A Study On Accounting Conservatism Of Capital-Raising Corporations

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ABSTRACT

Various factors affect conservative accounting of corporations. Most of all, this paper focuses on the factor of corporate capital raising. One of the important roles of conservatism is that companies conduct conservative accounting to cut the agency costs due to information asymmetry. Managers may desire excellent management performance and stable financial condition. Depending on circumstances, they seek to improve management performance and financial condition by choosing a proper accounting method. That is, they have incentives to carry out less conservative accounting. Companies that raise capital may have stronger incentives to take such an accounting method. On the contrary, if a capital market monitoring system works properly, corporations would conduct conservative accounting to reduce the agency costs. The results of the empirical analysis reveals that the Korean listed companies raising capital choose less conservative accounting than those that do not raise capital. This indicates companies without financing conduct conservative accounting more than those with.

Keywords: Conservatism; Capital Raising; Accounting Choice; Information Asymmetry; Agency Cost; Earnings Management

INTRODUCTION

Capital raising is one of the three major activities of corporations and is a very important activity for corporations. Corporations issue stocks or corporate bonds to raise capital directly in the capital market, or they raise capital through borrowing from financial institutions such as banks. The financial statements of the corporations are significantly affected by capital raising. In addition, managers have a lot of incentives from the accounting and economic perspectives in raising capital (Teoh, Welch & Wong, 1998a; 1998b; Rangan, 1998).

Conservatism, one of the important principles in company accounting, is a method of recognizing assets and revenues as low or as late as possible while debts and expenses as high or as quick as possible. Many companies including Daewoo Shipbuilding & Marine Engineering Co., Ltd. in the engineer-to-order industry have recently stirred up social issues because they have failed to abide by this underlying principle (Hyun, Han & Lee, 2016). Major fraud accounting cases, such as Enron, WorldCom and SK Global, remind about the importance of conservatism principle that firms need to observe (Healy & Palepu, 2003; Zekany, Braun & Warder, 2004; Choi, Lee, Choi & Ahn, 2015).

Watts (2003a; 2003b) argued the association between agency costs and accounting conservatism. In a situation where ownership and management are separated, accounting conservatism protects investors by monitoring managers. In previous studies, the role of accounting conservatism has been claimed to be the protection of shareholders and creditors. In this way, corporations are known to conduct conservative accounting to cut agency costs due to asymmetric information. However, this is not the only factor that affects such accounting. This study, above all, focuses on corporate capital raising. Capital raising companies are said to have incentives to manage earnings upward (Hong, 2016; Hong & Lee, 2016; Hong, 2017). If they make an upward earnings management, they are highly likely to carry out non-conservative accounting. If the monitoring system works well in the Korean capital market, the capital raising corporation will conduct conservatism accounting. On the other hand, if the monitoring system does not work well in the Korean capital market, the capital raising corporation will conduct less conservative accounting. This paper compares and analyzes accounting conservatism of companies that raise capital and those that do not.

The academic contribution of this paper is to verify the accounting conservatism of capital-raising corporations. Although there have been many studies on the accounting conservatism, there are no studies that have clarified the

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accounting conservatism of capital-raising corporations. The practical contributions of this paper are as follows. First, for external audits of capital-raising corporations, auditors need to examine thoroughly in case they conduct less conservative accounting. Second, regulators should consider to strengthen regulations and thoroughly supervise the financial reporting of capital-raising corporations. Third, investors should be more careful when investing in stocks or bonds considering that the numbers in the financial statements of the company may not be conservative.

HYPOTHESES DEVELOPMENT

Fields, Lys and Vincent (2001) defined "An accounting choice is any decision that affects the output of the accounting system in a particular way in terms of format or substance. This decision encompasses not only financial statements prepared in accordance with Generally Accepted Accounting Principles (GAAP), but also tax returns and reporting to regulatory authorities." Earnings management and conservatism are representative issues related to accounting choice (Kwon, Kim, Sohn, Choi & Han, 2010).

Watts and Zimmerman (1978, 1986) argued the positive accounting theory that political costs, bonus schemes, debt contracts can have impacts on a company's accounting method. In general, companies with higher debt ratio, lower interest coverage ratio and lower current ratio can encounter higher interest expenses as well as pressures of debt redemption. According to debt contracts hypothesis, companies choose the accounting method that recognizes future earnings in advance or increases earnings to avoid pressures from debt contracts violations. Since Dhaliwal (1980) verified this debt contracts hypothesis, many studies have been reporting the consistent results with the hypothesis.

