Journal of Accounting and Taxation Vol.1 (5), pp. 090-098, December, 2009
Available online at http://www.academicjournals.org/jat

Full Length Research Paper

Corporate taxation and capital gains realization in Canada

Tao Zeng

Accounting School of Business and Economics, Wilfrid Laurier University, Waterloo, Ontario, Canada, N2L 3C5. E-mail: tzeng@wlu.ca. Tel: (519)884-0710 ext. 2562. Fax: (519)884-0201.

Accepted 30 October, 2009

In this paper, an empirical work is designed to test whether corporate capital gains realization is associated with corporate tax. Under Canadian tax rules, capital gains are taxed when a taxpayer realizes them, rather than at the time that those gains accrue. It was tested whether corporate tax status, including accumulated loss-carry-overs, affects the decision to realize capital gains. Using financial statements from Canadian corporations, this study finds that, after controlling for other factors, corporate capital gains realization is positively associated with loss-carry-overs accumulated from previous years, which generally supports the argument that corporations take into account their tax status when realizing capital gains. This study also finds that firms realize capital gains for financing purposes. However, this study does not find that firms realize capital gains to manage earnings.

Key words: Capital gains realization, tax rate, loss-carry-over.

INTRODUCTION

Capital gains realization by individuals has been studied extensively throughout the years (Eichner and Sinai, 2000; Seyhun and Skinner, 1994; Burman and Randolph, 1994; Burman et al., 1994; Cook and O'Hare, 1992; Badrinath and Lewellen, 1991; Auten et al., 1989; Auten and Clotfelter, 1982; Feldstein and Yitzhaki, 1978 etc.); Odean (1998) for example, shows that investors are more likely to sell loss investments in December than in other months; Jin (2006) provides evidence that tax-sensitive investors defer selling stocks that incurred large capital gains; and Chay et al. (2006) examine a type of distribution that is taxed as capital gains, rather than as dividends and find that ex-day return behaviour reflects the value of tax-timing capital gains.

However, relatively few studies have examined corporate capital gains realization (Desai and Gentry, 2003). Desai and Gentry (2003) examine how capital gains taxes affect a firm's decision to realize capital gains. Their time-series analysis of aggregated corporate realization behaviour demonstrates that capital gains taxes are negatively associated with realized capital gains. Their firm-level analysis of realization behaviour finds similar results. Despite receiving limited researches, the volume of corporate taxable capital gains realization in Canada is substantial. For example, data shows that taxable capital gains across all industries have averaged 70% of individual taxable capital gains, over the last fifteen years (Figure 3). In addition, a corporation's capital gains can be an important component of its income. Figure 2 shows that, over the last fifteen years, capital gains income comprised about 10 - 30% of total taxable income, across all industries. In this paper, it was empirically tested whether a corporation's capital gains realization decision is associated with its tax status and whether other factors significantly impact that decision.

Before 1972, Canada did not impose income tax on capital gains. Since that time, Canada has taxed varying percentages of capital gains on the basis of the realization principle. Under this principle, capital gains are taxed in the year they are realized[a]. Capital losses, if

a From 1972 to 1987, one-half of capital gains were taxable, and one-half of capital losses were deductible against taxable capital gains. In 1988 and 1989, two-thirds of capital gains were taxable, and two thirds of capital losses were deductible against taxable capital gains. From 1989 to February 2000, three-quarters of capital gains were taxable, and three-quarters of capital losses were deductible against taxable capital gains. From March 2000 to October 18, 2000, the inclusion rate for capital gains and the deduction rate for capital losses was reduced to two-third. Finally, this inclusion deduction rate was reduced to one-half.

incurred, could only be deducted against capital gains; they may not be deducted against other types of income[b]. If there are not sufficient capital gains in the year to offset the capital losses, the excess losses can be carried backward for 3 years, or carried forward indefinitely, to be deducted against capital gains realized in those years. Unlike U.S. tax rules on capital gains or losses, Canadian tax rules do not distinguish short term, and long term, status.

As in the literature, it does not have an explicit theoretical model of capital gains behaviour. It simply follow other studies (Auten et al., 1989) and argue that realizing capital gains has some economic value (e.g., an important source of internal financing) as holding assets with accrued gains. Hence the decision to realize the capital gains depends on whether the value of realizing those gains is greater than the costs, which include the capital gains taxes.

Based on the realization tax rule for capital gains and losses, taxes are incurred when taxpayers realize capital gains or losses, not when capital gains or losses are accrued. Constantinides (1983, 1984) argues that the realization tax rule provides a tax-timing option to taxpayers to realize losses whenever they occurs, but defer gains to another time. However, tax rule and transactions costs prevent investors from exploiting this tax-timing option fully.

