The Effect Of Book-Tax Conformity On The Use Of Accruals:　Evidence From Korea

Haeyoung Ryu, Yonsei University, Korea
Soo-Joon Chae, Kangwon National University, Korea

ABSTRACT

This study in the Korean context investigates the effect of book-tax conformity on the use of accruals. In a sample of 4,331 Korean firms, we divide total accruals into book-tax accruals and book-only accruals. Book-tax accruals are defined as those that affect both taxable income and reported earnings. Book-only accruals are defined as those that affect only reported earnings and are unrelated to taxable income. We anticipate that managers will decrease taxable income by recording book-tax accruals that conform relatively closely to taxable income in order to reduce their tax liability. They are expected to attempt to increase book income through book-only accruals. We also examine the market response to firms that use these two types of accruals in different ways. Our evidence demonstrates increased use of income-decreasing book-tax accruals to decrease taxable income and increased use of book-only accruals to increase financial income. Use of book-only accruals also compensates for potential costs unrelated to tax, such as financial reporting costs. In addition, our results show that the market correctly assesses the management of accruals even when the uses of book-tax and book-only accruals offset each other.

Keywords:　Book Income; Taxable Income; Book-Tax Accruals; Book-Only Accruals; Stock Market Response

1.　INTRODUCTION

This study in the Korean context investigates the effect of book-tax conformity on the use of accruals. In a sample of 4,331 Korean firms, we divide total accruals into book-tax accruals and book-only accruals. In this study, book-tax accruals are defined as those that affect both taxable income and reported earnings. Book-only accruals are defined as those that affect only reported earnings and are unrelated to taxable income (Calegari, 2000).

When accounting numbers are used for tax calculation, the incentive for tax avoidance and earnings management may increase (Monem, 2003). In Korea, taxable income is calculated through tax adjustments based on book income. Because Generally Accepted Accounting Principles (GAAP) allows more discretion than tax regulations, managers prefer to use accounting strategies to modify their reporting of taxable income rather than adjusting taxable income directly. In many cases, taxable income and book income are sufficiently similar that some revenues and expenses may be recognized within the same period for both tax and financial reporting purposes (Calegari, 2000). In this situation, managers may choose book-tax accruals to reduce book income and minimize tax payments (Guenther, 1994; Guenther et al., 1997; Northcut & Vines, 1998). On the other hand, book income may be increased without affecting taxable income by reducing the allowance for bad debts, for example. Because tax codes forbid certain allowances, book-only accruals can be used to increase book income to avoid increasing taxable income in Korea.

Calegari (2000) argues that lowering book-tax accruals reduces net income as reported in the financial statement, which can affect accounting-based contracts and reduce firm value. To offset these potential costs, book-only accrual policies may be altered so as to accelerate the reporting of income-increasing accruals. For example, reserve policies can be adjusted without incurring additional tax costs in Korea.

In an efficient market, participants may correctly impound the value of current earnings components into stock prices. Prior studies suggest that measuring discretionary accruals can be used as a proxy to detect earnings

　　　　　　　　753

management. When firms manage accruals in different ways, the discretionary accruals method can't detect earnings management because the use of one type of accrual is offset by the use of another type. In these circumstances, the absolute value of earnings management may be large, and earnings quality may therefore be lower. If the market is efficient, stock prices fully reflect the contribution of all earnings components. Therefore, market participants are likely to show negative responses to firms using accruals in two different ways. Investors may also misunderstand this management of accruals because the total amount of accruals will seem small. However, use of the discretionary accruals method may moderate this negative response if discretionary accruals are not separated into book-tax accruals and book-only accruals.

In the context of our sample of Korean firms, we anticipate that managers will decrease taxable income by recording book-tax accruals that conform relatively well to taxable income in order to reduce their tax liability. We postulate that they will attempt to increase book income through book-only accruals. In addition, we investigate the market response to management of accrual components for tax and financial reporting purposes. Our evidence demonstrates that managers of Korean firms use income-decreasing book-tax accruals to decrease taxable income increasingly more often. They also use book-only accruals to increase financial income and compensate potential non-tax costs, such as financial reporting costs. In addition, our results show that the market correctly assesses the management of accruals even when they are used in different ways.

This study contributes to the stream of research on book-tax conformity. We investigate the management of accrual components in light of book and tax incentives in Korean firms with high book-tax conformity. In addition to examining the use of accrual components by Korean firms, we investigate the market's ability to interpret the management of accrual components correctly.