Basu (1997) defined "Conservatism as resulting in earnings reflecting bad news more quickly than good news". The definition implies that there are systematic differences in the timeliness and persistence of earnings between good news and bad news. Basu used stock returns to measure conservatism, and found that the positive changes in earnings are more persistent than the negative changes in earnings. Earnings response coefficients (ERCs) of positive changes in earnings were greater than ERCs of negative changes in earnings, and these results are consistent with the asymmetric persistence of earnings.

Kim and Bae (2006) also examined the relationship between conservatism and factors such as debt ratio, loan ratio, institutional investors' shareholding ratio, foreign investors' shareholding ratio and a state of being listed in the stock market. They argued that corporations with higher debt ratio, lower loan ratio, higher foreign investors' shareholding ratio, and listed companies tend to carry out conservative accounting.

Beatty, Weber and Yu (2008) though displaying no different views on the effects of conservatism, argued that the level of conservatism on financial reporting varies according to economic demands.

Kim and Bae (2009) investigated the relationship between conservatism and accruals by measuring the conservatism using earnings persistence model and stock returns model of Basu (1997), Ball and Shivakumar (2005) model, and Penman and Zhang (2002) model. Kim and Bae separated the accruals as non-discretionary accruals and discretionary accruals to verify their relationship with conservatism. Kim and Bae (2009) argued that conservatism is negatively related to both non-discretionary accruals and discretionary accruals. Kim and Bae (2009) claimed that accruals decreased due to the conservative accounting of the company. Kim and Bae (2009) also examined the effects of non-discretionary accruals and discretionary accruals on conservatism. It came out the companies with large discretionary accruals do conservative accounting. This result is contrary to the assumption in previous researches that claim the companies with large discretionary accruals conduct non-conservative accounting.

Hong and Oh (2016) conducted a study on accounting conservatism in terms of debt characteristics. The results of comparison between companies raising capital by bank loans and those issuing bonds showed that the former conducts more conservative accounting than the latter. These results can be viewed as a poor management of capital market participants in monitoring.

Hong (2016) and Hong and Lee (2016) studied on earnings management by companies raising capital. They argued that companies issuing equity manage earnings upward more than those issuing bonds. In addition to this, they also stated that those issuing bonds make an upward earnings management more than those that do not raise capital and

those issuing equity upward earnings management more than those without financing. In other words, capital-raising companies make an upward earnings management more than those that do not raise capital at all.

In conclusion, the abovementioned studies have reported that capital-raising companies seek to manage earnings upward in order to easily finance capital, reduce costs of raising capital, and to meet the requirements of debt contracts. However, the capital market's watchdog system appears to hardly function. According to the definition of conservatism, upward earnings management can be viewed as less conservative accounting. Consequently, the following hypothesis is set up and verify through empirical analysis in this.

Hypothesis: The capital-raising corporations would carry out less conservative accounting than non-capital raising corporations.

THE MODEL

Basu (1997) measured the degree of conservatism depending on how strong a relation between variations in the net losses during the previous term and during the current term is comparing with a relation between variations in the net earnings during the previous term and during the current term. He considered reflecting losses rather than earnings immediately as conservatism, and larger variations in the net losses than variations in the net earnings as a higher degree of conservatism. It is referred to as earnings persistence model, and its details are as follows: In formula (1), if a coefficient β_7 which represents conservatism is significant negative, it means firms that do not raise capital carry out conservative accounting more than those that do.

$$\Delta NI_t = \beta_0 + \beta_1 D\Delta NI_{t-1} + \beta_2 \Delta NI_{t-1} + \beta_3 D\Delta NI_{t-1} * \Delta NI_{t-1} + \beta_4 NFC_t + \beta_5 D\Delta NI_{t-1} * NFC_t + \beta_6 \Delta NI_{t-1} * NFC_t + \beta_7 D\Delta NI_{t-1} * \Delta NI_{t-1} * NFC_t + \varepsilon_t \tag{1}$$

Where:

ΔNI =   Change of net income scaled by beginning total asset = $(Net\ Income_t - Net\ Income_{t-1})/Total\ Asset_{t-1}$
$D\Delta NI$ = 1 if ΔNI is negative, otherwise 0
NFC =   1 if the firm did not raise capital, otherwise 0
ε =   residuals

