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Impact of Accounting Conservatism on the Informativeness of Current Stock Prices for Future Earnings

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ABSTRACT

Purpose: The purpose of this paper is to examine how accounting conservatism affects the relation between current stock returns, current earnings, and future earnings.

Design/methodology/approach: To achieve the purpose of this paper, we divide accounting conservatism into conditional and unconditional conservatism and investigate whether the relation between current stock returns, current earnings, and future earnings is different depending on the type of conservatism.

Findings: We find that the current stock returns of firms with strong conditional conservatism contain more information about future earnings. However, our results show that informativeness of current stock returns on future earnings does not change under unconditional conservatism.

Research limitations/implications: Even though we use prior research to capture the proxy for accounting conservatism, the extent or magnitude of accounting conservatism may not be properly measured by our proxies. However, despite of these limitations, our results still have the following meanings.

Originality/value: Our results suggest that compared to unconditional conservatism, conditional conservatism reflects managerial discretion over timely recognition of bad news and results in faster recognition of the impact of future earnings on current earnings. More specifically, our result indicates that conditional conservatism decreases the informativeness of current stock returns for future earnings due to asymmetric timeliness. And our result also provides indirect evidence that conditional conservatism reflects managerial discretion over timely loss recognition compared to unconditional conservatism, and thereby, deteriorates the informativeness of current returns for future earnings.

Keywords: Conditional conservatism, Unconditional conservatism, Future earnings response coefficient (FERC), Stock return, Earning

I. Introduction

The purpose of this study is to examine whether accounting conservatism alters the informativeness of current stock prices for future earnings and whether

† Corresponding author: Junyong Shim E-mail: jyshim@mju.ac.kr this differs depending on the type of conservatism.

Accounting conservatism is conventionally defined as "the accounting tendency to require a higher degree of verification to recognize good news as gains than to recognize bad news as losses" (Basu, 1997, p4). From the perspective of conventional conservatism, a firm's future uncertainty is reflected in present accounting information. In addition, conservative accounting treatment induces asymmetric timeliness

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of the recognition of accounting gains versus losses (Basu, 1997; Ball & Shivakumar, 2005; Watts, 2003a, 2003b). An important implication in asymmetric verification is the understatement of net assets (Givoly et al., 2007; Roychowdhury & Watts, 2007).

However, prior literature shows that conservative accounting decreases information asymmetry in the market by reducing managers' incentives to manipulate accounting information (Easley & O'Hara, 2004; LaFond & Watts, 2008). In other words, by constraining managerial opportunistic behavior and applying the prediction of future uncertainty to the present, conservative accounting information enables lower financial risk for investors (Watts, 2003a, 2003b). Therefore, this aspect of accounting conservatism reflects a firm's future uncertainty. In addition, it implies that conservative accounting information is closely related to future economic events and future earnings.

Specifically, empirical studies on accounting conservatism provide evidence of two opposing explanations for the role of conservatism in the equity market. Although conservative accounting is mainly seen as beneficial to market participants (Fan & Zhang, 2007; Khan & Watts, 2009; Kothari et al., 2009), it is also shown to decrease a firm's accounting information quality (Mensah et al., 2004; Paek et al., 2007; Gigler et al., 2009; Barth et al., 2014). Thus, whether or not accounting conservatism positively affects the equity market is not clear. Accordingly, for understanding this better, it is essential to investigate the effect of accounting conservatism as it relates to future accounting information. To address whether or not conservatism exacerbates the informativeness of realized earnings for future earnings, we examine the association of conservatism with future earnings response coefficient.

Since Collins, Kothari, Shanken, and Sloan (1994) introduced a framework on the informativeness of current stock returns for future earnings, called the future earnings response coefficient (hereafter, FERC), various studies have tried to identify the factors affecting it (Lundholm and Myers, 2002; Gelb and Zarowin, 2002; Ettredge et al., 2005; Tucker & Zarowin, 2006).

Collins et al. (1994) insist that either earnings' lack of timeliness or earnings' noise, due to accounting reliability, objectivity, verifiability, and conservatism, induces a low contemporaneous returns-earnings association and high returns-future earnings association. Current stock prices reflect the market's expectation of future performance by "bring the future forward." Therefore, stock prices are more informative if they forecast realized future earnings better (Collins et al., 1994; Lundholm & Myers, 2002; Tucker & Zarowin, 2006; Haw et al., 2012).

Collins et al. (1994) present two features that induce earnings' lack of timeliness. On the one hand, accrual accounting delays the recognition of expected future benefits from current cash expenditures, recognized currently as expenses, so investors expect positive cash flows in the future. These aspects of earnings enable stock returns for a current period to be related to earnings in future periods as well as the current period. In reference to this, we expect a firm's conservative accounting policy to alter this relation.

Conventionally, earnings are one of the important factors to address share price (Ariff and Khan 2002). According to the concept of FERC, we predict an association between accounting conservatism and FERC as follows. First, as conservative accounting requires a higher degree of verification to recognize gains and assets than to recognize losses or liabilities, asymmetric timeliness of gains and losses occurs (Basu, 1997; Watts, 2003a, 2003b). This asymmetric timeliness induces future information to be incorporated into current earnings. As a result, we expect the informativeness of current stock prices for future earnings to decrease as conservative accounting recognizes losses or bad news in a timely manner.

Second, accounting conservatism relates either directly or indirectly to the decrease in information asymmetry (Easley & O'Hara, 2004; LaFond & Watts, 2008) and managerial opportunistic behaviors (Watts, 2003a, 2003b). Conservatism provides information that lowers financial risk for investors by constraining managerial opportunistic behaviors and applying the prediction of future uncertainty to the present. LaFond and Watts (2008) argue that accounting conservatism reduces information asymmetry in the following two ways. First, it provides the best possible non-stock price "hard" information on current performance for uninformed investors. Second, the hard information provides a benchmark that makes it possible for alternative "soft" sources to generate credible information on unverifiable gains. Therefore, managers can convey more private information under the conservative accounting policy, regardless of their intentions.

