Earnings Management By Financing Purposes

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ABSTRACT

An objective of this study is to investigate the difference of earnings management before financing by capital financing purposes. Two main methods of financing directly in capital markets are seasoned equity offerings (hereafter 'SEO') and issuing bonds (hereafter 'BOND'). The purposes of financing are largely classified into working capital and investment capital. This study investigates whether the firms that need to finance for working capital are more motivated for earnings management than the firms that need to finance for investment capital. The results show that discretionary accruals before financing for working capital are greater than financing for investment capital for both SEO and BOND.

Keywords: Earnings Management; Capital Financing; Financing Purpose; Working Capital; Investment Capital

INTRODUCTION

Firms borrow from banks or raise capital directly from capital markets when they are lack of capital. Two main methods of direct financing in capital markets are SEO and BOND. Firms are required to disclose the purposes when raising capital directly from capital markets. The purposes of financing by SEO are largely classified into working capital and investment capital and the purposes of financing by BOND are largely classified into working capital, investment capital, and refinancing. A number of studies have explored the relationship between financing and earnings management in accounting researches. Prior studies have demonstrated that the firms are greatly motivated for earnings management before SEO while the motivation is not clear when the firms issue bonds and the effects are indirect. However, studies about earnings management by financing purposes have not been done. A probable reason is that none of financial databases provides SEO and BOND data by financing purposes. In this study, data about SEO by purposes were manually collected from KIND (Korea Investor's Network for Disclosure) system of Korea Exchange and data about BOND by purposes were also manually collected from BONDWEB system of EDAILY. This paper aims to validate the difference in amount of discretionary accruals before financing by capital financing purposes based on the assumption that the causes of earnings management should be different by financing purposes. The causes of earnings management for the firms that finance for working capital appear to be different from the firms that finance for investment capital. Refinancing is excluded from the analysis since BOND includes financing for it. Firms issuing equity and bonds at the same time and the firms financing for various purposes at once are also excluded from the analysis. Samples are the firms listed in Korea Exchange from 1992 to 2014 with fiscal year end of December excluding financial firms.

HYPOTHESES DEVELOPMENT

Rangan (1998), Teoh et al. (1998a), Teoh et al. (1998b), Shivakumar (2000), and Yoon & Miller (2002) claimed the firms issuing equity adjust discretionary accruals before financing to raise earnings. They asserted firms conduct earnings management to enhance the stock price before SEO and increased stock price accordingly facilitates issuing equity per se and is also beneficial to existing shareholders. Whereas, Lee & Kim (2010), Liu et al. (2010), and Lee & Heo (2013) failed to draw consistent conclusions in the investigations whether firms use earnings management before issuing bonds. Hong (2016), Hong & Lee (2016) directly compared earnings management before financing of the firms issuing equity with the firms issuing bonds, and the results showed that significantly more earnings management were detected in the firms issuing equity than the firms issuing bonds. This study sets up Hypothesis 1

to retest the identical analysis of Hong (2016), Hong & Lee (2016) except for the sample of bonds for refinancing. Hypothesis 1 has already been verified in previous studies, this study retests it to develop Hypothesis 2 & 3. Ahn et al. (2015) claimed the causes of earnings management vary in different SEO types. They argued that the upward adjustment of earnings management in the firms issuing equity with public offering is greater than in the firms issuing equity with right offering, while there is no significant difference noted between the firms issuing equity with private placement to the third party and the firms issuing equity with right offering. They also claimed that as inside participants increase, more downward adjustment of earnings management was detected when the firms issuing equity with private placement to the third party. As shown in the case of loss avoiding earnings management, if a firm is facing a particular situation, it would be more motivated for earnings management. Generally the situations that firms need to finance for working capital should be more urgent than the firms that finance for investment since the firms can be facing a crisis of bankruptcy if they failed to finance for working capital while failure to raise capital for investment is usually not the direct cause of bankruptcy. Therefore, the firms that need to finance for working capital should be more motivated for earnings management than that need to finance for investment capital. Based on these ideas, this study establishes Hypothesis 2 & 3 as follows and analyzes them.

Hypothesis 1: The firms that finance by SEO conduct more earnings management before financing than the firms that finance by BOND.

Hypothesis 2: The firms that finance by SEO for working capital conduct more earnings management before financing than the firms that finance for investment capital.

Hypothesis 3: The firms that finance by BOND for working capital conduct more earnings management before financing than the firms that finance for investment capital.