The next section outlines the findings of previous research in this area and develops the research hypotheses. Section 3 describes sample selection procedures and the methodology used to test the hypotheses. Section 4 presents some descriptive statistics and the results. Section 5 offers some concluding remarks.

2. LITERATURE REVIEW AND HYPOTHESES

2.1 Literature Review

If managers report high accounting income to increase the value of the company, corporate tax will increase. However, reporting low accounting income to reduce corporate tax may put the company in an unfavorable position in the capital market and decrease corporate value. Thus, accruals management in the reported earnings of the company for the purpose of tax reduction increases non-tax costs. Shackelford and Shevlin (2001) state that corporations with high marginal tax rates have an incentive to use discretionary accounting methods to adjust taxable income. However, lower accounting income may result in a negative evaluation by the capital market, which is a form of non-tax cost. If managers use book-only accruals at this time, accounting income may be increased, but taxable income will remain constant, thereby lowering non-tax costs.[1]

Calegari (2000) considers book income disclosure and avoidance of tax expenses together. He separates discretionary accruals into book-tax accruals and book-only accruals based on the level of book-tax conformity, arguing that firms with increased marginal tax rates use book-tax accruals to achieve tax planning goals. Managers use book-only accruals to avoid non-tax costs such as financial reporting costs. In his study, book-tax accruals refer to accruals with higher tax conformity in circumstances where the tax code allows similar or equal treatment when computing the corporation's taxable income. Thus, book-tax accruals affect both taxable income and reported earnings. On the other hand, book-only accruals are associated with relatively low tax conformity. They affect reported earnings and have no effect on the corporation's taxable income (Calegari 2000). However, this approach hasn't been developed because of low book tax conformity in US.

---

[1] Examples of non-tax costs include increased financial reporting costs in the capital market when tax burdens are reduced, or tax authorities' monitoring of tax avoidance (Mills & Sansing, 2000). In what follows, only explicit tax burdens are viewed as tax costs; they are differentiated from non-tax costs.

Book-tax conformity is more prevalent in Korea than in some other parts of the world, such as the US. In this environment, accruals may be easily divided into book-tax accruals and book-only accruals, and the management of these two types of accruals may be easily investigated. Choi et al. (2009) argue that the higher book-tax conformity in Korea than the US is mostly due to differences in treatment of unrealized gains or losses and in allowances, and the discrepancy between GAAP and tax rules. Because American firms report more unrealized gains and losses, book-tax conformity in the US is much lower than that in Korea. Furthermore, Korean tax rules prohibit faster tax depreciation deductions than book depreciation expenses, and allowances for bad debts are fully tax deductible in Korea as long as they are within the limit specified by the tax law. Accordingly, these differences result in higher book-tax conformity in Korea.

Managers want to increase disclosed book income and reduce taxes, which are unilaterally paid with no benefit in return. Previous studies have examined incentives for book income disclosure and avoidance of tax expenses in light of earnings management. However, these incentives must be considered for both outcomes together. In this study, earnings management is examined with simultaneous consideration of these two incentives.

2.2   Hypotheses

Mills and Plesko (2003) state that the average ratio of book income to taxable income in the US ranges from 1.4 to 1.7. In Korea, this ratio is in the range of 0.9 to 1.1. In Korea, where book-tax conformity is higher than in other countries, taxable income is calculated through tax adjustments that begin with book income. In this process, which is based on accrual accounting, accruals are not recognized by Korean tax rules. Most accruals generated by accounting reactions to economic events are reflected in tax reporting as well. Managers can reduce taxable income by deferring recognition of revenues until later and accruing expenses earlier.

However, accounting treatments related to estimations such as excessive depreciation, various allowances for valuation, and appropriation liabilities are not reflected in tax reporting based on the settlement principle of claims and obligations. Managers may attempt to increase book income by reducing allowances for bad debts and depreciating fixed assets beyond tax limits. Therefore, book income may be increased with no additional tax burden.

Accruals used for reducing taxable income may be called book-tax accruals, and accruals that do not affect taxable income may be reported through tax adjustment. The latter can be called book-only accruals, as they affect reported earnings only. Calegari (2000) suggest that firms adjust discretionary accruals with relatively high tax conformity (book-tax accruals) to achieve tax-planning goals and use discretionary accruals with relatively low tax conformity (book-only accruals) to accomplish financial reporting objectives.

