Investigating of long-term performance the stocks initial offering in Tehran Stock Exchange

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Abstract

The aim of this research was to investigate the long-term performance the stocks initial offering in Tehran Stock Exchange. This research was a kind of study of library and analytical reason and it was based on the ordinary least squares method (analysis of data compilation). In this research the financial information of 24 companies listed on the Tehran Stock Exchange during the period 2010 to 2015 that they had been initial offering were investigated (144 companies - year). To analyze the obtain results of research was used the 12 Stata software. The research results relate to confirming the first hypothesis have shown that the warm and cold type of market in the relationship between the volume of shares offered with the lower valuation of fact have the significant positive impact. Also according to the analysis made in relation to reject the second hypothesis of research reached to this result that there is not a significant relationship between the number of companies that are initial offering with the valuation less than in fact of the Stocks in the previous period. In the following the research results in relate to confirming third hypothesis indicate that there is a significant relationship between the number of companies have Initial offering with the kind of warm and cold market. Also according to the analysis conducted in relation to confirmation the fourth hypotheses of research conclude that there is a significant relationship between the grouped companies in the same industry in the initial offering with the kind of warm and cold market. In the following the research results related to the confirmation of fifth hypotheses showed that the kind of warm and cold market on the relationship between risk stocks initial offering and short-term returns have positive and significant impact. Also according to the analysis conducted in relation to confirmation of sixth hypotheses of research reached this conclusion that the companies with initial supply in the warm market compared to those in the cold market have the initial offering have poor performance in the long term. Finally according to the conducted analysis in relation to confirmation the seventh hypotheses of research to reach to this conclude that the cross variance of the long-term abnormal returns of companies that in the hot market have initial offering are significantly less.

Keywords: Market type of warm and cold, the stocks volume of initial offerings, classification companies, stocks risk and short term returns, poor performance.
1. Problem Statement

For many years the financial literature in the various aspects of initial stock offerings have been concentrate the different researchers and theorists but about the cold and hot IPO markets have been done few researches. Hence the aim of this research was to investigate the properties of hot and cold IPO markets in the Stock Exchange of Tehran. The decision to become a publicly traded for each company, it is an important step in the growth process and there are various motives behind this decision and the companies to increase famous and remarkable for the fact that they can obtain the important competitive advantage or valued to become publicly traded. In fact the companies have tend to offer new shares for the purpose of raise capital, the mainly of the market. Zingales (1995), argued that the companies because they feel they can obtain a higher price in the public market compared to the private sale to become the public joint stock. Companies that have the initial supply it seems that they have been in the period that have the range of very low initial prices and in this available periods that have high volume the initial supply that is associated with higher initial returns, in the term to this periods say "hot release". Lucas and McDonald (1990), stated that companies their IPO on the market decline and low boom (the so-called cold market) to delay and in growing and thriving market (the so-called hot market) to get a favorable price are become to the publicly traded. These terms have need to understand and the precise definition, because have a direct impact on decision-making and make changes in the portfolio of the investors and it will be basis for determine the strategy of buyers and sellers. Determine the time initial offering of stock are related simply with a large number of companies during in the hot and cold period that have initial offering and in the hot market the managers have tend to reduce the necessary time to become the publicly traded in order to take advantage of the benefits of high-valuation more quickly than might and if in the process of initial offering of stock the market was decline managers decided to delay its IPO in the hope that market conditions will soon come good in fact, the situation is not quickly comeback what they have imagined, due to tendency of managers to sell the shares which have risen in the price and is holding the assets whose the value has declined (Polnici, et al, 2013). Szyszka (2013) state that the hot markets with high valuations are tempting for managers of companies that are become to the publicly traded. Those who take advantage of investment opportunities due to the capital needs of his company are make decisions. The shares that in the first time offered on the stock exchange; valued lower than their real value and therefore most of the time is irrefutable the unusual high return of that stock (in the short term). Since the investors, buyers of initial offering shares and publishers of this stock are seeks to identify the best position for offering their shares, because their goal are offering shares to the possible highest price that there is the necessary demand for them, so the best situation for investors, it is they can purchase the shares at a low price, with the increase in stock prices and sell at the highest price obtain benefit. In total since in the hot market the imagine of the investment community are to creating an the uptrend and the growth of prices, so gain a profit in this market is much more probable from the cold market and in the cold market the probability to face with capital loss is much higher of the gain profit, in this market the investor activity are reduced and their concerns about the future of market are drive the downtrend in prices and the investment and buying the stocks with more likely will be to lead to losses in the capital. It is natural that the investors who have the higher degrees of risk aversion or have less hope to relative the increased growth in the market future prefer to with accept the small profit but reliable are protected their own of the investment losses due to cold market. This research is in attempt to identify and explain the high rates of valuation less than fact of the initial offering of stock.
and companies that over time have initial offering in the hot and cold market and categorizing them in the similar industries, risk and return and performance them in the long term in the stock Exchange Tehran. So we decided that given the importance of this issue from the perspective of the investors and companies and reduce their concerns about the future of the market and activity of investors in these markets pay to investigate in the initial offering hot and cold markets on the Stock Exchange Tehran, so that can take steps to solve this problem and offer a solution.

