Studying the Factors Affecting Price Bubble in Capital Market (Case Study: Tehran Stock Exchange Market)

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ABSTRACT

Financial markets especially the capital market are among the most important means of equipping and allocating financial sources. The stock exchange market is one of the elements of this market. Considering the financial and economic strategic importance of this market, in case there is extensive disruption and deviation in it, it will be seriously problematic to equip and allocate the financial sources of the country. One of the factors causing these issues is the price bubble. Considering the importance of price bubble and following the financial crises caused by the formation of a bubble, the main aim of this study was to investigate the factors affecting the price bubble in the Tehran stock exchange (TSE) market. The statistical sample of this study consists of 166 companies listed in the Tehran stock exchange (TSE) market from 2007 to 2017. In this study, the effective factors and fitting of the main model have been studied using spss software and EViews. The obtained results indicate that based on the fitting of the model, except for variables of size and transparency of information which have not shown a significant effect on the price bubble, other variables including stockholder composition, P/E ratio and liquidity speed have a significant effect on the price bubble.

Keywords:
Price Bubble, Size, Information Transparency, P/E ratio, Liquidity speed.

1. Introduction

The stock exchange market as a place for the formation of the financing flow and investment plays a major role in increasing production of the country thereby attaining progress in the country (Ali Nejad Sarokalaee and Taheri Abed, 2018). One of the important components of the financial markets, stock market and stock exchange market of which activity is transparent and sound. Now, if the stock exchange market does not act properly and efficiently, the price deviations will occur in this market. For this reason, it is important to pay attention to price distortions of the stock exchange market. Since stock markets have been faced with speculative fluctuations during the history of the financial markets. Although price fluctuations are intrinsic to the market, these fluctuations sometimes become abnormal and are replaced by the runaway rises and sudden declines, damaging the stock exchange market seriously(Samadi, et al., 2010).

In case an increase in the assets price in this market is not consistent with their intrinsic value and the macroeconomic factors, it can cause harmful effects for the entire economy. Considering the strategic financial and economic importance of this market, in case of any extensive disruption and distortion occurring in it, it will be seriously problematic to equip and allocate the financial sources of the country (Abdolmaleki et al., 2013). One of the factors causing these issues is the price bubble. The price bubble is intrinsically based on the reaction which is made toward price increases. In this regard, price increase leads to increased enthusiasm for investors, an increase in demand and finally a repeated increase in prices. The increase of demand for assets results from the people's attitude toward the high efficiency of the stock exchange in the past and their optimism about high-efficiency receipt. Such feedback on the price increase causes to increase the prices again more than expected. Anyway, the price bubble is never persistent. Prices cannot grow with ascending trend forever and as the price increase reaches the ending point, the increasing demand will be also ended. Here, ascending feedback replaces the descending feedback. Generally, when a share price is different from the future expected price, the issue of a price bubble in the market will be raised(Fallah Shams and Zare, 2013). Therefore, the increasing importance of the financial asset market in the economy of a country requires a continual investigation of this market. For this reason, this study has aimed to investigate the factors affecting the price bubble in Tehran Stock Exchange Market.

2. Theoretical framework and background of the study

Stock Exchange Market as a part of the capital market plays a very important role in directing savings to the economic production sectors in all countries. Stock Exchange Market is the mirror of the economy of the country but the condition of the macroeconomic variables is not consistent with the ascent of the stock exchange market indices in the economy of many developing countries. One of the factors causing these issues is asset price fluctuation and particularly, the formation of a share price bubble. Different definitions of price bubbles have been given. Some of them are as follows:

1) In the economic literature, the bubble means goods price distortion from the long-term equilibrium price. When the goods or service price is different from its expected price, the issue of the bubble will be raised. In other words, the Rational Price Bubble will occur when the goods price is higher than its intrinsic value. (Alipour, 2007).

2) Taylor et al. mention that the Rational Price Bubble implies that the share price and the divided profit should not be cointegrated. The economic concept of cointegration means that two or more variables of time series are correlated based on the theoretical fundamentals to form a long-term equilibrium relation. Although these time series have a random trend (nonstationary), they follow each other well over time so that their difference is stationary.

