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Reviewing factors affecting the pricing less than companies' initial public offering of shares listed in Tehran Stock Exchange

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Abstract: The study aimed to examine factors affecting the pricing less than initial public offering of shares of the companies listed in Tehran Stock Exchange. The universe includes companies all with an initial offering of shares listed in Tehran Stock Exchange between 2009 and 2012; due to the limited statistical population of the study, purposive sampling method was used. 24 companies with initial offering of shares in the period of investigation were chosen. Software used in this study is Eviews 7. The results showed firm age, size, institutional investors, sales growth, return on assets and the ratio of price to earnings per share have a significant impact on the pricing less than initial public offering of the shares of companies listed in Tehran Stock Exchange. In contrast, the combination of ownership and financial leverage has no impact on it significantly.

Key words: Firm age; Firm size; Institutional shareholder; Sales growth

1. Introduction

Nowadays, the companies which are being controlled by the government and have state ownership, often get regarded as a political issue, and therefore as desirable events for investors are not considered (Maritisy et al. 2010). According to Ritter et al (2008) small companies due to greater uncertainty about their future and intrinsic value and there compared with large companies are more risky and more exposed to the risk of speculative investor objectives, therefore, it is more to be priced less than the expected level of stocks of small companies. Darkan (2010) concluded P/E ratio has effect on initial offering shares returns. Noraty et al (2007) found out significant positive performance in the initial offering shares among firm size and pricing less than. While Kolack (2008) observed negative and less expected performance of initial offerings of long-term in Japan, Agate et al (2012) studied less pricing than real level on the initial offering of shares and identified the related factors. The results showed that pricing less than the real level on initial offering of shares in the London Stock Exchange was about 10 to 12%. And two variables, e.t firm size and risk arising from uncertainty, have significant relationship with less pricing while there is a negative significant relationship between variable of company's financial strength on less pricing and the size of the initial offering. Sherman et al. (2013) identified the factors affecting the less pricing in Hong Kong. The results showed the firm life, firm size, return on assets, firm risk, debt leverage and financial leverage are significantly related to less pricing than initial offerings (Khodaparasti et al, 2014). The purpose of this study was to examine factors affecting the less pricing than level of initial public offering of shares of the companies listed in the Tehran Stock Exchange.

2. Background research

Bottni and Sghari (2013) examined the factors affecting the pricing of initial public offering of shares in companies listed in Tehran Stock Exchange. The data collected in this study was analyzed by software SPSS and the result indicate that there is a significant relationship between variable of P/E and the change in the price of initial public offerings and the variable has the highest impact on the pricing of initial public offering of shares. Saet and Enguongi (2013) examined the factors affecting the less pricing than level of initial public offerings of companies listed in the Nairobi Stock Exchange, as an emerging market. The results indicate that obligators can allocate the less pricing to the investors; therefore, obligators can have a huge impact on the less pricing than level of initial public offerings of shares. Zhou and Lau (2014) examined the factors affecting the less pricing than level of initial public offerings of shares. The results suggest that some factors have significant impact on the less pricing than level of initial public offerings of shares; and there is a significant difference between board and small and medium investments. The study provides understanding and new knowledge in the field of less pricing. Lang (2014) examined the factors affecting the pricing of initial public offering of shares in the investment growth market emerging in China. The results according to the analysis

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showed that firm size, profitability, growth rate and the dividend rate are important and significant in the pricing of initial public offerings in market.

3. Methodology

3.1. The research hypotheses

- Age has a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.
- Firm size has a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.
- Institutional shareholders have a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.
- Ownership combination has a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.
- Sales growth has a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.
- Return on assets has a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.
- Financial leverage has a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.
- Ratio of price to return per share (ROA) has a significant impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange.

3.2. The statistical population and sample

The statistical population consists of all companies listed in Tehran Stock Exchange initial offering of shares during 2009-2013. In the present study because of the limited statistical sampling, purposive sampling method was used, 24 companies with initial offering of shares were selected in the investigation period.

3.3. Regression model

$$IPO_{it} = a_0 + a_1 Firm\ Size_{it} + a_2 Firm\ Ag + a_4 Ownership_{it} + a_5 Grov + a_8 P/E_{it} + \varepsilon_{it}$$

IPO_{it}: less pricing

$Firm\ Size_{it}$: normal log of book-value of firm's total assets

$Firm\ Age_{it}$: the number of years under being listed in Tehran Stock Exchange

$Institutional_{it}$: ratio of hold shares by institutional shareholders

$Ownership_{it}$: ratio of hold shares by great shareholders in company (over 50%)

$Growth_{it}$: (sales in current year- that in pervious)/sales in previous year

ROE_{it}: ratio of book-value on share to pure return

$Leverage_{it}$: ratio of total debts to total assets in company

P/E_{it}: ratio of price to return per share of company

3.4. Data analysis method

In the study, descriptive statistic will be explained and then done pretests of variance heterogeneity and fixed-effects test (F-Limear test and Hausman test). Finally, in order to test the research hypothesis, regression test was used. Software used in this study is Eviews 7.