The best strategy for managers is to report a high accounting income and a low taxable income. To accomplish these goals, managers may utilize these two types of accruals, book-tax accruals, and book-only accruals, differently. They tend to use book-tax accruals to reduce taxes and book-only accruals to increase reported earnings.

Tax savings are generally maximized by deferring revenues and accelerating expenses. Thus, tax conformity may impose significant non-tax costs on firms. Tax conformity may make firms appear to be relatively worse off to external parties (i.e., actual and potential investors, lenders, and suppliers) than they would be without conformity. Tax conformity may also increase the probability of firm violation of debt covenants or reduce managers' compensation associated with book income (Cloyd et al., 1996).

Seo and Yoon (2011) suggest that firms cannot maximize tax savings and financial reporting income independently without some cost. Based on the findings of their research, we examine the association between the use of book-tax accruals and that of book-only accruals. Because management of book-tax accruals reduces both taxable income and financial statement income, we argue that firms will simultaneously increase financial statement income by recording income-increasing accruals that have relatively low book-tax conformity to avoid non-tax costs. This leads to the following hypothesis:

Hypothesis 1:   The use of book-tax accruals will be offset by the use of book-only accruals.

The earnings response coefficient is influenced by the quality of profits. The higher the quality of profits, the more responsive investors will be to the reported profits. Holthousen and Verrecchia (1988) defined the quality of accounting income as the variance of the errors contained in the information. They reported that the smaller the variance of the errors contained in the accounting income, the higher the quality of the accounting income. If book-tax accruals are used to reduce taxable income, and book-only accruals are used to increase book income, the amount of earnings management measured by discretionary accruals will be small because the first type of accrual is offset by the second type. Therefore, earnings management may appear to be minimal.

However, if book-tax accruals are used to reduce taxable income, the quality of accounting information will decline. In addition, if book-only accruals are used to increase reported earnings, earnings quality will decline. Accordingly, for firms that increase book-only accruals while decreasing book-tax accruals, the earnings response coefficient will be low. In strong-form efficiency markets, investors will react negatively even if the management of book-tax accruals is offset by the management of book-only accruals and the total variation in accruals is minimal. Hence, Hypothesis 2 is as follows:

Hypothesis 2: In an efficient market, market participants will respond negatively to the management of accruals, even those used in different ways.

3. RESEARCH DESIGN

3.1 Designing Research Model

3.1.1 Measuring Book-Tax Accruals and Book-Only Accruals

In order to measure book-tax accruals and book-only accruals, the procedure of Calegari (2000) is adopted in this study. Discretionary accruals are estimated as the difference between total accruals and estimated non-discretionary accruals. Accruals derived from operating activities represent the ordinary performance of the firm; decision-makers are more interested in ordinary accruals than in extraordinary accruals (Bradshaw et al., 2001). Therefore, in this study, we focus on accruals from operating activities. Consistent with previous studies of earnings management (Jones, 1991; Bradshaw et al., 2001), total accruals (TA) for firm i in year t are computed as follows:

$$TA_{it} = \Delta CA_{it} + \Delta STDEBT_{it} - \Delta CL_{it} - \Delta CASH_{it} - \Delta DEP_{it}$$

where ΔCA is the change in current assets for firm i between years t − 1 and t. Similarly, $\Delta STDEBT$ is the change in the current portion of long-term debt, ΔCL is the change in current liability, $\Delta CASH$ is the change in the cash and cash equivalent balances, and DEP represents depreciation and amortization expenses. All variables are deflated by total assets at the beginning of the year.

Total accruals (TA) are divided into total book-tax accruals and total book-only accruals. To estimate total book-tax accruals, certain accrual items lacking high tax conformity are removed:

$$BTA_{it} = TA_{it} - BOA_{it}$$

$$BOA_{it} = \Delta DTA_{it} - \Delta DTL_{it} + \Delta TAXREC_{it} - \Delta TAXPAY_{it} - \Delta ALLOWANCE_{it} - DEP_{it}$$

where $\Delta TAXPAY$ is the change in income taxes payable for firm i between years t − 1 and t. Likewise, $\Delta TAXREC$ is the change in income taxes receivable. $\Delta TAXPAY$ and $\Delta TAXREC$ are eliminated because these variables represent income taxes due or receivable from the government and therefore are not part of the corporation's taxable income. ΔDTL is removed from total accruals because it includes deferred income taxes. Allowance for bad debts, other allowances, and depreciation expenses are classified as book-only accruals.[2]

---

[2] As accounting choices with inherent estimations like various allowances for losses on valuation, appropriation liabilities, and bad debt expenses are not recognized by the tax law, they were classified as book-only accruals.