2. Research background

Ghaemi (2013) pay to investigate the short term return of stock the companies that new enter in the Tehran Stock Exchange and to investigates the relationship of variables such as the volume of offered shares, company size, market conditions and the existence of companies similar with abnormal returns of new stock. The obtained results of the 153 sample companies are indicated there is relationship between of variables such as the market conditions and existence the similar company with the abnormal return (Ghaemi 2007 P.19).

Zahra Bostani (2007), the behavior of newcomer companies in Tehran Stock Exchange known similar worldwide country and has stated that there is not the statistically significant relationship between the firm size, age, type of ownership and type of industry and financial leverage with the long-term returns.

FadaiiNejad and Chavoshi (2006) to investigate the behavior of returns the stock are accepted for the first time in the Tehran Stock Exchange and its relation to market particular conditions (cold and hot) are considered a symbol for returns and its relation with influencing factors such as the price of open shares, Indicator changes and the market hot or cold conditions that explained by virtual variable, by using information from the Tehran Stock Exchange in the years 1997-2006 and for the sections according 5 and 15 days - one month - two months and a season of the offering shares can be investigate. The results of his study showed that there is a directly relationship between up to one month after the submission of initial offering the stock returns by market conditions to a pre-season also up to two months after the offering of this type stock don’t see the relationship between the market conditions in the current season and stock offering and the signs of economic slowdown or boom at the current time the offering shares with the 60-day interruption on returns of this share will be effective. This is evidence for asymmetry of information in the Tehran Stock Exchange during the mentioned period. Hilde Brown et al (2013) pay to investigate and identify the initial offering the stock in hot and cold market in the South Africa. As well as pay to investigate and determine how the initial offering on the Johannesburg Stock Exchange on the first day, first week and the first month from the each period of the date of 1996 to 2011 in both hot and cold market. Results of this research indicate that initial offering the stock is the among significantly less than the price and range, as well as in the hot market valuations less than the fact of the stock are over the cold market. As well as IPO in the hot and cold market with risk, return and risk have the significant relationship.

Agati and et al (2012) in a study pay to investigate the hot and cold market. In this research they have investigated the factors that under the influence of the hot and cold market and the results show that short-term returns in hot markets is more but the long-term abnormal returns is less. Also they have found fewer the unusual returns variance in the hot market.
Susana and the Listikav (2011) pay to investigate the abnormal returns of the initial public offerings stock and their competitors to follow the price drop wholesale and one-day of stock.

This research pay to investigate the relationship between industry variables and the variables before the IOP and the abnormal returns of the secondary stock for original company and their competitors. These findings are indicate that cumulative returns of initial offerings CAR in the range of [20 +, 4 +] if much less than the registered capital will be less. Industry factors beyond market share on continuing daily abnormal returns AR initial offerings in the longer term have affect. Whatever is more corporate communications and competitors before the public offering, the cumulative returns CAR competitors in rang of [3 + 1 +] is worse but in the range [20 +, 4 + CAR] competitors are better.

3. Research Methodology

The method of done research

This research is applied.

Its research design is a kind of quasi-experimental and it is by using a casual approach (from the past information). From the casual comparative method when is used that researcher pay to investigate the subject after the occurrence of events, moreover, there is no possibility of manipulation of independent variables (Namazi, 2001).

Research hypotheses

Based on the questions, theoretical foundations and literature of research are developed and tested the following hypotheses:

First hypothesis: the hot and cold type of market on the relationship between the volume of initial offered the shares with the valuation lower of fact have a significant positive impact.

The second hypothesis: there is a significant relationship between the number of companies that are initial supply with the valuation lower of fact in the previous period.

The third hypothesis: there is a positive and significant relationship between the number of companies have initial offering and the kind of hot and cold market.

The fourth hypothesis: there is a positive and significant relationship between the grouping of companies in the similar industry in the during initial offering and the kind of hot and cold market.

The five hypothesis: hot and cold type of market on the relationship between risk shares of the initial offering and short-term returns have the positive and significant impact.

The sixth hypothesis: the companies of initial supply in the hot market compared to those that in the cold market were initial offering have the poor performance in the long term.

