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The Relationship between Earning Management, Corporate Performance and Initial Public Offering of Stock

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Abstract
This study is aimed at investigating the relationship between initial public offering of stock and earning management. To this end, data mentioned in financial statement of corporate accepted in Tehran stock market for the years of 2006-2013 is used. To investigate earning management, arbitrary liability items are used and to evaluate financial performance, dissertation accruals are used. Results have shown that initial public offering of stock affects earning management positively and earning management affects earning performance positively. Additionally, findings have indicated that the relationship between dissertation accruals and financial performance in companies with initial public offering of stock is quite different from the relationship in companies without initial public offering of stock.
Key words: earning management, dissertation accruals, initial offering of stock, financial performance

Introduction
When offering stock publicly, people need real-time information to make decision on purchasing stock. In case of asymmetrical information while offering stock publicly, a group of informed people acquire abnormal return. Therefore, asset of people with low level of information is in danger. In initial public offering of stock, companies can use dissertation accruals and sell stocks at a very high price because some investors do not pay attention to real nature of earning increment. According to the fact that managers are forced to return dissertation accruals during the next periods, it is likely for companies with weak performance to have loss of earning during the next periods. Results have shown that companies manipulate both dissertation accruals and actual performances while offering stocks. IPO companies exploit investors via dissertation accruals ignoring gradual increase of earning. These companies sell stocks at a very high price. According to the fact that managers are forced to return dissertation accruals during the next periods, it is likely for companies with weak performance to have loss of earning during the next periods. Cash flow is not enough for companies with weak performance to neutralize the effect of dissertation accrual because these companies pay attention to earning management. Therefore, it is possible that earning management while initial offering of stocks directs investors to rethink about quality of future earning. They decide to reevaluate these companies dealing with earning management based on dissertation accruals. This study is aimed at discovering relationship between earning management and initial public offering of stock (IPO). Additionally, this paper is aimed at evaluating financial performance of IPO companies accepted in Tehran Stock Market. In these companies, managers pay attention to earning management.

Background
Herrmann et al. (2003) found out that there is a negative relationship between earning obtained from selling stocks in initial public offering of stock and the current-year performance. Also, when the current-year performance is positive and the expected next-year performance is negative, selling stock is the best way for earning management. Ball and Shivakumar (2008) investigated earning quality while initial public offering of stock and showed that companies provide conservative reports when initial public offering of stock. Investors demand high-quality reports due to asymmetrical information. Wong (2010) evaluated the relationship between real-time earning and asset increment via initial public offering of stock. Hid research was based on the theory that stock decreases in price while initial public offering of stock. One reason for this decrement is the existence of asymmetrical information between managers and investors. He concluded that in companies with real-time earning, price of stock decreases less due to lack of asymmetrical information. Eghbalnia (2008) evaluated short-term performance of initial public offering of stock in companies accepted in Tehran stock market. Results obtained from 36 cases have shown that initial offering has better performance in short-time period in comparison with the average of market. To determine the price below the value of initial public offering of stock in Tehran stock market is similar to other stock markets.

Methodology
Research hypotheses
In order to investigate the relationship between earning management before and after initial public offering of stock, three hypotheses are mentioned:
Hypothesis 1: there is a meaningful relationship between initial public offering of stock and dissertation accruals
Hypothesis 2: there is a meaningful relationship between dissertation accruals and financial performance in companies with initial public offering of stock
In case of approval of hypothesis 2, hypothesis 3 is proposed and investigated. If the second hypothesis is rejected, then hypothesis 3 is also rejected.

Hypothesis 3: there is a quite different relationship between dissertation accruals and financial performance in companies with initial public offering of stock.

Research variables and their measurement indices

Earning management: earning management is calculated as below based on Jones adjusted model:

$$TA_{i,t} = \alpha_{i,t}\left(\frac{1}{A_{i,t-1}}\right) + \beta_{1_{i,t}}\left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t}}\right) + \beta_{2_{i,t}}\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t}$$

Where TA presents dissertation accruals, $A_{i,t-1}$ is total asset of corporation in the first year and $\Delta REV_{i,t}$ represent earning changes of each company in comparison with the previous year. $\Delta REC_{i,t}$ is account changes of each company compared with the previous year. $PPE_{i,t}$ represents asset, machinery and equipments.

Financial performance: to calculate financial performance, return of dividend is used which is defined as earnings before interest and tax divided by total asset.

Initial public offering of stock: initial public offering of stock is done in the following method:

Comprehensive information including acceptance date and initial public offering of stock after companies have entered stock market is accessible through the website of Iran stock company (tse.tmc.com). Accordingly, if companies have initial public offering, 1 and if they do not have any initial public offering, 2 are used.

Control variables

1- Corporate size: normal logarithm of data at the end of period
2- Leverage: total debt at the end of period to total asset at the end of period ratio
3- Market value to booking value ratio

Statistical models to hypothesis testing

For test the first hypothesis, following model is used:

$$TA_{i,t} = \alpha_0 + \alpha_1 IPO_{i,t} + \alpha_2 size_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 MTB_{i,t}$$

Where **TA** represents dissertation accruals, **IPO** is initial offering of stock and Size represents the corporate size. **Lev** is financial leverage. **MTB** is Market value to booking value ratio.

