

Management Of Accrual Components In Response To Corporate Income Tax Rate Changes: Evidence From Korea

Won-Wook Choi, Yonsei University, Korea
Hyun-Ah Lee, Yonsei University, Korea

ABSTRACT

Changes in the statutory corporate income tax rate provide firms with an opportunity to reduce their tax burden by shifting their taxable income from higher to lower tax rate years. One negative consequence of shifting taxable income across years is higher variation in book income for financial reporting purposes. Taxable income and book income are closely related in most countries, and, in general, reporting volatile book income across years is not a favorable signal to investors. This study investigates how firms shift taxable income and concurrently mitigate book income fluctuation by managing accrual components separately when the statutory income tax rate changes. Unlike prior studies, we decompose discretionary accruals into two components and examine distinctive patterns of accrual management in Korea, where book-tax conformity is high and aggressive tax avoidance is restricted. We find that firms manage book-tax accruals for taxable income shifting and manage book-only accruals to mitigate book income fluctuation. Furthermore, we find the extent of book-tax and book-only accruals management varies depending on the firms' tax and financial reporting costs. The results of this study provide clear and compelling evidence of firms' opportunistic accrual management behavior in response to statutory tax rate reduction.

Keywords: Tax Rate; Income Shifting; Accrual Component; Accrual Management

INTRODUCTION

A change in statutory corporate income tax rates creates a unique situation in which a firm's tax decisions may take priority over financial accounting decisions.¹ Firms can substantially reduce their tax burden by shifting taxable income from the higher to the lower tax rate period (Sholes et al., 1992). Prior studies have examined firms' tax-motivated behaviors in periods of statutory tax rate reductions, as the tax-saving benefits in such years are expected to be far greater than those in other years.² Guenther (1994) and Lopez et al. (1998) report that firms decrease accruals and, in consequence, income in anticipation of a tax rate reduction, deferring taxable income to later (less tax onerous) years. They also argue that the decrease in accruals is insignificant when the financial reporting cost is higher than the tax-saving benefits, as managers still weigh book income when the tax rate reduction is anticipated.

This study investigates the strategic accrual management behavior that firms exhibit as they attempt to resolve the trade-off between taxable and book income in response to statutory tax rate reductions. Our approach is

¹ When corporate managers make accounting decisions, they encounter a trade-off between taxable and book income; tax minimization strategies often lead to lower book income. Managers of publicly listed firms normally give priority to book income for financial reporting purposes, given their concern for its impact on the firm's cost of capital in the capital market and managerial compensation (Cloyd et al., 1996).

² In particular, they pay attention to accrual management rather than real expenditure management, as the latter is more costly to manage.

different from prior studies in that we decompose accruals into two components and examine how these components are managed differently in a setting where accruals are the primary tools for taxable income shifting and book-tax conformity is high.

Accruals, used primarily for financial reporting purposes, can be decomposed into book-tax accruals and book-only accruals depending on whether they affect taxable income (Calegari 2000). Typical book-tax accruals include revenues and expenses that are recognized in the same period for both tax and financial reports. On the other hand, typical book-only accruals include estimation accounts, such as allowance or depreciation accounts, which are recognized differently in tax and financial reports. Changes in book-only accruals do not affect the taxable income because tax deduction limits on allowance or depreciation accounts are predetermined by tax law-based formulas.

Hence, firms are expected to manage book-tax accruals to shift their taxable income to the year of a tax rate reduction. For example, they may choose to defer recognition of revenues or accelerate recognition of expenses in the year prior to the tax rate reduction. However, deferral of revenues or acceleration of expenses inevitably involves fluctuation in book income; book income is decreased in the year prior to the tax rate reduction and increased in the year of the tax rate reduction. In such cases, book-only accruals can be effective tools to mitigate book income fluctuation without foregoing the tax-saving benefits. For example, an understatement of the allowance in the year prior to the tax rate reduction can raise book income without affecting taxable income, compensating for the decrease in book income caused by book-tax accrual management. In the year of the tax rate reduction, the allowance may be overstated to the same extent that it was understated in the preceding year; book income then decreases accordingly, resulting in a steady book income stream across years without affecting taxable income. Thus, firms can save taxes and mitigate book income volatility by managing book-tax and book-only accruals in opposite directions.

We test our hypotheses by analyzing recent archival data on publicly listed Korean firms. In Korea, corporate tax rates were reduced three times during the 2000s; the maximum statutory tax rate was reduced in 2002 (1%), 2005 (2%), and 2009 (3%), dropping from 28% to 22% over this time period. Korean firms are more likely to depend on accruals for tax planning than are U.S. firms, which have more opportunities to utilize aggressive tax shelters. Moreover, as the book-tax conformity in Korea is higher, the conflict between book and taxable income is higher than in the U.S. (Choi et al., 2009). Therefore, we expect Korea to provide a powerful research setting in which to examine the effective accrual management behavior that firms exhibit in resolving book tax trade-offs.

Our empirical findings show that book-tax accruals increase and book-only accruals decrease in the year of a tax rate reduction. The increase in book-tax accruals supports the notion that firms shift taxable income from the year before to the year of the tax rate reduction by deferring revenue or accelerating expenses. On the other hand, the decrease in book-only accruals indicates that firms mitigate book income fluctuation during the period of the tax rate reduction by adjusting estimation accounts. We further find that the increase in book-tax accruals is more pronounced for firms with a higher marginal tax rate, while the decrease in book-only accruals is salient for firms with a higher debt ratio. This finding implies that the management of book-tax and book-only accruals varies according to firms' tax and financial reporting costs.

The results of this study contribute to the extant literature in at least three ways. First, we find that firms distinguish tax and financial reporting decisions in response to tax rate reductions; prior studies mainly focus on tax-motivated decisions. Second, our empirical findings from the use of accrual components suggest that traditional accrual measures-such as the Jones model of discretionary accruals (1991) for book income management or Desai and Dharmapala's residual (2006) for tax avoidance-can be improved by disaggregating accruals into detailed categories and applying different components for different purposes. Third, compared with earlier studies, our findings-based on data from Korean firms-provide clearer and more compelling evidence of firms' accrual management behavior in resolving the book tax trade-offs. Section 2 contains a more detailed explanation regarding the contributions of this study.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 describes the sample, variables, and research methods. Section 4 presents the results, while Section 5 concludes the study.