This study seeks to test whether a corporate capital gains realization decision can be explained by tax incentives. In particular, it was test whether a corporation's accumulated capital loss-carry-overs can affect its decision to realize capital gains. If a corporation has loss-carry-overs from the previous years, it will realize capital gains to use those losses as soon as possible.

Furthermore, one important source of financing for the corporation is the selling of properties, marketable securities, and other investments, as well as selling discontinued operations or subsidiaries (Desai and Gentry, 2003; Bates, 2005). Bates (2005) finds that sales of corporate subsidiaries usually result in substantial cash remuneration. Similar to free cash flow from operations, cash proceeds from such sales have been reallocated to unfunded projects. Since capital gains arise from selling any of the above assets, this study also expects to find that a corporation may sell assets when it needs financing. In other words, the value of proceeds from sales is inversely related to the corporation's ability to generate free cash flow.

Finally, current studies find that firms use asset sales to manage earnings; however, the results are not conclusive. For example, Bartov (1993) demonstrates that firms time the sale of assets to smooth earnings. Herrmann et al. (2001) examine Japanese managers' use of income from selling assets and marketable securities to manage earnings. They find that firms with current performance below previous forecasts manage earnings upward by reporting higher income from asset sales. Nevertheless, Black et al (1998) examine asset sales in countries where asset revaluation is allowed (such as UK, Australia, and New Zealand). They find that firms in those countries do not appear to smooth earnings through asset sales. This study will add earnings (before capital gains or losses realization) into the model. If firms use asset sales to manage income, it is expected to find that firms with low earnings before asset sales will realize more capital gains, and vice versa.

Using SEDAR Canadian corporate financial reporting data, this study finds that a corporation's capital gains realization appears to be particularly shaped by tax incentives, that is, capital gains realization is positively associated with loss-carry-overs accumulated from previous years. In addition, a corporation's capital gains are generalized for financing purposes. However, the firms were not found to realize capital gains from asset sales to manage earnings.

This study seeks to assist corporate taxpayers, tax advisers, pension consultants, and others in making decisions on capital gains realization. This study is also of interest to policy- makers, to the extent that it assists them in understanding about how a corporation's capital gains realization is affected by the capital gains taxes, since significant tax dollars are involved.

In the next section, relevant literatures on corporate capital gains or losses realization will be reviewed.

LITERATURE REVIEW

Bull et al. (2004) study both corporate and individual capital gains/losses. They use the statistics and data from the Income Division of the IRS and show that capital realizations are persistent at the aggregate, and at the individual and corporate taxpayer level. They also show that for all corporations in the US, there is a striking run-up in capital gains realization in the late 1990s and a large decline in the early 2000s. This is consistent with this study of Canadian corporations in Figure 1. However, Bull et al (2004) only study the corporate capital gains behaviour at an aggregate level and not examine what factors determine the decision to realize capital gains.

Desai and Gentry (2003) examine how capital gains taxes affect a firm's decision to realize capital gains. Their time-series analysis of aggregated corporate realization behaviour demonstrates that capital gains taxes are negatively associated with realized capital gains. Their firm-level analysis of realization behaviour finds similar results. In their firm-level analysis, they regress capital gains on marginal tax rate, Tobin's Q, and firm size.

Auten et al. (1989) argue that previous studies on capital gains realization behaviour have been hampered

[b] One except to this rule is the capital loss incurred from disposition of the shares or bonds of a small business company. This capital loss could be deducted against any types of income.