Stock returns model of Basu (1997) is a representative measure of conservatism. Basu (1997) stated conservatism to recognize the bad news immediately and not to recognize the good news until it is realized. Stock returns would decrease if losses due to bad news are reflected immediately. Consequently, a negative stock returns would be more closely correlated with net earnings than a positive stock returns. Based on these ideas, the model to measure conservatism has been designed as follows: In formula (2), if a coefficient β_7 is significant positive, it suggests non-capital raising companies to carry out conservative accounting more than those raising capital.

$$XP_t = \beta_0 + \beta_1 DR_t + \beta_2 RET_t + \beta_3 DR_t * RET_t + \beta_4 NFC_t + \beta_5 DR_t * NFC_t + \beta_6 RET_t * NFC_t + \beta_7 DR_t * RET_t * NFC_t + \varepsilon_t \tag{2}$$

Where:

XP =   Net income scaled by beginning market value = $Net\ Income_t / Market\ Value_{t-1}$
RET =   Buy and hold return from April of this year to March of next year[1]
DR =   1 if RET is negative, otherwise 0

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[1] The financial statements of South Korean companies are disclosed at the end of March. In the accounting conservatism studies of South Korean companies using Basu's Stock returns model, 'buy and hold return from April of this year to March of next year' is used as the stock returns (Kim, Yang & Cho, 2011; Nam, Son & Kim, 2013; Lee, Han & Kim, 2015; Hong & Oh, 2016).

Givoly and Hayn (2000) measured conservatism by using non-operating accruals. The below formula (3) indicates that a significant negative coefficient β_1 represents higher conservatism (Lafond & Watts, 2008).

$$GHAC_t = \beta_0 + \beta_1 NFC_t + \beta_2 GHAC_{t-1} + \beta_3 OCF_t + \beta_4 LEV_t + \beta_5 MV_t + \beta_6 BM_t + \varepsilon_t \qquad (3)\,^2$$

Where:

$GHAC =$ Nonoperating accruals scaled by beginning total asset
$\qquad = [Net\ Income_t + Depreciation\ Expense_t - OCF_t - \{(\Delta Accounts\ Receivable_t + \Delta Inventories_t$
$\qquad + \Delta Prepaid\ Expenses_t) - (\Delta Accounts\ Payable_t + \Delta Taxes\ Payable_t)\}]/\ Total\ Asset_{t-1}$
$OCF =$ Cash flows from operations scaled by beginning total asset
$LEV =$ Leverage = Debt ratio = $Total\ Liability_t/\ Total\ Asset_t$
$MV =$ Natural logarithm of market value = $Ln(Market\ Value_t)$
$BM =$ Book to market ratio = $Book\ Value_t/\ Market\ Value_t$

Ball and Shivakumar (2008) examined the degree of conservatism by analyzing the relationship between total accruals and operating cash flows. The relationship between the two is determined by how the good news or the bad news is recognized in operating cash flows. When profits and losses are asymmetrically recognized and the bad news cause losses, the relation of total accruals and operating cash flows is positive, which suggests conservatism. Such a significant positive coefficient β_7 in the below formula (4) reveals that corporations which do not raise capital carry out conservative accounting more than those which do.

$$TACC_t = \beta_0 + \beta_1 OCF_t + \beta_2 DOCF_t + \beta_3 NFC_t + \beta_4 OCF_t * DOCF_t + \beta_5 OCF_t * NFC_t + \beta_6 DOCF_t *$$
$$NFC_t + \beta_7 OCF_t * DOCF_t * NFC_t + \beta_8 GW_t + \beta_9 PPE_t + \varepsilon_t \qquad (4)$$

Where:

$TACC =$ Total accruals scaled by beginning total asset = $(Net\ Income_t - OCF_t)\ /\ Total\ Asset_{t-1}$
$OCF =$ Cash flows from operations scaled by beginning total asset
$DOCF =$ 1 if OCF is negative, otherwise 0
$GW =$ Sales growth rate scaled by beginning total asset = $(Salses_t - Salses_{t-1})/\ Total\ Asset_{t-1}$
$PPE =$ Property, plant and equipment scaled by beginning total asset

Khan and Watts (2009) expanded stock returns model of Basu (1997) to develop a conservatism measure, called *CSCORE*. To reduce statistical deviation in this study, a hundred group of *CSCORE* was formed, each value assigned to each group (0-99), and then figures gained by dividing such a value by 100 used. If *CSCORE* is closer to 1, conservatism is stronger. If a coefficient β_1 of the following formula (5) is significant positive, it suggests non-capital raising firms conduct conservative accounting more than those raising capital.

