

# Long-Run and Short-Run Returns of Initial Public Offerings (IPO) of Public and Private Companies in Tehran Stock Exchange (TSE) Market

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## Abstract

This paper surveys some effective factors on long-term and short-term returns of initial public offerings (IPO) of public and private companies in Tehran Stock Exchange (TSE) market. We use panel data approach to compare determinant factors of returns of IPO either in public and private firms. The results show that P/E ratio, volume of transactions and size of companies are the main factors of determinant of abnormal long-run returns of IPO in both private and public companies. In the short-run, the IPO's returns of private enterprises related to size, and volume of transaction. Although in the public companies, size, P/E and individual firm's specification are the determinants of short-run IPO's returns. Results of research pointed to conclusion that the corporate ownership has no significant impact on returns of IPO in short-run and long-run. And both private enterprises and public companies might retain the profit and release the loss by set share retention/offering rate and over/under pricing of IPO companies.

**Keywords:** Initial public offerings, abnormal returns, corporate ownership, Tehran Stock Exchange

**Abbreviations:** Initial Public Offerings, (IPO); Tehran Stock Exchange, (TSE); Principle 44 of the Iranian Constitutional (P44IRC); Cumulative Abnormal Return, (CAR);

**1. Introduction**

Various aspects of initial public offerings (IPO) and post-IPO performance have so far empirically examined: long-run versus short-run performance of the IPO, sample of IPO and timing, model specification, management quality, prospectus, regulatory, pricing and underpricing and etc. .

(Abhyankar, Chenb, & Ho, 2006) and (Bessler & Thies, 2007) study the long-run performance of IPOs. (Ritter & Welch, 2002) Argue that the characteristics of an IPO sample contribute to the observed differences in the findings of studies on the long-run performance. (Gompers & Lerner, 2003) Argument that the relative performance of an IPO sample depends on the method used to examine performance.

(Moshirian, Ng, & Wu, 2010) Examine model specification and IPO performance and show that the existence of long-run under performance for Asian IPOs depends on the methodology used. (Kirkulak, 2008) Provide insight into Japanese venture capital (VC) industry and find that the long-run stock performance results are very sensitive to the methods used to measure average abnormal returns.

(Goergen & Renneboog, 2007) Study ownership matter and conclude that the long-run performance of IPOs is not correlated with control and ownership retention. Although (Roosenboom & Goot, 2005) analyze that ownership and control variables influence market value at the time of the initial public offering. (Marisettya & Subrahmanyam, 2010) Document groups affiliation (domestic, foreign, or government) and the performance of IPOs. (Wu & Kwok, 2007) Investigate long-run performance of global IPOs as compared to purely domestic ones made by US industrial companies.

(Chen & Wilhelm Jr., 2008) Study smoothing an initial public offering's transition to secondary market trading. (Brada & Ma, 2007) Illustrate optimal timing of initial public offerings and they suggest that the (miss) timing of privatization represents significant losses for the government and for investors. (Jones & Ligon, 2009) Survey effects of the day of the week on IPOs initial returns. (Kenourgios, Papathanasiou, & Rafail Melas, 2007) Show the effect of the Monday in IPO initial returns. They use a multivariate approach to test whether this calendar effect is due to the effects of other factors such as Log (size), venture, high price, etc. to affect IPO underpricing.

(Kea, Liaob, & Hsuc, 2007) Provide an industrial perspective (such as future growth opportunities, R&D expenditure) on IPOs on bond in the Taiwan Stock Exchange. (Grammenos & Papapostolou, 2012) Examine prospectus and market information matters.

(Fukugawa, 2012) Study the impacts of intangible assets on the initial public offering of biotechnology startups. Management quality, certification and IPOs explored by (Chemmanur & Paeglis, 2005). (Yip, Su, & Ang, 2009) Perform regression analyses to investigate the effect of underwriter choice, venture capital support and industry and their interactions on the long-term performance of IPOs.

(Abdou & Dicle, 2007) Investigate risk factors matter in the IPO valuation. They divide the risk factors into several categories; management issues, international trade issues, technological

issues, operational issues, financial issues and finally, market, economic and regulatory issues. (Burrowes, Feldmann, & Feldmann, 2004) Examine under performance and liquidity risk of initial public offerings and they seek to explain the degree of underpricing discovered.

It seems that pricing of IPOs continues to puzzle in finance. Over/under pricing of IPOs is the consequence of inattention to this puzzle as more important aspect of IPOs. The underpricing of IPOs and share retention (the proportion of shares retained by the pre-IPO owners) or offering rate (the ratio of offering shares to all shares) are two important decision variables in the IPO process that have attracted much attention in the IPO literature.