THE MODEL

This paper analyzes earnings management by adjusting discretionary accruals. In earnings management researches, the most used measures are Modified Jones Model (Dechow et al., 1995) and Performance Matched Model (Kothari et al., 2005) to estimate discretionary accruals. This study measures earnings management using Performance Matched Model. Ball & Shivakumar (2008) argued errors occur when measuring discretionary accruals of growth firms and extreme performance firms using Modified Jones Model. It is plausible that firms issuing equity and/or bonds have high growth and/or extreme performance. To verify the Hypotheses, regression models are set up which have discretionary accruals before financing as dependent variable and *DUMMY* variables as main variables which mean *SEO* vs. *BOND*, *Working Capital* vs. *Investment Capital*. *LEV* is included to control firms' financial stability and *GW* is included to control firms' growth opportunity. *CFO* is a variable to control firms' profitability, *SIZE* is included to control firms' size effect, and *LOSS* is included to control accruals property.

Performance Matched Model

$$TA_t/TA_{t-1}=\beta_0+\beta_1(1/A_{t-1})+\beta_2(\triangle REV_t-\triangle AR_t)/A_{t-1}+\beta_3(PPE_t/A_{t-1})+\beta_4 ROA_t+\varepsilon_t \quad (1)$$

TA:	Total Accruals
A:	Total Assets
$\triangle REV$:	Changes in Revenue = $\triangle REV_t-\triangle REV_{t-1}$
$\triangle AR$:	Changes in Account Receivable = $\triangle AR_t-\triangle AR_{t-1}$
PPE:	Property, Plant, and Equipment
ROA:	Return on Assets

Research Model

$$DA_{t-1} = \beta_0+\beta_1 SEO_t+\beta_2 LEV_{t-1}+\beta_3 GW_{t-1}+\beta_4 CFO_{t-1}+\beta_5 SIZE_{t-1}+\beta_6 LOSS_{t-1}+\Sigma YD+\Sigma IND+\varepsilon_{t-1} \quad (2)$$

DA: Discretionary Accruals measured by Kothari et al. (2005)
SEO: 1 if financed by Seasoned Equity Offerings, 0 if financed by Issuing Bonds
LEV: Leverage=Total Liabilities/Total Assets
GW: Growth=ΔSales scaled by Total Assets
CFO: Cash Flows from Operating scaled by Total Assets
SIZE: The natural logarithm of the Total Assets
LOSS: The earnings < 0 then 1, otherwise 0
YD: Year Dummy
IND: Industry Dummy

$$DA_{t-1} = \beta_0+\beta_1 WC\_SEO_t+\beta_2 LEV_{t-1}+\beta_3 GW_{t-1}+\beta_4 CFO_{t-1}+\beta_5 SIZE_{t-1}+\beta_6 LOSS_{t-1}+\Sigma YD+\Sigma IND+\varepsilon_{t-1} \quad (3)$$

WC_SEO: 1 if financed by SEO for Working Capital, 0 if financed by SEO for Investment Capital.

$$DA_{t-1} = \beta_0+\beta_1 WC\_BOND_t+\beta_2 LEV_{t-1}+\beta_3 GW_{t-1}+\beta_4 CFO_{t-1}+\beta_5 SIZE_{t-1}+\beta_6 LOSS_{t-1}+\Sigma YD+\Sigma IND+\varepsilon_{t-1} \quad (4)$$

WC_BOND: 1 if financed by BOND for Working Capital, 0 if financed by BOND for Investment Capital.

EMPIRICAL RESULTS

Table 1 is descriptive statistics of total 2,240 samples. Mean of *DA* as a dependent variable is 0.004, slightly higher than the market average, 0. It means the firms that finance are more likely use earnings management than the total firms in the market. No material differences from the prior studies noted in the values of other variables.

Table 1. Descriptive statistics

Variables	Sample size	Mean	SD	Median	Min	Max
DA	2,240	0.004	0.068	0.000	-0.280	0.393
SEO	2,240	0.420	0.494	0.000	0.000	1.000
LEV	2,240	0.684	0.323	0.663	0.119	1.500
GW	2,240	0.183	0.587	0.089	-0.754	2.071
CFO	2,240	0.043	0.467	0.031	-0.163	0.249
SIZE	2,240	27.246	1.785	27.227	22.114	32.183
LOSS	2,240	0.283	0.451	0.000	0.000	1.000

See Model (2) for variables' definition.

Table 2 is the matrix of correlations between variables. According to the results, the firms that finance by SEO use more earnings management since the correlation between *DA* and *SEO* is significantly positive.

Table 2. Pearson correlation matrix

Variables	*DA*	*SEO*	*LEV*	*GW*	*CFO*	*SIZE*	*LOSS*
DA	1						
SEO	0.132***	1					
LEV	0.011	0.004	1				
GW	0.023	0.013	0.292***	1			
CFO	-0.157***	-0.075***	0.238***	0.215***	1		
SIZE	-0.126***	-0.396***	0.084***	0.012	0.148***	1	
LOSS	0.048**	0.148***	0.001	-0.022	-0.109***	-0.172***	1

See Model (2) for variables' definition.
*, **, and *** significant at the 10%, 5%, and 1% levels, respectively.