3) In the share market, the intrinsic value equals the current value of all future cash flows or the divided profits. In this market, the bubble means the potential distortion of the share price from its intrinsic value(Alipour, 2007).

4) Smith et al. (2006) suggest that the bubble means that the market price of an asset is beyond the current value of the expected cash flows(Smith, et al., 2006).

Therefore, the phenomenon of the bubble is the term that frequently appears in the share markets. Many researchers pay attention to the issue from two perspectives to start this discussion.

The first perspective is the definition of the mathematical economy which describes the bubbles in the asset price. The second perspective is the theoretical economy which discusses the bubble in the share market (Zisimos Apostolos, 2005). Generally, there is no consensus in the literature on the definition of bubble and its causes(Filardo, 2004). Mcqueen et al. studied all types of bubble in the markets. Results of their research indicated that there are four types of financial markets(Mcqueen et al., 1994):

1) Rational bubbles: It means that the share price gets distant from the fundamental values without calling the investors' behavior irrational. In the rational bubble, although the investors are fully aware of the high fundamental value of the share market, they remain in the market because they believe that the bubble will likely grow again.

2) Intrinsic bubbles: Intrinsic bubbles mean the bubbles which occur due to the fundamental factors so that the bubble will grow with growth and improvement of the fundamental factors and publication of the news about it. One of the main characteristics of the intrinsic bubbles is that it takes longer than the rational bubble takes. Another characteristic of the intrinsic bubbles is the sharp reaction toward the news of the fundamental factors.

3) Bubble occurring due to behavior: Bubbles occurring due to behavior are the ones that are caused by the psychological factors and mean a state of ecstasy and happiness which encompass the individuals and form the public thoughts. The collective thought also contributes to this factor.

4) Information bubble: If the price does not reflect the entire information (no accumulation of information), the prices will keep distant from the fundamental value and an information bubble will be created.

2.1. Factors affecting the share price
2.1.1. Fundamental variables
In an efficient market, the share price is first determined by the fundamental factors and is obtained from the composition of two main variables i.e. EPS(Earnings per share) and P/E(the price-to-earnings ratio). A part of the earnings per share may be divided among the shareholders and the remainder is held by the company as a reserve for investment. The future revenue flow of the company is a function of the current earning level and the expected revenue growth of the company.

2.1.2. Technical variables
Technical variables are a combination of the external circumstances which are effective in the supply and demand of the shares. Some of these factors are also indirectly effective in fundamental factors. (For example, economic growth is effective in the revenue growth rate of the companies). Technical variables are as follows:

Inflation: There is a statistically reverse relationship between inflation and share price.

Industrial condition: There is a direct relationship between share price and the industrial condition where there is a share. In other words, in case there is bad news of a company, this news will be effective in other shares that are available in the industry causing to reduce the share demand of that group.

The surrogate markets: The firms listed in the stock exchange market compete with other markets including government bonds, the goods market, the housing market, etc. for attracting the investors.

Major transactions: Major transactions mean the purchases or sales which are made based on the factors except for the intrinsic value. These transactions also include transactions of the hidden information holders. Age conditions: Studies indicate that the age conditions of investors are effective in their decision-making. For example, the more elderly investors' ratio in the share market, the more share demand in the stock exchange market causing share price movement.

Liquidity degree: Liquidity degree shows the degree to which the share is converted into cash. The more liquidity degree of the shares in a firm listed in the stock exchange market, the more demand for purchase of the firm.

2.1.3. Sentimental variables:

Sentimental variables study the mental conditions of the activists in the stock exchange market (individual and collective). It should be noted that purchase or sale can lead to a desirable result based on the sentimental variables. But general conditions governing the market may lead to reverse result.

To use these variables, it is assumed that since the market share is not efficient, this inefficiency can be described with psychology and sociology. For example, one of the assumptions which are available in these variables is that a specified rate of loss is much more painful than that of profit for the investors. broadly speaking, short-term investors usually use the technical variables to select the Intended share while long-term investors use fundamental variables for decision-making. Of course, these investors may use technical variables besides the fundamental variable.