LITERATURE REVIEW AND HYPOTHESES

Literature Review

Research on Corporate Tax Rate Changes

Scholes et al. (1992) investigate whether firms shift income across time periods in response to the United States Tax Reform Act of 1986 (hereafter “TRA 86”), which reduced the corporate tax rate from a maximum of 46% to 34% over a period of two years. They find that firms shift some portion of their gross margin from the preceding quarters to the quarters of the scheduled tax rate reduction; however, they do not find evidence that firms have accelerated selling, general, or administrative expenses. The authors also discuss cross-sectional differences in firms’ propensities to shift income, providing evidence that smaller firms are less engaged in income shifting in anticipation of the tax rate reduction.

Guenther (1994) focuses on current discretionary accruals that are expected to affect taxable income; he estimates current discretionary accruals by subtracting the change in current liabilities from the change in current assets. According to his estimation method, however, allowance accounts are incorrectly included in the accruals that affect taxable income. He finds that firms have reduced discretionary accruals in the year prior to the passage of TRA 86. He further examines whether the level of these income-decreasing accruals varies depending on a firm’s fiscal year-end date, size, level of debt, and level of manager ownership. The results showed that discretionary accruals in the year preceding the tax rate reduction were negatively related to firm size and positively related to debt levels; this implies that income deferral is expected in only those firms for which tax savings are higher than nontax costs. He does not find an association between a firm’s fiscal year-end or level of manager ownership and the level of income-decreasing discretionary accruals.

Lopez et al. (1998) utilize the tax subsidy measure developed by Wilkie (1992) as a proxy for firm-level tax aggressiveness, predicting that more aggressive tax planning firms will have a higher probability of making negative accrual shifts in the year before the TRA 86 tax rate reduction. In addition, they expect to find that more aggressive tax planning firms have made greater negative accrual shifts in the year preceding the tax rate reduction compared with other firms. The results support their expectations; the variable for tax aggressive behavior is significantly correlated with discretionary accruals.

In Korea, several corporate tax rate reductions occurred in the 1990s. The tax rate was slashed 2 percentage points in 1994, 1995, and 1996; the original tax rate of 34% fell to 28%. Shin (2002) and Kim and Park (2003) examine whether Korean firms have decreased their discretionary accruals to defer income in the years prior to these tax rate reductions, but their results are not consistent; while Kim and Park (2003) find evidence of tax-motivated management of discretionary accruals in the years prior to the tax rate reductions, Shin (2002) does not. Shin (2002) argues that, as the tax rate reductions are relatively small compared with those in the U.S., firms do not have as much incentive to manage discretionary accruals.

In sum, previous studies have regarded discretionary accruals as a means to manage taxable income for tax planning when tax decisions take priority over financial accounting decisions. However, a large body of literatures has documented discretionary accruals primarily as a means to manage book income for financial reporting purposes. Although accruals can be used to manage book and taxable income, very few studies, with the exception of Calegari (2000), have explored the simultaneous management of accruals.

Calegari (2000) recognizes that accruals can be divided into two different types depending on whether they affect taxable income. He defines accruals with high book-tax conformity as “book-tax accruals,” and finds that firms with increased marginal tax rates due to TRA 86 have adjusted their book-tax accruals downward for tax planning. In addition, he defines accruals with low book-tax conformity as “book-only accruals,” and reports that firms had simultaneously adjusted book-only accruals upward to accomplish financial reporting objectives. However, his analysis are limited to long-term construction firms based on the assumption that TRA 86 has eliminated the tax deferral benefit for those firms by replacing the completed-contract method with the percentage-of-completion method.

Contributions to Extant Literature

This study makes the following contributions to the extant literature. First, we investigate how firms minimize not only tax, but also financial reporting costs, in response to a tax rate reduction. In contrast to prior studies that mainly focus on tax-motivated income shifting behavior, we concurrently examine firms' utilization of an explicit measure that does not impede tax-motivated income shifting to reduce financial reporting costs.

Second, this study aims to explain how different components of accruals can be used simultaneously for different purposes and emphasizes the importance of decomposing accruals into two different measures, tax planning and book income management. Previous studies have used aggregate accruals, such as Jones' model of discretionary accruals (1991) or Desai and Dharmapala's tax avoidance measure (2006), to examine firms' book income management or tax planning. However, the Jones model of discretionary accruals (1991) does not control for accrual management of tax planning, which may result in an overly inclusive estimate for book income management. Desai and Dharmapala's tax avoidance measure (2006) may result in an estimate with a similar problem, as the measure is estimated by a residual of book-tax difference that is not captured by total accruals.

Finally, our analysis is performed in a unique setting (Korea) where book-tax conformity is high and accruals are the primary tools for tax planning. Accrual management for tax planning purposes has a more significant effect on book income for Korean firms due to their higher book-tax conformity. Moreover, in Korea, aggressive tax shelters such as tax havens or transfer pricing are utilized to a very limited extent, whereas in the U.S., there are many opportunities for multinational firms to use aggressive tax shelters. Thus, our findings provide more compelling evidence of firms' opportunistic accrual management behavior in dealing with a higher degree of book tax trade-offs.

Hypotheses

Changes in corporate tax rates provide strong incentives for firms to shift taxable income to the period of the tax rate reduction for tax minimization. Therefore, in a country where accruals are the primary tools of tax planning, firms are expected to defer taxable income to the year of the tax rate reduction by using accruals that affect taxable income; we classify them as book-tax accruals. For example, they can defer revenue accruals or accelerate expense accruals in the year preceding the tax rate reduction. Such deferral of revenues or acceleration of expenses is generally reversed in the following year, resulting in an increase in revenues or a decrease in expenses. Therefore, we expect book-tax accruals to increase in the year of a tax rate reduction if firms shift taxable income by managing book-tax accruals to avoid taxes.