$$CSCORE_t = \beta_0 + \beta_1 NFC_t + \beta_2 MV_t + \beta_3 LEV_t + \beta_4 OCF_t + \beta_5 MB_t + \beta_6 GW_t + \Sigma YD + \Sigma IND + \varepsilon_t \qquad (5)\,^3$$

Where:

$CSCORE =$ Measurement of conservatism developed by Khan and Watts (2009)
$YD =$ Year dummy variables
$IND =$ Industry dummy variables

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[2] This model included control variables which is commonly used in many previous studies such as Paek and Yoo (2010); Kim et al. (2011); Nam et al. (2013); Gong and Baek (2016); Hong and Oh (2016).
[3] This model included control variables which is commonly used in many previous studies such as Kim and Park (2014); Choi and Bae (2015); Choi et al. (2015); Ryu and Kim (2015); Hong and Oh (2016).

Refer to Model (1), (3) and (4) for the definition of other variables.

This study is conducted by using samples of corporations listed from 1991 to 2014 in Korea Exchange (KRX) KOSPI market. Companies that provide financial services or do not adopt fiscal month of December are excluded due to incomparability. KOSDAQ companies with the possibility of unusual samples were also excluded. In addition, only companies that increase capital by issuing equity or bonds, among all other capital-raising companies, are included in the samples. To adjust extreme values, the top 1% and bottom 1% of data are winsorized. The final samples selected are 10,650. The financial data are collected from Total Solution 2000 (TS-2000) of the Korea Listed Companies Association (KLCA), stock price data from FN-Guide's Data-Guide, data for seasoned equity offerings from Korea Investor's Network for Disclosure System (KIND) of KRX, and data for issuing bonds from Edaily's BONDWEB system. Table 1 shows the process of sample selection and Table 2 shows the sample distribution by year and industry.

Table 1. Sample selection procedures

Sample selection criteria	Sample size
KOSPI companies listed in the KRX between 1991 and 2014	12,618
(-) Financial companies	(811)
(-) Companies with fiscal year not ending in December	(327)
(-) Companies with missing financial data	(830)
Final samples	10,650

Table 2. Sample distribution

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1991	22	13	14	36	20	7	11	24	16	17
1992	23	15	15	37	22	7	12	25	17	19
1993	24	15	16	39	21	8	13	25	18	20
1994	24	15	16	39	21	8	14	25	18	20
1995	24	15	16	40	21	7	15	25	18	21
1996	25	17	16	41	22	8	15	26	18	22
1997	23	19	19	43	19	8	15	28	19	20
1998	24	20	19	43	20	10	15	27	25	23
1999	24	20	21	45	21	12	15	27	26	24
2000	25	20	21	45	24	12	15	30	27	24
2001	27	20	22	47	24	13	16	31	27	28
2002	27	20	22	47	24	13	17	31	27	29
2003	27	20	22	49	25	14	17	31	28	30
2004	28	20	22	50	27	14	17	34	31	32
2005	28	20	23	52	28	14	17	36	32	33
2006	29	20	23	54	28	14	17	37	33	34
2007	29	21	25	55	28	15	18	38	33	35
2008	29	23	26	59	28	15	18	40	35	36
2009	30	23	26	59	28	15	18	41	36	36
2010	30	24	26	59	30	15	18	45	37	40
2011	31	25	27	60	30	16	19	46	37	41
2012	32	25	27	61	32	17	19	48	39	42
2013	34	25	28	64	32	17	19	49	41	43
2014	35	25	28	67	32	19	19	49	41	43
Total	654	480	520	1,191	607	298	389	818	679	712

(Table 2 continued on next page)

(Table 2 continued)