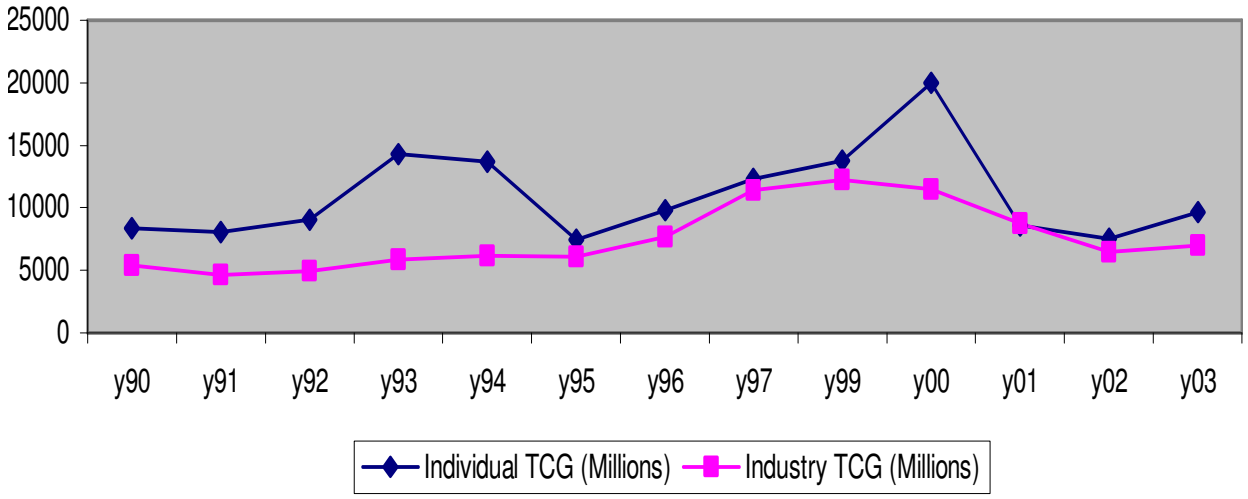

Figure 1. Individual and industrial taxation capital gains realization, 1990 - 2003.
Source: Statistics Canada.

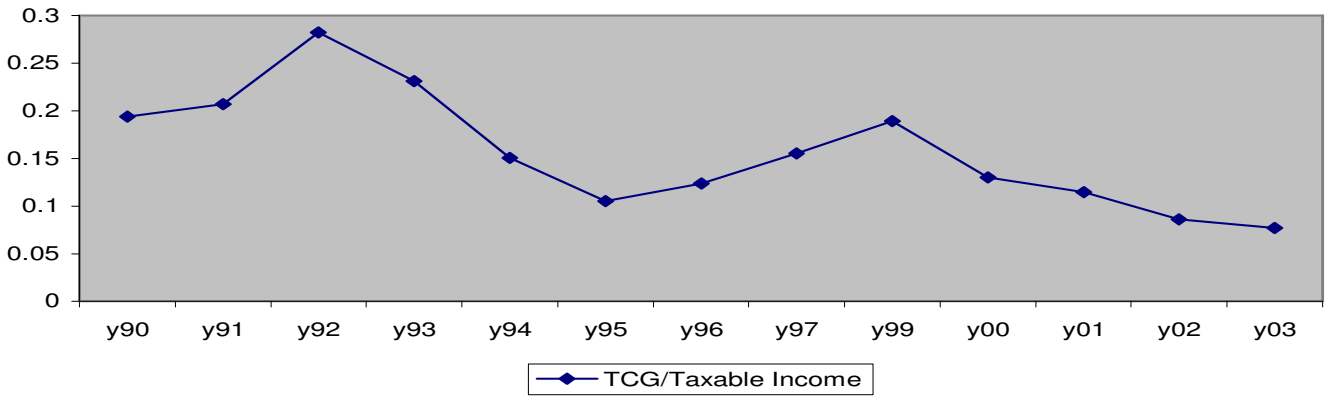

Figure 2. Ratio of Taxable Capital Gains to Taxable Income, 1990 - 2003.
Source: Statistics Canada.

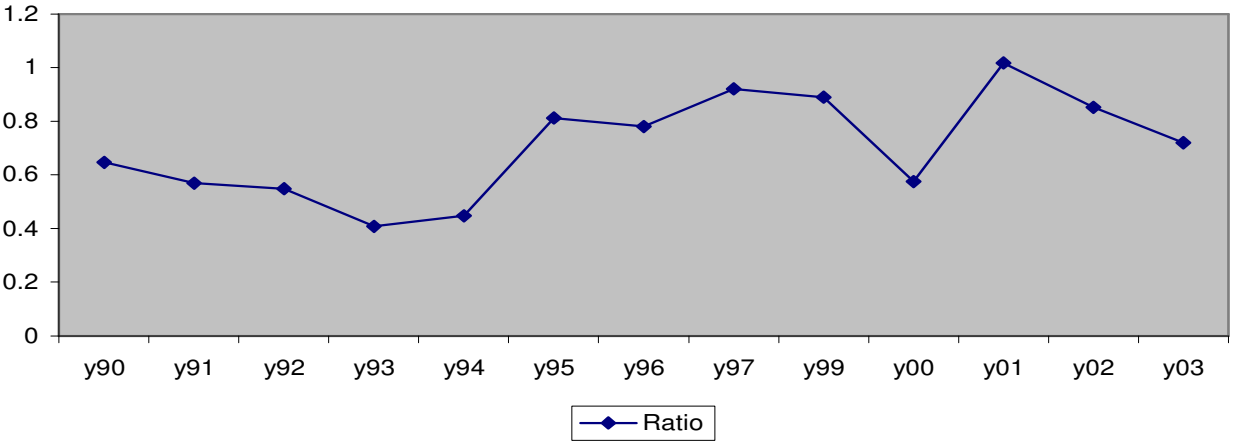

Figure 3. Ratio of industry taxable capital gains to individual taxable capital gains, 1990 - 2003.
Source: Statistics Canada.

by econometric problems. In particular, the marginal tax rate on capital gains is determined simultaneously with the level of capital gains. Desai and Gentry (2003) use the Graham's estimates of marginal tax rates (Graham, 1996) and admit that these rates are driven by the presence of non-capital losses, which are not completely divorced from the gains/losses on the investments. In other words, their marginal tax rates and gain/loss realizations are determined simultaneously.

