
FINANCES OF THE NATION

THE TAXATION OF DIVIDEND INCOME IN CANADA

Michael Smart*

For almost 60 years, the Canadian Tax Foundation published an annual monograph, Finances of the Nation, and its predecessor, The National Finances. In a change of format, the 2014 Canadian Tax Journal introduced a new “Finances of the Nation” feature, which presents annual surveys of provincial and territorial budgets, and topical articles on taxation and public expenditures in Canada. In this article, Michael Smart discusses the tax treatment of personal dividend income in Canada. Incorporating the changing parameters of the dividend gross-up and credit system since 1972, including provincial credits, he estimates the effective tax rate on eligible and ordinary dividend income of taxable investors, and compares it with the rate applying to other income sources. He discusses the implications of the tax measures for corporate financial decisions and tax-avoidance behaviour. He also presents new estimates of the associated federal and provincial tax expenditures, which are large.

The underlying data for the Finances of the Nation monographs and the articles in this journal will be published online in the near future.

KEYWORDS: DIVIDENDS ■ TAXATION ■ INTEGRATION ■ TAX EXPENDITURES ■ ANALYSIS

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INTRODUCTION

Canada's tax system has long included a measure of corporate and personal tax integration. In a classic corporate income tax regime such as Canada's, corporations and their shareholders are taxed separately. Moreover, dividends paid to shareholders are not deductible from corporate taxable income. There is therefore potential for double taxation of dividend income. Under a system of full integration, dividends are taxed at a lower rate in the hands of shareholders, so that combined personal and corporate taxes are (at least notionally) the same as they would be if the original pre-tax earnings of the corporation had accrued directly to the shareholder. Canada's personal tax system has, since 1949, included a dividend tax credit (DTC) that has resulted in partial integration of corporate and personal taxes. Since a significant reform in 2006, the Canadian system exhibits nearly full integration for both large corporations and small domestically owned businesses (Canadian-controlled private corporations [CCPCs]) that are subject to a lower rate of corporate taxation.

In this brief article, I explain the current approach to dividend taxation in Canada. I document the evolution of tax rules and tax rates, including the dividend tax system, since 1972. The data show a marked decline in the effective tax rate on domestic dividends, owing to the combined effects of general corporate and personal tax-rate reductions, as well as enhancements to integration. I offer some observations about the changing degree of integration in the system and its role in controlling tax avoidance, with particular focus on periods of "overintegration" when the effective tax rate on dividends from small business has been lower than the rate on other income sources.

The fiscal cost of current dividend tax policies is large: incorporating provincial credits, I estimate that \$8 billion of revenues were forgone in 2013. The DTC is received mainly by high-income taxpayers. In 2013, the average shareholder with income above \$250,000 received a \$17,841 tax benefit from the DTC, enough to reduce the average effective tax rate for this group from 32.3 percent to 28.9 percent of total income assessed. In all, about 40 percent accrues to taxpayers in the top 1 percent of the distribution of total income, and 70 percent to those in the top decile.

DIVIDEND TAXATION: PRINCIPLES AND POLICY PARAMETERS

THE DIVIDEND GROSS-UP AND CREDIT SYSTEM

The Canadian system of dividend tax relief is complex, and it has many moving parts. Since 1972, Canada has operated a "gross-up and credit" system that aims to reduce double taxation while fully taxing the underlying corporate income at each shareholder's own personal marginal tax rate. Moreover, since 2006, the system has distinguished between underlying corporate income that is deemed to be subject to the general corporate tax rate and income of small CCPCs that are eligible for the small business deduction.

The system is perhaps best explained by means of an example, as presented in table 1. For concreteness, I assume that both the corporation and the shareholder

are resident in Ontario, and I use the relevant tax rates applying in 2014. In particular, consider the following (from the left-hand column of the table):

- A large corporation has \$100 in pre-tax profit. After corporate taxes at a rate of 26.5 percent, the corporation pays a shareholder a dividend of \$73.50 (row 3).
- This “eligible” dividend is grossed up by 38 percent to yield \$101.43 in taxable income. If the shareholder faces the top marginal tax rate of 49.5 percent applying in 2014, the personal tax payable on the grossed-up dividend is \$50.24 (row 4).
- The taxpayer is eligible for a DTC of 15 percent federally and 10 percent provincially, which together amount to \$25.38 (row 5) and reduce net tax payable to \$24.86 (row 6).

The resulting personal tax is therefore 33.8 percent of the \$73.50 dividend received, considerably lower than the 49.5 percent rate on ordinary income. Incorporating corporate taxes at least notionally paid,¹ however, the total tax (row 7) is 51.36 percent of the underlying pre-tax corporate income—slightly higher than the ordinary tax rate.