Table 3 shows the univariate analysis results of three hypotheses. Firms that finance for working capital appear to use more earnings management before financing.

Table 3. T-test

DA	*DUMMY*=1	*DUMMY*=0	Difference
SEO; SEO vs. BOND (Sample size)	0.014 (940)	-0.004 (1,300)	0.018***
WC_SEO; Working Capital vs. Investment Capital (SEO) (Sample size)	0.020 (781)	-0.013 (159)	0.033***
WC_BOND; Working Capital vs. Investment Capital (BOND) (Sample size)	0.001 (1,169)	-0.038 (131)	0.038***

See Model (2), (3), and (4)' for variables' definition.
*, **, and *** significant at the 10%, 5%, and 1% levels, respectively.

Table 4 shows regression analysis results that support Hypotheses. In panel A, the coefficient (0.010) of firms that finance by SEO is positive at a significance level of 1% (t value=2.96), which suggests that the firms finance by SEO use more earnings management before financing than the firms finance by issuing bonds. Regression analysis result seems to support Hypothesis 1. In panel B, the coefficient (0.028) of firms that finance by SEO for Working Capital is positive at a significance level of 1% (t value=4.32), which suggests that the firms finance by SEO for Working Capital use more earnings management before financing than the firms finance by SEO for Investment Capital. Regression analysis result seems to support Hypothesis 2. In panel C, the coefficient (0.031) of firms that finance by BOND for Working Capital is positive at a significance level of 1% (t value=5.46), which suggests that the firms finance by BOND for Working Capital use more earnings management before financing than firms finance by BOND for Investment Capital. Regression analysis result seems to support Hypothesis 3. No material differences from the prior studies noted in the values of other control variables. In every analysis, VIF values are lower than 10, therefore, there is no issue with multicollinearity.

Table 4. Regression analysis for hypotheses

$DA_{t-1} = \beta_0+\beta_1 DUMMY_t+\beta_2 LEV_{t-1}+\beta_3 GW_{t-1}+\beta_4 CFO_{t-1}+\beta_5 SIZE_{t-1}+\beta_6 LOSS_{t-1}+\Sigma YD+\Sigma IND+\varepsilon_{t-1}$ (2), (3), (4)

	Panel A: Hypothesis 1 *DUMMY = SEO*			Panel A: Hypothesis 2 *DUMMY = WC_SEO*			Panel A: Hypothesis 3 *DUMMY = WC_BOND*		
Variables	**Parameter Estimate**	**t value**	**VIF**	**Parameter Estimate**	**t value**	**VIF**	**Parameter Estimate**	**t value**	**VIF**
Intercept	0.066	2.35**	0.000	0.065	1.55	0.000	0.032	0.81	0.000
DUMMY	0.010	2.96***	1.401	0.028	4.32***	1.199	0.031	5.46***	1.114
LEV	0.009	12.74***	3.900	0.008	7.75***	5.471	0.009	7.70***	2.835
GW	0.001	0.11	1.110	-0.001	-0.37	1.116	0.001	2.99***	1.998
CFO	-0.084	-14.66***	3.829	-0.072	-8.37***	5.357	-0.103	-12.95***	2.477
SIZE	-0.003	-3.05***	1.532	-0.004	-2.45**	1.365	-0.002	-1.56	1.579
LOSS	-0.008	-2.42***	1.197	-0.018	-3.56***	1.265	0.001	0.15	1.103
YD	Included			Included			Included		
IND	Included			Included			Included		
Adj. R^2	0.106			0.108			0.143		
F value	7.61***			3.83***			6.40***		
Sample size	2,240			940			1,300		

See Model (2), (3), and (4)', and 'Table 3' for variables' definition.
VIF = Variance Inflation Factor.
*, **, and *** significant at the 10%, 5%, and 1% levels, respectively.

CONCLUSION

This paper examined the difference of earnings management before financing by capital financing purposes. This study verified whether the firms that need to finance for working capital are more motivated for earnings management than the firms that need to finance for investment capital. The results show that discretionary accruals before financing for working capital are greater than financing for investment capital for both SEO and BOND. Academically, this study contributes to verify the difference of earnings management by financing purposes of SEO and BOND. There have been a lot of studies regarding the entire SEO and/or BOND, however, studies in detailed SEO and/or BOND by financing purposes are rarely found. Practical contributions of this study are that it suggests the firms which implemented earnings management before financing, especially for working capital, the effects should be reflected to the prices upon issuing equity and/or bonds. Moreover, audit needs to be done in even stricter manner, reflecting the consequences of earnings management before financing, specifically for working capital.

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