free float shares to enhance their Stock market liquidity and to make use of better funding. This can lead to more development of the company through absorbing more capital. As a result, the company will face less risk in stock market fluctuations.

3) It is also recommended that governments, through transferring the shares to the public, increase the percentage of free float shares of the governmental companies existing in the stock market so to fight against money laundering, to attract wandering capitals, and to encourage and stimulate people to invest in financial markets. This enables governments to raise the liquidity of the stock of these companies, intensify the competition among state-owned companies through attracting public capital and accelerate the speed of privatization process.

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