Research variables

The dependent variable

Short-term returns (underpricing less than of fact)
Base on the divided one plus excess return first day of initial offering to one plus the stock market returns minus one, multiplied by 100 to obtain (Aqaty and others, 2012).

\[ \text{MAAR} = \left( \frac{P1+1}{PM+1} - 1 \right) \times 100 \]

Long-term abnormal returns

On the basis of returns the buy and hold stock are obtained. Stock returns during maintenance minus the market return during maintenance are the calculated basis of the long term return (Aqaty and others, 2012).

\[ \text{BHAR} = (R_{it} - R_{m\text{it}}) \]

Corporate Risk

Beta coefficient one share is the total of the commercial and financial systematic risks of its share. The usual approach is to calculate the total beta. Then it can be divided into two forming components of systematic risk. Systematic risk are obtained from the covariance of the rates of stock return to rate of return on market portfolio divided by the rate of return on the market portfolio (Aqaty and others, 2012).

\[ \text{RISK} = \frac{\text{COV}(i,m)}{\text{V}(m)} \]

Cross variance of abnormal returns of long-term

It was obtained from the variance of the long-term abnormal returns during the investigation period (Aqaty and others, 2012).

\[ \text{RETVAR} = \text{VAR BHAR} \]

Number of companies

It is obtained from the number of supply companies during the investigation period (Aqaty and others, 2012).

Similar industries:

The number of the companies in the same industry have been the initial offering (Aqaty and others, 2012).

The independent variable

Hot market

Periodic that monthly returns of the stock market index have shown an increase rather than at least 3 previous periods (months) of securities. If the company have supply in the hot market the number one and if the cold market is supplied give the zero (Aqaty and others, 2012).

Short-term returns (pricing less than fact)

It is obtain according divided one plus the first day of initial offering an excess return to one plus a stock market returns minus one multiplied by 100 (Aqaty and others, 2012).
MAAR=(P1+1 / PM+1)-1)*100

Moderating variables

Hot and cold market

Periodic that monthly returns of the stock market index have shown an increase rather than at least 3 previous periods (months) of securities. If the company have supply in the hot market the number one and if the cold market is supplied give the zero (Aqaty and others, 2012).

The statistical population and sample

In this study due to the research sample was the appropriate representative of the target population, for select the sample was used the screening methods (Elimination). For this purpose, the following criteria were considered and if a company has obtain all criteria to be selected as one of the sample companies. The sample selection process is depicted in the paintings.

The sample of this research is selected based on the following criteria:

1. the companies offered their shares for the first time.
2. the companies that are not from the investment companies.

Among all companies listed on the Tehran Stock Exchange by applying the above conditions have been chosen 24 companies as a sample. The number of company in the cold market was supply and the number of 16 companies have been supply in the hot market.

Data collection methods

In this research to collect data and information were used from the library method and purview. Research theory bases has been collected from books, magazines and Persian and Latin specialized Web sites and the required financial data has been collected by visiting the site of the Tehran Stock Exchange, the company's financial statements, as well as by using the Tadbirkardaz and Rahhavardnovin software.

Methods of data analysis and hypothesis testing

In done this research the numerous statistical methods and econometric patterns has been used which in the following are described in detail. After collecting the data, the first step is to calculate the descriptive statistics of the used variables. This statistics are includes the average, median, standard deviation and other information was used. After investigating the descriptive statistics, the desired functions (patterns) were estimate with help the econometric patterns which to these patterns will be referred in continue. It should be noted that the primary data this research after the extracted from the listed sources are enter to the Excel software 2010 Editionsso with done some calculations obtained the needed variables for hypotheses test of research. Then the analysis and test the research hypotheses along with its results due to the obtained output from the Stata software the 12 version is performed.
4. The research findings:

Descriptive statistics of research variables

At the section of descriptive statistics the data analysis done by using the central indexes such as average and dispersion indexes such as the standard deviation, skewness and kurtosis. In this respect average was the main central index and it shows the average of data, so that if the data on an axis were aligned on a regular basis the average value is exactly the point of balance or center of gravity of the distribution. Standard deviation was the dispersion parameters and it show the amount of scattering data. Skewness also is the parameters set the deviations from symmetry and it is the data asymmetry index. If the population have the symmetrical distribution, skewness coefficient is equal to zero if the population is skewed to the left, coefficient of skewness is negative and if you have the right skew, skewness coefficient will be positive. Elongation is the index to measure of dispersion the population toward the normal distribution (Momeni and Ghaiyoomi, 2012). Summarizes status of the descriptions statistics related to the model variables after remove scatter data and the screening with help the software of the stata is presented in Figure 4-1.