Hypothesis 1-1: Book-tax accruals will increase in the year of a tax rate reduction.

Firms engaged in book-tax accrual management in response to a tax rate reduction typically trade off tax savings with financial reporting costs because the deferral of revenues or acceleration of expenses also lowers book income in the year prior to the tax rate reduction. Therefore, firms with concerns about the level of book income are expected to manage accruals that do not affect taxable income; we classify them as book-only accruals. For example, firms understate their allowance for bad debts to increase their book income in the year prior to a tax rate reduction. Conversely, in the following year, they overstate their allowance for bad debts to the same extent that the account was understated in the preceding year, and the book income decreases accordingly. By managing book-only accruals and book-tax accruals in opposite directions, firms can alleviate the fluctuation in book income without foregoing tax-saving benefits. Thus, we expect book-only accruals to decrease in the year of a tax rate reduction.

Hypothesis 1-2: Book-only accruals will decrease in the year of a tax rate reduction.

Whether firms put more emphasis on the benefits of tax saving or on the consequence of financial reporting depends on firm characteristics. It is indisputable that firms with high tax costs have more incentives for effective tax planning than do firms with lower tax costs. Manzon's marginal tax rate (1994) is a measure that assesses a firm's tax costs by estimating the present value of \$1 of tax payable on additional income. Thus, we expect that firms with higher marginal tax rates in previous years are more likely to exploit the opportunity to reduce corporate taxes by managing book-tax accruals.

On the other hand, financial reporting costs also affect firms’ accounting decisions. This is because reporting lower book income may result in a decrease in a manager’s compensation, increased interest rates on debt holdings, forced repayment of debt, or undervaluation of stock prices. In this study, we mainly focus on the financial reporting costs associated with violating debt covenants. The closer a firm is to violating accounting-based debt covenants, the more likely it is that the firm will make income-increasing accounting choices (Watts and Zimmerman, 1986). This implies that firms with a high debt ratio have higher financial reporting costs and, thus, are likely to manage book income upward. According to our first hypothesis, book income, which is lowered by the management of book-tax accruals in the year prior to the tax rate reduction, can be increased by the management of book-only accruals. Therefore, we expect that firms with higher financial reporting costs, using debt ratios as a proxy, are more likely to increase book income by managing book-only accruals in response to the tax rate reduction. In this case, the reversal effect of book-only accruals is expected to be greater in the year of the tax rate reduction.

In sum, given that firms’ incentives for managing accrual components differ according to their tax and financial reporting costs, firms should exhibit different levels of increase in book-tax accruals and decrease in book-only accruals in the year of the tax rate reduction.

Hypothesis 2-1: The increase in book-tax accruals in the year of a tax rate reduction will be greater for firms with high tax costs.

Hypothesis 2-2: The decrease in book-only accruals in the year of a tax rate reduction will be greater for firms with high financial reporting costs.

RESEARCH DESIGN

Designing Research Model

Measuring Book-Tax Accruals and Book-Only Accruals

We adopt the procedure of Calegari (2000) to calculate book-tax and book-only accruals by decomposing total accruals into two components. Consistent with previous studies (Jones, 1991; Sloan, 1996; Bradshaw et al., 2001), total accruals for firm *i* in year *t* are calculated as follows:

$$TA_{i,t} = (\Delta CA_{i,t} - \Delta CASH_{i,t}) - (\Delta CL_{i,t} - \Delta STD_{i,t}) - DEP_{i,t} \tag{1}$$

- $TA_{i,t}$ = Total accruals
 - $\Delta CA_{i,t}$ = Changes in current assets
 - $\Delta Cash_{i,t}$ = Changes in cash and cash equivalent
 - $\Delta CL_{i,t}$ = Changes in current liabilities
 - $\Delta STD_{i,t}$ = Changes in long-term current liabilities
 - $Dep_{i,t}$ = Depreciation expenses for tangible and intangible assets
- (All variables above are deflated by total assets at the beginning of the year)

Total accruals (*TA*) are decomposed into total book-tax accruals and total book-only accruals. Allowance for bad debts, allowance for inventory valuation loss, depreciation, and amortization expenses are classified as book-only accruals (*BOA*), as they are treated differently by tax laws and financial reporting requirements. Tax-related accounts such as current deferred tax asset/liability and tax receivable/payable are also classified as book-only accruals (*BOA*) because they cannot be tools for managing taxable income. Book-tax accruals (*BTA*) are estimated by subtracting book-only accruals (*BOA*) from total accruals.

$$BTA_{i,t} = TA_{i,t} - BOA_{i,t} \tag{2}$$

$$BOA_{i,t} = \Delta DTA_{i,t} - \Delta DTL_{i,t} + \Delta TAXREC_{i,t} - \Delta TAXPAY_{i,t} - \Delta ALLOW_{i,t} - DEP_{i,t} \tag{3}$$

- $BTA_{i,t}$ = Total book-tax accruals
 $BOA_{i,t}$ = Total book-only accruals
 $\Delta DTA_{i,t}$ = Changes in current deferred tax assets
 $\Delta DTL_{i,t}$ = Changes in current deferred tax liabilities
 $\Delta TaxRec_{i,t}$ = Changes in income tax receivables
 $\Delta TaxPay_{i,t}$ = Changes in income tax payable
 $\Delta ALLOW_{i,t}$ = Changes in allowances for bad debts and inventory valuation
 (All of the above variables are deflated by total assets at the beginning of the year)