This study overcomes this problem by using loss-carry-overs accumulated from previous years and the effective tax rate, before the effect of current gains/losses as explanatory variables. Plesko (2003) and Lisowsky (2007) find that firms' loss-carry-over positions can be used to infer firms' marginal tax rates and actual tax liability.

This study extends existing research by analyzing Canadian corporations using the SEDAR financial reporting data. In the next section, I develop the empirical tests.

EMPIRICAL TESTS

This study seeks to test whether corporate capital gains realization decision can be explained by tax incentives. In particular, whether a corporation's accumulated capital loss-carry-overs can affect its decisions to realize capital gains. If firms have loss-carry-overs from previous years, they will realize capital gains to use those losses as soon as possible.

In addition, since selling asset is an important source of internal financing, and capital gains or losses may be generated from the sale, firms may sell assets when they need financing.

Earnings (before capital gains) have been added in the model. If firms use asset sales to manage earnings, it is expected that firms will realize more capital gains from selling assets if their earnings before the sale are low, and vice versa.

Firm size was also added, firms' statutory tax rates and effective tax rates in the model.

In summary, the regression model is specified as follows:

$$CG_{it} = \alpha_0 + \alpha_1 STR_{it} + \alpha_2 ETR_{it} + \alpha_3 LCO_{it} + \alpha_4 INC_{it} + \alpha_5 CAS_{it} + \alpha_6 SIZ_{it} + \varepsilon_{it}$$

CG_{it} : Net capital gains realized for firm i in year t.

STR_{it} : Firm i's statutory tax rate in year t.

ETR_{it} : Firm i's effective tax rate in year t.

LCO_{it} : Accumulated loss-carry-overs from previous years for firm i in year t.

INC: net earnings before net capital gains for firm i in year t.

CAS: cash flow before proceeds from selling assets for firm i in year t.

SIZ: firm size for firm i in year t.

Table 1. Industry distribution.

Metal and Mining (SIC 1000 - 1299	
Industry	**Number of firms**
Consumer	36
Energy	33
Health care	9
Materials	54
Industrials	16
Information technology	10
Utilities	5
Tele communications	4
Total	167
A: Future tax assets	Amounts %

The regression was performed using two-year financial data, obtained from the System for Electronic Document Analysis and Retrieval (SEDAR)[c]. Corporations in the sample have to meet the following 3 conditions: (1) Canadian public companies with share prices listed on the TSX300 at the fiscal year end of 2005 or 2006 (a total of 271 firms); (2) available audited annual financial statements for the years 2004-2006 on SEDAR (3 firms are removed); (3) not in the banking, real estate, insurance, and financial institutions (SIC 6000-6799, 39 firms are removed) and not income trusts or funds (53 income trusts or income funds are removed).

As a result, there are 167 firms and thus 334 firm-year observations (two-year data) from 8 industries (see Table 1 for the industry distribution).

The variables for the tests are measured as follows:

The dependent variable is net capital gains, measured as capital gains net of capital losses. Firms' financial reports disclose the following four items related to capital gains/losses. Firms report their gains/losses and/or proceeds from selling the following assets: (a) property, plant and equipment (PPE); (b) marketable securities or other investments; (c) discontinued operation or subsidiaries; and (d) other miscellaneous gains/losses (see Table 2 for the categories of corporate capital gains/losses).

Table 2 shows that, in 2005, the largest capital gains resulted from the disposition of PPE. About 56% of capital gains arose from selling PPE. In 2006, the largest capital gains arose from the disposition of discontinued business, operations, or subsidiaries, representing about 53% of all capital gains.

[c] SEDAR is the system used for electronically filing most securities-related information with the Canadian securities regulatory authorities. Filing with SEDAR started January 1, 1997, and is now mandatory for most reporting issues in Canada. The SEDAR system allows users to access public company and mutual fund securities-related information (e.g., annual financial reports).

Table 2. Categories of corporate capital gains (in Millions).

		2006	2005
Disposition of PPE	Capital gains	999	4787
Disposition of PPE	Capital losses	66	112
Disposition of marketable securities/investments	Capital gains	2271	2031
Disposition of marketable securities/investments	Capital losses	218	203
Disposition of discontinued operation/subsidiaries	Capital gains	3653	1666
Disposition of discontinued operation/subsidiaries	Capital losses	44.1	48
Other	Capital gains	61	38
Other	Capital losses	0	0
Total	Capital gains	6984	8522
Total	Capital losses	328	363

Table 2 also shows that, for the years 2005 and 2006, firms realized much more capital gains than capital losses. This is consistent with Desai and Gentry (2003), who find that U.S. public firms realized more capital gains than capital losses for their sample periods (1990 - 1999).