Furthermore, we divide accounting conservatism into conditional and unconditional conservatism. While unconditional conservatism tends to arise more uniformly from accounting standards, conditional conservatism reflects managerial discretion over earnings recognition and possibly conveys private information to the stock market. Therefore, we predict that conditional conservatism will have a stronger effect on FERC compared to unconditional conservatism, which will have weaker signaling effect.

To measure firm-specific accounting conservatism, we estimate the Basu (1997) and Ball and Shivakumar (2005) models on a firm-specific basis, using a rolling seven-year window. We define the sum of the estimated intercepts of the model as unconditional conservatism and the sum of the estimated coefficients of the model as conditional conservatism, following prior literature (Lara et al., 2006; Heltzer, 2006; Kim & Ko, 2009).

In brief, empirical findings indicate the following. First, FERC increases under conditional conservatism, but unconditional conservatism does not affect FERC. Second, conditional and unconditional conservatism have insignificant effect on the contemporaneous relation between earnings and returns. In sum, this result indicates that conditional conservatism increases the informativeness of current stock returns for future earnings due to asymmetric timeliness. In other words, this result also provides indirect evidence that under conditionally conservative polices, current earnings reflect timely loss recognition and future earnings would capture more persistent information compared to unconditional conservatism. On the other hand, under unconditional conservatism, current earnings are more likely to contain persistent components.

Our results contribute to accounting research of conservatism and FERC. Especially, this study attempts to compare the mechanism of informativeness between conditional and unconditional conservatism. We expect these findings to extend Kim and Kim (2015), which investigated the relations between conservatism and FERC, regardless of the type of conservatism.

The remainder of this paper is organized as follows. Section 2 reviews relevant literature and develops the hypotheses. Section 3 presents the research design and explains sample selection, and section 4 presents the results of analysis and presents additional analysis. Finally, section 5 concludes.

II. Related Literature and Hypothesis

Existing research provides evidence that debtholders demand higher levels of conservative accounting to reduce the negative impact of agency conflict between borrowers and lenders (Zhang, 2008). However, whether or not accounting conservatism positively affects the equity market remains unclear. In this section, we review prior studies focusing on the positive and negative effects of accounting conservatism on the equity market and present our hypotheses to test the association between conservatism and the FERC.

In terms of the beneficial role of accounting conservatism, Basu (1997) examines how conservatism affects capital markets' reaction to earnings news through a short-window earnings response coefficient (ERC). He finds that a positive earnings change has a higher ERC than a negative earnings change and argues that this difference in the ERC arises because negative earnings changes are more likely to reverse than positive earnings changes. Since Basu (1997) provides empirical evidence of accounting conservatism, several other studies have tested the

informational benefits of conservatism. Watts (2003a) argues that the importance of firm performance for investors leads to the demand that the firm report more conservatively, and conservatism helps address the moral hazard caused by parties to the firm having asymmetric information and asymmetric payoffs. LaFond and Watts (2008) suggest that the level of information asymmetry between inside and outside investors positively relates to the degree of conservatism and information asymmetry led conservatism. They point out that information asymmetry between inside and outside investors not only generates agency costs that reduce future cash flows but also increases the required rate of return on the stock. LaFond and Roychowdhury (2008) examine how management ownership affects the degree of accounting conservatism. They find that firms with lower management ownership require more conservative accounting because management ownership is negatively associated with agency costs. D'Augusta et al. (2012) provide empirical evidence that conservatism reduces investors' disagreement with earnings announcements. The authors interpret this as evidence that conservative accounting increases informational efficiency in the equity market. Penman and Zhang (2013) hold the view that when it comes to the riskiness of a firm, its conservative accounting numbers capture this information. Accordingly, an appropriate discount rate would be applied to the firm's expected cash flow. Garcia Lara et al. (2011) provide a similar result, implying that higher conditional conservatism lowers the implied cost of capital.

On the other hand, several empirical studies argue that accounting conservatism imposes costs on equity holders. Mensah et al. (2004) provide empirical results that accounting conservatism causes higher analysts' earnings forecast errors and greater dispersion of analysts' forecasts. Although they do not directly interpret the results as the "dark side" of accounting conservatism, these findings indicate that market participants could have difficulty in interpreting accounting information or in forecasting earnings. Paek et al. (2007) suggest that more conservative accounting policies incorporate lower earnings multiple, as conditional conservatism induces noise in the earnings process and also reduces earnings persistence. In addition, Barth et al. (2014) empirically test for whether accounting conservatism affects information content positively, using trading volume. They find that higher conditional conservatism decreases the swiftness at which equity investors resolve investor disagreement and uncertainty at earnings announcements.

From the conventional perspective of conservatism, as future uncertainty is reflected in present accounting information, we investigate the informativeness of current stock prices for future earnings that is already recognized in current earnings. We use the FERC, which measures the degree to which current stock returns reflect information about future earnings, as our main measure of stock price informativeness.

Earlier scholars identified various factors that affect the relation between current returns and future earnings. Among them, a high level of disclosure improves the price informativeness of future earnings because disclosures help investors to impound valuable information about future earnings into stock prices (Lundholm & Myers, 2002; Gelb & Zarowin, 2002; Ettredge et al., 2005). When it concerns mandatory or voluntary disclosure, information intermediaries, mainly analysts or institutional investors, disclose private information about future earnings, thereby improving price informativeness about future earnings (Ayers & Freeman, 2003; Piotroski & Roulstone, 2004; Dhiensiri et al., 2005).