Year	(11)	(12)	(13)	(14)	(15)	(16)	(17)	NFC_t=0	NFC_t=1	Total
1991	19	17	24	12	3	30	11	86	210	296
1992	21	18	25	12	3	31	11	94	219	313
1993	23	18	27	12	3	31	11	133	191	324
1994	23	18	26	13	3	31	11	184	141	325
1995	23	18	27	13	3	31	12	209	120	329
1996	27	19	27	13	3	32	11	226	116	342
1997	27	19	27	14	3	33	11	199	148	347
1998	25	21	27	14	3	33	16	186	179	365
1999	27	21	29	14	3	34	21	190	194	384
2000	27	21	30	14	4	36	22	97	300	397
2001	29	23	32	14	4	39	24	118	302	420
2002	30	24	33	14	4	40	25	115	312	427
2003	31	25	34	14	4	41	26	106	332	438
2004	33	26	38	14	5	42	26	110	349	459
2005	33	26	38	14	6	45	29	98	376	474
2006	35	26	39	14	7	47	31	77	411	488
2007	36	27	39	16	7	48	32	114	388	502
2008	37	27	41	16	7	50	35	107	415	522
2009	38	29	41	18	7	52	37	140	394	534
2010	38	29	42	19	9	55	38	137	417	554
2011	38	30	44	20	9	55	42	130	440	570
2012	39	30	50	20	10	57	48	148	448	596
2013	42	30	55	21	11	57	50	127	491	618
2014	43	30	55	21	12	56	51	132	494	626
Total	744	572	850	366	133	1,006	631	3,177	7,473	10650

(1) = Food, Beverage; (2) = Textile, Clothes, Leather; (3) = Lumber, Pulp, Paper, Furniture; (4) = Cokes, Chemical products; (5) = Medical, Pharmaceuticals; (6) = Rubber, Plastic; (7) = Nonmetallic products; (8) = Metal, Fabricated metal; (9) = Computer, Medical manufacturing; (10) = Machinery, Electronic equipment; (11) = Motor, Trailers; (12) = Construction; (13) = Wholesaler, Retailer; (14) = Transportation service; (15) = Publishing, Broadcasting, Video, Communication; (16) = Professional service; (17) = Others

EMPIRICAL RESULTS

Table 3 shows the descriptive statistics of variables. The mean value of *NFC* is 0.702, which means that 7,473 (=10,650*0.702) corporations have not raised capital and 3,177 (=10,650-7,473) corporations have raised capital. The mean value of *TACC* is -0.022, and the median value is -0.004. The mean value of *XP* is 0.059, and the median value is 0.070. The mean value of *NI* is 0.025, and the median value is 0.027. The mean value of *ΔNI* is 0.004, and the median value is 0.001. The mean value of *RET* is 0.150, and the median value is 0.004. The mean value of *GHAC* is -0.034, and the median value is -0.030. The mean value of *CSCORE* is 0.497, and the median value is 0.500. Most statistical values of variables are not significantly different from the results of previous studies.

Table 3. Descriptive statistics

Variables	Sample size	Mean	Std.	Min	Median	Max
NFC_t	10,650	0.702	0.458	0.000	1.000	1.000
$TACC_t$	10,650	-0.022	0.121	-0.664	-0.004	0.406
XP_t	10,650	0.059	0.395	-2.075	0.070	1.552
NI_t	10,650	0.025	0.081	-0.333	0.027	0.243
ΔNI_{t-1}	10,650	0.004	0.084	-0.333	0.001	0.390
RET_t	10,650	0.150	0.676	-0.843	0.004	3.427
OCF_t	10,650	0.050	0.085	-0.203	0.048	0.304
GW_t	10,650	0.065	0.209	-0.688	0.051	0.895
PPE_t	10,650	0.002	0.002	0.000	0.001	0.015
$GHAC_t$	10,650	-0.034	0.080	-0.342	-0.030	0.243
$CSCORE_t$	10,650	0.497	0.287	0.000	0.500	0.990
LEV_t	10,650	0.524	0.226	0.054	0.532	0.999
MV_t	10,650	18.347	1.664	15.374	18.051	23.363
MB_t	10,650	1.009	0.879	0.019	0.771	5.660

NFC = 1 if the firm did not raise capital, otherwise 0
$TACC$ = total accruals scaled by beginning total asset
XP = net income scaled by beginning market value
NI = net income scaled by beginning total asset
ΔNI = change of net income scaled by beginning total asset
RET = buy and hold return from April of this year to March of next year
OCF = cash flows from operations scaled by beginning total asset
GW = sales growth rate scaled by beginning total asset
PPE = property, plant and equipment scaled by beginning total asset
$GHAC$ = Non-operating accruals scaled by beginning total asset
$CSCORE$ = measurement of conservatism developed by Khan and Watts (2009)
LEV = debt ratio
MV = natural logarithm of market value
MB = Book to market ratio