Figure 4-1, the descriptive statistics of research variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Views</th>
<th>Average</th>
<th>Elongation</th>
<th>Skewness maximum amount</th>
<th>Minimum amount</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term returns (less valuation)</td>
<td>24</td>
<td>0/17</td>
<td>2/04</td>
<td>1/03</td>
<td>0/618</td>
<td>0/063</td>
</tr>
<tr>
<td>Similar industries</td>
<td>24</td>
<td>2/81</td>
<td>0/72</td>
<td>0/27</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Long-term returns</td>
<td>24</td>
<td>0/317</td>
<td>2/09</td>
<td>1/24</td>
<td>0/87</td>
<td>0/099</td>
</tr>
<tr>
<td>Cross variance of long-term abnormal returns</td>
<td>24</td>
<td>0/291</td>
<td>1/06</td>
<td>1/87</td>
<td>0/831</td>
<td>0/034</td>
</tr>
<tr>
<td>Corporate risk</td>
<td>24</td>
<td>0/308</td>
<td>0/39</td>
<td>0/42</td>
<td>0/619</td>
<td>0/13</td>
</tr>
<tr>
<td>Hotmarket</td>
<td>24</td>
<td>-</td>
<td>-0/88</td>
<td>-0/37</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Coldmarket</td>
<td>24</td>
<td>-</td>
<td>0/46</td>
<td>1/63</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Test the normal distribution of the research dependent variable in done this research to estimate the model parameters is used from the ordinary least squares method. This method is based on the assumption that the research dependent variable has the normally distributed, so that the abnormal distribution is required to be controlled the normality of the dependent variable before to estimate the parameters and in case of absence of this condition would be taken the suitable solution for to being normal them (including conversion of it). In this study
the subject is examined through the Shapiro Wilk statistic. In this test the null hypothesis and the alternative hypothesis is as follows:

\[
\begin{align*}
  H_0 & : \text{Normal Distribution} \\
  H_1 & : \text{Not Normal Distribution}
\end{align*}
\]

If the level of significant of statistic of the test is greater than 0.05 (Prob > .05) then null hypothesis based on the normal distribution of variables will be accepted. In Figure 4-2 offered the Shapiro-Wilk test results for the variable short-term of the returns Initial Public Offerings for the sample companies.

Figure 4-2 The test results of the normality of research variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Shapiro Wilk statistic</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term returns (less valuation)</td>
<td>0/87</td>
<td>0/67</td>
</tr>
<tr>
<td>Similar industries</td>
<td>0/36</td>
<td>0/14</td>
</tr>
<tr>
<td>Long-term returns</td>
<td>0/51</td>
<td>0/41</td>
</tr>
<tr>
<td>Cross variance of long-term abnormal returns</td>
<td>0/99</td>
<td>0/81</td>
</tr>
<tr>
<td>Corporate risk</td>
<td>0/24</td>
<td>0/07</td>
</tr>
<tr>
<td>Hotmarket</td>
<td>0/39</td>
<td>0/16</td>
</tr>
<tr>
<td>Coldmarket</td>
<td>0/88</td>
<td>0/72</td>
</tr>
</tbody>
</table>

Given that for the research variables the significance level of Shapiro Wilk statistical is greater than 0.05, so the hypothesis based on the normal distribution of these variables at a confidence level of 95% is confirmed.

4.4- collinearity test

collinearity is a situation in which shows an independent variable is a linear function of other independent variables. If the collinearity in the regression equation is high this means that there is a high correlation between the independent variables and may be despite of the high R2, the model does not have a high reliability. In other words despite the fact that model looks good but not have the significant independent variables. If it is approved collinearity there is a set of problems to determine the accuracy of the regression equation. Test collinearity research variables is in the following table:
Table (4-3) collinearity test

<table>
<thead>
<tr>
<th>Variable</th>
<th>symbols</th>
<th>Model1 seventh hypothesis</th>
<th>sixth hypothesis</th>
<th>fourth hypothesis</th>
<th>third hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Risk</td>
<td>risk</td>
<td>3/12</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hotmarket</td>
<td>hot</td>
<td>1/78</td>
<td>1/36</td>
<td>1/29</td>
<td>1/22</td>
</tr>
<tr>
<td>number ofcorporate</td>
<td>market</td>
<td>2/41</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coldmarket</td>
<td>cold</td>
<td>1/22</td>
<td>2/01</td>
<td>1/55</td>
<td>1/86</td>
</tr>
</tbody>
</table>

As you can see the eigenvalues close to zero is high in the forecast internal correlation and small changes in data values are leading to large changes in the estimated coefficient of the regression coefficients of the equation. Eigenvalues are represent the probability of internal correlation between the variables. Status indicator greater than 15 is indicates the risk of collinearity between the independent variables and the amounts of more than 30 is indicate a serious problem is the use of regression in the present situation (Hassasyeghaneh and others, 2010). On the other hand, all the status indices are less than 15 which it is indicates the absence of collinearity between the independent variables.

The first model test (hypothesis first, second and fifth)

Test of dissimilarity variances and autocorrelation

One of the assumptions of regression equation is the fixed error of variances that known as the assumption of homogeneity of variances. If the errors have the constant variance, said that there is the heterogeneity of variance. The assumption of linear regression models were the zero covariance between the error components over time (or as cross-sectional of data types).