On the one hand, some studies argue that price informativeness about future earnings depends on accounting choices (Tucker & Zarowin, 2006). Furthermore, Tucker and Zarowin (2006) argue that managers smooth earnings as a means to communicate their assessment of future earnings rather than to intentionally distort accounting numbers. On the other hand, income smoothing could also make earnings noisier if managers deliberately manipulate earnings. As a result, they provide evidence of a positive association between the degree of income smoothing and FERCs, showing that the change in the current stock price of higher-smoothing firms contains more information about future earnings than the change in the stock price of lower-smoothing firms.

Oswald and Zarowin (2004) show that capitalization of R&D expenditure links positively to price informativeness. Orpurt and Zang (2009) examine for whether the direct method of cash flow statement increases price informativeness for future earnings. Haw et al. (2012) explain that the informativeness of stock prices for future earnings reveals the extent to which value-relevant information about a firm's prospects is available to investors and is incorporated into stock prices. Kim and Kim (2015) demonstrated the relations between conservatism and FERC. They find the negative FERC under the conservative accounting practices, which they interpret as investors not recognizing conservatism.

Using the FERC framework developed by Collins et al. (1994), our study investigates the association between accounting conservatism and the FERC. Based on prior literature, we expect that more conservative accounting would affect FERC as follows. As conservative accounting requires a high degree of verification to recognize losses and liabilities than to recognize gains and assets, asymmetric timeliness arises (Basu, 1997; Watts, 2003a, 2003b). This asymmetric timeliness accelerates the incorporation of future information into current earnings. As a result, we expect informativeness of the current stock price for future earnings to increase because conservative accounting forces earlier recognition of bad news.

Specifically, as we decompose accounting conservatism into unconditional and conditional conservatism (Ball and Shivakumar, 2005), we analyze the effect of each on the FERC. Conditional conservatism requires a higher degree of verification for good news rather than for bad news after (ex-post or news dependent) difficult-to-verify news occurs (Basu, 1997), therefore this leads to a downward bias in equity book value and earnings (Watts, 2003). Examples of conditional conservatism include lower cost or market accounting for inventory, and impairment accounting for long-lived assets. If the market perceives and utilizes bad news in current earnings in advance, it is likely that future earnings would contain more persistent components. As a result, conditional conservatism will appear to have higher FERC because it increases the persistence of future earnings.

However, unconditional conservatism is applied before (ex-ante or news independent) difficult-toverify news occurs. Examples of unconditional conservatism include immediate expensing of the costs of developed intangibles, depreciation of PPE (property, plant, and equipment) that is more accelerated than economic decay, and historical cost accounting for positive NPV (net present value) projects. Under unconditionally conservative accounting practices, current earnings are more likely to capture persistent information. Then, it will report a high current ERC.

Meanwhile, Qiang (2007) suggests that unconditional conservatism reduces conditional conservatism because unconditional conservatism recognizes losses earlier (i.e., before news). As a result, unconditional conservatism is more likely to uniformly arise from accounting standards, whereas conditional conservatism is more likely to reflect a manager's discretion over the recognition of earnings and more likely to mitigate the information asymmetry by conveying private information.

Therefore, we expect the informativeness of the current stock price for current and future earnings to differ depending on the type of conservatism used. Specifically, we predict that conditional conservatism will have a more important role in incorporating future earnings into current earnings than unconditional conservatism.

In sum, the preceding arguments imply that the association between degree of conditional accounting conservatism and the FERC will be positive and unconditional conservatism will not affect or have a weak positive effect on the FERC, leading to the following hypotheses:

H1: Informativeness of current stock prices for future earnings will increase as conditional conservatism increases.

H2: Informativeness of current stock prices for future earnings will be insignificant or declines weakly as unconditional conservatism increases.

III. Research Design and Sample

A. Measurement of Conservatism

We estimate two measures of conditional conservatism and two measures of unconditional conservatism using the Ball and Shivakumar (2005) model.

$$ACC_{t} = \alpha_{0} + \alpha_{t}DCFO_{t} + \alpha_{2}CFO_{t} + \alpha_{3}DCFO_{t}$$
$$\times CFO_{t} + v_{t}$$
(1)

where total accruals (*ACC_i*) are measured as income before extraordinary items less cash flow from operations (*CFO_l*), scaled by average total assets. *DCFO_l* is a dummy variable taking value 1 if *CFO_l* is negative and 0 otherwise. We estimate equation (1) by firm using a rolling seven-year window and define ($\alpha_2 + \alpha_3$) as conditional conservatism (*COND1*) and (-1) × ($\alpha_0 + (\alpha_1 \times \text{economic loss frequency}^1)$) as unconditional conservatism (*UCON1*). *COND1* and *UCON1* are replaced by the corresponding annual quintile ranks scaled to lie between 0 (lowest conservatism) and 1 (highest conservatism).

$$\Delta NI_{t} = \beta_{0} + \beta_{1} D \Delta NI_{t-1} + \beta_{2} \Delta NI_{t-1} + \beta_{3} D \Delta NI_{t-1} \\ \times \Delta NI_{t-1} + \varepsilon_{t}$$
(2)

where ΔNI_t is change in income before extraordinary items from fiscal year *t*-1 to *t*, scaled by average total assets. $D\Delta NI_{t-1}$ is a dummy variable taking value 1 if the ΔNI_{t-1} is negative and 0 otherwise. We estimate equation (2) by firm using a rolling seven-year window and then define (-1) × ($\beta_2 + \beta_3$) as conditional conservatism (*COND2*) and (-1) × ($\beta_0 + (\beta_1 \times \text{economic} \text{loss frequency}^2)) as unconditional conservatism$ (*UCON2*). *COND2* and *UCON2* are replaced by the corresponding annual quintile ranks scaled to lie between 0 (lowest conservatism) and 1 (highest conservatism).