(Chorruk & Worthington, 2010) Study pricing and performance of IPOs and (Vong & Trigueiros, 2010) examine the short-run price performance of IPO. (Chana, Wangb, & John Weia, 2004) Appraise underpricing and long-term performance of IPOs. (Chia & Padgett, 2005) Survey short-run underpricing and its characteristics in Chinese IPO markets. (Li, Zheng, & Melancon, 2005) Examine effects of underpricing and share retention on IPO aftermarket liquidity. (Cheung, Ouyang, & Tan, 2009) Study regulatory changes affect IPO underpricing. There are various explanations for underpricing, with theories based on asymmetric information, agency costs, and signaling. (Ritter & Welch, 2002) Point out there is no single dominant theoretical cause for underpricing. They show that IPO underpricing is significantly related to: P/E ratio differential, capital rose, offer price, and the 30-day cumulative pre-market return before listing. (Kenourgios, Papathanasiou, & Rafail Melas, 2007) Find that underwriter's reputation and over subscription are two main determinants of short-run underpricing of Greek IPOs. Research of (Agatheea, Sannaseea, & Brooks, 2012) shows that ex ante financial strength (based on the Altman Z-score) has a significant negative effect on short-run underpricing.

This study mainly focuses on the main determinant factors of returns and seek to answer whether the long-run and short-run returns of both public and private IPO companies influenced by size, age and unobservable individual firm's specification, volume of transactions, P/E ratio and offering rate. If it is influenced, is effect of these factors on long-run and short-run returns the same in two groups of IPO companies, public companies and private enterprises?

The relationship between IPO returns and factors influencing IPO performance is investigated by (Durukan & Yerleskesi, 2002). They mentioned that firm size, gross proceeds, method of IPO, age of firm and Debt/E ratio were statistically significant in the estimated short-term return regression equations. From the long-term regression equations they conclude that in the long-run big firms with lower ownership retention provide lower returns. The long-run performance of IPOs with monthly cumulative abnormal returns is assessed by (Chorruk & Worthington, 2010).

The impact of variables such issuer size, firm age, the number of shares sold by insiders at the offering and the offer price are highly motivated in IPOs literature by (Lowry & Shu, 2002), (Loughran & Ritter, 2004), (Bradley, Cooney, Jordan, & Singh, 2004) and (Ritter J. , 1998) respectively.

Although numerous studies have examined various issues of IPOs, but only few of them have focus on the main determinant of IPOs performance in short-run and long-run. We believe that the existing discussion neglects at least one important issue: corporate ownership and its effect on returns of IPO in short-run and long-run. We use a panel data model that allows analysis of short and long-run performance of IPOs companies in Tehran Stock Exchange (TSE) market.

The contribution of this paper is to provide some evidence supporting that the size and P/E ratio are the main determinant of IPOs returns in long-run. Furthermore, demonstrate that most of public companies and private enterprises are overpriced and the corporate ownership has no significant impact on returns of IPO in short-run and long-run. Testable hypothesis are declaration the effect of factors that determine the short-term and long-term IPOs abnormal return in both public companies and private enterprises.

According to Principle 44 of the Iranian Constitutional (P44IRC) most public companies of Iran should divest to private sectors. Therefore since 2006 shares of companies under P44IRC have been offered in TSE market and there has an increasing trend in divesting from public inclusive companies on the subject of privatization. There is an argument that the returns of IPOs of public companies is under government controlling since privatization year. As a result of government pressures it might suppose that there is over/under pricing and retention phenomena IPOs of public companies. This research tries to study the short-term and long-term initial public offerings returns of these companies and compare the results with private companies' offerings returns.

We expect that over the long run, P/E ratio is the main determinant of long-run returns of IPO in both private and public companies. As though in the short run the volume of transactions and size of companies, initial offering rate, age of firms and other individual firm's specification are the determinants of short-run IPO's returns. The rest of this paper is as following: section 2 describes our data and methodology. Section 3 explains estimation results and discussion. Final section concludes the article.