Following Calegari (2000), we use the Rees et al. (1996) model, which modified the Jones model (1991) to disentangle the discretionary portion of book-tax accruals (BTA) and book-only accruals (BOA).³ Discretionary book-tax accruals ($DBTA$) (hereafter, “book-tax accruals”) and discretionary book-only accruals ($DBOA$) (hereafter, “book-only accruals”) are determined as follows⁴:

$$DBTA_{i,t} = BTA_{i,t} - \left(\alpha_0 \frac{1}{ASSET_{i,t-1}} + \alpha_1 \frac{\Delta ADJREV_{i,t}}{ASSET_{i,t-1}} + \alpha_2 \frac{CFO_{i,t}}{ASSET_{i,t-1}} \right) \quad (4)$$

$$DBOA_{i,t} = BOA_{i,t} - \left(\alpha_0 \frac{1}{ASSET_{i,t-1}} + \alpha_1 \frac{\Delta ADJREV_{i,t}}{ASSET_{i,t-1}} + \alpha_2 \frac{PPE_{i,t}}{ASSET_{i,t-1}} + \alpha_3 \frac{CFO_{i,t}}{ASSET_{i,t-1}} \right) \quad (5)$$

- $DBTA_{i,t}$ = Discretionary book-tax accruals
 $DBOA_{i,t}$ = Discretionary book-only accruals
 $\Delta ADJREV_{i,t}$ = Changes in revenues minus change in receivables
 $CFO_{i,t}$ = Cash flow from operations
 $PPE_{i,t}$ = Tangible and intangible assets subject to depreciation
 $ASSET_{i,t-1}$ = Total assets at the beginning of the year
 $\Delta ALLOW_{i,t}$ = Changes in allowances for bad debts and inventory valuation

The change in book-tax accruals ($\Delta DBTA$) and book-only accruals ($\Delta DBOA$) for firm i in year t are estimated by subtracting the values of year $t-1$ from the respective values of year t . In this study, the change variables of book-tax accruals ($\Delta DBTA$) and book-only accruals ($\Delta DBOA$) are used to investigate whether they are increased or decreased in the year of a tax rate reduction compared with the year prior to the tax rate reduction.

$$\Delta DBTA_{i,t} = DBTA_{i,t} - DBTA_{i,t-1} \quad (6)$$

$$\Delta DBOA_{i,t} = DBOA_{i,t} - DBOA_{i,t-1} \quad (7)$$

Research Model

To verify the firms’ taxable income shifting through book-tax accruals, we regress changes in book-tax accruals ($\Delta DBTA$) on the year dummy (YR), which equals “1” if the firm-year is the year of a tax rate reduction and “0” otherwise. We also regress changes in book-only accruals ($\Delta DBOA$) on the year dummy (YR) to investigate the firms’ management of book-only accruals to mitigate book income fluctuation.

³ We exclude industries with less than 10 sample firms because book-tax and book-only accruals are estimated for each industry and each year using the cross-sectional modified Jones model.

⁴ Given that book-tax and book-only accruals are estimated by adopting the modified Jones model, the variables can be susceptible to criticism regarding the ability of the model to isolate discretion.

$$\begin{aligned} \Delta DBTA_{i,t} = & \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} \\ & + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} \\ & + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (8)$$

$$\begin{aligned} \Delta DBOA_{i,t} = & \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} \\ & + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} \\ & + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (9)$$

- $YR_{i,t}$ = Dummy variable that equals “1” if the year is 2005 or 2009 and “0” otherwise
- $SIZE_{i,t}$ = Natural logarithm of total assets
- $\Delta SIZE_{i,t}$ = Change in firm size
- $LEV_{i,t}$ = Total debt divided by total equity
- $\Delta LEV_{i,t}$ = Change in LEV
- $ROA_{i,t}$ = Net income divided by lagged total assets
- $\Delta ROA_{i,t}$ = Change in ROA
- $CFO_{i,t}$ = Cash flow from operations divided by lagged total asset
- $\Delta CFO_{i,t}$ = Change in CFO
- $MTR_{i,t}$ = Manzon’s marginal tax rate (1994) modified for Korean tax laws.
 $MTR_{i,t} = (1 \text{ Korean won} \times tr)/(1 + r)^n$
 where tr is the maximum statutory tax rate; r is an annual average interest rate on 3-year corporate bonds; $n = NOLs_{i,t-1}/EFAI_{i,t-1}$
 where $NOLs$ is net operating loss at period $t-1$, $EFAI$ is market value of equity multiplied by r at period $t-1$
 If n is higher than 5, n is assumed equal to 5 because Korean tax laws allow firms to carry over $NOLs$ for 5 years. For firms with no $NOLs$, MTR is assumed to equal 1 *Korean Won* multiplied by the maximum statutory rate.
- $\Delta MTR_{i,t}$ = Change in MTR
- $PBR_{i,t}$ = Market value divided by total equity
- $\Delta PBR_{i,t}$ = Change in PBR
- $LOSS_{i,t}$ = Dummy variable that equals “1” if net income is negative and “0” otherwise

Control variables that are expected to affect the change in book-tax accruals ($\Delta DBTA$) and the change in book-tax accruals ($\Delta DBOA$) include firm size ($SIZE$), debt ratio (LEV), cash flow from operations (CFO), profitability (ROA), marginal tax rate (MTR), market-to-book ratio (PBR), and loss ($LOSS$).

We expect that the coefficient of YR , β_1 in model (8) will be positive if book-tax accruals are increased in the year of a tax rate reduction, as mentioned in hypothesis 1-1. On the other hand, we expect a negative value for the coefficient of YR , β_1 in model (9) if book-only accruals are decreased in the year of a tax rate reduction, as in hypothesis 1-2.

In addition, because we assume that incentives for managing book-tax accruals differ depending on the firm’s tax cost, we partition sample firms into two groups based on the firm’s marginal tax rates (MTR). If firm i ’s marginal tax rate (MTR) is higher than the industrial mean in the same year, the firm is included in the high tax cost group. If firm i ’s MTR is lower than the industrial mean in the same year, the firm is included in the low tax cost group. By estimating the regression model (8) for each group, we test 2-1 hypothesis and expect that β_1 will have a greater positive value for the high tax cost group than the value for the low tax cost group.

On the other hand, incentives for managing book-only accruals are expected to differ depending on firms’ financial reporting costs, which are assessed by the firm’s debt ratios. Thus, if firm i ’s debt ratio is higher than the industrial median in the same year, the firm is included in the high financial cost group. The remaining firms are classified as the low financial cost group. By estimating the regression model (9) for each group, we test our 2-2 hypothesis and anticipate that β_1 will have a greater negative value for the high financial reporting cost group than the value for the low financial reporting cost group.