H0: the model variables don’t have the autocorrelation and heteroscedasticity

H1: the model variables have the autocorrelation and heteroscedasticity

Table (4-4) the test of autocorrelation and heteroscedasticity

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Test of heterogeneity of variance</th>
<th>Autocorrelation test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Significant level</td>
</tr>
<tr>
<td></td>
<td>0/32</td>
<td>0/569</td>
</tr>
</tbody>
</table>
Investigations of test results heteroscedasticity are indicate the significantly level are higher than the 5%. Therefore the null hypothesis is not rejected this means that the research variables have the homogeneity variance and lack of the autocorrelation. The first model test (investigate the hypotheses first, second and fifth)

Table (4-5) First model test

<table>
<thead>
<tr>
<th>Significant level</th>
<th>Statistics t</th>
<th>Coefficient</th>
<th>Symbol</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/0285</td>
<td>-2/418</td>
<td>-0/128</td>
<td>RISK</td>
<td>Risk</td>
</tr>
<tr>
<td>0/627</td>
<td>0/428</td>
<td>0/22</td>
<td>MARKET</td>
<td>Number of companies</td>
</tr>
<tr>
<td>0/019</td>
<td>2/68</td>
<td>0/41</td>
<td>HOT</td>
<td>Hotmarket</td>
</tr>
<tr>
<td>0/031</td>
<td>2/31</td>
<td>0/27</td>
<td>HOT*RISK</td>
<td>Hotmarket at the risk</td>
</tr>
<tr>
<td>0/024</td>
<td>-2/68</td>
<td>-0/28</td>
<td>Cold</td>
<td>Coldmarket</td>
</tr>
<tr>
<td>0/000</td>
<td>3/47</td>
<td>0/89</td>
<td>cold*RISK</td>
<td>Coldmarket at the risks</td>
</tr>
<tr>
<td>0/001</td>
<td>3/019</td>
<td>1/117</td>
<td>C</td>
<td>Width of origin</td>
</tr>
</tbody>
</table>

17/36 Statistics f 0/31 Adjusted coefficient of determination

0/000 Significant level

The first hypothesis test

H0: hot and cold type of market, the relationship between the volume of initial offering of stock, with the valuation is less than located don’t have the significant effect.

H1: hot and cold type of market, the relationship between the volume of initial offering of stock, with the valuation is less than located have the significant effect.
The results of Table 4.5 is shows the optimality the model to test the hypothesis. Statistic F (61.35) and a significance level (0.000) confirms the significance of the model to test the hypothesis. Lagrange test results also are showed the lack of existence the autocorrelation between this order sentences. Adjusted coefficient of determination is 31%. The hot and cold market variables as the independent variable and variable the stock volume of initial offering with a valuation less are known as the dependent variable in the research. Variable of the stock volume of initial offering with a less valuation due to its significance level (0.019) in table 4-5 has a positive direct relationship with the hot market variable, if in the initial offering will be done in the hot market the stock volume of initial offering are increases with the less valuation.

Variable the stock volume of initial offering with a less valuation due to its significance level (0.024) in table 4-5 have the reverse negative correlation with the variable cold market, if in the cold market will be done the initial offering the volume of initial offering of stock are reduced with the less valuation. In the result according to the results of the table of results the first hypothesis that based on the type of hot and cold market on the relationship between the stock volume of initial offerings with the less than fact in the valuation have the positive and significant impact has confirmed.

The second hypothesis test

H0: there is no relationship between the number of companies that are the initial offerings with the valuation less than the real stock in the previous period.

H1: there is positive and direct relationship between the number of companies that are the initial offerings with the valuation less than the real stock in the previous period.

The results of table 4-5 is shows the optimality the model to test the hypothesis. Statistic F (61.35) and a significance level (0.000) confirms the significance of the model to test the hypothesis. Lagrange test results also are showed the lack of existence the autocorrelation between this order sentences. Adjusted coefficient of determination is 31%. The valuation variables of less than fact the stock as the independent variable and variable the number of companies that have initial offering are known as the dependent variable in the research. Variable of the number of companies that have initial offering due to its significance level (0.627) in table 4-5 don’t has a relationship with the valuation variables of less than fact the stock. In the result according to the results of the table of results the second hypothesis that between the number of companies that have initial offering with the stock volume of initial offerings with the valuation less than the real stock in the previous period there is the positive and significant impact has confirmed.