## 2. Data and Analytical Methods

### 2.1. Data:

The data which are used in this paper are: company's size, age, transaction volume, accumulated returns, P/E ratio and initial offering rate. All row data are accessible from the web site of Tehran Stock Exchange. The sample of pool data has been since 1th February 2006 to 30th February 2011 for 18 public companies and 15 private enterprises. An amount of 30 daily cumulative returns of observations collected for comparison the short-run returns of IPO of public and private companies since initial public offering date. The name, website addresses and initial public offering date of 33 companies listed in table 4 and table 5 of appendix. As (Fama, 1998) and (Mitchell & Stafford, 2000) argue, cumulative abnormal return (CAR) may be a better, less biased method to gauge long-run returns. Hence we calculate CAR as follows:  $CAR_{(T_1, T_2)} = \sum_{t=T_1}^{T_2} (R_{it} - R_{mt})$  where  $R_{it}$  and  $R_{mt}$  are daily returns for firm i and daily market returns respectively.

Here we use cumulative daily returns because there is some regulated limitation on the volatility of a share price in Iran and it is maximum 4 percent daily. If we use ended closed price of a stock in this situation it does not show the appropriate change of a stock price. However, cumulative returns never ignore high variation of price among a period. Either way 12 monthly accumulated returns of observations collected for comparison with the long-run returns.

## 2.2. Analytical Method:

In order to determine the effective factors on long-term and short-term returns we use a panel data approach and estimate the parameters of a panel data model by quantitative econometric software EViews 7. Our basic, empirical evidence, model is a linear equation:

$$R(IPO_{it}) = \alpha_0 + \gamma_1 L(\text{Size})_{i,t} + \gamma_2 (\text{Age})_{i,t} + \gamma_3 (\text{IOf. rate})_{i,t} + \gamma_4 L(\text{Trans. Vo})_{i,t} + \gamma_5 P/E_{0i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (1)$$

Where,  $R(IPO_{it})$ , the dependent variable, is the long-term return adjusted by market returns, (abnormal return), correspond to period  $t$  and company  $i$ .  $L(\text{Size})$  is the logarithm total market value of a firm i.e. number of total shares multiplied by daily price of shares.  $\text{Age}$  is the age of the company from the date of establishment to the date of the initial offering in the TSE market by year.  $\text{Off. Rate}$  is the ratio between number of exchange shares on the first day and total numbers of company's shares during offering date in TSE market.  $\text{Log}(\text{Trans. Vo})$  Represent logarithm transaction volume.  $P/E_{0i,t}$  is the stock price divide by its per earnings.  $\mu_i$ ,  $\lambda_t$  represent the between-cross section and between-time period variances, respectively.  $\varepsilon_{i,t}$ : Idiosyncratic effect or within-group variance.  $\alpha$ : Intercept;  $N$ : number of firms,  $T$ : number of time periods.

## 2.3. Panel Data Analysis:

Panel data allow control for variables that cannot observe or measured like manager behavior factors and differences in business practices across companies or variables that change over time but not across entities. Here we focus on two techniques used to analyze panel data: Fixed Effects (FE) and Random Effects (RE). The features of FE models are that they cannot be used to investigate time-invariant causes of the dependent variables. Technically, time-invariant characteristics of the individuals are perfectly collinear with the entity dummies. Substantively, FE models are designed to study the causes of changes within an entity.

When using FE we assume that something within the individual may impact or bias the predictor or outcome variables and we need to control for this. Another important assumption of the FE model is that those time-invariant characteristics are unique to the individual and should not be correlated with other individual characteristics. Because each entity is different therefore the entity's error term and the constant (which captures individual characteristics) should not be correlated with the others. If the error terms are correlated then FE is no suitable since inferences may not be correct and we need to model that relationship (probably using RE). This is the main rationale for the Hausman test (Hausman, 1978).

The rationale behind RE model is that, unlike the FE model, the variation across entities is assumed to be random and uncorrelated with the predictor or independent variables included in the model (Greene, 2003).

### 3. Estimation results and Discussion

#### 3.1. Descriptive statistics

As shown in Fig. 1 and Fig. 2 most of private and public companies, about 73% and 67% of private and public companies respectively, have a negative capital gain in the long-term. In addition most of public companies similar to private enterprises have a positive capital gain in short-term.