Table 4. Pearson correlation matrix

Panel A: Earnings Persistence Model of Basu (1997)

Variables	NFC_t	ΔNI_t	$D\Delta NI_{t-1}$	ΔNI_{t-1}
NFC_t	1.000	-	-	-
ΔNI_t	-0.009	1.000	-	-
$D\Delta NI_{t-1}$	0.006	0.057***	1.000	-
ΔNI_{t-1}	0.006	-0.161***	-0.549***	1.000

Panel B: Stock Returns Model of Basu (1997)

Variables	NFC_t	XP_t	DR_t	RET_t
NFC_t	1.000	-	-	-
XP_t	-0.015	1.000	-	-
DR_t	-0.012	-0.024	1.000	-
RET_t	-0.031***	0.066***	-0.651***	1.000

Panel C: Givoly and Hayn Model (2000)

Variables	NFC_t	$GHAC_t$	$GHAC_{t-1}$	OCF_t	LEV_t	MV_t	BM_t
NFC_t	1.000	-	-	-	-	-	
$GHAC_t$	0.005	1.000	-	-	-	-	-
$GHAC_{t-1}$	0.060***	0.147***	1.000	-	-	-	-
OCF_t	0.138***	-0.261***	-0.140***	1.000	-	-	-
LEV_t	-0.296***	-0.252***	-0.164***	-0.140***	1.000	-	-
MV_t	-0.214***	0.086***	0.053***	0.179***	-0.136***	1.000	-
BM_t	0.037***	0.108***	0.051***	-0.016	-0.139***	-0.310***	1.000

Panel D: Ball and Shivakumar Model (2008)

Variables	NFC_t	$TACC_t$	OCF_t	$DOCF_t$	GW_t	PPE_t
NFC_t	1.000	-	-	-	-	-
$TACC_t$	-0.060***	1.000	-	-	-	-
OCF_t	0.138***	-0.312***	1.000	-	-	-
$DOCF_t$	-0.112***	0.200***	-0.610***	1.000	-	-
GW_t	0.011	0.030***	0.126***	-0.039***	1.000	-
PPE_t	0.105***	-0.262***	-0.023**	0.050***	0.119***	1.000

Panel E: Khan and Watts Model (2009)

Variables	NFC_t	$CSCORE_t$	MB_t	OCF_t	LEV_t	MV_t	GW_t
NFC_t	1.000	-	-	-	-	-	
$CSCORE_t$	0.051***	1.000	-	-	-	-	-
MB_t	-0.086***	0.005	1.000	-	-	-	-
OCF_t	0.138***	-0.020	0.015	1.000	-	-	-
LEV_t	-0.296***	0.126***	0.082***	-0.140***	1.000	-	-
MV_t	-0.214***	0.081***	0.337***	0.179***	-0.136***	1.000	-
GW_t	0.011	0.060***	0.035***	0.126***	0.271***	-0.017*	1.000

1) Refer to Table 3 for the definition of variables.
2) ***, **, and * significant at the 1%, 5%, and 10% levels, respectively.

Panel A, B, C, D, and E in Table 4 show the Pearson correlation matrix between the variables in each research model. The correlation coefficients between variables in each model are not significantly different from the results of previous researches.

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Table 5. Regression Analysis by Earnings Persistence Model of Basu (1997)

$\Delta NI_t = \beta_0 + \beta_1 D\Delta NI_{t-1} + \beta_2 \Delta NI_{t-1} + \beta_3 D\Delta NI_{t-1} * \Delta NI_{t-1} + \beta_4 NFC_t + \beta_5 D\Delta NI_{t-1} * NFC_t + \beta_6 \Delta NI_{t-1} * NFC_t$
$+ \beta_7 D\Delta NI_{t-1} * \Delta NI_{t-1} * NFC_t + \varepsilon_t$　　　　　　　　(1)

Variables	Coefficient	t-value
$Intercept$	0.066	9.91[***]
$D\Delta NI$	-0.008	-0.85
ΔNI	-1.262	-106.41[***]
$D\Delta NI * \Delta NI$	1.254	84.15[***]
NFC	-0.064	-8.01[***]
$D\Delta NI * NFC$	0.007	0.60
$\Delta NI * NFC$	1.073	37.85[***]
$D\Delta NI * \Delta NI * NFC$	**-1.400**	**-30.71[***]**
$F-value$	1,653.76[***]	
$Adj. R^2$	0.521	
$Sample\ size$	10,650	

1) Refer to Table 2 for the definition of variables.
2) [***], [**], and [*] significant at the 1%, 5%, and 10% levels, respectively.