As the estimated conservatism in equations (1) and (2) may capture different aspects of conservatism, we take the average value of each conservatism measure (i.e., *CONDavg* and *UCONavg*).

B. Measurement of Stock Price Informativeness

Collins et al. (1994) introduced a framework to measure how much information for future earnings is reflected in current stock returns. This framework shows that current stock returns reflect the current unexpected earnings and the current change in expectations about future earnings. Specifically, based on their framework, Lundholm and Myers (2002) and Tucker and Zarowin (2006) use the past, current, and future earnings and future returns as explanatory variables of current returns. They combine three future years of earnings into $EARN_3$ and three future years of returns into RET_3 to increase the power of their tests. Following these studies, we implement the following regression as the basic model:

$$RET_{t} = \beta_{0} + \beta_{1} EARN_{t-1} + \beta_{2} EARN_{t} + \beta_{3} EARN_{t3} + \beta_{4} RET_{t3} + \varepsilon$$
(3)

In equation (3), RET_t is stock returns during fiscal year *t*, and $EARN_{t-1}$ and $EARN_t$ are net income for fiscal year *t*-1 and *t*, respectively, deflated by the market value of equity at the beginning of the fiscal year. $EARN_{t3}$ is the sum of net income for fiscal year *t* + 1 through *t* + 3, deflated by the market value of equity at the beginning of each fiscal year. RET_{t3} is the annually compounded stock returns for fiscal year *t* + 1 through *t* + 3. According to prior literature, the coefficient on past earnings ($EARN_{t-1}$) is predicted to be negative, the coefficients on current

Similar to Helzer (2009), we use the frequency of *DCFO_t* during the seven years (rolling window) divided by seven as the frequency of economic loss.

Similar to Helzer (2009), we use the frequency of DΔNI_{r-1} during the seven years (rolling window) divided by seven as the frequency of economic loss.

earnings (*EARN*_t) and future earnings (*EARN*_{t3}) are projected positive, and the coefficient on future returns (*RET*_{t3}) is expected to be negative (Lundholm & Myers, 2002; Tucker & Zarowin 2006).

To examine our hypothesis, we extend equation (3) by including the conservatism measure and its interaction with explanatory variables. Our primary model is as follows:

$$RET_{t} = \beta_{0} + \beta_{1} EARN_{t-1} + \beta_{2} EARN_{t} + \beta_{3} EARN_{t3}$$

$$+ \beta_{4} RET_{t3} + \beta_{5} D_{-}UCON + \beta_{6} D_{-}UCON$$

$$* EARN_{t-1} + \beta_{7} D_{-}UCON * EARN_{t}$$

$$+ \beta_{8} D_{-}UCON * EARN_{t3} + \beta_{9} D_{-}UCON$$

$$* RET_{t3} + \beta_{10} D_{-}COND + \beta_{11} D_{-}COND$$

$$* EARN_{t-1} + \beta_{12} D_{-}COND * EARN_{t}$$

$$+ \beta_{13} D_{-}COND * EARN_{t3} + \beta_{14} D_{-}COND$$

$$* RET_{t3} + \varepsilon \qquad (4)$$

Here, we substitute measures of unconditional (UCON) and conditional (COND) conservatism with dummy variables for easy interpretation. $D_{-}UCON$ is a dummy variable that takes value 1 if UCON is larger than the median value of UCON and 0 otherwise. $D_{-}COND$ is also a dummy variable that takes value 1 if the COND is larger than the median value of COND. In equation (4), $D_{-}UCON1$ and $D_{-}COND1$ represent conservatism as measured by the Basu (1997) model and $D_{-}UCON2$ and $D_{-}COND2$ represent conservatism as measured by the Ball and Shivakumar (2005) model. If conservatism has a positive effect on the informativeness of future earnings and conveys information about future earnings, then the coefficients on $D_{-}UCON * E4RN_{3}$

and $D_COND * EARN_{13}$ should be positive. However, we expect conditional conservatism to convey more information about future earnings because conditional conservatism, rather than unconditional conservatism, is more likely to reflect managerial choices regarding recognition of economic events. Thus, we predict the coefficient on $D_COND * EARN_{13}$ to be significant and positive, but we expect a weak or insignificant coefficient on $D_UCON * EARN_{13}$.

C. Sample

Our sample selection process is documented in Table 1. We use firms listed on the Korean stock market as our sample. Especially, IFRS adoption in Korea improves the usefulness of earnings information and the value relevance (Ji 2017; Hwang et al. 2017). We construct the sample using the KIS-VALUE database and the initial sample period begins with 1997 as the first year in which the database covers stock price data.³⁾ From this sample, we eliminate 345 firms (11,527 firm-years) where earnings (*EARN*_{t-1}, *EARN*_{t, EARN_{t+3}) or returns (*RET*_t, *RET*_{t3}) are not available. We then delete 305 firms (5,681 firm-years) where financial data for measuring conservatism are unavailable. This sample selection process leaves 999 firms, with 5,178 firm-year observations.}

Panel A of Table 2 reports descriptive statistics for the study variables. The mean (median) of annual stock returns (*RET*_i) is 27.0 percent (10.3 percent) and the mean earnings/market value (*EARN*_i) is 6.5 percent (8.1 percent). The medians for future earnings