Different studies have been conducted to ingestive the price bubbles and factors affecting it inside and outside the country. Dassios and Li(2018) studying a mathematical model of the economic bubble and the first transient time have shown that scalability is highly important for economic bubbles modeling because it reduces the structure of correlation between price and model parameters. In the end, this study recognizes the dynamics of the time asset price and gives estimations of the bubble collision time. Fantazzini(2016) has studied the presence of a negative bubble of Brent and Western Texas crude oil prices in 2014. Based on the results of this study, there is a negative bubble and is justified beyond the economic basic level. This statement is confirmed with a set of bubble recognition strategies (including financial bubbles tests and LPPL for the financial negative bubbles). Herzog(2015) has studied an eco-physic model for financial bubbles. In this study, it has been shown that the factors recognize only bubbles with time delay and bubble recognition is different in individual or collective perspectives. In this study, the new definition of the asset bubble in financial affairs has been used and generally, the model of this study gives a unique insight into properties and development of the financial bubbles. Mamipour and Sepahi(2015) in a study have analyzed the effect of inexperienced and experienced investors on the formation of the bubble in the Tehran Stock Exchange Market. Results of this study which has investigated 50 companies listed in the Tehran Stock Exchange Market indicate that the effect of inexperienced investors on the

probability of creating Speculative Bubbles is different from that of the institutional and professional investors. The purchase and sale of the inexperienced investors considering the commerce of the professional investors increase the probability of the bubble and can be the main factor of the bubble in the share market. Results also show that the P/E ratio and flow speed cause bubbles while the firm size as the index scale company leads to the reduction of the bubble probability in the share market. Fallah Shams et al. (2014) in a study investigated the effect of individual and legal marketing on the creation of a price bubble in the Tehran Stock Exchange Market. In this study, a bubble recognition test is performed based on the updated market price within 5 min and then, the sample companies are divided into two groups with or without bubble and the size effect of these groups has been studied based on the Logistic Regression model using the available information. The findings indicate the higher effect of natural persons on bubbles as compared with legal entities at the same time.

Among the local studies, Abbasi et al. (2018) also studied the role of a price bubble in the creation of fluctuations of the selected companies of petrochemical and automotive industries listed in Tehran Stock Exchange Market. In this research, the presence of a bubble during 6 years from 2009 to 2014 has been studied from 2009 to 2014 using the price-to-earnings ratio(P/E) durability test for the listed companies of petrochemical and automotive industries. The test results indicate that at a confidence level of 99 %, 63% of the studied companies and a confidence level of 90%, 50% of the companies experience a price bubble. Rasekhi et al. (2017) in another study tested the multiple bubbles in the exchange market of Iran using TADF Unit Root Tests. The results of this study which have been conducted based on the monthly data of the Nominal Exchange Rate during periods 2002:01-2015:12 indicate that the exchange market of Iran has experienced explosive behavior and multiple bubbles. The relative prices of the merchandise explain properly the explosive behavior in the Nominal Exchange Rate. Findings show that the explosive behavior of the Nominal Exchange Rate during periods 2008:9- 2008:7, 2011:12-2011-10 and 2012:6-2012:8 due to the presence of rational bubbles in the exchange rate and during other determined periods has resulted from the fundamental factors of the relative prices of the merchandises. Rasekhi et al. (2016) in a

study entitled "Determining the Price Bubble Period " has recognized the price bubble in the period of 2002-2015 for the Tehran Stock Exchange Market. Based on the results, the explosive behavior and the presence of multiple bubbles have been confirmed in the stock market in intervals: 05 1382-03: 138208: 1388-06: 138802: 1390-12: 2015. While the stock market has not experienced the price bubble in 2015. Also, Ansari Samani and Nazari(2016) in a study identified and ranked the predictor factors of the stock price bubble: Application of logistic regression and Artificial Neural Networks (ANN). In this study, they studied the price bubble condition for 158 companies in 2010-2013. Results of the research tests showed that an increase in the variables of transparency, share float, The price-to-book ratio, share liquidity, Institutional Stock Ownership, and corporate size cause to reduce the share price bubble. After instructing the Artificial Neural Networks (ANN) using the sample data, the network was optimized with in-sample data. In the end, these variables were ranked based on the predictability of the share price bubble using independent variables sensitivity analysis through the Artificial Neural Networks (ANN).