Sample Selection

Our initial sample consists of firms listed on the Korea Stock Exchange (KSE) during the period between 2003 and 2009. We exclude the 1% tax reduction of 2002 from our analysis because it is deemed too small to provide firms with incentives for tax-saving benefits. Financial firms are excluded from the sample because of the unique nature of their financial data. Non-December year-end firms are also eliminated from the sample for homogeneity. The financial and stock data are gathered from the TS2000 (<http://www.kokoinfo.com>) and KIS-VALUE (<http://www.kisline.com>) databases.⁵ These procedures resulted in the final sample comprising 3,539 firm-years, as reported in Table 1.

Table 1 Sample Descriptions

Panel A. Sample Selection Procedure			
Sample Selection			Firm-years
All firm-year observations from the database without missing values from 2003 to 2009			4,209
(Less) Financial firms			(324)
(Less) Non-December year-end firms			(269)
(Less) Firms in industries with less than			(77)
Final sample size			<u>3,539</u>
Panel B. Samples by Year and Industries			
Year	Firm-years	Industry	Firm-years
2003	455	Food, Beverages, and Tobacco Products	208
2004	472	Fiber Products and Wearing apparel	168
2005	490	Wood and Pulp Products	135
2006	506	Chemical Products, Medical chemicals	673
2007	521	Non-metallic Mineral Products	144
2008	542	Metal Products	303
2009	553	Automobiles and Auto parts, and Transportation Manufacturing	781
	<u>3,539</u>	Construction	306
		Wholesale Trade	252
		Other Service Activities	569
			<u>3,539</u>

EMPIRICAL RESULTS

Descriptive Statistics

Table 2 presents descriptive statistics for the variables used to analyze changes in book-tax accruals and book-only accruals in the year of a tax rate reduction. The change in book-tax accruals ($\Delta DBTA$) and book-only accruals ($\Delta DBOA$) show symmetrical distributions. The range for book-tax accruals ($\Delta DBTA$) is wider than the range for book-only accruals ($\Delta DBOA$) because book-only accruals are limited to estimation accounts such as allowances, depreciation, and amortization. These statistics suggest that there are many opportunities for corporations to use book-tax accruals to achieve their tax planning goals.

⁵ TS2000 and KIS-VALUE databases systems are Korean equivalents of COMPUSTAT or CRSP in the U.S, providing financial and stock price data for firms listed on the Korea Stock Exchange.

Table 2 Descriptive Statistics for Model Variables (N=3,539)

Variables	Mean	SD	Min	1Q	Median	3Q	Max
Δ DBTA	-0.0041	0.1581	-0.5463	-0.0822	-0.0009	0.0754	0.5050
Δ DBOA	-0.0001	0.0447	-0.1655	-0.0182	-0.0012	0.0169	0.1778
YR	0.2947	0.4560	0.0000	0.0000	0.0000	1.0000	1.0000
SIZE	19.5386	1.5040	16.8541	18.4520	19.2396	20.4257	23.7283
Δ SIZE	0.0708	0.1832	-0.6196	-0.0133	0.0613	0.1432	0.7443
LEV	0.4481	0.1926	0.0770	0.3027	0.4555	0.5908	0.8933
Δ LEV	-0.0064	0.0779	-0.3038	-0.0395	-0.0060	0.0281	0.2401
ROA	0.0352	0.0874	-0.3822	0.0099	0.0402	0.0780	0.2433
Δ ROA	-0.0022	0.0858	-0.3501	-0.0300	-0.0017	0.0252	0.3128
CFO	0.0494	0.0853	-0.2257	0.0035	0.0500	0.0965	0.3011
Δ CFO	-0.0025	0.0956	-0.2971	-0.0505	-0.0044	0.0450	0.3090
MTR	0.2708	0.0224	0.1959	0.2748	0.2750	0.2750	0.2970
Δ MTR	-0.0072	0.0193	-0.0690	-0.0220	0.0000	0.0000	0.0666
PBR	1.0518	0.9832	0.1422	0.4525	0.7301	1.2596	6.0078
Δ PBR	0.0320	0.7969	-3.5723	-0.1891	0.0366	0.2535	3.3829
LOSS	0.0930	0.2904	0.0000	0.0000	0.0000	0.0000	1.0000

Notes: Δ DBTA is change in discretionary book-tax accruals from model (6), Δ DBOA is change in discretionary book-only accruals from model (7), YR is dummy variable that equals “1” if the year is 2005 or 2009 and “0” otherwise, SIZE is natural logarithm of total assets, Δ SIZE is change in firm size, LEV is total debt divided by total equity, Δ LEV is change in LEV, ROA is net income divided by lagged total assets, Δ ROA is change in ROA, CFO is cash flow from operations divided by lagged total assets, Δ CFO is change in CFO, MTR is Manzon’s marginal tax rate (1994) modified for Korean tax laws, Δ MTR is change in MTR, PBR is market value divided by total equity, Δ PBR is change in PBR, and LOSS is dummy variable that equals “1” if net income is negative and “0” otherwise.

Regression Results

Column A of Table 3 provides the regression results for the association between tax rate reductions and the change in book-tax accruals. The statistically significant and positive coefficient for YR confirms that book-tax accruals shift from the year preceding the year of a tax rate reduction, known as taxable income shifting. Column B in Table 3 reports the regression results for the association between tax rate reductions and the change in book-only accruals. The result shows that the change in book-only accruals (Δ DBOA) is negatively associated with YR, suggesting that book-only accruals are decreased in the year of a tax rate reduction because they are managed to mitigate book income fluctuation.