      756   *The Clute Institute*

Based on this classification of book-tax accruals and book-only accruals, the following regression equation was used to estimate discretionary book-tax accruals (DBTA) (hereafter, "book-tax accruals") and discretionary book-only accruals (DBOA) (hereafter, "book-only accruals") (Defond & Jiambalvo, 1994; Sunramanyam, 1996):

$$DBTA_{it} = BTA_{it} - (\beta_0 \frac{1}{ASSET_{it-1}} + \beta_1 \frac{\Delta SALES_{it} - \Delta AR_{it}}{ASSET_{it-1}} + \beta_2 \frac{\Delta CFO_{it}}{ASSET_{it-1}})$$

$$DBOA_{it} = BOA_{it} - (\beta_0 \frac{1}{ASSET_{it-1}} + \beta_1 \frac{\Delta SALES_{it} - \Delta AR_{it}}{ASSET_{it-1}} + \beta_2 \frac{PPE_{it}}{ASSET_{it-1}} + \beta_3 \frac{\Delta CFO_{it}}{ASSET_{it-1}})$$

$ASSET_{it}$ = Total assets
$SALES_{it}$ = Changes in sales
AR_{it} = Changes in account receivables
PPE_{it} = Tangible and intangible assets - (land + construction in progress)
CFO_{it} = Cash flow from operating activities

3.1.2　Research Model

Equation (1) is the test model for Hypotheses 1. The dependent variable for testing of the first hypothesis is discretionary book-only accruals (DBOA). The coefficient of interest is β1, the coefficient of discretionary book-tax accruals (DBTA). If the sign of β1 in Equation (1) is negative, the result can be interpreted to coincide with the hypothesis of this study.

$$DBOA_{it} = \beta_0 + \beta_1 DBTA_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 CFO_{it} + \beta_5 PBR_{it} + \epsilon_{it} \qquad (1)$$

$DBTA_{it}$ = Discretionary book-tax accruals
$DBOA_{it}$ = Discretionary book-only accruals
$SIZE_{it}$ = Natural logarithm of total assets
LEV_{it} = Debt ratio (total liabilities/total assets)
CFO_{it} = Cash flow from operations (operating cash flow/total assets)
PBR_{it} = Price-to-book value ratio (stock price /book value per share)

Company size (SIZE) is included as a control variable. As the size of the company grows, the financial reporting costs will increase to the point that the company may increase earnings (Badertscher et al., 2009). If political costs are substituted, the incentive for reporting higher earnings may be suppressed (Watts & Zimmerman, 1986). As the debt ratio (LEV) increases, earnings management behavior also increases, according to some studies (Defond & Jiambalvo, 1994). According to other research (DeAngelo et al., 1994), as the debt ratio increases, the company shows increased negative accruals. To control for the possibility that the debt ratio may affect discretionary accruals, this study includes the debt ratio (LEV), obtained by dividing total liabilities by total assets, as a control variable. Following previous studies (Dechow et al., 1995; DeFond & Subramanyam, 1998) in which a negative relationship was established between cash flow and discretionary accruals, a cash flow variable (CFO), obtained by dividing the cash flow from operating activities by the initial total assets, is included in the regression equation. In addition, to control for the influence of the growth of the company on accruals, the price book value ratio (PBR) is included in the model.

The purpose of Hypothesis 2 is to test the ability of investors to recognize accrual components correctly even when they are used in two different ways. For this purpose, the earnings response coefficient is used. In financial economics, the earnings response coefficient, or ERC, is the estimated relationship between equity returns and the unexpected portion of (i.e., new information in) companies' earnings announcements.

In an efficient market, equity prices are generally expected to reflect all relevant information at a given time. Market participants with superior information are expected to exploit that information until share prices have effectively impounded it. Therefore, some changes in a company's share price are expected to result from changes in

　　　　　　　　　　　757

the relevant information available to the market. The ERC is an estimate of the change in a company's stock price due to the information provided in a company's earnings announcement.