3. Methodology
3.1. Research hypotheses
Considering that this study investigates the factors affecting the price bubble in Tehran Stock Exchange Market, it includes five hypotheses as follows:

1) Firm Size has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.
2) Stockholder composition has a significant effect on the price bubble in companies **listed** in Tehran Stock Exchange Market.
3) P/E ratio has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.
4) Information transparency has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.
5) Liquidity speed has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.

3.2. statistical population and sample
The statistical population of this study includes all companies listed in Tehran Stock Exchange Market

and the statistical sample includes the companies in periods of 2007-2017. 166 of these companies have been selected based on the following conditions and using the elimination method. In other words, the companies which don't meet the intended criteria are excluded and other companies are included in the sample. The intended conditions are as follows:

1) To observe their comparability, the financial year of the companies is ended to 21 March.
2) Transactions of the companies' shares are not interrupted during the intended period and do not change its financial period as well.
3) They are not part of banks and financial institutes (investment companies, holding and leasing companies).
4) The required data of the company should be accessible.
5) It should have been listed in Tehran Stock Exchange Market since early 2007.
6) Share fluctuations of the studied companies should be relatively large.
7) The volume of the sold and purchased shares should be very large.

3.3. Introduction of the studied variables and model
This article has attempted to test the effect of the variables on the price bubble based on the available literature.

Corporate size: It has been determined based on the total market value of the company and in this study, it is equal to market value logarithm of the company i in year t.

Stockholder composition: FREE–FLOAT share is a percent of the total capital of the company which is accessible for transaction in the stock market which can be transacted without any limitation and is the number which is obtained from the subtraction of the number of restricted stock from the total stock of the company.

P/E ratio It indicates the market's expectations of the future profitability growth of the company which is obtained from the division of the current share price of the company in the market by the predicted net earning per share.

Information transparency: To measure the information transparency following Barth et al. (2013), profit transparency is used. the profit transparency is

equal to the Coefficient of Determination(R2) of the regression resulting from stock return and change of profitability.

Liquidity speed(transaction flow) Liquidity power and stock to cash conversion in the market which is measured with factors such as the number of purchasers, frequency of purchase, transaction days, the number of transacted shares, size of the transactions and the share value. In this study, to determine the liquidity rate of the share of the company i in year t, the model proposed by Rian(1996) has been used as follows:

BAS = (AP – BP) / (AP - BP) * 100 / 2

Where:
BAS: the difference between the share bid and the offer price of the company i in year t
AP: Mean of the share offer price of the company i in year t
BP: Mean of the share bid price of the company i in year t

The price bubble has been calculated in this study based on the model used in the study by Abbasian et al. (2010). This model is as follows:

$$P_t = \sum_{j=1}^{\infty} \frac{E_t(d_{t+j})}{(1+r)^j} + b_t$$

Where d_t: Dividend, P_t: Share price at time t and $E_t(0)$ the expected value based on the valuable information at time t. If rate r is fixed during the period, the equilibrium price(fundamental value) is obtained and b_t shows the random bubble rate which causes to establish this relation.

After calculating the price bubble for the studied years,effect of each of the five factors including corporate size, Stockholder composition, P/E ratio,Information transparency, and Liquidity speed(transaction flow) on the price bubble in the capital market will be calculated considering the presence or absence of the bubble based on the Binary Logit method. In fitting of the model, the data for the past six months of the bubble (sudden change in the share price in the market) has been used. The regression model applied in this research is defined as follows(Fallahshams et al, 2014).

$$\log it(p) = \ln\left(\frac{p_t}{1-p_t}\right) = \alpha + \beta_1 x_{1,i} + ... + \beta_k x_{k,t}$$

In this model, the dependent variable (P) is a bivalent variable that indicates the presence or absence of a bubble in the companies.

It is necessary to note that the information about each of the intended variables was extracted from the financial statements and the reports given by the companies to the stock exchange market as well as Tadbir Pardaz and Rahavard Novin accounting software and financial information CD of the companies on the official site of the stock exchange market and Codal site for the studied years and then processed in the Excel and prepared for analysis with Eviews.