Figure 1: compare short-term and long-term capital gain of initial offering shares in private enterprises

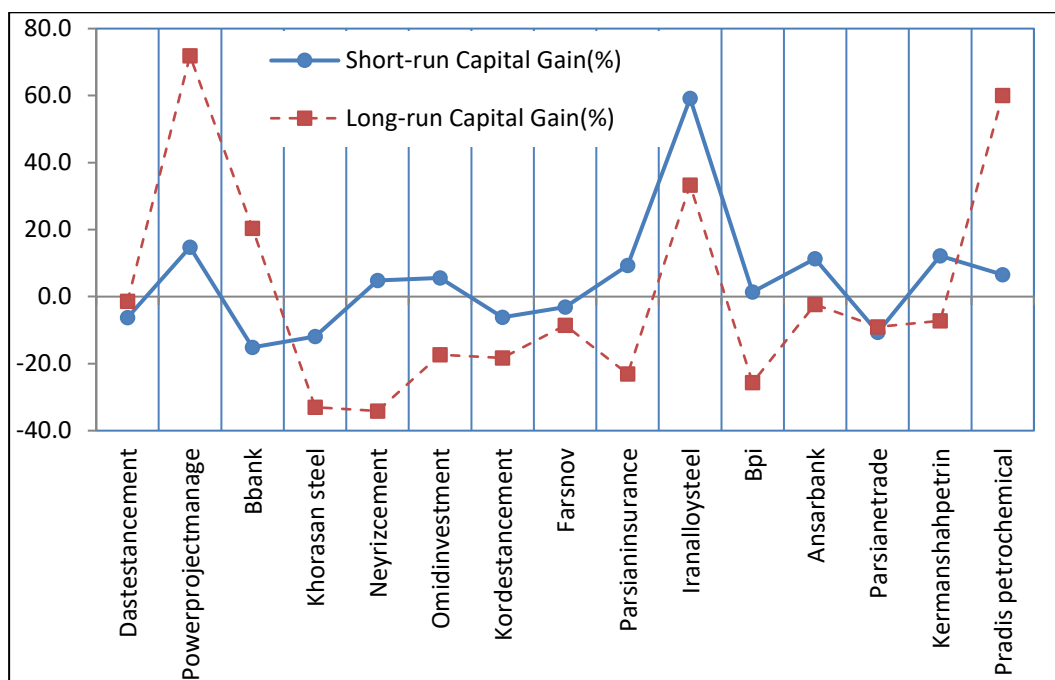
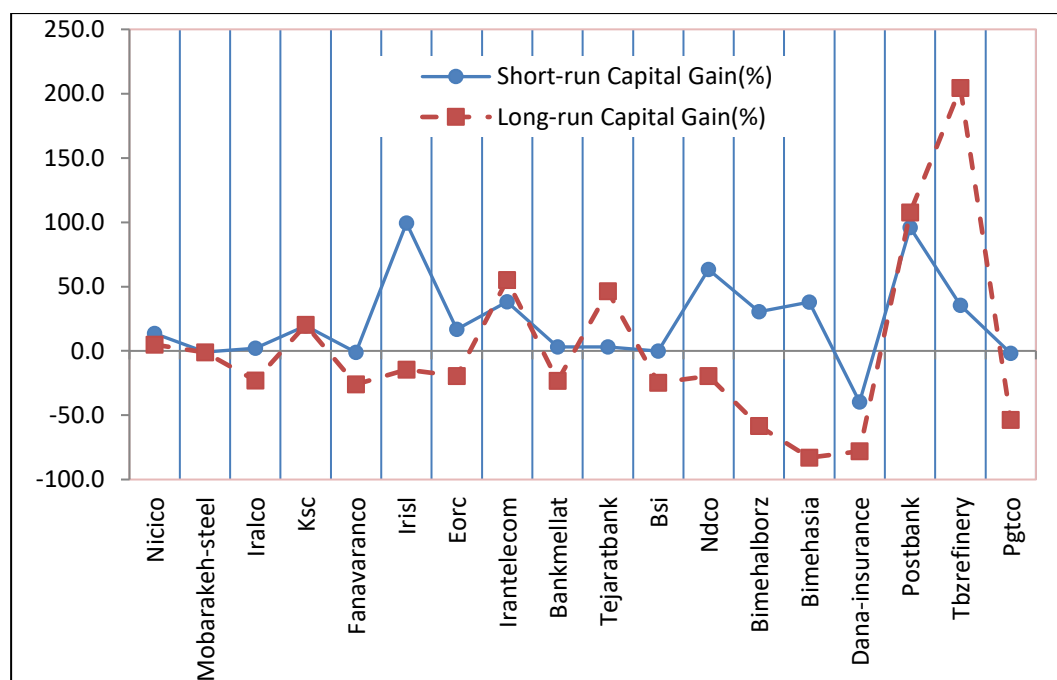


Figure 2: compare short-term and long-term capital gain of initial offering shares in public companies



As table 1 show, we classified post-performance of all public companies and private enterprises according to the long-term and short-term return status into six groups. We named groups C4, C5 and C6 as improved performance companies and groups C1, C2 and C3 as un-improved performance companies. The number percentage of un-improved companies of private ownership (66%) is less than public ownership (72%). There are two possible hypotheses to answer this question, why most of IPO companies have un-improved performance: overpricing and firm’s operating performance.

