

The Impact of Free Float Shares on the Supply and Demand in Companies Listed in Tehran Stock Exchange

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Abstract- Making rational decisions by investors in the Tehran Stock Exchange is possible through raising public awareness and clearing out any actions available in the market. The aim of this study is the impact of free float shares on the supply and demand in companies listed in Tehran Stock Exchange. For this purpose, the information of some companies listed in Tehran Stock Exchange during the years 1388 to 1392 were studied. The panel data technique was used to analysis of the data and information. The summary and conclusions from the overall test hypotheses show that, the free float share has significant impact on the supply and demand of stocks in the studied companies in the Tehran Stock Exchange.

Keywords- free float share, demand of stock, supply of stock, panel data

I. INTRODUCTION

Free float share represents the portion of shares of a corporation that are in the hands of shareholders who would be willing to sell their shares through suitable recommended price. Being preparation to buy and sell of shares of the company at a price (or a price range) by the buyer or seller called as demand and supply for a stock, respectively. The stock market should be free of any restrictions on the mechanism of demand and just supply and demand determines the price of financial assets so their prices will be close to their intrinsic worth. The main aim of this study was to evaluate the impact of free float shares on the supply and demand in companies listed in Tehran Stock Exchange.

II. LITERATURE AND BACKGROUND OF RESEARCH

One of the basic parameters for the purpose of evaluating the stock market is the percentage of free float share. The Morgan Stanley Capital International as an institution for determination of the free float has defined it as the following form: "It is a part of a stock company that has been in the trade market and not being kept by the management of strategic objectives with shareholders".

Calculating free floating share in Tehran stock exchange (according to the subject of the article (6) of the law

development of new tools and financial institutions) is the coefficient of buoyancy in the total stock of the non-managerial stock sharers at the end of the financial period that the free float is calculated for that period. The Organization shall, at the end of June, September, December and March of each year in a three month sections calculate free float shares and provide the results for a month after the end of the above period. Minimum free float shares for the admission in the two first and second markets of Tehran stock exchange is as follows:

1. The first market-main tableau; at least 20% of the registered shares.
2. Secondary tableau of the first market; at least 15% of the registered shares.
3. second stock market registered; at least 10% of the registered shares

It should be noted that the free float share is effective on stock liquidity, rate of return, risk, supply and demand for stock, stock price volatility. (Jamali, 1387).

Mohammad Reza Asgari et al (1388) conduct a research in titled "impact of free float share percentage on the stock prices volatility of companies listed in Tehran stock exchange" during the years 1384 to 1387 that concluded that the positive and significant relationship exist between the percentage of free float share and stock price volatility for companies listed in stock market and the relationship is different among industries.

Adel Afkhami et al (1388) in a study entitled "The relationship between the percentage of free float and risk and stock returns for companies listed in Tehran Stock Exchange within 3 months of the year 1383 until the end of the first half of 1387, concluded that no significant relationship exist between the percentage of free float share and return and risk, But there is significant relationship between percentage of free float share and liquidity.

Mohammed Jamali Hassanjani et al (1387) in a study examined the relationship between percentage of free float share and performance in companies listed in the Tehran Stock Exchange in the period from 1383 to 1385 and concluded that the relationship between free float and risk and liquidity and P/E is positive and is negative with performance.

Dillo and Johnson (1991) using information hypothesis demonstrated that the direct relationship exist between supply information for the percentage of free float share and stock prices. That is, a stock price with higher percentage of free float shares will increase.

Joel Garboni (2007) has done one of the most recent survey of the Philippines stock exchange based on the free float percentage, he has mentioned the stock companies under the title of the most important barometer of the local price changes In the Philippine stock exchange for a company to be in Exchange market, there should be the following standards: a free floating, capital market flotation, tradability, the average value of daily transactions and the turnover rates.

III. RESEARCH HYPOTHESES

The impact of free float shares on supply and demand of share is significant.

IV. RESEARCH MODEL

The model is evaluated as follows:

$$y = \beta_0 + \beta_1 x_{it}$$

Where

y: supply and demand of shares

x: free float share

V. POPULATION AND SAMPLE

The statistical population in this study is all companies listed in Tehran Stock Exchange during 1388 to the end of year 1392. The Statistical sample is determined by removal method after applying the follows:

- End of the financial year ending in March.
- The company not made any changes financial year during research.
- Financial information is available.

Therefore, sample size of 120 companies was obtained.