4. The research findings

The descriptive statistics relating to all research variables is shown in Table 1. In the first column, the mean of data has been given for the intended variable during the studied years (2011 to 2015) and all studied companies. For example, number 9.8 has been estimated for the size. It means that mean corporate size is equivalent to 9.8 during the studied years. The mean of the stockholder composition is 1.24. The minimum size is 4.6 and the maximum size is 0.88. The mean of the P/E ratio is 3/22, the minimum P/E ratio is -2/236 and the maximum is 2079. The difference between mean and median is significant only in the P/E ratio, indicating the abnormal distribution of this variable. Considering the obtained values, it can be said that the variable of the liquidity speed has the lowest stability among the research variables and the variable of size with the lowest standard deviation has had the highest stability during the ten years of the research.

After presenting the descriptive statistics and before fitting of the main model, the durability test has been performed for all studied variables. For this purpose, the durability of the research variables has been done through four methods (Levin, Lin & Chu(LLC), Im, Pesaran and Shin (IPS), Fisher tests (ADF) and Fisher test (PP) which have been recognized as the most important unit-root tests with panel data. This test examines the hypothesis of the unit root found in the series values. The results of

these tests are given in Table 2 and indicate the durability of all variables to be studied.

After the final classification of the companies into two groups with and without bubble, values of independent variables for each company were collected and its effect on the dependent variable which the presence or absence of the bubble has been tested. In this study, the factors effective in the presence of bubbles have been studied with Logit Model using spss software and EViews. As mentioned above, the independent variables used for fitting of the Logit Model include P/E ratio, corporate size, transaction flow speed, Information transparency, and stockholder composition. Summary of the results of the Logit Model based on the past 6-month period data before bubble is given in the following Table by applying the constant ratios in the model based on EViews software.

Table 1: The descriptive statistics of the research variables

Variable	Mean	Standard deviation	Minimum	Maximum	Median	Skewness	Kurtosis
Size	8.9	2.1	6.4	88.0	8.8	31.7	1215.7
STc Stockholder composition	24.1	15.5	5.0	90.0	20.0	1.5	3.1
PE P/E ratio	22.3	105.4	-236.2	2079.0	6.5	11.4	161.2
TIn Information transparency:	2.5	19.3	-68.0	518.7	-0.1	12.3	305.6
LS Liquidity speed	197.1	119.6	1.0	526.0	193.0	0.4	-0.4

Table 2: Results of the unit-root for the model variables at level of

Test method \ Variables	Levin,lin cho-stat	Im, Pesaran and Shin W-stat	ADF-fisher Chi-square	PP-Fisher Chi-Square	Result
Size	-565/710 0000/0	-09/16 000/0	087/283 (9586/0)	366/446 000/0	I(0)
STc Stockholder composition	-98/48 000/0	-78/7 000/0	746/767 000/0	481/952 000/0	I(0)
PE P/E ratio	-735/54 000/0	-357/15 0000/0	825/558 000/0	215/638 000/0	I(0)
TIn Information transparency:	-8360/32 (0.000)	-145/10 (0.000)	796/433 (0.000)	961/559 (0.000)	I(0)
LS Liquidity speed	-47/17 (0.000)	-28/3 (0.000)	673/294 (0.2353)	088/344 (0.004)	I(0)
Bubb Bubble	-66/16 (0.000)	-15/5 (0.0036)	606/229 (0.000)	895/204 (0.000)	I(0)

Reference: The research findings

Table 3: Results of studying the factors affecting the price bubble in EViews software.

Independent variables	Coefficient	Significance level
C	-0.167955	0.0018
Size	-0.022516	0.0067
STc	0.004006	0.0021
PE	0.000623	0.0048
TIn	**0.001726**	**0.1416**
LS	0.094331	0.0244
McFadden R-squared	0.765477	
Log-likelihood	-128.1980	
Restr. log-likelihood	-509.5508	
Prob	0.027948	

Based on the obtained results of the output of the Logit Model, all studied variables (corporate size, Stockholder composition, P/E ratio, and Liquidity speed) but Information transparency have a significant relationship with the price bubble.

The results obtained from fitting the model of studying the factors affecting the price bubble were analyzed in SPSS software and its results are given in Table 4.

Based on the results which were obtained through SPSS software, other variables than corporate size and Information transparency show a significant effect on the price bubble.