Statutory tax rate is the combined Canadian federal and provincial income tax rates, obtained from the income tax footnote. It shows the general tax burden across firms in Canada. In this study, firms are subject to the statutory tax rates of 31 - 49%.

Effective tax rate shows the firm's specific tax burden and specific tax status. It is measured as the provision for income tax, divided by earnings before income tax and non-controlling interest (zero if no income tax is payable in that year). Effective tax rate is different from statutory tax rate since firms could claim losses in accumulated from previous years, as well as certain credits (e.g., manufacturing and processing credit, investment tax credit, etc) and resource allowance, which also reduce the effective tax rate. The firm's foreign subsidiaries are subject to the foreign tax rates, which are different from the statutory tax rates. Effective tax rates can be generally obtained from the income tax footnote. Ideally, effective tax rate should exclude taxes resulting from realizing capital gains.

Firms with the same statutory tax rate may have different effective tax rates since they each have a different tax status. Hence the effective tax rate is added in the model on the basis that it will be relevant to capital gains realization.

Loss-carry-over is measured as those losses accumulated from other years. It includes both capital losses and non-capital losses, and can be obtained from the income tax footnote.

Cash flow, proceeds from selling assets, net earnings, and total assets can all be directly obtained from financial statements. To reduce heteroskadesticity, all the variables except firm size, statutory tax rate and effective tax rate are deflated by the firm's market value. The firm's market value is measured as the number of shares outstanding, multiplied by the share price, at the fiscal year end.

TESTING RESULTS

The testing results are presented in Tables 3 to 9. Table 3 describes the statistics of the variables. It shows the variables mean, first quartile, median, third quartile, standard deviation, maximum, and minimum values. For example, the mean value of capital gains is 0.0081; the first quartile and median are zero, the third quartile value is 0.0021; the standard deviation value is 0.0521, the maximum capital gains value is 0.8405 and the minimum is -0.1324.

For the sample period, 62% of firm-year observations have realized either capital gains or capital losses or both (44% realized only capital gains, 6% realized both capital gains and capital losses, and 12% realized only capital losses). As such, capital gain/loss realization appears to be quite common over the sample period.

In addition, for all the firm-year observations, total net capital gains are more than 14% of total earnings (before gains/losses) in year 2006, and more than 11% of total earnings in year 2005. After being deflated by firm market value, total net capital gains are over 25% of total earnings (before gains/losses) in year 2006, and over 15% of total earnings in year 2005. Therefore, despite receiving limited attention, the volume of corporate capital gains is substantial, and increasing so, when compared with corporate net income.

Another variable that deserves more explanation is the variable of loss-carry-overs. The mean value is 0.1195; the first quartile value is 0.0042; the median is 0.034; the third quartile value is 0.1035; the standard deviation is 0.2401, the maximum and minimum are 1.7331 and zero respectively. Overall, for the sample period, more than 80% firm-years have accumulated losses from previous years. These losses can be used to offset income in the current or future years.

Table 3. Descriptive statistics of variables. The sample contains 334 observations.

Variables	Mean	1st Quartile	Median	3rd Quartile	Std. Dev.	Maximum	Minimum
CG	0.0081	0	0	0.0021	0.0521	0.8405	-0.1324
STR	0.3508	0.34	0.35	0.36	0.0217	0.49	0.31
ETR	0.2387	0	0.325	0.35	0.1605	0.9	0
LCO	0.1195	0.0042	0.034	0.1035	0.2401	1.7331	0
INC	0.0463	0.0036	0.034	0.0676	0.1404	1.2393	-0.5018
CAS	-0.0044	-0.0231	-0.0002	0.0192	0.1023	0.5098	-0.7095
SIZ	9.2649	8.8856	9.2051	9.6945	0.6148	10.607	7.3464

CG: total amount of capital gains, divided by market value. Market value is measured as number of shares outstanding times share price, at the fiscal year end, *STR:* statutory tax rate, collected from the income tax footnote *ETR*: effective tax rate before the effect of current capital gains (losses) realization, collected from the income tax footnote, *LCO*: accumulated loss-carry-overs incurred from previous years, divided by market value, *INC*: net earnings before capital gains (losses), divided by market value, *CAS*: cash flow before proceeds from selling assets, divided by market value, *SIZ*: firm size, measured as the log of total assets

Table 4. Pearson correlation of variables.