Sample Selection Criteria	Number of Firms	Number of Firm-Years
Firms listed on the KOSPI and KOSDAQ market for 1997-2013 with December fiscal year and in non-financial industries collected from KIS-VALUE database	1,649	22,386
Delete if RET ₁ , RET ₁₃ , EARN _{t-1} , EARN _t , or EARN _{t3} data are missing	(345)	(11,527)
Delete if financial data for measuring conservatism are unavailable	(305)	(5,681)
Final Sample	999	5,178

Table 1. Sample Selection Process

 Our final sample starts in 2004 because our measure of conservatism requires at least seven years. (RET_{t3}) and for returns ($EARN_{t3}$) are approximately three times the median value of current earnings (RET_t) and returns (EARNt). In an additional test, we decompose earnings into operating cash flows and

Panel A: Descriptive	Statistics (N = $5,178$))			
Variables	Mean	Median	Std. Dev.	P25	P75
RET	0.2700	0.1029	0.6967	-0.1839	0.5031
RET _{t3}	0.6369	0.3561	1.2109	-0.0992	1.0248
EARN _{t-1}	0.0689	0.0834	0.2670	0.0088	0.1826
EARNt	0.0653	0.0809	0.2489	0.0085	0.1750
EARN _{t3}	0.1004	0.2052	0.5855	-0.0460	0.4159
OCF _{t-1}	0.1454	0.1008	0.3329	-0.0143	0.2626
OCF _t	0.1255	0.0891	0.3059	-0.0175	0.2344
OCF _{t3}	0.2883	0.2564	0.5465	0.0106	0.5518
ACC _{t-1}	-0.0803	-0.0397	0.3534	-0.1925	0.0634
ACCt	-0.0625	-0.0312	0.3221	-0.1668	0.0691
ACC _{t3}	-0.2010	-0.1030	0.6186	-0.3789	0.0930
UCON1	0.0371	0.0728	2.0289	-0.3768	0.5005
COND1	0.1550	0.0707	1.4451	-0.2438	0.4297
UCON2	0.0043	0.0522	1.1667	-0.1298	0.2184
COND2	-0.6322	-0.7117	2.0070	-1.1403	-0.2797

Table 2. Descriptive Statistics and Correlation

Panel B: Pearson (Upper Triangle) and Spearman (Lower Triangle) Correlations

Variables	<i>RET</i> _t	RET _{t3}	EARN _{t-1}	EARN _t	EARN ₁₃	OCF _{t-1}	0CFt	OCF ₁₃	ACC _{t-1}	ACC _t	ACC ₁₃	D_UC ON1	D_CO ND1	D_UC ON2	D_CO ND2
RET _t	1	-0.146	-0.048	0.206	0.044	0.076	0.184	-0.046	-0.113	-0.023	0.087	0.032	0.011	0.026	0.001
RET _{t3}	-0.152	1	-0.123	-0.173	0.030	-0.047	-0.014	0.094	-0.059	-0.130	-0.069	0.005	0.036	-0.031	-0.019
EARN _{t-1}	0.077	-0.043	1	0.402	0.286	0.390	0.135	0.155	0.417	0.192	0.137	0.057	0.015	0.127	-0.033
EARNt	0.413	-0.041	0.461	1	0.385	0.270	0.388	0.180	0.059	0.423	0.216	0.050	0.015	0.114	-0.024
EARN _{t3}	0.091	0.294	0.336	0.429	1	0.207	0.257	0.428	0.024	0.062	0.589	0.041	-0.040	0.099	0.030
OCF _{t-1}	0.127	0.001	0.450	0.336	0.236	1	0.211	0.225	-0.625	0.015	0.003	0.061	0.043	0.049	-0.005
OCF_t	0.264	0.034	0.214	0.445	0.301	0.280	1	0.259	-0.085	-0.628	0.019	0.050	0.049	0.018	-0.006
OCF _{t3}	-0.003	0.199	0.199	0.238	0.517	0.293	0.314	1	-0.090	-0.093	-0.434	0.031	0.010	0.013	0.006
ACC _{t-1}	-0.093	-0.050	0.276	0.026	0.043	-0.589	-0.087	-0.117	1	0.135	0.103	-0.013	-0.028	0.052	-0.016
ACC _t	0.007	-0.097	0.183	0.297	0.051	0.008	-0.580	-0.092	0.159	1	0.151	-0.001	-0.033	0.073	-0.013
ACC _{t3}	0.111	0.031	0.141	0.186	0.371	-0.049	-0.006	-0.457	0.190	0.171	1	0.018	-0.048	0.089	0.037
D_UCO NI	0.041	0.005	0.082	0.071	0.047	0.068	0.059	0.030	0.000	0.002	0.014	1	0.528	0.047	0.000
D_CON D1	-0.002	0.022	0.010	0.029	-0.030	0.026	0.029	0.005	-0.025	-0.027	-0.030	0.528	1	-0.025	-0.012
D_UCO N2	0.055	-0.004	0.181	0.157	0.116	0.052	0.025	0.016	0.081	0.101	0.101	0.047	-0.025	1	0.099
D_CON D2	-0.014	0.007	-0.034	-0.021	0.015	-0.002	-0.002	0.010	-0.021	-0.013	0.014	0.000	-0.012	0.099	1

Panel B presents Pearson (Upper Triangle) and Spearman(Lower Triangle) Correlations. Bold denotes significance lower than 0.05 level using a two-tailed test.
 All continuous variables are winsorized at 2%.
 See Appendix for definitions of variables.

total accruals to examine which components of earnings are affected by conservatism. The mean of operating cash flows/market value (OCFt) is 12.6 percent, and the mean of total accruals/market value (ACC₁) is -0.06 percent. The sum of these two variables is similar to the mean of earnings/market value (EARN_t). The measures of conservatism using the Basu (1997) model are UCON1 and COND1. When we estimate conservatism using the Basu (1997) model, the mean (median) value for unconditional conservatism (UCON1) is 0.04 (0.07) and the mean (median) value for conditional conservatism (COND1) is 0.16 (0.07). The measures of conservatism using the Ball and Shivakumar (2005) model are UCON2 and COND2. The mean (median) value for unconditional conservatism (UCON2) is 0.00 (0.05) and the mean (median) value for conditional conservatism (COND2) is -0.63(-0.71).