Table 1: classifying the companies according to the long and short-term return status.

| Group | Short-term return | Long-term return | Number of private firms | Number of public firms | Hidden information | Post-performance |
|-------|-------------------|------------------|-------------------------|------------------------|--------------------|------------------|
| C1    | Positive          | Negative         | 6                       | 7                      | probably           | Un-Improved      |

|                              |               |               |           |           |            |          |
|------------------------------|---------------|---------------|-----------|-----------|------------|----------|
| C2                           | Low-negative  | High-negative | 3         | 5         | probably   |          |
| C3                           | High-positive | Low-positive  | 1         | 1         | probably   |          |
| C4                           | Negative      | Positive      | 1         | 0         | impossible | Improved |
| C5                           | Low-positive  | High-positive | 2         | 5         | impossible |          |
| C6                           | High-negative | Low-negative  | 2         | 0         | impossible |          |
| <b>Total number of firms</b> |               |               | <b>15</b> | <b>18</b> |            |          |

IPO performance of a firm is under the influence of many factors such as: pricing, effects of corporate ownership, regulatory, timing, retention and smoothing the IPOs. There is no evidence for this claim that the effect of over/under pricing and retention rate (or offering rate) is considerably among the other factors. Although other factors such as corporate ownership has no direct effect on the IPOs return. This factor through pricing and offering channel might have an impact on the IPO performance. Thus someone argue that the over/under pricing and offering rate (or share retention) are two important determinants of IPO performance and these variable is used as tools to do arbitrarily propose.

The above mentioned discussion about first hypothesis implies that: most of public and private companies have un-improved performance due to overpricing (set the initial price over the market value) phenomena in IPO process in TSE. However, the corporate ownership issue might intensify overpricing of public companies.

Second hypothesis explain that operation performance of a company might lead to un-improved outcome. Because over the long run, stock price performance is not purely driven by speculation, but it is a reflection of a firm's operating performance. And after one year the price of the stock fell to its lowest level.

As shown in table 4 and table 5 Appendix, the public company Irisl with minimum offering rate (2.38%) has maximum capital gain (99.4%) in short-run. And company Bimehasia with maximum offering rate (9.98%) has minimum capital gain (-83%) in long-run. Furthermore, the private enterprise Khorasansteel among other enterprises has maximum offering rate (14.1 %) with low capital gain (-33%) in long-run. And the Pardispetroshimical company has minimum offering rate (0.1%) has higher long-run capital gain (66%) among other private enterprises. Therefore, descriptive analyzing of data lead to the conclusion that setting the offering rate is of critical importance in the initial public offering process. In TSE, companies such as Pardispetroshimical and Irisl retention the potential capital gain with low offering rate. However, company Bimehasia and company Khorasansteel eluded their potential loss by setting high offering rate.

Low offering rate reduces the number of shares floating in the market and signals positive information about a firm and could attract aftermarket trades and improve market value.

Offering rate influences market liquidity and therefore it affects the aftermarket risk level hence offering rate might have a significant positive impact on initial returns.

### 3.2. Estimation of model

The estimation results of the model in short-run and long-run illustrated in tables 2, 3 respectively. This study estimates returns of IPO and its explanatory variables as Eq. 1 on unbalanced panel data either in public and private firms in short-run and long-run. The sample of pool data has been since February 2006 to February 2011. An amount of 30 daily observations of cumulative returns collected for comparison the short-run returns of IPO of public and private companies since initial public offering date. Either way 12 monthly observations of cumulative returns collected for comparison the long-run returns. The basic panel model in Eq. 1, referring to both intercept and slopes. In the event that there is neither a significant firm specific nor significant temporal effects, we could pool all of the data and run an ordinary least squares (OLS) regression model.

Therefore one can argue that there are significant differences among firms and unobserved firm specific characteristics, such as business practices across companies, investment opportunities or variables that change over time but not across entities which might affect the returns of IPO and are not captured by the pooled OLS model.

These firm specific effects may be correlated to the regressors and thus one needs to control those unobserved time-invariant firm specific effects by allowing the error term to include a firm-specific fixed effects. Thus it yields consistent estimators in the presence of company fixed effects provided that the regressors are not correlated with the error term. Furthermore to postulate the hypothesis, we oblige to use fixed effect or random effect techniques.