	CG	*SIZ*	*CAS*	*INC*	*LCO*	*ETR*	*STR*
CG	1						
SIZ	0.1349	1					
CAS	-0.4002	-0.094	1				
INC	0.1938	0.1095	0.3359	1			
LCO	0.3574	0.2194	-0.3037	-0.094	1		
ETR	0.0495	0.2566	0.025	0.2988	-0.1327	1	
STR	-0.049	0.0058	0.1043	0.0424	-0.1374	0.0279	1

Table 5. Regression results from univariate model.

	Proceeds from sales	Net capital gains	Net capital gains	Net capital gains
Intercept	0.0195(6.8857)**	0.0074 (2.8046)**	0.0047 (1.5737)	-0.0013 (-0.4329)
Cash flow w/o proceeds from sales	-0.3989 (-14.38)**	-0.2059 (-8.005)**		
Income w/o capital gains realization			0.0732 (3.6149)**	
Loss-carry-over at the beginning				0.0806 (7.1367)**
R^2	0.38	0.16	0.04	0.13
F-test	206.7	64.08	13.07	50.93

**Significant at 0.001 level.

Table 4 presents the Pearson correlations of the variables. It shows that the maximum correlation (absolute value) is between capital gains and cash flow.

The minimum correlation (absolute value) is between firm size and statutory tax rate. The correlation between capital gains and loss-carry-over is 0.3574, which generally support the tax explanation for capital gains realization. That is, firms with accumulated losses are more likely to realize capital gains.

Table 5 presents results from the univariate model. It shows that net capital gains and loss-carry-over are positively associated, which supports the expectation that a corporation's capital gains realization is shaped by tax incentives. It also shows that the net capital gains realized from asset sales are negatively associated with cash flow (before the sales), and that the proceeds from asset sales are negatively associated with cash flow (before the sales). It supports the argument that a corporation's capital gains are generalized for financing purposes. However, the Table 5 shows that net capital gains realization is positively associated with earnings. This is not consistent with the argument that firms realize capital gains from selling assets to manage earnings. Nevertheless, Table 5 shows the preliminary results from the univariate model. Next, the results from the multivariate model will be discussed.

Table 6. Regression results for total net capital gains

$$CG_{it} = \alpha_0 + \alpha_1 STR_{it} + \alpha_2 ETR_{it} + \alpha_3 LCO_{it} + \alpha_4 INC_{it} + \alpha_5 CAS_{it} + \alpha_6 SIZ_{it} + \varepsilon_{it}$$

.

	Co-eff.	t-test	Co-eff.	t-test
Intercept	-0.0194	-0.372	0.0239	0.292
SIZ	0.0001	0.2	0.0001	0.9
CAS	-0.2286	-8.93**	-0.322	-9.485**
INC	0.1385	7.4279**	0.2657	8.1781**
LCO	0.0556	5.19**	0.0584	4.1533**
ETR	-0.0056	-0.3512	-0.0292	-1.1946
STR	0.046	0.3852	-0.0823	-0.4733
R^2	0.34		0.48	
F-test	28.32		30.38	
Observations	334		204	

The second and third columns show the results for all firm-year observations, while the fourth and fifth columns show the results only for firms that realized capital gains/losses in that year.
**Significant at 0.001 level.

Table 6 presents the results from the multivariate model specified in Section 3 for total net capital gains. The first two columns show the results for all firm-year observations, while the third and fourth columns show the results only for firms that realized capital gains/losses in that year. The results from Table 6 are consistent with those from the univariate model. It shows that a corporation's capital gains realization is positively associated with its loss-carry-overs accumulated from previous years. It also shows that the net capital gains realized from selling assets are negatively associated with cash flow. However, net capital gains realization is positively associated with earnings, which is not consistent with the argument that firms realize capital gains from selling assets to manage earnings.

Table 6 shows that the coefficients on other control variables including firm size, effective tax rate and statutory tax rate are not significant. Tables 7 - 9 present testing results from the multivariate model for three categories of net capital gains, that is, net capital gains realized from selling PPE, net capital gains realized from selling marketable securities and other investments, and net capital gains from selling discontinued operations and subsidiaries. The first two columns show the results for all firm-year observations, while the third and fourth columns show the results only for firms that realized such capital gains/losses in that year.

The results from Tables 7 - 9 are generally consistent with those from Table 6. It shows that a corporation's net capital gains from each of the three categories are positively associated with its loss-carry-overs accumulated from previous years and negatively associated with cash flow. In addition, net capital gains from each of the three categories are positively associated with earnings.