Table 3 Regression Results for the Entire Firm Sample

$$\Delta DBTA_{i,t}(\Delta DBOA_{i,t}) = \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} \\ + \beta_6 ROA_{i,t} + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} \\ + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t}$$

Coefficients	Dependent Variable			
	(A) $\Delta DBTA$ (t-value)	(B) $\Delta DBOA$ (t-value)	(C) ΔDA (t-value)	(D) $\Delta DESAI$ (t-value)
Intercept	-0.1696 (-3.1)**	0.0333 (2.05)**	-0.0927 (-1.81)*	-0.0101 (-0.34)
YR	0.0323 (3.96)***	-0.0042 (-1.73)*	0.0118 (1.55)	0.0110 (2.49)**
SIZE	0.0005 (0.32)	-0.0002 (-0.41)	0.0006 (0.38)	0.0001 (0.17)
$\Delta SIZE$	0.0068 0.44	0.0065 (1.41)	0.0231 (1.59)	0.0084 (1.00)
LEV	0.0246 (1.65)*	0.0027 (0.63)	0.0219 (1.57)	-0.0159 (-1.97)**
ΔLEV	-0.2677 (-7.21)***	-0.0575 (1.41)	-0.3228 (-9.29)***	-0.0248 (-1.24)
ROA	-0.0792 (-1.71)*	0.0122 (0.89)	-0.1218 (-2.81)***	0.0393 (1.57)
ΔROA	0.4923 (12.86)***	-0.0411 (-3.62)**	0.4740 (13.24)***	0.6928 (33.39)***
CFO	-0.0375 (-0.84)	0.0163 (1.24)	-0.0078 (-0.19)	-0.0772 (-3.19)***
ΔCFO	-0.2679 (-7.74)***	-0.0254 (-2.48)**	-0.2914 (-9.00)***	0.0989 (5.27)***
MTR	0.5021 (3.15)**	-0.1176 (-2.49)**	0.2321 (1.56)	0.0444 (0.51)
ΔMTR	-0.0597 (-0.3)	-0.0803 (-1.37)	-0.1864 (-1.01)	-0.2557 (-2.40)**
PBR	-0.0008 (-0.28)	-0.0003 (-0.34)	-0.0001 (-0.06)	-0.0009 (-0.56)
ΔPBR	-0.0077 (-2.08)**	0.0038 (3.51)***	-0.0021 (-0.63)	-0.0039 (-1.95)*
LOSS	0.0099 (1.02)	0.0004 (0.14)	0.0115 (1.26)	-0.0018 (-0.34)
F-Value	31.48***	4.58***	35.96***	160.92***
R ² -Adj	0.1076	0.0139	0.1215	0.3876
N	3539	3539	3539	3539

Notes: *, **, and *** denote significance at the .01, .05, and .10 levels, respectively, using a two-tailed test.

ΔDA is discretionary accruals from modified Jones (1991) models, $\Delta DESAI$ is tax avoidance from Desai's (2006) tax avoidance measure, and all other variable are defined in Table 2.

In addition, we replace the change in book-tax accruals ($\Delta DBTA$) and the change in book-only accruals ($\Delta DBOA$) in the regression model with the change in discretionary accruals (ΔDA) as a dependent variable to analyze the effect of decomposing book-tax accruals and book-only accruals. The result, in Column C, shows that the coefficient for YR is positive but insignificant, which indicates that corporations use book-tax accruals and book-only accruals inversely and that the analysis without deposited accrual components may not yield a significant result.

Further, we run a regression using Desai and Dharmapala's (2006) measure of tax avoidance ($\Delta DESAI$) as a dependent variable to analyze the change in the level of tax avoidance in the year preceding and the year of a tax rate reduction. It is expected that the level of tax avoidance is decreased in the year of the tax rate reduction because the tax rate is lower than in the year preceding the reduction. Column D of Table 3 shows that the level of tax avoidance is increased in the year of the tax rate reduction, contrary to our expectation. We presume that the result is due to the limitation of Desai and Dharmapala's (2006) tax avoidance measure, which does not take into account tax avoiding activities via book-tax accruals.

Table 4 Regression Results for Sample Firms Divided by Firm Characteristics

Panel A. Analysis of Sample Firms Divided by <i>MTR</i> in Year <i>t-2</i>				
$\Delta DBTA_{i,t} = \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t} \quad (8)$				
Variables	High Tax Cost Group (A)		Low Tax Cost Group (B)	
	Estimate	<i>t</i> -stat.	Estimate	<i>t</i> -stat.
<i>Intercept</i>	-0.0528	-0.78	-0.2717	-1.94**
<i>YR</i>	0.0346	3.62***	0.0244	1.1
<i>SIZE</i>	0.0005	0.31	-0.0021	-0.35
$\Delta SIZE$	0.0132	0.75	0.0196	0.49
<i>LEV</i>	0.0209	1.31	0.0225	0.46
ΔLEV	-0.3078	-7.39***	-0.1869	-1.94**
<i>ROA</i>	-0.1311	-2.46**	-0.0351	-0.32
ΔROA	0.6068	13.53***	0.3159	3.72***
<i>CFO</i>	-0.0368	-0.77	-0.0353	-0.28
ΔCFO	-0.2643	-7.08***	-0.3308	-3.57***
<i>MTR</i>	0.0979	0.48	1.1068	2.84***
ΔMTR	0.3689	1.27	-0.4282	-1.12
<i>PBR</i>	-0.0003	-0.1	0.0012	0.15
ΔPBR	-0.0038	-0.94	-0.0178	-1.9**
<i>LOSS</i>	0.0090	0.88	0.0168	0.6
<i>F</i> -Value	31.58***		4.29***	
<i>R</i> ² -Adj	0.1246		0.1246	
<i>N</i>	3008		531	
Panel B. Analysis of Sample Firms Divided by <i>LEV</i> in Year <i>t-1</i>				
$\Delta DBOA_{i,t} = \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t} \quad (9)$				
Variables	High Financial Reporting Cost Group (A)		Low Financial Reporting Cost Group (B)	
	Estimate	<i>t</i> -stat.	Estimate	<i>t</i> -stat.
<i>Intercept</i>	0.0304	1.32	0.0240	0.95
<i>YR</i>	-0.0056	-1.69*	-0.0002	-0.05
<i>SIZE</i>	-0.0002	-0.34	-0.0003	-0.38
$\Delta SIZE$	0.0030	0.50	0.0208	2.84**
<i>LEV</i>	0.0102	1.00	-0.0111	-1.32
ΔLEV	0.0102	-2.57**	-0.0659	-3.67***
<i>ROA</i>	0.0079	0.41	0.0172	0.87
ΔROA	0.0129	0.81	-0.1223	-7.48***
<i>CFO</i>	0.0392	2.09**	-0.0160	-0.84
ΔCFO	-0.0333	-2.35**	-0.0103	-0.69
<i>MTR</i>	-0.1217	-1.87*	-0.0636	-0.87
ΔMTR	-0.0874	-1.21	-0.0215	-0.2
<i>PBR</i>	-0.0002	-0.25	-0.0001	-0.07
ΔPBR	0.0041	3.01**	0.0024	1.24
<i>LOSS</i>	0.0038	0.97	-0.0057	-1.33
<i>F</i> -Value	2.89***		5.99***	
<i>R</i> ² -Adj	0.0148		0.038	
<i>N</i>	1769		1770	