4. Results

4.1. Study on variance heterogeneity

To examine the variance heterogeneity, disturbing terms of LM Arch test were conducted. The results of variance heterogeneity test of LM Arch are described in the Table 1.

Table 1: results of disturbing terms of LM Arch test

Explanation	Statistics value	Probability
F-statistic	0.921457	0.072
Obs*R-squared	1.648725	0.072

*5% error level

According to Table 1, f-statistic in test is not significant at level of 5%, so hypothesis on the variance homogeneity was confirmed and the variance heterogeneity of disturbing terms rejected.

4.2. Significance testing of the fixed effects method

Table 2: F-Lymear and Hausman test

Explanation	Statistic value	Freedom degree	Probability
Cross-section F	1.376452	23	0.002*
Cross-section Chi-square	174.537156	23	0.000*
Hausman test			
Explanation	8.445178	6	0.004*

* 5% error level

According to Table 2 the results of two tests conducted (F, Hausman), the probability obtained in both tests was less than 5% and so it should be used fixed-effects method in regression model.

4.3. Lien-Loien test

According to Table 3, examining the statistic values obtained and their acceptance probability showed that null hypothesis on non-stability to all variables was rejected, and all variables under study are placed on the stability level.

Table 3: Lien-Loien test

Variables	Statistics	Probability
Less pricing than IPO	5.745	0.019*
Firm age	5.692	0.021*
Firm size	-4.247	0.037
Institutional shareholders	-6.026	0.015
Ownership combination	5.991	0.027*
Sales growth	7.357	0.005*
Return on assets	-4.127	0.035
Financial leverage	6.882	0.012*
Ratio of price to return per share	6.618	0.016

*5% error level

4.4. The research hypothesis testing

Table 4: regression test

Variable name	Estimating coefficient	Estimate deviation coefficients	t-statistics	Significance-level
Fixed	1.541	0.292	5.278	0.007*
Firm age	-0.316	0.068	-4.647	0.016*
Firm size	-3.152	0.526	-5.992	0.000*
Institutional shareholders	0.676	0.148	4.568	0.018
Ownership combination	0.249	0.182	1.368	0.079
Sales growth	-1.528	0.368	-4.152	0.034*
Return on assets	-0.304	0.084	-3.619	0.048*
Financial leverage	0.743	0.589	1.262	0.082
Ratio of price to return per share	2.286	0.392	5.831	0.000*

*5% error level

Table 5: significance of total model

Watson-Durbin	Determination coefficient	Adjusted determination coefficient	F-statistic	Significance level
2.173	0.542	0.536	92.519	0.000**

*5% error level and **1% error level

According to Table 4, Watson-Durbin statistic is between 1.5 and 2.5 and can be said there is no correlation between errors terms and it can use regression. Given adjusted determination coefficient, control and independent variables can predict about 53.6% of changes in dependent variable. As regarded, significance level of F-statistic less than error level of 1%, it can be concluded that the regression model is significant statistically. Significance level of t-statistic for independent variables onto dependent variable showed that firm age, firm size, institutional shareholders, sales growth, return on assets and the ratio of price to returns per shares have significant impact on less pricing than level of the initial public offering of shares of companies listed in the Stock Exchange Tehran. In contrast, the combination of ownership and financial leverage don't have any significant impacts on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange. Empirical research model is as follows:

$$IPO_{it} = 1.541 - 3.152\ Firm\ Size_{it} - 0.316\ Firm\ Age_{it} + 0.676\ Institutional_{it} + 0.249\ Ownership_{it} - 1.528\ Growth_{it} - 0.304\ ROE_{it} + 0.743\ Leverage_{it} + 2.286\ P/E_{it} + \varepsilon_{it}$$

5. Conclusion and recommendations

Hypotheses testing results showed that firm age, firm size, institutional shareholders, sales growth, return on assets and ratio of price to return on assets have significant effect on less pricing than level of the initial public offering of shares of listed companies in Tehran Stock Exchange. In contrast, the combination of ownership and financial leverage has no impact on less pricing than level of the initial public offering of shares of companies listed in Tehran Stock Exchange. Therefore, Heibati and Mouradi (2010) found a significant relationship between the ratio of price to returns per share and less pricing. Botteni and Asghari (2014) showed a significant relationship between variable of ratio of price to returns per share and less pricing, as well as the variable has the highest impact on the pricing of initial public offering per share. Lang (2014) indicated that firm size, profitability, growth rate and the dividend rate are of significant and important factors in the pricing of initial public offerings in the market. According to the results, we suggest the followings:

1. The companies are recommended which want to offer their initial share offering according to the results to take decision and factors affecting pricing decisions to consider.

2. The investors are recommended not to choose the companies offering initial shares with the heights age, size, sales growth, and return on assets because these companies are priced less.

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