The coefficient on statutory tax rate is not significant for all three categories of net capital gains. The coefficient on firm size is not significant for all three categories of net capital gains realizations except for net capital gains realized from selling discontinued operations or subsidiaries. Table 9 shows that firm size is negatively associated with net capital gains from selling discontinued business. That is, larger firms realize relatively less capital gains from selling discontinued business. The coefficient on effective tax rate is not significant for all three categories of net capital gains except for net capital gains from selling PPE. Table 7 shows that effective tax rate is negatively associated with net capital gains from selling PPE. That is, firms realize relatively less capital gains from PPE sales when their effective tax rates are high, and vice versa. This is consistent with the expectation that a corporation's capital gains realization is shaped by tax incentives.

The following sensitivity tests have been undertaken in this study.

First, the variables are deflated by total assets. The results (which are not presented in this paper) do not change qualitatively.

Second, 1, 3 and 5% of the capital gains outliers and loss-carry-over outliers are deleted. Again, the results do not change qualitatively.

Finally, industry dummy variables are added to the model and these do not change the results qualitatively.

In addition, I follow Desai and Gentry (2003) and add investment opportunity as an explanatory variable, measured as the proxy for a Q-ratio. However, the variable is not significant.

Conclusion and Limitations

In this paper, an empirical work is designed to test whether corporate capital gains realization is associated with corporate tax. Based on the realization tax rule, taxes are incurred when taxpayers realize capital gains/losses, not when capital gains/losses are accrued. In this study, I test whether accumulated loss-carry-overs can affect capital gains realization. Using Canadian corporations' financial statements, this study finds that, after controlling for other factors, corporate capital gains realization is positively associated with loss-carry-overs accumulated from previous years, and is negatively related to effective tax rates. It supports the argument that corporations take into account their tax status when realizing capital gains.

Furthermore, this study finds that a corporation's capital gains are generalized for financing purposes as capital gains realized from selling assets are negatively associated with a corporation's cash flow.

Table 7. Regression results for net capital gains from dispositions of PPE

$$CG_{it} = \alpha_0 + \alpha_1 STR_{it} + \alpha_2 ETR_{it} + \alpha_3 LCO_{it} + \alpha_4 INC_{it} + \alpha_5 CAS_{it} + \alpha_6 SIZ_{it} + \varepsilon_{it}$$

	Co-eff.	t-test	Co-eff.	t-test
Intercept	0.0014	0.2484	0.0024	0.3123
SIZ	0.0003	0.6573	0.0003	0.2276
CAS	0.0006	0.2353	-0.0125	-1.7942*
INC	0.0025	1.2223	0.0317	3.4618**
LCO	0.0035	3.0474**	0.0077	3.1984**
ETR	-0.003	-1.7233*	-0.0141	-3.142**
STR	-0.008	-0.6959	-0.008	-0.285
R^2	0.052		0.19	
F-test	2.974		5.22	
Observations	334		137	

The second and third columns show the results for all firm-year observations, while the fourth and fifth columns show the results only for firms that realized capital gains/losses in that year.
** Significant at 0.001 level, *significant at 0.1 level.

Table 8. Regression results for net capital gains from disposition of marketable securities or other investments.

$$CG_{it} = \alpha_0 + \alpha_1 STR_{it} + \alpha_2 ETR_{it} + \alpha_3 LCO_{it} + \alpha_4 INC_{it} + \alpha_5 CAS_{it} + \alpha_6 SIZ_{it} + \varepsilon_{it}$$

.

	Co eff.	t-test	Co eff.	t-test
Intercept	-0.011	-0.314	0.1866	1.2494
SIZ	0.0003	0.1091	-0.0014	-0.1379
CAS	-0.1308	-7.6225**	-0.3382	-6.3238**
INC	0.0791	6.3339**	0.2621	6.0201**
LCO	0.0307	4.2752**	0.0049	0.2029
ETR	-0.0028	-0.2538	-0.0183	-0.4653
STR	0.0121	0.1662	-0.5079	-1.5175
R^2	0.27		0.58	
F-test	20.41		14.71	
Observations	334		71	

The second and third columns show the results for all firm-year observations, while the fourth and fifth columns show the results only for firms that realized capital gains/losses in that year.
**Significant at 0.001 level.

However, no support is found for the notion that firms realize capital gains from selling assets to manage earnings as the firm's capital gains realizations are positively associated with earnings.

Nevertheless, this study provides only a preliminary conclusion. This is because public financial reports do not disclose a corporation's precise tax status, such as taxable income, tax rates, etc. In addition, the financial statements used are consolidated statements for the parent company and all its subsidiaries. For tax purposes, each company or subsidiary is an independent taxpayer. In order for the conclusions of this study to be stronger, relevant data for each independent corporate taxpayer needs to be used as such data is not available to this study.