Accordingly, unexpected earnings, the dummy variable (EC) indicating firms with negative discretionary book-tax accruals and positive discretionary book-only accruals reported at the same time, their interaction variable, and the control variables are included in the following regression model:

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 EC_{it} + \beta_3 UE \times EC_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 CFO_{it} + \beta_7 PBR_{it} + \epsilon_{it} \qquad (2)$$

CAR_{it} = Cumulative abnormal returns
EC_{it} = 1 for a company with negative DBTA and positive DBOA at the same time; otherwise 0
UE_{it} = Unexpected earnings, {(net income − net income of the previous period)/ market value at the beginning of the year}
$SIZE_{it}$ = Natural logarithm of total assets
LEV_{it} = Debt ratio (total liabilities/total assets)
CFO_{it} = Cash flow from operations (operating cash flow/total assets)
PBR_{it} = Price-to-book value ratio (stock price /book value per share)

In Equation (2), the dependent variable, cumulative abnormal return (CAR), is based on the cumulative sum of the monthly abnormal return from April to March of the following year calculated using the market adjustment model. Here, the abnormal return is obtained by subtracting the monthly market return, calculated using the value-weighted market index (VWI) from the monthly stock return. The independent variable, unexpected earnings (UE), was obtained by subtracting the actual net income of the previous year from the actual net income of the current year and dividing it by the initial total market value. Here, β3, the coefficient of the interaction term between EC and UE, is the main regression coefficient for Hypothesis 2. In other words, if β3 has a statistically significant negative value, this indicates that market participants interpret earnings management correctly, although the two types of accruals have been used in different ways. If they have not interpreted correctly, however, the resulting value will be statistically insignificant.

As for control variables, the natural log of the initial total assets was included in the model to control for company size. As the size of the company increases, the number of stakeholders increases. Therefore, the informativeness of earnings will decrease, and a negative relationship with CAR is expected. According to Dahliwal et al. (1991), who found lower earnings response coefficients for companies with high debt ratios than for companies with no or very few liabilities, the value obtained by dividing total liabilities by total assets may be included to control for the effect of debt ratio. Lastly, the value obtained by dividing the total market value by total stockholder equity is included in the model as a control variable to control for the growth potential of the company (PBR). As improved profitability is likely in companies with high growth potential, investors' responsiveness will also increase. Therefore, for companies with high growth potential and a high earnings response coefficient, a positive relationship between CAR and PBR is expected (Collins & Kothari, 1989).

3.2   Sample Selection

The sample for this research includes firms listed on the Korean Stock Exchange as of December 31, 2011. The following conditions were applied in the sample selection process:

1.   Companies listed on the KOSPI market during the period 2001−2010, based on 2011 data.
2.   Firms with December year-end, excluding firms from the financial industry.
3.   Firms for which financial and stock values can be extracted from KIS-Value (http://www.kisline.com).

Winsorization of the upper and lower 1% of the sample was performed based on dependent and independent variables. Details of the sample selection process are presented in Table 1.

Table 1: Sample Descriptions

Sample Selection Procedure	Firm-Years
All firm-year observations from Korea Stock Exchange during the period 2001~2010	7,056
(Less) Financial service	(522)
(Less) Non-December firms	(675)
(Less) Firms in industry with < 10 firms	(99)
(Less) Firms with insufficient financial data	(1,125)
(Less) Firms with insufficient stock value	(304)
Final sample size used for hypotheses	4,331

4. EMPIRICAL RESULTS

4.1 Descriptive Statistics

Table 2 shows descriptive statistics for the variables used to test the hypotheses. Mean and median values of DBTA are −0.004 and 0.001, respectively. This result indicates that the listed firms have a tendency to decrease earnings to avoid tax payment by using DBTA. Mean and median values of DBOA are 0.005 and 0.000, respectively. This result implies that the listed firms manage earnings upward to mask their tax avoidance by using DBOA. EC, which represents management of two types of accruals at the same time, has a mean value of 0.295. This result implies that 29.5% of the sample firms simultaneously use DBTA to decrease taxable income and manage DBOA to increase book income. For control variables, the mean (median) for firm size (SIZE) is 26.223 (25.967), and the mean (median) for debt-equity ratio (LEV) is 0.462 (0.463). The mean (median) for cash flow from operations (CFO) is 0.053 (0.054).