The fifth hypothesis test

H0: Hot and cold type of market don’t have impact on the relationship between the risk stock initial offering and return on the short-time

H1: Hot and cold type of market have the positive and direct impact on the relationship between the risk stock initial offering and return on the short-time

The results of table 4-5 is shows the optimality the model to test the hypothesis. Statistic F (61.35) and a significance level (0.000) confirms the significance of the model to test the
hypothesis. Lagrange test results also are showed the lack of existence the autocorrelation between this order sentences. Adjusted coefficient of determination is 31%. The return on the short-time variables as the independent variable and the risk variable as the dependent variable and the variable hot and cold market as a mediating variable are known in the research. Variable of risk due to its significance level (0.0285) in table 4-5 with the return on the short-time variables have the negation and the reciprocal relationship. Hot market mediating variable in risk due to its significance level (0.031) in table 4-5 have the positive and direct relationship with the variable of the short-term returns. Cold market mediating variable in risk due to its significance level (0.000) in table 4-5 have the positive and direct relationship with the variable of the short-term returns, in the result according to the results of the table of results the fifth hypothesis that between the number of companies that have initial offering with the hot and cold type of market have the positive and direct impact on the relationship between the risk stock initial offering and return on the short-time has confirmed.

The third model test

Test of dissimilarity variances and autocorrelation

One of the assumptions of regression equation was the fixed error of variances that it is known as the assumption of homogeneity of the variances. If errors do not have constant variance, it is said that there is heterogeneity of variance. The other assumption the linear regression models is the zero covariance between the error components in the overtime (or cross-sectional for the data types).

H0: the model variables don’t have the autocorrelation and heterogeneity of variance.

H1: the model variables have the autocorrelation and heterogeneity of variance.

Table (4-6) test of the autocorrelation and heterogeneity of variance

<table>
<thead>
<tr>
<th>Assumption</th>
<th>test of the heterogeneity of variance</th>
<th>test of the autocorrelation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi2</td>
<td>significant heterogeneity</td>
<td>F  significant autocorrelation</td>
</tr>
<tr>
<td>0/22</td>
<td>0/79</td>
<td>0/014</td>
</tr>
<tr>
<td></td>
<td>Dont have</td>
<td>dont have</td>
</tr>
</tbody>
</table>

Investigations of test results the heterogeneity variants are indicate the significantly level is more than the 5%. Therefore the null hypothesis is not rejected this means that the research variables have homogeneous variance and lack of autocorrelation.

The third hypothesis test

Table (4-7) third hypothesis testing

\[
\text{MARKET} = B0 + B1 \text{HOT} + B2 \text{cold} + e
\]
The third hypothesis test

H0: there is not the significant relationship between the number of companies that have the initial offering and the kind of hot and cold market.

H1: there is the significant relationship between the number of companies that have the initial offering and the kind of hot and cold market.

The results of table 4-7 is shows the optimality the model to test the hypothesis. Statistic $F(18.31)$ and a significance level (0.000) confirms the significance of the model to test the hypothesis. Lagrange test results also are showed the lack of existence the autocorrelation between this order sentences. Adjusted coefficient of determination is 21%. The hot and cold market of variables as the independent variable and the number of companies that have the initial offering variable as the dependent variable are known in the research. Variable of number of companies that have the initial offering due to its significance level (0.021) in table 4-5 with the hot market variables have the positive and direct relationship. If the initial offering will be done in the hot market the number of companies that have the initial offering are increased. Variable of number of companies that have the initial offering due to its significance level (0.011) in table 4-5 with the cold market variables have the negation and the reciprocal relationship. If the initial offering will be done in the cold market the number of companies that have the initial offering are decreased, in the result according to the results of the table of results the third hypothesis that between the number of companies that have initial offering and the hot and cold type of market have the positive and direct impact has confirmed.

The fifth hypothesis test

Test of heterogeneity variances and autocorrelation

One of the assumptions of regression equation was the fixed error of variances that it is known as the assumption of homogeneity of the variances. If errors do not have constant variance, it is said that there is heterogeneity of variance. The other assumption the linear
regression models is the zero covariance between the error components in the overtime (or cross-sectional for the data types).

H0: the model variables don’t have the autocorrelation and heterogeneity of variance.

H1: the model variables have the autocorrelation and heterogeneity of variance.

Table (4-8) test of the autocorrelation and heterogeneity of variance

<table>
<thead>
<tr>
<th>Assumptions test of heterogeneity of variance</th>
<th>test of autocorrelation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi2 significant heterogeneity</td>
<td>F Significant level</td>
</tr>
<tr>
<td>0/01</td>
<td>0/18</td>
</tr>
<tr>
<td>0/87</td>
<td>0/614</td>
</tr>
<tr>
<td>Don't have</td>
<td>Don't have</td>
</tr>
</tbody>
</table>

Investigations of test results the heterogeneity variants are indicate the significantly level is more than the 5%. Therefore the null hypothesis is not rejected this means that the research variables have homogeneous variance and lack of autocorrelation.