Column (1) of both tables 2, 3 contain explanatory variables of the model: Log (Size), P/E, Offering Rate, Log (Age) and Log (Transaction volume). Column (2) and column (3) of tables 2, 3 shows estimated parameters of the suitable model for the public companies and private enterprises respectively. The suitable model selected according to Hausman's specification test, adjusted R-squared and Durbin-Watson statistic. Hausman's specification tests whether there is significant correlation between the unobserved firm-specific RE and the regressors. If there is such a correlation, the RE model would be inconsistent estimated and the FE model would be the model of choice. Other statistics of estimation also present in both preferred FE model and RE model.

Table 2: Estimation short-term returns adjusted by market returns

| Variables: | Public companies      | Private enterprises  |
|------------|-----------------------|----------------------|
|            | Fixed Effect          | Fixed Effect         |
| Intercept  | -23.1448<br>(0.0000)* | -19.8261<br>(0.0000) |
| Log(Size)  | 0.9942<br>(0.0000)    | 0.8959<br>(0.0000)   |

|  |                            |                            |
|--|----------------------------|----------------------------|
| <b>P/E</b>                                       | 0.0005<br>(0.0690)         | 0.0007<br>(0.7266)         |
| <b>Offering Rate</b>                             | -                          | -                          |
| <b>Log(Age)</b>                                  | -                          | -                          |
| <b>Log(Transaction volume)</b>                   | 1.21E-05<br>(0.9396)       | -0.0003<br>(0.0901)        |
| <b>AR(1)**</b>                                   | 0.9296<br>(0.0000)         | 0.9308<br>(0.0000)         |
| <b>R-squared (<math>R^2</math>)</b>              | 0.99829                    | 0.9974                     |
| <b>Adjusted R-squared (Adj.<math>R^2</math>)</b> | 0.99821                    | 0.9973                     |
| <b>Durbin-Watson stat.</b>                       | 2.1402                     | 1.8267                     |
| <b>F-statistic</b>                               | 13899.3<br>(0.0000)***     | 9082.9<br>(0.0000)         |
| <b>Total panel (unbalanced) observations:</b>    | 522                        | 435                        |
| <b>Cross-sections included:</b>                  | 18                         | 15                         |
| <b>Redundant Fixed Effects Tests:</b>            | 55.3036                    | 97.9334                    |
| <b>Cross-section Chi-square Specifications</b>   | (0.0000)<br>FE is suitable | (0.0000)<br>FE is suitable |

Note: • P-Value, ••AR (1) indicates first order autoregressive component of specification, •••Probe (F-statistic).

Table 3: Estimation long-term returns adjusted by market returns

| Variables:           | Public companies     | Private enterprises |
|----------------------|----------------------|---------------------|
|                      | Fixed Effect         | Fixed Effect        |
| <b>Intercept</b>     | -1.2134<br>(0.0000)* | -1.6988<br>(0.1251) |
| <b>Log(Size)</b>     | 0.0302<br>(0.0007)   | ▲                   |
| <b>P/E</b>           | 0.0037<br>(0.0006)   | 0.0155<br>(0.0226)  |
| <b>Offering Rate</b> | -                    | -                   |
| <b>Log(Age)</b>      | -                    | -                   |

|  |                            |                            |
|--|----------------------------|----------------------------|
| <b>Log(Transaction volume)</b>                   | 0.0215<br>(0.0001)         | -0.01335<br>(0.0014)       |
| <b>R-squared (<math>R^2</math>)</b>              | 0.2314                     | 0.4708                     |
| <b>Adjusted R-squared (Adj.<math>R^2</math>)</b> | 0.1526                     | 0.3475                     |
| <b>Durbin-Watson stat.</b>                       | 2.0827                     | 1.6858                     |
| <b>F-statistic</b>                               | 2.9363<br>(0.0000)**       | 3.8180<br>(0.0000)         |
| <b>Total panel (unbalanced) observations:</b>    | 216                        | 165                        |
| <b>Cross-sections included:</b>                  | 18                         | 15                         |
| <b>Redundant Fixed Effects Tests:</b>            | 2.1521                     | 2.2316                     |
| <b>Cross-section Chi-square Specifications</b>   | (0.0066)<br>FE is suitable | (0.0095)<br>FE is suitable |

Note: • P-Value, ••Probe (F-statistic). ▲. This coefficient has Varsity specification across companies so which they did not report here.