Table 2: Descriptive Statistics for Main Variables (N = 4,331)

Variable	Mean	Standard Deviation	Minimum	Median	Maximum
DBTA	−0.004	0.140	−0.542	0.001	0.459
DBOA	0.005	0.073	−0.236	0.000	0.359
CAR	0.003	1.102	−2.843	−0.064	3.361
UE	0.009	0.171	−2.206	0.004	2.826
EC	0.295	0.456	0	0	1
SIZE	26.223	1.433	23.686	25.967	30.708
LEV	0.462	0.196	0.090	0.463	0.954
CFO	0.053	0.084	−0.220	0.054	0.273
PBR	0.884	0.877	0.011	0.613	5.165

Notes: *DBTA* is discretionary book−tax accruals and *DBOA* is discretionary book-only accruals. *CAR* is the cumulative sum of the monthly abnormal return from April to March of the following year calculated using the market adjustment model. Here, the abnormal return is obtained by subtracting the monthly market return, calculated using the value-weighted market index (VWI) from the monthly stock return. *UE* is obtained by subtracting the actual net income of the previous year from the actual net income of the current year and dividing it by the initial total market value. *EC* is dummy variable that equals 1 if the firm reports negative discretionary book-tax accruals and positive discretionary book-only accruals at the same time and 0 otherwise. *SIZE* is the natural logarithm of assets at the beginning of the fiscal year. *LEV* is total liabilities scaled by total assets. *CFO* is cash flow from operations divided by total assets. *PBR* is the market value of equity to the book value of equity.

Table 3 presents the correlations among the variables used in the regression analysis. There is a negative association between DBTA and DBOA, which provides some evidence that earnings management with DBOA increases when financial income is reduced by DBTA. There is a positive relationship between cumulative abnormal return (CAR) and UE, in accordance with the results of previous research.

Table 3: Correlation Coefficients among Variables

	DBOA	CAR	UE	EC	SIZE	LEV	CFO	PBR
DBTA	−0.391***	0.061***	−0.013	−0.493***	0.072***	−0.124***	0.029*	−0.074***
DBOA		−0.020	0.165***	0.459***	−0.036*	0.073***	−0.040***	0.079***
CAR			0.118***	−0.017	−0.006	0.031	−0.026*	0.050***
UE				0.008	−0.025*	0.010	0.048***	0.066***
EC					−0.030**	0.076***	−0.010	0.018
SIZE						0.152***	0.157***	0.127***
LEV							−0.168***	0.168***
CFO								0.006

All variables are defined in Table 2. *** indicates significance at the 1% level, ** at the 5% level, and * at the 10% level.

          The Clute Institute

4.2   Regression Results

Table 4 shows the empirical results for the association between DBOA and DBTA. If the sign of coefficient β1 is negative, Hypothesis 1 is supported. The coefficient for DBTA is –0.237 (t-value = −33.2), which is negative and significant at the 1% significance level.

Managers have incentives to report higher than "true" book income and lower than "true" taxable income. Since higher revenues and lower expenses increase both financial profits and income tax liabilities, a trade-off exists between tax planning and financial reporting objectives. For example, companies that attempt to reduce their tax liabilities by either reducing income accruals or increasing expense accruals will also report lower financial earnings. Reducing book-tax accruals reduces financial statement net income, which can affect accounting-based contracts and reduce firm value. To offset these potential costs, managers may try to increase book income by using book-only accruals when attempting to decrease taxable income. This result implies that firms with DBTA earnings management have a tendency to inflate earnings upward using DBOA. Thus, Hypothesis 1 is supported.

Table 4: Association between Discretionary Book−tax Accruals and Discretionary Book-only Accruals

$$DBOA_{it} = \beta_0 + \beta_1 DBTA_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 CFO_{it} + \beta_5 PBR_{it}$$
$$+ IndustryDummy + YearDummy + \epsilon_{it}$$

Variables	Expected Sign	Dependent Variable: DBOA	
		Coefficient	t Value
Intercept		−0.008	−0.41
DBTA	−	−0.237	−33.2***
SIZE	+/−	0.000	0.17
LEV	+/−	−0.007	−1.45
CFO	−	−0.034	−2.79***
PBR	+	0.006	5.39***
Industry dummy	N/A	Included	
Year dummy	N/A	Included	
F-Value	60.11***		
Adjusted R^2	0.2309		
N	4,331		

All variables are defined in Table 2. *** indicates significance at the 1% level, ** at the 5% level, and * at the 10% level.