The fourth hypothesis test

Table(4-9) fourth hypothesis test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Significant level</th>
<th>T-statistic</th>
<th>Variable coefficient</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed amount</td>
<td>0.047</td>
<td>2.08</td>
<td>0.138</td>
<td>B0</td>
</tr>
<tr>
<td>Hotmarket</td>
<td>0.017</td>
<td>2/65</td>
<td>0/28</td>
<td>Hot</td>
</tr>
<tr>
<td>Cold market</td>
<td>0.042</td>
<td>-2/02</td>
<td>-0/59</td>
<td>Cold</td>
</tr>
<tr>
<td>Adjusted coefficient of determination</td>
<td>27.81</td>
<td>statistic f</td>
<td>0/19</td>
<td></td>
</tr>
</tbody>
</table>

The fourth hypothesis test

H0: there is not a significant relationship between the grouping of companies in the similar industry in during initial offering and the kind of hot and cold market.
H1: there is a significant relationship between the grouping of companies in the similar industry in during initial offering and the kind of hot and cold market.

The results of table 4-9 is shows the optimality the model to test the hypothesis. Statistic F (27.81) and a significance level (0.000) confirms the significance of the model to test the hypothesis. Lagrange test results also are showed the lack of existence the autocorrelation between this order sentences. Adjusted coefficient of determination is 19%. The hot and cold market of variables as the independent variable and the grouping of companies in the similar industry variable as the dependent variable are known in the research. Variable of the grouping of companies in the similar industry due to its significance level (0.017) in table 4-9 with the hot market variables have the positive and direct relationship. If the initial offering will be done in the hot market the grouping of companies in the similar industry are decreased. Variable of the grouping of companies in the similar industry due to its significance level (0.042) in table 4-9 with the cold market variables have the negative and the reciprocal relationship. If the initial offering will be done in the hot market the grouping of companies in the similar industry are decreased, in the result according to the results of the table of results the fifth hypothesis that between the grouping of companies in the similar industry in during initial offering and the hot and cold type of market have the positive and direct impact has confirmed.

The six hypothesis test

Test of heterogeneity variances and autocorrelation

One of the assumptions of regression equation was the fixed error of variances that it is known as the assumption of homogeneity of the variances. If errors do not have constant variance, it is said that there is heterogeneity of variance. The other assumption the linear regression models is the zero covariance between the error components in the overtime (or cross-sectional for the data types).

H0: the model variables don’t have the autocorrelation and heterogeneity of variance.

H1: the model variables have the autocorrelation and heterogeneity of variance.

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>test of heterogeneity of variance</th>
<th>test of the autocorrelation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi2</td>
<td>significant heterogeneity</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>0.47</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>Don't have</td>
<td>0/12</td>
</tr>
<tr>
<td></td>
<td>0/781</td>
<td>Don't have</td>
</tr>
</tbody>
</table>

Investigations of test results the heterogeneity variants are indicate the significantly level is more than the 5%. Therefore the null hypothesis is not rejected this means that the research variables have homogeneous variance and lack of autocorrelation.

The six hypothesis test
Sixth hypothesis test

H0: the initial supply companies in the hot market compared to those in the cold market were the initial offering have the strong performance in the long term.

H1: the initial supply companies in the hot market compared to those in the cold market were the initial offering have the poor performance in the long term.

The results of table 4-11 is shows the optimality the model to test the hypothesis. Statistic F (9.46) and a significance level (0.000) confirms the significance of the model to test the hypothesis. Lagrange test results also are showed the lack of existence the autocorrelation between this order sentences. Adjusted coefficient of determination is 24%. The hot and cold market of variables as the independent variable and the performance in the long term variable as the dependent variable are known in the research. Variable of the hot market due to its significance level (0.000) in table 4-11 with the performance in the long term variables have the negation and the reciprocal relationship. If the initial offering will be done in the hot market the performance in the long term are decreased. Variable of the performance in the long term due to its significance level (0.000) in table 4-11 with the cold market variables have the positive and direct relationship. If the initial offering will be done in the cold market the performance in the long term are increased. In the result according to the results of the table of results the six hypothesis that the initial supply companies in the hot market compared to those in the cold market were the initial offering have the poor performance in the long term has confirmed.