### 3.3. Empirical results:

The estimated coefficient of log (size) and P/E, as shown in table 2, in preferred model for public companies in the short-run is positive and significant. However, the coefficients log (transaction volume) is significant and the coefficient P/E is not significant in the estimated model of private enterprises in short-run. Significant of AR (1) in both preferred models indicates that there is autoregressive component in the specification of models, and it implies that short-run returns of today's is correlated to previous day. In the public companies under P44IRC, coefficient individual firm's specifications are significant although these coefficients are not significant for most companies of private model<sup>1</sup>.

Thereby present estimation results in short-run returns; we conclude that the IPO's returns of private enterprises related to size, and volume of transaction. Although in the public companies, size, P/E and individual firm's specification are the determinants of short-run IPO's returns.

As shown in table 3, the coefficient of P/E and log (transaction volume) is significant in estimated long-run models for both private and public companies. It is considerable that coefficient size has a variety specification across companies in preferred private enterprises long-run model. The size of a company points up the scale of firm's operation. Therefore due to scale of firm operation, long-run returns of a firm influenced with his own size. In summary, the fundamental factors, such as P/E ratio and size of firms are the main determinant of long-run abnormal returns of IPO in both private enterprises and public companies under P44IRC.

### 4. Conclusion

The article provides empirical determinate of affective factors on long-term and short-term returns of IPOs of public and private companies in the Tehran Stock Exchange market. We use panel data approach to compare determinant factors of returns of IPO either in public companies under P44IRC and private firms in short-run and long-run.

<sup>1</sup>-Note that coefficient individual firm's specification has not presented in table 2 and table 3.

Result of descriptive statistic shows that most of public companies and private enterprises are overpriced and have negative abnormal returns in long-run. Considering the privatization condition in economies of Iran and neglect the effect of firms' operation performance trusts conclusion of overpricing in IPOs process. Furthermore some companies set high/low offering rate to retention the potential loss/profit.

Estimation results indicate that some fundamental and technical factors such as P/E ratio, size of the firm and volume of transactions are the main factors of determinant of abnormal long-run returns of IPO in both private and public companies as we expected. In the short-run, technical factors such as volume of transaction and individual firm's specification factors are the determinants of short-run the IPO's returns.

Therefore, short-run IPO's returns of private enterprises related to the size and volume of transaction and there is no statistical evidence in significance of the individual firm's specification. Although in the public companies under P44IRC, size, P/E and individual firm's specification are the determinants of short-run returns of IPOs.

Limitation of sample estimation constrained us to include other variables such as industry structures in the estimated model. Perhaps specific characteristics of industry affect the firms' performance in IPOs process.

Overall, there are many factors that determine the long-run and short-run returns of IPOs companies. Thus government and corporate policy makers might use some of these factors as tools to do their arbitrary propose by regulatory, pricing, smoothing and timing in initial public offerings.

## 5. Appendix

Table 4: Private companies' names, initiate offering rate date and price, share price after 30 days and one year.

| Company name        | Date        | Offering rate | Of. Initial Price | Share price of Day 30 | Share price of Month 12 | %price changes in short-run | %price changes in long-run |
|---------------------|-------------|---------------|-------------------|-----------------------|-------------------------|-----------------------------|----------------------------|
| Dastestancement     | 15-Jul-2007 | 1.23          | 2570              | 2409                  | 2535                    | -6.3                        | -1.4                       |
| Powerprojectmanag e | 26-Aug-2007 | 5.50          | 1352              | 1551                  | 2324                    | 14.7                        | 71.9                       |
| Bbank               | 25-Sep-2007 | 10.00         | 1235              | 1048                  | 1487                    | -15.1                       | 20.4                       |
| Khorasan steel      | 30-Oct-2007 | 14.10         | 3815              | 3362                  | 2555                    | -11.9                       | -33.0                      |
| Neyrizcement        | 27-Nov-2007 | 5.00          | 5050              | 5295                  | 3326                    | 4.9                         | -34.1                      |
| Omidinvestment      | 1-Jun-2008  | 4.65          | 3700              | 3905                  | 3058                    | 5.5                         | -17.4                      |
| Kordestancement     | 27-Aug-2008 | 12.96         | 8007              | 7511                  | 6542                    | -6.2                        | -18.3                      |