Panel B of Table 2 presents Pearson and Spearman correlations for the variables.⁴⁾ As prior literature indicates, the correlation between current returns (*RET*_i) and current earnings (*EARN*_t) is significantly positive. Further, future earnings (*EARN*_t) are significantly and positively correlated with current returns (*RET*_i), consistent with prior literature on the FERC (Lundholm & Myers, 2002; Tucker & Zarowin, 2006). Although the measure of unconditional conservatism (*D_UCONI*) using the Basu (1997) model is significantly and positively correlated with current returns (*RET*_t), other measures of conservatism (*D_COND1*, *D_UCON2*, and *D_COND2*) are not significantly correlated with current returns (*RET*_t).

IV. Results

A. Main Results

Table 3 presents the main empirical results for the effect of conservatism on the FERC. As prior literature predicts, when we estimate a basic model without the measure of conservatism, the coefficients on current earnings (*EARN*₁) and future earnings (*EARN*₁₃) are both positive and significant (0.483, *t* statistics = 11.68, and 0.038, *t* statistics = 2.23, respectively) and the coefficients on past earnings (*EARN*₁₋₁) and future returns (*RET*₁₃) are both negative and significant (-0.399, *t* statistics = -10.78, and -0.075, *t* statistics = -9.93, respectively). The positive sign on future earnings (*EARN*₁₃) indicates that the news of future earnings is impounded into current returns, and the negative sign demonstrates that realized future earnings contain measurement errors that future returns remove (Lundholm & Myers, 2002).

As the correlation table in panel B of Table 2 shows, the relatively high correlation between unconditional conservatism (D_UCONI) and conditional conservatism (D_CONDI) could cause a potential problem in the regression (e.g., multicollinearity). Accordingly, we present each result separately: only the unconditional conservatism measure, only the conditional conservatism measure, and both the unconditional and conditional measures. The signs and significance of the coefficients on future earnings (*EARN*_B) do not change, regardless of the independent variable composition.

We interpret our results based on the results with unconditional and conditional conservatism. Panel A of Table 3 shows the results on the effect of conservatism estimated by the Basu (1997) model on earnings informativeness. When we include both unconditional (D UCONI) and conditional (D CONDI) measures of conservatism and interaction variables in the basic model without the conservatism measure, the coefficient on the interaction term D COND1 * $EARN_{t3}$ is significant and positive (0.098, t statistics = 2.56), indicating that conditional conservatism improves the FERC. However, the coefficient on the interaction term D_UCON1 * EARN₁₃ is not significant, indicating that unconditional conservatism does not enhance the FERC. Although we find a significant and positive coefficient on D COND1 * EARN13, the coefficient on EARN13 loses its significance after the inclusion of our conservatism measure. These results are similar when we estimate conservatism using the

⁴⁾ In panel B of Table 2, we convert the measures of conservatism into dummy variables.

Panel A: Conservatism	measured by Ba	isu (19	97) model					
Variables	Without Conservatism		With Conditional Conservatism		With Unconditional Conservatism		With Unconditional and Conditional	
	Coeff. Est. t-	value	Coeff. Est.	t-value	Coeff. Est.	t-value	Coeff. Est.	t-value
Intercept	0.240	1.02	0.245	1.04	0.246	1.05	0.249	1.06
EARN _{t-1}	-0.399 *** -1	0.78	-0.342 ***	-6.10	-0.385 ***	-7.40	-0.348 ***	-5.92
EARNt	0.483 *** 1	1.68	0.438 ***	6.83	0.413 ***	6.88	0.409 ***	6.08
EARN _{t3}	0.038 ** 2	2.23	-0.004	-0.17	0.036	1.52	0.004	0.14
RET _{t3}	-0.075 *** -	9.93	-0.084 ***	-7.61	-0.087 ***	-8.66	-0.088 ***	-7.71
D_COND1			-0.019	-0.91			-0.012	-0.47
D_COND1 * EARN _{t-1}			-0.093	-1.28			-0.118	-1.37
D_COND1 * EARN _t			0.073	0.89			-0.014	-0.15
D_COND1 * EARN _{t3}			0.073 **	2.21			0.098 ***	2.56
D_COND1 * RET _{t3}			0.017	1.14			0.004	0.23
D_UCON1					-0.018	-0.91	-0.012	-0.52
D_UCON1 * EARN _{t-1}					-0.016	-0.22	0.043	0.51
D_UCON1 * EARN _t					0.139 *	1.73	0.154	1.61
D_UCON1 * EARN _{t3}					0.004 **	0.11	-0.045	-1.18
D_UCON1 * RET _{t3}					0.024 *	1.78	0.023	1.48
Industry Fixed Effect	Yes		Ye	s	Yes		Yes	
Year Fixed Effect	Yes		Ye	S	Yes		Yes	
Adjusted R ²	0.210		0.21	1	0.211		0.211	
F-Value	23.613***		21.98	4***	21.932***		20.516***	
Observations	5,178		5,17	8	5,178	3	5,178	3