In order to test the second hypothesis, following model is used:

$$ROA_{i,t} = \alpha_0 + \alpha_1 TA_{i,t} + \alpha_2 size_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 MTB_{i,t}$$

Where, ROA is financial performance (earnings before and after interest and tax).

$$ROA_{i,t} = \alpha_0 + \alpha_1 TA_{i,t} + \alpha_2 size_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 MTB_{i,t}$$

Hypothesis analysis

- Descriptive statistics

Table 1: descriptive statistics

	TA	SIZE	LEV	MTB	ROA
mean	.79	13.296	.09	1.69	.137
median	.9	13.097	.05	1.57	.119
max	.99	18.39	.79	33.23	.627
min	.0001	9.8	.001	-22.13	-.327
Std. Dev.	.283	1.4	.1	2.5	.117
Skewness	.13	.76	.32	.21	.89
Kurtosis	.78	.12	.63	.89	.987

The first hypothesis test

Table 2: results of regression of dissertation accruals (earning management) via random effect method

Prob	t-Statistic	Std. Error	Coefficient	Variable
.0001	4.6	.062	.3	C
.0171	2.82	.082	.26	IPO
.0008	4.027	.42	1.7	SIZE
.0006	-4.59	.12	-.56	LEV
.0000	4.36	.123	.54	MTB
	.52			Adjusted R-squared
	1.87			Durbin-Watson
	4.92			F-statistic

According to results of table 2, t, coefficient of initial public offering of stock and dissertation accruals are 2.82 which is bigger that the value mentioned in table being 2. Therefore, hypothesis 0 is rejected. Consequently, there is a meaningful relationship between initial public offering of stock and dissertation accruals. So, the first hypothesis is approved. There is a positive relationship between MTB and corporate size while there is a negative relationship between financial leverage and dependent variable.

Second hypothesis test

Table 3 represents results of regression of financial performance in companies with initial public offering of stock.

Prob	t-Statistic	Std. Error	Coefficient	Variable
.0000	4.36	.12	.54	
.0112	2.87	.17	.51	IPO
.0119	2.82	.127	.36	SIZE
.0000	-6.08	.003	-.02	LEV
.0000	5.88	.02	.12	MTB
		.51		Adjusted R-squared
		1.92		Durbin-Watson
		4.92		F-statistic

These results have been obtained via random effects method. According to table 3, coefficient of dissertation accruals is 2.87 which is bigger than the value mentioned in table being 2. Therefore, hypothesis 0 is rejected and consequently, there is a meaningful relationship between dissertation accruals and financial performance in companies with initial public offering of stock. So, the second hypothesis is approved.

The third hypothesis test

Table 4: results of regression of financial performance in companies without initial public offering of stock

Prob	t-Statistic	Std. Error	Coefficient	Variable
.0000	8.88	.009	.08	
.0000	4.14	.043	.18	IPO
.0000	-5.77	.058	-.34	SIZE
.0000	14/33	.08	1.15	LEV
.0000	9.64	.04	.39	MTB
		.49		Adjusted R-squared
		1.91		Durbin-Watson
		4.92		F-statistic

After estimating the mentioned function, in order to test the third hypothesis, it is necessary to investigate whether the relationship between dissertation accruals and financial performance in companies with initial public offering of stock is different from that in companies without initial public offering of stock. To this end, results from companies with initial public offering of stock mentioned in table 3 is compared with the results of companies without initial public offering of stock mentioned in table 4. Hypothesis test is to investigate whether dissertation accrual of companies without initial public offering of stock is different from that of companies with initial public offering of stock. Results are given in table 5.

H0: dissertation accrual and financial performance of companies with initial public offering of stock are the same as those of companies without initial public offering of stock

H1: dissertation accrual and financial performance of companies with initial public offering of stock are not the same as those of companies without initial public offering of stock

Table 5: White T-test for difference of dissertation accrual and financial performance of companies with initial public offering of stock and companies without initial public offering of stock

Coefficient of the companies without initial public offering of stock	Coefficient of the dissertation accrual and financial performance of companies with initial public offering of stock	H_0	White T-test	Result
.18	**.51**	**Coefficient of the dissertation accrual and financial performance of companies with initial public offering of stock =Coefficient of the companies without initial public offering of stock**	**2.47**	**H0 is rejected**

According to table 5, dissertation accrual and financial performance of companies with initial public offering of stock are not the same as those of companies without initial public offering of stock. Consequently, H0 means that sameness of future short-time financial performance coefficient before and after initial public offering of stock is rejected. Table 5 has shown that the value of 2.47 is bigger than the value of t mentioned in table which is 2. Consequently, H0 is rejected and H1 is approved. Therefore, dissertation accrual and financial performance of companies with initial public offering of stock are not the same as those of companies without initial public offering of stock. So, the third hypothesis is approved. Consequently, dissertation accrual and financial performance of companies with initial public offering of stock are not the same as those of companies without initial public offering of stock.

Conclusion

Dissertation accrual and financial performance of companies with initial public offering of stock are not the same as those of companies without initial public offering of stock.

Theories regarding underpricing are classified into four groups: asymmetrical information, basic factors, observational factors and behavioral factors. Models based on asymmetrical information are preferable. These theories assume that one partner involved in initial public offering of information have more access to information. All types of asymmetry of information leading to underpricing are mentioned in the following.

- When asymmetry of information favors investor bank. According to the fact that this kind of institutes are greatly informed of market demand, then company offering stock is forced to underprice stocks in order to sell them.
- Company offering stock has higher level of information about its own value, so the more valuable the company is the more underpricing the company uses.

Some investors are more informed than others, so they avoid investing on stocks which are overpriced. Consequently, fear of uninformed investors to buy easily leads to underpricing .Research results have shown that initial public offering of stock affects earning management positively. Also, dissertation accruals affects financial performance positively so that Dissertation accrual and financial performance of companies with initial public offering of stock are not the same as those of companies without initial public offering of stock.

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