|                             |             |      |       |       |       |       |       |
|-----------------------------|-------------|------|-------|-------|-------|-------|-------|
| <b>Farsnov</b>              | 21-Oct-2009 | 5.00 | 2540  | 2462  | 2323  | -3.1  | -8.5  |
| <b>Parsianinsurance</b>     | 14-Nov-2010 | 4.91 | 3304  | 3612  | 2540  | 9.3   | -23.1 |
| <b>Iranalloysteel</b>       | 9-Mar-2011  | 4.99 | 2500  | 3979  | 3333  | 59.2  | 33.3  |
| <b>Bpi</b>                  | 16-Aug-2011 | 0.94 | 2150  | 2180  | 1599  | 1.4   | -25.6 |
| <b>Ansarbank</b>            | 28-Aug-2011 | 2.80 | 2680  | 2984  | 2617  | 11.3  | -2.4  |
| <b>Parsianetrade</b>        | 30-Aug-2011 | 0.18 | 9736  | 8696  | 8859  | -10.7 | -9.0  |
| <b>Kermanshahpetrin</b>     | 13-Nov-2011 | 2.86 | 4500  | 5047  | 4176  | 12.2  | -7.2  |
| <b>Pradis petrochemical</b> | 25-Nov-2011 | 0.1  | 17500 | 18652 | 28001 | 6.6   | 60.0  |

Table 5: Public companies' names, initiate offering rate date and price, share price after 30 days and one year

| <b>Company name</b>    | <b>Date</b> | <b>Offering rate</b> | <b>Initial Of. Price</b> | <b>Share price of Day 30</b> | <b>Share price of Month 12</b> | <b>%price changes in short-run</b> | <b>%price changes in long-run</b> |
|------------------------|-------------|----------------------|--------------------------|------------------------------|--------------------------------|------------------------------------|-----------------------------------|
| <b>Nicico</b>          | 4-Feb-2007  | 2.99                 | 3704                     | 4202                         | 3885                           | 13.4                               | 4.9                               |
| <b>Mobarakeh-steel</b> | 11-Mar-2007 | 2.96                 | 1900                     | 1884                         | 1880                           | -0.8                               | -1.1                              |
| <b>Iralco</b>          | 11-Jun-2007 | 4.85                 | 12000                    | 12265                        | 9223                           | 2.2                                | -23.1                             |
| <b>Ksc</b>             | 7-Aug-2007  | 4.38                 | 3350                     | 4007                         | 4030                           | 19.6                               | 20.3                              |
| <b>Fanavaranco</b>     | 3-Feb-2008  | 4.95                 | 6885                     | 6815                         | 5096                           | -1.0                               | -26.0                             |
| <b>Irisl</b>           | 18-May-2008 | 2.38                 | 2500                     | 4985                         | 2138                           | 99.4                               | -14.5                             |
| <b>Eorc</b>            | 29-Jun-2008 | 4.54                 | 5800                     | 6766                         | 4662                           | 16.7                               | -19.6                             |
| <b>Irantelecom</b>     | 9-Aug-2008  | 4.86                 | 1500                     | 2073                         | 2326                           | 38.2                               | 55.1                              |
| <b>Bankmellat</b>      | 18-Feb-2009 | 5.00                 | 1050                     | 1083                         | 806                            | 3.1                                | -23.2                             |
| <b>Tejaratbank</b>     | 18-May-2009 | 5.86                 | 1204                     | 1241                         | 1763                           | 3.1                                | 46.4                              |
| <b>Bsi</b>             | 9-Jun-2009  | 5.84                 | 1002                     | 1000                         | 754                            | -0.2                               | -24.8                             |
| <b>Ndco</b>            | 22-Jul-2009 | 5.89                 | 1400                     | 2285                         | 1125                           | 63.2                               | -19.6                             |
| <b>Bimehalborz</b>     | 7-Oct-2009  | 9.62                 | 6293                     | 8212                         | 2613                           | 30.5                               | -58.5                             |
| <b>Bimehasia</b>       | 23-Dec-2009 | 9.98                 | 1486                     | 2051                         | 253                            | 38.0                               | -83.0                             |

|                       |             |      |       |       |      |       |       |
|-----------------------|-------------|------|-------|-------|------|-------|-------|
| <b>Dana-insurance</b> | 18-Aug-2010 | 4.80 | 27147 | 16355 | 5966 | -39.8 | -78.0 |
| <b>Postbank</b>       | 2-Nov-2010  | 4.99 | 2302  | 4510  | 4777 | 95.9  | 107.5 |
| <b>Tbzrefinery</b>    | 13-Nov-2010 | 4.58 | 1402  | 1898  | 4268 | 35.4  | 204.4 |
| <b>Pgtco</b>          | 18-Jan-2012 | 5    | 1219  | 1197  | 564  | -1.8  | -53.7 |

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