Lastly, the gains/losses collected from financial reports do not perfectly match taxable capital gains/losses. For example, for depreciable assets and intangible assets (eligible assets), the depreciation rules, the rules on acquisition and disposition of these assets differ between accounting principles and tax law. Despite these limitations, financial reporting data can still shed light on the

Table 9. Regression results for net capital gains from disposition of discontinued operations or subsidiaries

$$CG_{it} = \alpha_0 + \alpha_1 STR_{it} + \alpha_2 ETR_{it} + \alpha_3 LCO_{it} + \alpha_4 INC_{it} + \alpha_5 CAS_{it} + \alpha_6 SIZ_{it} + \varepsilon_{it}$$

.

	Co eff.	t-test	Co eff.	t-test
Intercept	-0.0094	-0.3947	0.2343	1.9405*
SIZ	-0.0009	-0.4566	-0.01734	-2.6068**
CAS	-0.0923	-7.9188**	-0.1207	-3.4838**
INC	0.0522	6.1438**	0.3662	7.9779**
LCO	0.0212	4.3438**	0.0464	2.9566**
ETR	0.0026	0.361	-0.0284	-0.9803
STR	0.046	0.8457	-0.2046	-0.7608
R^2	0.28		0.74	
F-test	20.79		20.77	
Observations	334		51	

The second and third columns show the results for all firm-year observations, while the fourth and fifth columns show the results only for firms that realized capital gains/losses in that year.
** Significant at 0.001 level, * significant at 0.1 level.

determinants of corporate capital gains realization.

ACKNOWLEDGEMENT

The author thanks the participants of the 101st National Tax Association Annual Conference, the participants of the 18th International Conference of Pacific Rim Management, and anonymous reviewers for their valuable comments. The author also gratefully acknowledges the financial support for this research received from CA/Laurier Research Centre.

REFERENCE

Auten G, Clotfelter CT (1989). Permanent versus Transitory Tax Effects and the Realization of Capital Gains, Q. J. Econ. 97(4): 613-632.
Badrinath SG, Lewellen WG (1991). Evidence on Tax-Motivated Securities Trading Behaviour. J. Finan. 46(1): 369-382.
Bartov E (1993). The Timing of Asset Sales and Earning Manipulation. Account. Rev. 68(4): 840-855.
Bates TW (2005). Asset Sales, Investment Opportunities, and the Use of Proceeds. J. Finan. 60(1): 105-135.
Black EL, Sellers KF, Manly TS (1998). Earning Management Using Asset Sales: An International Study of Countries Allowing Non-current Asset Revaluation. J. Bus. Finan. Account. 25(9-10): 1287-1317.
Burman LE, Clausing KA, O'Hare JF (1994). Tax Reform and Realizations of Capital Gains in 1986, Natl. Tax J. 47: 1-19.
Burman LE, Randolph WC (1994). Measuring Permanent Responses to Capital-Gains Tax Changes in Panel Data, Am. Econ. Rev. 84(4): 794-809.
Chay JB, Choi D, Pontiff J (2006). Market Valuation of Tax-Timing Options: Evidence from Capital Gains Distributions. J. Finan. 61(2): 837-865.
Constantinides GM (1983). Capital Market Equilibrium with Personal Tax, Econometrica May 51: 611-636.
Constantinides GM, Ingersoll J (1984). Optimal Bond Trading with Personal Taxes, J. Finan. Econ. Sept. 13: 299-335.
Cook EW, Hare JFO (1992). Capital Gains Redux: Why Holding Periods Matter, National Tax Journal, Vol. XLV, No.1, 53-76 (March 1992).
Desai MA, Gentry WM (2003). The Character and Determinants of Corporate Capital Gains, Tax Policy Econ. MIT Press 18: 1-36.
Eichner M, Sinai T (2000). Capital Gains Tax Realizations and Tax Rates: New Evidence from Time Series, Natl. Tax J. 53(3): 663-681.
Feldstein M, Yitzhaki S (1978). The Effect of the Capital Gains Tax on the Selling and Switching of Common Stock, J. Pub. Econ. 9: 17-36.
Graham JR (1996). Proxies for the Corporate Marginal Tax Rate, J. Finan. Econ. 42: 187-221.
Herrmann D, Inoue T, Thomas WB (2001). The Sale of Assets to Manage Earnings in Japan, Working Paper, Oregon State University 2001.
Jin L (2006). Capital gains Tax Overhang and Price Pressure, J. Finan. June. 61(3): 1399-1431.
Lisowsky P, Inferring US (2007). Tax Liability from Financial Statement Information, Working paper, Boston University School of Management, September.
Odean T (1998). Are Investors Reluctant to Realize Their Losses? Journal of Finance 52: 1563-1588.
Plesko G (2003). An Evaluation of Alternative Measures of Corporate Tax Rates, J. Account. Econ. 35: 201-226.
Seyhun HN, Skinner DJ (1994). How Do Taxes Affect Investors= Stock Market Realizations? Evidence from Tax-Return Panel Data, J. Bus. 67(2): 231-262.