VI. FINDING RESEARCH

One way to avoid spurious regression is ensure from being stationary of the data; hence, before estimation of the model, the statistical properties of the panel data were studied in term of being stationary or being unit root. The results of the Dicky Fuller unit root tests for the variables of the model is described in the following table, thus we see that all variables are stationary at level zero.

TABLE I. RESULTS OF THE DICKY FULLER UNIT ROOT TESTS FOR THE VARIABLES OF THE MODEL

Variables	Test	Test statistics at 5% level	Critical Value	results
Supply and demand for shares	Dicky Fuller	-12.25	-2.96	Stationary at zero level
Free float shares	Dicky Fuller	-9.86	-2.96	Stationary at zero level

Source: finding of research

VII. ESTIMATION OF MODEL

In this section of the study, after entering the data into the software and initial estimates of the parameters, the existence or non-existence of a separate intercept for each of the companies must be examined. First, one must be examined the F-Limer test and select data among the accumulated data and non- accumulated data (fixed effects or random effects); where H0 hypothesis is homogeneity of intercept (mixed) and the hypothesis H1 is heterogeneity of intercept (panel data).

$$\begin{cases} H_0: \alpha_0 = \alpha_1 = \dots = \alpha_n = \alpha \\ H_1: \alpha_i \neq \alpha_j \end{cases}$$

$$F_{(n-1, nt-n-k)} = \frac{(RSS_R - RSS_{UR}) / (n - 1)}{RSS_{UR} / (nt - n - k)}$$

If F is calculated from the F table with degrees of freedom (n-1) and (nt-nk) is larger, the null hypothesis is rejected and therefore the bound regression has not validated and should be considered different intercepts in the estimation. The likelihood ratio test was used for this test. In the *Eviews* software and after running of the Redundant Fixed Effects-Likelihood Ratio, if the obtained prob is smaller than 0.05, the panel data method will be accepted at 95% and above, but if greater than 0.05, then the mixed method will be accepted.

TABLE II.

Test Summary	Statistic	d.f.	Prob
Cross-section F	1.03	99,82	0.44

As can be seen, the prob is more than 0.05; as a result, the regression has same intercept and the mixed method is accepted.

VIII. THE RESULTS OF ESTIMATION OF MODEL

After formulation the model and the selection of best method, the estimation results with same intercept for selected companies are as follow:

IX. ESTIMATION OUTPUT FOR FIRST MODEL

variable	pooled		
	Coefficient	t-statistic	Prob
Free float share	-1425423	-15.96	0.00
$\bar{R}^2 = 0.68$	$R^2 = 0.69$		
D.W=1.27			

The aim of estimation of the model is explaining of free float share on supply and demand for shares of companies, based on the estimated probability (Prob = 0.0000), the variable of free float share by -1425423 has a negative effect and has significant effect on the independent variable, that is, supply and demand for shares and the hypothesis is confirmed. The numerical value \bar{R}^2 indicates that how the percentage of change in the dependent variable explained by the independent variables. In fact, if high \bar{R}^2 obtains in the estimates it will be good. On the other side, if \bar{R}^2 is low, which means the model is not bad. In the empirical analysis, achieving to very high \bar{R}^2 not very common but even some of the estimated regression coefficients was insignificant or has signs that they are contrary to previous expectations (Gujarati, 1388, 257). In the present model, $\bar{R}^2 = 0.68$ i.e. 60% of the variability of dependent variables are explainable by above independent variables. The statistic value of Durbin Watson is 1.27 and has small distance with number 2; On the other hand, according to the mixed method and shortness of studied years, one can be claimed the no autocorrelation and correctness of the model.

X. CONCLUSIONS AND RECOMMENDATIONS

Summary and conclusions the overall test hypotheses show that the free float share in the studied companies in the Tehran Stock Exchange has significant impact on the supply and demand of stocks. After a scientific investigation, if the research has been performed in a systematic and scholarly process, the scholar certainly can be proposed some comments about the findings and results. Therefore, the following recommendations will be presented based on the research results.

According to the confirmation the hypothesis, it is recommended the companies listed in Tehran Stock Exchange that used the higher percentage of free float share to establish a logical relationship between the intrinsic value and the price of their shares. And finally offered to investors that review your stock portfolio and taking out their capital from a company with a low free float weight and transfer to stocks with higher free float weights, so that purchase the stock with real price that is determined by demand and supply as well as removing of liquidity problems.

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