The more correlation between variables of the logistic regression, the more suitable variables selected

for the fitting of the model. The correlation coefficients were also calculated for the studied variables and given in Table 5. Wald test statistic for each of the variables and obtained error level indicates the significance level of the coefficients in the model. Value of goodness-of-fit(Log-likelihood) and correlation coefficient were two correlation indices, indicating goodness-of-fit of the corresponding function. Considering the given Table, the goodness-of-fit of the model is 65 %, indicating that the model has the relatively good fitting.

In sum, based on both calculating methods, the independent variables but the corporate size and Independent variables have a significant effect on the price bubble.

Table 4: Results of studying the factors affecting the price bubble in SPSS software.

Step 5	B Constant ratio	S.E. Standard deviation	Wald test	Df degree of freedom	Sig.
C	-168	326	265	1	606
Size	-023	034	448	1	503
STc	004	001	8.071	1	004
PE	001	000	8.144	1	004
TIn	002	002	1.304	1	254
LS	001	000	8.489	1	004

Table 5: Logit Function correlation coefficient rate

Step 5	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
5	121.754	064	65

5. Conclusion

The role of the capital market in the economy includes the attraction of the macro and micro capitals of the investors and its optimal allocation to economic activities such as production. This issue has positive effects on economic prosperity, the decline of inflation and employment. While one of the destructive factors of the capital market is the sudden, runaway and unreasonable growth of prices until reaching the maximum price and finally sudden decline. At the same time, several investors will sustain a loss and will be forced to leave the market. One of the reasons for the reduction of the said price which is raised in the economic circles is the price bubble in the stock exchange market. Perhaps, it can be said that the bubble is the most complex disorder which entangles the capital markets. When the shadow of bubble encompasses the market transparency, prices will rise

with astronomical growth and without high economic justification. In this case, the stock exchange market has lost its function for the optimal allocation of the resources and determination of the price. While the motivation for maximizing the profit in investment is regarded as an important criterion in the decision-making of the capital owners in the stock exchange market. For this reason, the market sometimes shows behavior which is not based on the fundamentals of the stock market at all. The sudden procession of the purchasers affects the stock price without any economic and logical justification. In this condition, calculations and types of asset pricing models lose their efficiency and the unreasonable condition of bubble determines the price instead of some criteria such as supply, demand, and efficiency. The presence of a bubble in the market prevents the ability to predict and measure the real share value of the companies and

confuse the investors and make the resource allocation inefficient. For this reason, considering the importance of the price bubble issue, this study has aimed to present a model for estimation of the price bubble probability in the capital market and the Tehran Stock Exchange Market. In this study, 166 companies listed in Tehran Stock Exchange Market have been considered during 2007-2017 to study the factors affecting the price bubble based on the proposed model. Based on the fitting of the model, except for variables of size and transparency of information which have not shown a significant effect on the price bubble, other variables including the stockholder composition, P/E ratio and liquidity speed have a significant effect on the price bubble. Considering these results, the studied hypotheses are raised and the test and general conclusion are elaborated separately.

First hypothesis: Firm Size has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.

Based on the results, fitting of the studied model in SPSS software indicates non-significance of the size variable while the result of the fitting of the model in EViews software indicates the significance of the effect of size variable on the price bubble. As a result, it cannot be accepted that there is a significant relationship between size and price bubble and this hypothesis that the corporate size has a significant effect on the price bubble in the companies listed in Tehran Stock Exchange Market.

Second hypothesis: Stockholder composition has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.

Based on both methods used for fitting the model, Stockholder composition and price bubble have shown a significant effect. Therefore, stockholder composition has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.

Third hypothesis: P/E ratio has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.

Results obtained from fitting of the model based on both used methods have shown the significant relationship between the E/P ratio and the price bubble. For this reason, the hypothesis that the P/E ratio has a significant effect on the price bubble in

companies listed in Tehran Stock Exchange Market is accepted.

Fourth hypothesis: Information transparency has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.

Regarding the relationship between Information transparency and price bubble, both used methods have not shown a significant relationship. For this reason, it can be said that the hypothesis that Information transparency has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market is not accepted.

Fifth hypothesis: Liquidity speed has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market.

Results obtained from fitting of the model have shown the significant relationship between Liquidity speed and the price bubble. Therefore, the hypothesis that liquidity speed has a significant effect on the price bubble in companies listed in Tehran Stock Exchange Market is also accepted.