Table 5 shows the results of hypothesis testing with earnings persistence model of Basu (1997). Basu measured the degree of conservatism depending on how strong a relation between variations in the net losses during the previous term and during the current term is comparing with a relation between variations in the net earnings during the previous term and during the current term. He considered reflecting losses rather than earnings immediately as conservatism, and larger variations in the net losses than variations in the net earnings as a higher degree of conservatism. The coefficient β_7 of $D\Delta NI * \Delta NI * NFC$, which is the explanatory variable of this study, is a significant negative value. It explains that variations in the net losses of the corporations that do not raise capital is greater than variations in the net earnings. It indicates the corporations that do not raise capital are more conservative than corporations that raise capital. The explanatory power of the model is 52.1% and the F-value is significant. Regression analysis seems to be completed properly to verify this research hypothesis that is using earnings persistence model.

Table 6. Regression Analysis by Stock Returns Model of Basu (1997)

$XP_t = \beta_0 + \beta_1 DR_t + \beta_2 RET_t + \beta_3 DR_t * RET_t + \beta_4 NFC_t + \beta_5 DR_t * NFC_t + \beta_6 RET_t * NFC_t + \beta_7 DR_t * RET_t * NFC_t + \varepsilon_t$　　(2)

Variables	Coefficient	t-value
$Intercept$	-0.059	-25.72[***]
DR	0.062	13.74[***]
RET	0.076	106.16[***]
$DR * RET$	-0.057	-5.32[***]
NFC	0.060	21.08[***]
$DR * NFC$	-0.062	-11.55[***]
$RET * NFC$	-0.074	-42.30[***]
$DR * RET * NFC$	**0.058**	**4.60[***]**
$F-value$	1,614.99[***]	
$Adj. R^2$	0.515	
$Sample\ size$	10,650	

1) Refer to Table 3 for the definition of variables.
2) [***], [**], and [*] significant at the 1%, 5%, and 10% levels, respectively.

Table 6 shows the results of hypothesis testing with stock returns model of Basu (1997). Basu stated conservatism to recognize the bad news immediately and not to recognize the good news until it is realized. Stock returns would decrease if losses due to bad news are reflected immediately. Consequently, a negative stock returns would be more closely correlated with net earnings than a positive stock returns. The coefficient β_7 of $DR * RET * NFC$, which is the explanatory variable of this study, is a significant positive value. It indicates that corporations that do not raise capital are more conservative than corporations that raise capital. The explanatory power of the model is 51.5% and the F-value is significant.

Table 7. Regression Analysis by Givoly and Hayn Model (2000)

$GHAC_t = \beta_0 + \beta_1 NFC_t + \beta_2 GHAC_{t-1} + \beta_3 OCF_t + \beta_4 LEV_t + \beta_5 MV_t + \beta_6 BM_t + \varepsilon_t$　　　　(3)

Variables	Coefficient	t-value
Intercept	-0.020	-0.77
NFC	**-0.013**	**-2.50**[**]
GHAC	-0.108	-12.30[***]
OCF	-0.326	-13.04[***]
LEV	-0.106	-12.13[***]
MV	0.003	1.92[*]
BM	0.004	5.45[***]
F-value	78.85[***]	
Adj.R²	0.043	
Sample size	10,650	

1) Refer to Table 3 for the definition of variables.
2) [***], [**], and [*] significant at the 1%, 5%, and 10% levels, respectively.

Table 7 shows the results of hypothesis testing with Givoly and Hayn (2000) model. Givoly and Hayn (2000) measured conservatism by using non-operating accruals. The coefficient β_1 of NFC, which is the explanatory variable of this study, is a significant negative value. It indicates that corporations that do not raise capital are more conservative than corporations that raise capital. The explanatory power of the model is 4.3% and the F-value is significant.