5. Conclusion:
Yearly the great number of companies with the issuance of stock for the first time are enter to the capital markets and the Stock Exchange. Usually these companies grow so fast that their financial resources through debt such as bank loans and credit resources like them for financing of development of this company are not enough. The initial public offering is the company's first sale of common stock to investors through Stock Exchange or public subscription. The main objective of the initial public offering are increase capital for the company. Shares offering in Stock Exchange in order to take advantage of its benefits and privileges, a cumbersome regulatory and reporting requirements also have followed. Now in most countries are considered the developed that annual the stray enormous amount of the capital are guide to the productive sectors and actively in the community. These markets could by attract the different investors with the different motivations and degrees of multiple risk taking are encourage the public to share in the ownership of the company. The Stock Exchange markets, as the core of the capital market, annual the large amount of money the new investment in the issue the company's shares guide to these sectors. In the capital market the primary basis of transactions are formed the existence related information. Therefore the information is the most precious asset in the capital market; what in the capital markets must be considered is that many people who commit to investment, they are ordinary people who only way to access the important information of company are the announcements that from a company will be published in the form of accounting reports and financial statements. Due to the lack of capital market efficiency occur the anomalies in the initial public offerings. The most important abnormalities existence in the first public offering are long-run price underperformance, underpricing, hot IPOs, or in the more simply state "Long-term returns less than market returns, short-term returns above the market return and thriving market." The decline in IOP are occur due to various reasons that it is including optimism excessive buyers supplied stocks (Miller, 1977), cutting the supplied of the price of issue stocks by the underwriters (Ritter, 1991 Ljungqvist, 1996), errors in measurement of return or select the wrong criteria (Thakor& Hughes, 1992) or due to management decisions and performance of the company before the initial public offering of stock in the Stock Exchange (Brav et al., 1998). Decision to become a public held for each company is the important step in the growth process for that company and there are various motives behind this decision and the companies to increase and eye-catching, to be able to gain an important competitive advantage or valuation are become to public held, in fact the company with purpose of increase the capital have tendency of issue new shares the mainly on the market. Zingales (1995) argues that companies due to feel that can obtain the higher price in the public market rather than the proportion of private sales converted to the publicly held. The companies that they have initial supply, it seems that they have been in the periods have the range of initial prices very low and these available courses that have large volume of Initial offering are associated with the higher initial returns, that is the period of so-called "hot publishing". Donald and Lucas (1990), stated that the companies that their IPO in the market on the wane and low boom (the so-called cold market) to delay and in the growing and thriving market (the so-called warm market) to obtain a favorable price to become the public held. These terms have need to understand and precise definition, because have a direct impact on the decision-making and make changes in the portfolio's investors and it will be the basis for determine the strategy buyers and sellers. Determining the time of the initial public offering are associated simply with a large number of companies are related in the period of hot and cold that have the initial offering and in the hot market the managers to reduce the necessary time to become the publicly held, in order to take advantage of the benefits of high valuation have tend faster than...
is possible and if in the process of initial public offering the market are decline the managers decided to its IPO are delay.in the hope that the good market conditions will soon come, in fact the situation is not quickly comeback what they have imagined, caused by manager tendency to sell the shares which has increased its price and holding the assets whose has declined its value(poltnicki, et al, 2013).Szyszka (2013), are state that markets of hot with the high valuation for companies managers are tempting that have become the publicly held they make decisionstheose who take advantage of investment opportunities, due to the capital needs of their company. Shares on the stock exchange will be offered for the first time are valued lower than their real valueand therefore most of the time the unusual high return of that stock (in the short time) is irrefutable. Since the investors, buyers of shares Initial Public Offering and the publishers of this stock are seeks to identify the best location for their offering shares, because their goal of offering shares the highest price possible that there is the necessary demand for its, so the best situation for investors it is that they can purchase the shares at a low price with the increase in stock prices and sell at the highest price are benefit. In total since in the hot market thought the investment community are on the creating the upward trend and growth of prices, so to make a profit in this market are the more likely from the cold market and in the cold market the likely to face the capital losses is much more than to make a profit, in this market the investor activity are reduced and they worry about the future of the market and incentive to continue their downward trend in prices and investment and buying the share will be to lead to losses in investment more likely. It is natural that investors who have higher degrees of risk aversion or relative to increased growth of market future have less hope are prefer with gain the small profit but safe are protected itself of the capital loss due to the market was cold. This research are attempt to identify and explain the high amount of valuation less than real the stock in the initial offerings and the companies that over time in the hot and cold market have initial offering, grouping them in the same industry, risk and return and their performance in the long-term in the Stock Exchange of Tehran. So we decided that, given the importance of this issue from the perspective of investors and companies and reduce their concerns about the future of the market and investor activity in these markets are paid to investigate the cold and hot markets of IPO in the Tehran Stock Exchange so we can take steps to solve this problem and offer a solution. According to broaden the scope of privatization in country, lucky investors particularly individual investors that newcomer to the stock exchange and that the tendency in the society level in side of market capitalization have good increase in recent years, the need for done the correctly investment decisions and with the scientific basis in the growth and prosperity of the capital market and protect and their confidence in the capital markets of investors and their capital are very important.
References


7. Dastghir Mohsen and Alikhani Boany, Mahdi (20074). The phenomenon of cheap sale in the initial stock offering and the assumptions related them, monthly magazine Stock Exchange, Issue 58


11. Zarei Hossein (2005) "initial public offering of stock" the capital: educational site in the field of financial markets