Notes: *, **, and *** denote significance at the .01, .05, and .10 levels, respectively, using a two-tailed test. Variables are defined in Table 2.

Table 4 provides the regression results for sub-groups classified according to tax and financial reporting costs. In panel A of Table 4, tax costs are proxied by the firm's marginal tax rate (*MTR*) in year *t-2*. We use the marginal tax rate in year *t-2* to avoid the possibility that the marginal tax rate in *t-1* may have been influenced by the firms' tax planning prior to the tax rate reduction. The coefficient on *YR* for the high tax cost group is significantly positive, while the coefficient on *YR* for the low tax cost group is insignificantly positive. This difference shows that firms with high tax costs are more likely to shift taxable income through book-tax accrual management than firms with low tax costs, supporting hypothesis 2-1.

Panel B of Table 4 reports the results of the regression model (9) for sub-groups classified according to financial reporting costs, proxied by the firm’s debt ratio in year $t-1$. The coefficient on YR for the high financial reporting cost group is significantly negative, while the coefficient on YR for the low financial reporting cost group is insignificantly negative. This result suggests that the decrease in book-only accruals in the year of a tax rate reduction is pronounced for firms with high financial reporting costs because they are more likely to manage book-only accruals in the year prior to the tax rate reduction than firms with low financial reporting costs, supporting hypothesis 2-2.

Additional Analysis

In Korea, a tax rate reduction is usually announced a year before it is implemented. Although depreciation and amortization are book-only accruals, it is difficult for firms to manage them for financial reporting purposes in the year preceding tax rate changes because their estimation cannot change every year. Furthermore, the effects of managing depreciation and amortization would be different from those of managing allowances, as the consequences of managed depreciation and amortization can last over many periods without being reversed in the subsequent period.

Therefore, in extended analysis, we subdivide book-only accruals into two sub-components: allowance accounts, including allowance for bad debts and inventory valuation loss ($DBOA_{allowance}$), and depreciation accounts, including depreciation and amortization ($DBOA_{depreciation}$). Then, we analyze how $DBOA_{allowance}$ and $DBOA_{depreciation}$ change in the year of the tax reduction, respectively. Table 5 shows that the coefficient on YR is significantly negative only in the sub-component of allowance accounts. The untabulated descriptive statistics of sub-components show that the distribution of $\Delta DBOA_{allowance}$ is similar to that of $\Delta DBOA$, while $\Delta DBOA_{depreciation}$ is not. In addition, the standard deviation and range of $\Delta DBOA_{depreciation}$ is relatively smaller than those of $\Delta DBOA_{allowance}$ or $\Delta DBOA$. These results support our assumptions that firms are more likely to exploit allowance accounts than depreciation accounts in response to a tax rate reduction and that the decrease in book-only accruals stems mainly from the management of allowance accounts.

Table 5 Regression Results for the Entire Firm Sample Using the Components of Book-only Accruals

$$\Delta DBOA_{allowance\ i,t} (\Delta DBOA_{depreciation\ i,t}) = \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t}$$

Variables	$\Delta DBOA_{allowance}$ (A)		$\Delta DBOA_{depreciation}$ (B)	
	Estimate	t-stat.	Estimate	t-stat.
Intercept	0.0244	1.84*	0.0024	1.46
YR	-0.0038	-1.93*	-0.0001	-0.68
SIZE	-0.0000	-0.14	-0.0000	-1.16
Δ SIZE	0.0065	1.73*	-0.0004	-0.88
LEV	0.0003	0.11	0.0003	0.69
Δ LEV	-0.0368	-4.1***	0.0041	3.69***
ROA	-0.0088	-0.79	0.0006	0.47
Δ ROA	0.0291	3.14***	0.0026	2.33**
CFO	0.0158	1.46	-0.0007	-0.53
Δ CFO	-0.0202	-2.41**	0.0053	5.1***
MTR	-0.0892	-2.31**	-0.0042	-0.89
Δ MTR	-0.0451	-0.95	-0.0063	-1.07
PBR	0.0000	0.03	0.0000	0.44
Δ PBR	0.0035	3.95***	-0.0002	-2.5***
LOSS	-0.0005	-0.24	0.0000	0.27
F-Value	5.97***		5.26***	
R ² -Adj	0.0193		0.0166	
N	3539		3539	

Notes: *, **, and *** denote significance at the .01, .05, and .10 levels, respectively, using a two-tailed test. Variables are defined in Table 2.

This study follows Calegari’s (2000) method of decomposing discretionary accruals into book-tax accruals and book-only accruals. However, in Korea, allowances for bad debts or depreciation reported on financial statements are tax deductible as long as they are within the limit specified by the tax laws. These accounts within the tax limit are better suited for book-tax accruals than for book-only accruals because they do not create a book-tax difference. Therefore, for more precise analysis, we should have used tax return data to collect the non-tax deductible amounts of allowances and depreciation, and we should have classified non-tax deductible expenses as book-only accruals and the rest as book-tax accruals.