Table 5 shows the empirical results for the effects of earnings management on earnings response coefficients. Here, the key variable is EC, a dummy variable for firms with simultaneous negative DBTA and positive DBOA. The coefficient for EC*UE is –0.365 (t-value = −1.79), which is negative and significant at the 10% significance level. This result implies that investors in the market react negatively to firms managing book-tax and book-only accruals in two different ways at the same time. In other words, the stock market is fully aware of the management of accrual components and their reflection in current stock prices even when DBTA and DBOA offset each other.

Table 5: Two Types of Discretionary Accruals: Response of the Capital Market

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 EC_{it} + \beta_3 UE_{it} \times EC_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 CFO_{it} + \beta_7 PBR_{it} + IndustryDummy + YearDummy$$
$$+ \epsilon_{it}$$

Variables	Expected Sign	Dependent Variable: DBOA	
		Coefficient	t Value
Intercept		0.049	0.18
UE	+	1.091	9.31***
EC	−	−0.045	−1.27
UE × EC	−	−0.365	−1.79*
SIZE	+/−	−0.005	−0.65
LEV	+/−	0.078	0.92
CFO	−	−0.511	−2.55**
PBR	+	0.061	3.25***
Industry dummy	N/A	Included	

Table 5 cont.

Year dummy	N/A	Included
F-Value		5.44***
Adjusted R^2		0.02
N		4,331

All variables are defined in Table 2. *** indicates significance at the 1% level, ** at the 5% level, and * at the 10% level.

5.   SUMMARY AND CONCLUSION

The higher book-tax conformity in Korea allows firms to manage earnings in two different ways simultaneously. Accruals with relatively high tax conformity are used to achieve tax planning goals, and accruals with relatively low tax conformity are used to accomplish financial reporting objectives. This study examines the effect of book-tax conformity in Korea on the use of accruals. For this purpose, we use a sample of 4,331 Korean firms, dividing total accruals into book-tax accruals and book-only accruals. In addition, we examine how the stock market interprets managers' accounting decisions that affect discretionary accruals and taxes.

Managers want to increase disclosed book income and reduce taxes, which are unilaterally paid with no benefit in return. Although previous studies have focused on earnings management or reduction of tax expenses, few have considered both simultaneously. The incentives for book income disclosure and taxes reduction are not independent; therefore, they must be considered together. In this study, these incentives are examined at the same time.

If managers report higher book income in order to increase corporate value in the capital market, the income tax will increase, and if managers report lower book income to reduce income tax, stockholders will respond unfavorably. To managers facing this conflict between book income and taxable income, the best reporting strategy is to report higher book income and lower taxable income. Accordingly, managers may attempt to adjust discretionary accruals with consideration of the influence of their accounting choices regarding taxable income rather than simply attempting to adjust discretionary accruals. Therefore, we test accruals adjustment according to incentive, examining how companies use book-tax accruals and book-only accruals differently depending on the circumstances. The market response to accruals adjustment is also investigated.

The research results are as follows. First, managers use book-tax accruals to lower taxable income and book-only accruals to increase book income. This result confirmed that managers utilize these two kinds of accruals differently. Second, reducing book-tax accruals reduces operating income as reported in the financial statement, which can affect accounting-based contracts and reduce firm value. To offset these potential costs, managers may try to increase book income by using book-only accruals to decrease taxable income.

There are many types of earnings management. Discretionary accruals based on the modified Jones model are insufficient to identify certain types of earnings management. For example, when book-tax accruals are used to reduce taxable income and book-only accruals are used to increase earnings at the same time, these two effects may offset each other. In this case, using the discretionary accruals method based on the Jones model is inadequate to measure earnings management. Use of this method may cause errors in the interpretation of regression results. This study confirmed that the informativeness of book income decreases when these two types of accruals are used in opposite directions.

Following Calegari (2000), this study divided discretionary accruals, which are commonly used in previous studies as a measure of earnings management, into book-tax accruals and book-only accruals. We empirically demonstrated how these two types of accruals are used differently for earnings management based on book- and tax-related incentives. In addition, earnings management is used to reduce taxes and increase reported earnings simultaneously. This study contributes to the literature in this area by shedding light on the market response to the differential use of these types of accruals.