Table 8. Regression Analysis by Ball and Shivakumar Model (2008)

$TACC_t = \beta_0 + \beta_1 OCF_t + \beta_2 DOCF_t + \beta_3 NFC_t + \beta_4 OCF_t * DOCF_t + \beta_5 OCF_t * NFC_t + \beta_6 DOCF_t * NFC_t$
$+ \beta_7 OCF_t * DOCF_t * NFC_t + \beta_8 GW_t + \beta_9 PPE_t + \varepsilon_t$　　　　(4)

Variables	Coefficient	t-value
Intercept	0.015	1.65[*]
OCF	-0.294	-3.21[***]
DOCF	-0.077	-6.09[***]
NFC	0.017	1.63
*OCF*DOCF*	-1.077	-10.12[***]
*OCF*NFC*	-0.318	-3.14[***]
*DOCF*NFC*	0.103	6.43[***]
OCF*DOCF*NFC	**1.862**	**12.09**[***]
GW	0.008	1.72[*]
PPE	-12.726	-17.13[***]
F-value	133.49[***]	
Adj.R²	0.101	
Sample size	10,650	

1) Refer to Table 3 for the definition of variables.
2) [***], [**], and [*] significant at the 1%, 5%, and 10% levels, respectively.

Table 8 shows the results of hypothesis testing with Ball and Shivakumar (2008) model. Ball and Shivakumar (2008) examined the degree of conservatism by analyzing the relationship between total accruals and operating cash flows. The relationship between the two is determined by how the good news or the bad news is recognized in operating cash flows. When profits and losses are asymmetrically recognized and the bad news cause losses, the relation of total accruals and operating cash flows is positive, which suggests conservatism. The coefficient β_7 of $OCF * DOCF * NFC$, which is the explanatory variable of this study, is a significant positive value. It indicates that corporations that do not raise capital are more conservative than corporations that raise capital. The explanatory power of the model is 10.1% and the F-value is significant.

Table 9. Regression Analysis by Khan and Watts Model (2009)

$$CSCORE_t = \beta_0 + \beta_1 NFC_t + \beta_2 MV_t + \beta_3 LEV_t + \beta_4 OCF_t + \beta_5 MB_t + \beta_6 GW_t + \Sigma YD + \Sigma IND + \varepsilon_t \tag{5}$$

Variables	Coefficient	t-value
Intercept	-0.095	-15.76***
NFC	**0.004**	**4.48*****
MV	0.005	17.01***
LEV	0.008	4.48***
OCF	-0.006	-1.59
MB	-0.001	-4.41***
GW	0.001	1.07
YD	included	
IND	included	
F-value	154.74***	
Adj. R^2	0.394	
Sample size	10,650	

1) Refer to Table 3 for the definition of variables.
2) ***, **, and * significant at the 1%, 5%, and 10% levels, respectively.

Table 9 shows the results of hypothesis testing with Khan and Watts (2009) model. Khan and Watts expanded stock returns model of Basu (1997) to develop a conservatism measure, called *CSCORE*. If *CSCORE* is higher, conservatism is stronger. The coefficient β_1 of NFC, which is the explanatory variable of this study, is a significant positive value. It indicates that corporations that do not raise capital are more conservative than corporations that raise capital. The explanatory power of the model is 39.4% and the F-value is significant.

The regression analysis for the above five models reveals the consistent results that non-capital raising corporations conduct conservative accounting more than capital raising corporations. Namely, the results from 1991 to 2014 coincided with the hypothesis[4].

CONCLUSION

This study has analyzed accounting conservatism of corporations that raise capital by issuing equity or issuing bonds and those that do not. The capital-raising corporations have incentives to choose less conservative accounting in order to easily finance capital, reduce costs of capital, or prolong conditions of contracts such as debt contracts. On the contrary, they would decide to conduct conservative accounting to cut the agency costs due to information asymmetry. The evidence this study provided reveals that among the Korean listed companies, those that raise capital carry out less conservative accounting than those that do not. The academic contribution of this paper is to verify the accounting conservatism of capital-raising corporations. Although there have been many studies on the accounting conservatism, there are no studies that have clarified the accounting conservatism of capital-raising corporations. The practical contributions of this paper are as follows. First, for external audits of capital-raising corporations, auditors need to examine thoroughly in case they conduct less conservative accounting. Second, regulators should consider to strengthen regulations and thoroughly supervise the financial reporting of capital-raising corporations. Third, investors should be more careful when investing in stocks or bonds considering that the numbers in the financial statements of the company may not be conservative. The limitation is that it does not include bank loan financing companies since the data was unobtainable. It would be meaningful if this paper can be extended in the following study to compare accounting conservatism differences between stock issuers and bond issuers.

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[4] The result of every regression analysis that excluded the period of the Asian financial crisis shows no qualitative difference, which is shown in the table 5 through 9.

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