 Table 3. The Effects of Conservatism on FERC

Panel B: Conservatism measured by Ball and Shivakumar (2005) model

Variables	With Conditional Cor	nservatism	With Unconditional Conservatism		With Uncondit Conditio	ional and nal
	Coeff. Est.	t-value	Coeff. Est.	t-value	Coeff. Est.	t-value
Intercept	0.237	1.01	0.261	1.11	0.257	1.09
EARN _{t-1}	-0.434 ***	-8.06	-0.426 ***	-8.67	-0.445 ***	-7.58
EARNt	0.547 ***	9.26	0.454 ***	8.50	0.519 ***	8.05
EARN _{t3}	0.013	0.57	0.041 *	1.87	0.020	0.79
RETt ₃	-0.072 ***	-7.13	-0.085 ****	-8.69	-0.080 ****	-7.03
D_COND2	0.019	0.92			0.032	1.46
D_COND2 * EARN _{t-1}	0.065	0.90			0.039	0.52
D_COND2 * EARN _t	-0.124	-1.53			-0.154 *	-1.85
D_COND2 * EARN _{t3}	0.058 *	1.74			0.059 *	1.73
$D_COND2 * RET_{t3}$	-0.008	-0.56			-0.011	-0.71
D_UCON2			-0.049 **	-2.38	-0.054 **	-2.52
D_UCON2 * EARN _{t-1}			0.074	1.02	0.070	0.93
D_UCON2 * EARN _t			0.082	1.00	0.120	1.43

Variables	With Conditional Conservatism		With Unconditional C	onservatism	With Unconditional and Conditional	
	Coeff. Est.	t-value	Coeff. Est.	t-value	Coeff. Est.	t-value
$D_UCON2 * EARN_{t3}$			-0.006	-0.19	-0.017	-0.50
D_UCON2 * RET ₁₃			0.019	1.36	0.019	1.37
Industry Fixed Effect	Yes		Yes		Yes	
Year Fixed Effect	Yes		Yes		Yes	
Adjusted R ²	0.211		0.211		0.211	
F-Value	21.916***		21.941***		20.501***	
Observations	5,178		5,178		5,178	

Table 3. Continued

*, **, and *** indicate significance at 10%, 5%, and 1% level, respectively
 See Appendix for definitions of variables.

Ball and Shivakumar (2005) model. In Panel B of Table 3, the coefficient on the interaction term D COND2 * EARN₁₃ is marginally significant and positive (0.059, t statistics = 1.73) but the coefficient on the interaction term D UCON2 * EARN₁₃ is insignificant. Overall, our results suggest that information about future earnings is included in current stock returns only in the presence of strong conservatism.

B. Additional Results - Earnings Decomposition

Tucker and Zarowin (2006) decompose earnings into operating cash flow and total accruals because predicting future cash flows is the main task of current equity valuation. Next, they examine whether income smoothing engenders more information about future cash flows to be impounded in the current stock price. Similar to income smoothing, if managers recognize bad news in a timely manner, then current and future earnings are affected by conservative accounting (conditional conservatism). However, unlike income smoothing, conditional conservatism does not alter current and future cash flows but is more likely to alter current earnings through accruals. Thus, we predict that conditional conservatism enhances the informativeness of future accruals, which is reflected in current stock returns.

Table 4 shows the results of additional analysis. As predicted, both coefficients on the interaction terms D_COND1 * ACC₁₃ and D_COND2 * ACC₁₃ are significant and positive (0.069, t statistics = 1.80, and 0.073, t statistics = 2.10, respectively), indicating that conditional conservatism improves the FERC through accruals. While the coefficient on the interaction term D COND2 * OCF13 is insignificant, the coefficient on the interaction term D COND1 * OCF_{t3} is significant and positive (0.095, t statistics = 2.12). The difference in results using the Basu (1997) and the Ball and Shivakumar (2005) models may arise from the different methods used to estimate conservatism. While the measure of conservatism in the Basu model is based on stock returns, the measure of conservatism in the Ball and Shivakumar model is based on firms' actual operating cash flows. In the Basu model, negative stock returns are treated as bad news for the firm that is conditioned on timely recognition, but all bad news would not affect earnings (operating cash flow or accruals). Thus, we attribute this different result to the disparity in the methods for measuring bad news.

Variable	Without Cons	ervatism	$D_UCON = D$ $D_COND = D$	0_UCON1 0_COND1	$D_UCON = D$ $D_COND = D$	UCON2 COND2	
-	Coeff. Est.	t-value	Coeff. Est.	t-value	Coeff. Est.	t-value	
Intercept	0.168	0.72	0.183	0.78	0.166	0.71	
ACC _{t-1}	-0.346 ***	-10.30	-0.260 ****	-4.87	-0.408 ***	-7.41	
OCF _{t-1}	-0.233 ***	-6.14	-0.142 **	-2.40	-0.334 ***	-5.23	
ACC_{t}	0.275 ***	7.09	0.173 ****	2.80	0.308 ***	5.05	
OCF_t	0.484 ***	11.38	0.369 ***	5.50	0.537 ***	7.76	
ACC_{13}	0.055 ***	3.28	0.041	1.55	0.025	1.01	
OCF ₁₃	-0.035 *	-1.74	-0.048	-1.58	-0.040	-1.30	
RET _{t3}	-0.075 ***	-9.96	-0.086 ****	-7.48	-0.083 ***	-7.26	
D_UCON			-0.014	-0.61	-0.024	-1.06	
$D_UCON * ACC_{t-1}$			-0.044	-0.57	0.008	0.11	
$D_UCON * OCF_{t-1}$			-0.049	-0.56	0.025	0.33	
$D_UCON * ACC_t$			0.380 ***	4.17	0.278 ***	3.44	
$D_UCON * OCF_t$			0.345 ***	3.60	0.070	0.82	
$D_UCON * ACC_{t3}$			-0.055	-1.45	-0.005	-0.16	
D_UCON * OCF _{t3}			-0.088 **	-1.98	-0.009	-0.23	
$D_UCON * RET_{t3}$			0.026	1.59	0.023	1.57	
D_COND			-0.015	-0.57	0.010	0.43	
$D_{COND} * ACC_{t-1}$			-0.109	-1.39	0.102	1.42	
D_COND * OCF _{t-1}			-0.109	-1.22	0.143 *	1.83	
$D_COND * ACC_t$			-0.145	-1.56	-0.336 ***	-4.15	
$D_COND * OCF_t$			-0.087	-0.89	-0.087	-1.01	
$D_COND * ACC_{13}$			0.069 *	1.80	0.073 **	2.10	
D_COND * OCF _{t3}			0.095 **	2.12	0.012	0.31	
$D_COND * RET_{t3}$			0.000	-0.02	-0.009	-0.60	
Industry Fixed Effect	Yes		Yes		Yes		
Year Fixed Effect	Yes		Yes	Yes		Yes	
Adjusted R ²	0.214		0.215	0.215			
F-Value	23.046*	**	18.712*	18.712***		**	
Observations	5,178		5,178		5,178		