We use a simple method because access to tax return data is limited. We estimate the tax limit amounts of allowance and depreciation by firms’ allowance rate (allowance for bad debts divided by receivables) and depreciation rate (depreciation expenses divided by depreciable asset). If a firm’s allowance rate is lower than the median of sample firms’ allowance rate, the firm’s allowance for bad debts is classified as book-tax accruals. If a firm’s allowance rate is higher than the median, the firm’s allowance for bad debts is classified as book-only accruals. The same procedure is applied to depreciation. We re-examine our hypotheses using the alternative measures of book-tax and book-only accruals, mitigating the possibility of accrual components misclassification.

Table 6 Regression Results for Sample Firms Using an Alternative Measure for Book-tax and Book-only Accruals

Panel A. Analysis of the Entire Firm Sample				
$\Delta DBTA_{i,t}(\Delta DBOA_{i,t}) = \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t}$				
Variables	$\Delta DBTA$ (A)		$\Delta DBOA$ (B)	
	Estimate	t-stat.	Estimate	t-stat.
Intercept	-0.1693	-3.10**	0.0338	2.09**
YR	0.0323	3.97***	-0.0042	-1.74*
Controls	-	-	-	-
F-Value	31.43***		4.53***	
R ² -Adj	0.1075		0.0138	
N	3539		3539	
Panel B. Analysis of Sample Firms Divided by MTR in Year t-2				
$\Delta DBTA_{i,t} = \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t} \quad (8)$				
Variables	High Tax Cost Group (A)		Low Tax Cost Group (B)	
	Estimate	t-stat.	Estimate	t-stat.
Intercept	-0.0516	-0.76	-0.2708	-1.94*
YR	0.0346	3.62***	0.0244	1.11
Controls	-	-	-	-
F-Value	31.57***		4.28***	
R ² -Adj	0.1246		0.0797	
N	3008		531	
Panel C. Analysis of Sample Firms Divided by LEV in Year t-1				
$\Delta DBOA_{i,t} = \beta_0 + \beta_1 YR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 \Delta SIZE_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta LEV_{i,t} + \beta_6 ROA_{i,t} + \beta_7 \Delta ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 \Delta CFO_{i,t} + \beta_{10} MTR_{i,t} + \beta_{11} \Delta MTR_{i,t} + \beta_{12} PBR_{i,t} + \beta_{13} \Delta PBR_{i,t} + \beta_{14} LOSS_{i,t} + \varepsilon_{i,t} \quad (9)$				
Variables	High Financial Reporting Cost Group (A)		Low Financial Reporting Cost Group (B)	
	Estimate	t-stat.	Estimate	t-stat.
Intercept	0.0311	1.35	0.0238	0.94
YR	-0.0057	-1.73*	-0.0000	-0.01
Controls	-	-	-	-
F-Value	2.69***		5.97***	
R ² -Adj	0.0150		0.0378	
N	1769		1770	
Notes: *, **, and *** denote significance at the .01, .05, and .10 levels, respectively, using a two-tailed test. Variables are defined in Table 2.				

Panel A of Table 6 reports that *YR* is positively related to the change in book-tax accruals ($\Delta DBTA$) and negatively related to the change in book-only accruals ($\Delta DBOA$). Panels B and C of Table 5 show the results for sub-groups categorized based on the tax and financial reporting costs. The coefficient on *YR* is positively significant for the high tax cost group, while the coefficient on *YR* is not significant for the low tax cost group. Similarly, the coefficient on *YR* is negatively significant for the high financial reporting cost group, while the coefficient on *YR* is not significant for the low financial reporting cost group. We find that all results for the management of decomposed accrual components and their incentives are robust.

CONCLUSIONS

This study explores the different roles of accrual components when firms face a reduction in the statutory corporate income tax rate. Korean firms encounter several tax rate reductions in 2000s and have opportunities to minimize their tax costs through taxable income shifting. The attributes of Korean tax environment, where book-tax conformity is high and aggressive tax shelters are restricted, provide the powerful ground for academics to investigate accruals for taxable income shifting. They also provide an ideal setting to examine how the firms resolve the book tax trade-offs caused by tax saving effort.

The results of this study show that firms shift taxable income from the year preceding to the year of the reduction by managing book-tax accruals while concurrently mitigating book income fluctuation by managing book-only accruals. Further, the extent of book-tax and book-only accruals management varies depending on the firms' tax and financial reporting costs. This study sheds light on firms' effective decision rule by identifying how they classify accruals in detail and minimize tax and financial reporting costs in response to a tax rate reduction. We believe that this study enables policymakers, auditors, financial information users, and academics to understand firms' opportunistic accounting choices in response to government regulation changes.

ACKNOWLEDGMENTS

We thank the seminar participants at the 2012 Korean Accounting Association Conference for their helpful discussions and valuable comments.

AUTHOR INFORMATION

Won-Wook Choi, Ph. D., Professor, School of Business, Yonsei University, 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Korea; Education: 1993, Ph.D., Columbia University; 1987, M.B.A., University of Michigan; 1984, B.B.A., Yonsei University. Academic and professional experience: Professor, Yonsei University, 2008-present; Associate Professor, Yonsei University, 2004-2008; Associate Professor, Dongguk University, 1998-2004; Assistant Professor, Rutgers University, 1994-1998; Assistant Professor, Hong Kong University of Science & Technology, 1993-1994. E-mail: wonchoi@yonsei.ac.kr

Hyun-Ah Lee, Ph. D. Candidate, School of Business, Yonsei University, 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Korea; Education: 2013, Ph.D. Candidate, Yonsei University, School of Business MS/Ph. D. Integrated Program; 2003, B.B.A., Yonsei University. Academic and professional experience: A member of Korean Institute of Certified Public Accountants 2002-Present; Senior Associate, UBS Securities Seoul Branch 2005-2007; Senior Associate, Samil PricewaterhouseCoopers 2002-2005. Email: hyunah@yonsei.ac.kr (Corresponding author)

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NOTES

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