In the end, based on what has been done in this study, the companies listed in Tehran Stock Exchange Market have experienced the price bubble. The result confirms the obtained results in the studies such as the study by Soltani(2007), Zare(2011), Fallah Shams et al. (2013) and Rasekhi et al. (2016). Results obtained from the study of the factors affecting the price bubbles also indicate that Stockholder composition, P/E ratio and Liquidity speed have shown a significant effect on the price bubble. The result is in line with the obtained results in other conducted studies in this field such as the study by Ebrahimi Sarveolia et al. (2013) and Zandieh and Ghoochani (2013). While the corporate size and Information transparency have not shown a significant effect on the price bubble. The result is not in line with the result of the study by Asadi et al. (2006). Based on the results obtained in this study, the following suggestions are given:

✓ As shown in the research findings, the presence of low free float and blocking of shares between one or more major stockholders have been regarded as one of the factors of a price bubble in the stock exchange market. Therefore, it is suggested that the stock exchange organization adopt suitable strategies and create punitive and incentive mechanisms and require all companies listed in

Tehran Stock Exchange Market to increase their free float. The presence of low free float disrupts the relationship between the intrinsic stock value and their price and share of the companies with a low free float will change considerably.Therefore, the stockholders will purchase these stocks. This phenomenon causes an attack of the investors to shares in some special companies which causes to increase in the stock price of these companies.

✓ Considering the significant effect of P/E ratio on the occurrence of the price bubble in Tehran Stock Exchange Market , it seems that the investors need to pay attention to P/E ratio of the companies besides other information and consider the shares of the companies with low P/E for purchase once the experts warn about

✓ Considering the significant effect of the Liquidity speed on the price bubble, the stockholders and other investors are suggested to pay special attention to the Liquidity speed. Since although Liquidity speed may cause a bubble, it has a strong relationship with the expected return of the share and from this respective, it may be welcomed by the stockholders and investors.

✓ Although the corporate size has had no significant effect on the bubble based on results of this study, it seems that smaller companies will be more exposed to the stock price bubble, therefore, the market administrators(Stock Exchange Organization) should pay more attention to disclosure of information and stock transactions of these companies.

✓ The Stock Exchange information system in Iran does not provide transparent information to the investors (of course, this has been improved in the past years and more transparent than the past information is provided), therefore, it is suggested that the companies listed in the stock exchange market should provide full and timely information by applying the binding laws and regulations and give this information to the investors.

✓ More development of the computer network in the counties and establishment of more Brokerage Networks in these centers are necessary for the development of the information transparency in the stock exchange market.

✓ The presence of the bubble in each market indicates emotional purchase without analysis. Therefore, the more education and insight level of the stockholders, the less probability of bubble. As a result, it is suggested that Tehran Stock Exchange Organization should provide necessary training through media, holding the educational classes , conferences , international conferences , publishing newspaper or journal relating to analysis and recognition of the companies' stocks , creating websites and information weblogs by reducing the difference in information level and awareness of the investors with the stock price bubble of the companies listed in Tehran Stock Exchange (TSE) Market and preventing huge loss of the inexperienced investors including institutional and non-institutional investor.

Since the capital market of the country especially in the last years has played the role of inflation buffer in the economy of Iran and has successfully absorbed floating liquidity, the occurrence of bubble and burst of the bubble and flow of liquidity to parallel markets even can be harmful to the economy of the country. Therefore, the economic authorities of the country are suggested to change the shareholding culture and change the short-term attitude of the actors in the stock market by adopting suitable and timely policies. Some suggestions are given in this regard:

• Extensive privatization of the stock companies and increase of free float of the large stock companies

• Active participation of the large private sector holdings and encouraging such companies to make investment and particularly participate more in guidance of the large industrial companies of the country

• Enacting some incentive laws and tax exemptions for the companies which have a shareholding in a company, particularly vertical shareholding

• Designing and commissioning of modern financial tools such as the derivative contract for reduction of shareholders' risk

- Designing and commissioning of new institutions based on the religious law in the capital market of the country such as endowment mutual fund
- Stability in the enactment of customs and industrial commercial laws and refusing to change the laws and instructions continually
- Continual improvement in the business space
- Promoting shareholding culture through the mass media

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