Table 4. Effects of Conservatism on FERC - Earnings Decomposition

*, **, and *** indicate significance at 10%, 5%, and 1% level, respectively
 See Appendix for definitions of variables.

V. Conclusion

We examine how accounting conservatism affects the relation between current stock returns, current earnings, and future earnings, using the framework proposed by Collins et al. (1994). Specifically, we

divide accounting conservatism into conditional and unconditional conservatism and investigate whether the relation is different depending on the type of conservatism. Following prior literature, we estimate the Basu (1997) and Ball and Shivakumar (2005) models on a firm-specific basis, using a rolling seven-year window, and then define the sum of the estimated intercepts of the model as unconditional conservatism and the sum of estimated coefficients of the model as conditional conservatism.

Using a Korean sample (5,187 firm-year observations) for 2004-2010, we find that conditional conservatism enhances the FERC, but we do not find similar evidence for the effect of unconditional conservatism. This result suggests that compared to unconditional conservatism, conditional conservatism reflects the timely recognition of bad news, thereby, conveying high-quality information on future earnings in the current stock price.

Furthermore, we find that both measures of conservatism have no effect on current returns and contemporaneous earnings, indicating that increase in the informativeness of current stock returns for future earnings by conditional conservatism is not at the expense of a decrease in the informativeness of current stock returns on current earnings.

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RET _t	=	stock returns during fiscal year t;
RET _{t3}	=	annually compounded stock return for fiscal years $t + 1$ through $t + 3$;
EARN _{t-1}	=	net income for fiscal year $t - 1$, deflated by the market value of equity at the beginning of fiscal year $t - 1$;
EARN _t	=	net income for fiscal year t, deflated by the value of equity at the beginning of fiscal year t;
EARN _{t3}	=	sum of net income for fiscal years $t + 1$ through $t + 3$, deflated by the market value of equity at the beginning of each fiscal year;
ACC _{t-1}	=	total accruals in fiscal year $t - 1$ obtained by subtracting operating cash flow from net income, deflated by the market value of equity at the beginning of fiscal year $t - 1$;
OCF _{t-1}	=	cash flow from operations reported in the cash flow statements for fiscal year $t - 1$, deflated by the market value of equity at the beginning of fiscal year $t - 1$;
ACC _t	=	total accruals in fiscal year t obtained by subtracting operating cash flow from net income, deflated by the market value of equity at the beginning of fiscal year t ;
OCF _t	=	cash flow from operations reported in the cash flow statements for fiscal year t , deflated by the market value of equity at the beginning of fiscal year t ;
ACC _{t3}	=	sum of total accruals for fiscal years $t + 1$ through $t + 3$, deflated by the market value of equity at the beginning of each fiscal year;
OCF _{t3}	=	sum of operating cash flows for fiscal years $t + 1$ through $t + 3$, deflated by the market value of equity at the beginning of each fiscal year;
UCON1	=	$EARN_{it} = \alpha_0 + \alpha_1 NEG_{it} + \alpha_2 RET_{it} + \alpha_3 NEG_{it} * RET_{it} + _{eit}$ where, NEG_{it} is a dummy variable taking the value 1 if RET_{it} is negative, and 0 otherwise; the measure of unconditional conservatism ($\alpha 0 + \alpha 1^*$ negative return frequency), results from the firm- and year- specific estimations of the above regression from Basu (1997) using a rolling seven-year window;
COND1	=	measure of conditional conservatism ($\alpha_2 + \alpha_3$), results from the firm- and year- specific estimations of the above regression from Basu (1997) using rolling seven year windows;
D_UCON1	=	1 if the UCON1 variable is larger than median value of UCON1, 0 otherwise;
D_COND1	=	1 if the COND1 variable is larger than median value of COND1, 0 otherwise
UCON2	=	$ACC_{it} = \delta_0 + \delta 1 \ NEG_{it} + \delta_2 \ OCF_{it} + \delta_3 \ NEG_{it} * OCF_{it} + \varepsilon_{it}$ where NEGit is a dummy variable taking the value 1 if OCF_{it} is negative, and 0 otherwise; the measure of unconditional conservatism ($\delta_0 + \delta_1$ * negative operating cash flow frequency), result from the firm- and year- specific estimations of the above regression Ball and Shivakumar (2005) using a rolling seven-year window;
COND2	=	measure of conditional conservatism ($\delta_2 + \delta_3$), results from the firm- and year- specific estimations of above regression from Ball and Shivakumar (2005) using a rolling seven-year window;
D_UCON2	=	1 if the UCON2 variable is larger than median value of UCON2, 0 otherwise;
D_COND2	=	1 if the COND2 variable is larger than median value of COND2, 0 otherwise

Appendix A. Definition of variables