AUTHOR INFORMATION

Haeyoung Ryu, Ph.D., Researcher, Business Research Institute, Yonsei University, 134 Shinchon-dong, Seodaemoon-gu, Seoul, Korea. E-mail: hyryu @yonsei.ac.kr

Soo-Joon Chae, Ph.D., Professor of Accounting, School of Business, Kangwon National University, 192-1 Hyoja-dong, Chuncheon, Gangwon-do, Korea. E-mail: sjchae@kangwon.ac.kr   (Corresponding author)

REFERENCES

1. Badertscher, B., Phillips, J., Pincus, M., & Rego, S. (2009). Tax implications of earnings management activities: Evidence from restatements. *The Accounting Review, 84*(1), 63-97.
2. Bradshaw, M. T., Richardson, S. A., & Sloan, R. G. (2001). Do analysts and auditors use information in accruals? *Journal of Accounting Research, 39*(1), 45-74.
3. Calegari, M. (2000). The effect of tax accounting rules on capital structure and discretionary accruals. *Journal of Accounting and Economics, 30*(1), 1-31.
4. Choi, W., Lee, H., & Jun, B. (2009). The provision of tax services by incumbent auditors and earnings management: Evidence from Korea. *Journal of International Financial Management and Accounting, 20*(1), 79-103.
5. Cloyd, C. B., Pratt, J., & Stock, T. (1996). The use of financial accounting choice to support aggressive tax positions: Public and private firms. *Journal of Accounting Research, 34*(1) 23-43.
6. Collins, D. W., & Kothari, S. P. (1989). An analysis of inter temporal and cross-sectional determinants of earnings response coefficients. *Journal of Accounting and Economics, 11*(2), 143-181.
7. DeAngelo, H., DeAngelo, L., & Skinner, D. (1994). Accounting choice in troubled companies. *Journal of Accounting and Economics, 17*(1/2), 113-143.
8. Dechow, P., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review, 70*(2), 193-225.
9. DeFond, M. L., & Jiambalvo, J. (1994). Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics, 17*(1), 145-176.
10. DeFond, M., & Subramanyam, K. R. (1998). Auditor changes and discretionary accruals. *Journal of Accounting and Economic, 25*(1), 35-68.
11. Dhaliwal, D., Lee, K., & Fargher, N. (1991). The association between unexpected earnings and abnormal security returns in the presence of financial leverage. *Contemporary Accounting Research, 8*(1), 20-41.
12. Guenther, D. A. (1994). Earnings management in response to corporate tax rate changes: Evidence from the 1986 Tax Reform Act. *The Accounting Review, 69*(1), 230-243.
13. Guenther, D., Maydew, E., & Nutter, S. (1997). Financial reporting, tax costs, and book-tax conformity. *Journal of Accounting and Economics, 23*, 225-248.
14. Holthausen R. W., & Verrecchia R. E. (1988). The effect of sequential information releases on the variance of price changes in an intertemporal multi-asset market. *Journal of Accounting Research, 26*(1), 82-106.
15. Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research, 29*(2), 193-228.
16. Mills, L., & Plesko, G. A. (2003). Bridging the reporting gap: a proposal for more informative reconciling of book and tax income. *National Tax Journal, 56*(4), 865-93.
17. Mills, L., & Sansing, R. (2000). Strategic tax and financial reporting decisions: Theory and evidence. *Contemporary Accounting Research, 17*(1), 85-106.
18. Monem, R. M. (2003). Earnings management in response to the introduction of the Australian gold tax. *Contemporary Accounting Research, 20*(4), 747-774.
19. Northcut, D. W., & Vines, C. C. (1998). Earnings management in response to political scrutiny of effective tax rates. *Journal of the American Taxation Association, 20*(2), 22-36.
20. Seo, S. C., & Yoon, S. S. (2011). A study on the earnings management vehicles through tax decomposition of accruals. *Korean Accounting Review, 36*(4), 249-283. [Printed in Korean]
21. Shackelford, D., & Shevlin, T. (2001). Empirical tax research in accounting. *Journal of Accounting and Economics, 31*, 321-387.
22. Subramanyam, K. R. (1996). The pricing of discretionary accruals. *Journal of Accounting & Economics, 22*(1, 2, & 3), 249-281.
23. Watts, R., & Zimmerman, J. (1986). *Positive accounting theory*. Edgewood Cliffs, NJ: Prentice Hall.