In the right-hand column of table 1, the same calculations are performed for the case in which the \$100 pre-tax earnings accrue to a small CCPC, subject to a corporate tax rate of 15.5 percent in Ontario in 2014. In this case, the dividend received is deemed “non-eligible” for the enhanced DTC and is grossed up by 18 percent. The resulting taxable income is allowed federal and provincial DTCs of 11 percent and 4.5 percent, respectively. In this case, the gross-up and credit almost perfectly offset the notional effect of corporate taxes, leaving the taxpayer with almost exactly \$100 in taxable income, and a DTC to fully offset deemed corporate taxes. The combined effective tax rate on pre-tax income is 49.4 percent, almost the same as for ordinary income.

In both cases, the total tax at least notionally paid on pre-tax corporate income is about the same as it would be if the underlying income accrued directly to the shareholder. The role of integration in neutrality should be clear: if the shareholder “sees through” the corporation and considers all taxes as equivalent, then she should be indifferent between investing in bonds that pay interest that is deductible from corporate tax and shares that pay dividends that are not deductible. Moreover, for a small business, a controlling shareholder-manager should be indifferent between receiving income as a salary that is deductible from corporate tax and a dividend that is not deductible, and should be indifferent between operating a corporation or an unincorporated business, on the basis of tax considerations.

1 The shareholder’s eligibility for the DTC is independent of whether or not the underlying income was subject to corporate taxation. In some cases, such as when the corporation earns income from foreign affiliates that is exempt from taxation in Canada, or when the corporation is in a tax loss position, the effective corporate tax rate may be much lower than the rate at which the DTC is paid. For the purposes of the example, I ignore this possibility and assume that income has faced corporate taxation at the full statutory rate.

TABLE 1 Illustration of the Gross-Up and Credit System

| | Large corporation | Small CCPC |
|---|-------------------|------------|
| | <i>dollars</i> | |
| 1. Pre-tax profit | 100.00 | 100.00 |
| 2. Corporate tax paid | 26.50 | 15.50 |
| 3. Dividend received | 73.50 | 84.50 |
| 4. Tax on grossed-up dividend | 50.24 | 49.39 |
| 5. Dividend tax credit | 25.38 | 15.47 |
| 6. Personal taxes paid | 24.86 | 33.92 |
| 7. Total taxes paid | 51.36 | 49.42 |

CCPC = Canadian-controlled private corporation.

Note: Calculations for a taxable corporation and a top-bracket shareholder in Ontario, 2014.

THE EVOLUTION OF THE DTC

The Canadian tax system has long provided relief from double taxation of dividends.² In 1949, the federal government established a tax credit for dividend income received from taxable Canadian corporations; the rate for the credit was 10 percent, which was then the corporate tax rate for small businesses. (The credit rate increased to 20 percent in 1953, when the small business rate also increased.) Because dividends were not grossed up, the credit provided a greater tax reduction for taxpayers facing higher personal tax rates, compared to those taxed at lower rates, and was therefore inequitable. Moreover, since capital gains were then not subject to tax in Canada, the system included non-neutralities that gave rise to surplus-stripping transactions, which converted taxable dividends to untaxed capital gains.

Noting these and other problems, in 1966 the Carter commission recommended a reform to the DTC to achieve full integration for all corporations.³ While the Carter proposals were not adopted, the 1971 tax reform did introduce the gross-up and credit system described above. Initially, the gross-up rate was set at one-third of actual dividends—or one-quarter of grossed-up dividends—effectively integrating the system for corporations subject to the 25 percent corporate tax rate then applying to small CCPCs. While specific parameters of the system were changed in 1978, 1982, and 1987, the tax system up to 2005 maintained the principle of full integration at the low corporate tax rate (and so only partial integration for large corporations).

The effects of the various changes since 1972 are presented in figure 1. In it, I show the effective rate of personal taxation of dividends from large corporations

2 For more details on the history, see Glenn P. Jenkins, *The Role and Economic Implications of the Canadian Dividend Tax Credit*, Discussion Paper no. 307 (Ottawa: Economic Council of Canada, June 1986); and K.A. Siobhan Monaghan and Thomas W. Wilson, "Taxation of Income from Property and Capital Gains," in Heather Kerr, Ken McKenzie, and Jack Mintz, eds., *Tax Policy in Canada* (Toronto: Canadian Tax Foundation, 2012), 6:1-36, at 6:23-25.

3 Canada, *Report of the Royal Commission on Taxation* (Ottawa: Queen's Printer, 1966).

“eligible dividends”) and from small CCPCs (“ordinary dividends”), together with the top personal tax rate applying to ordinary income.⁴ If the marginal tax rate on ordinary income is m , the gross-up rate is g , and the combined federal-provincial DTC rate is a fraction, d , of the grossed-up dividend, then the effective personal dividend tax rate, t_d , is calculated as follows:

$$t_d = (m - d)(1 + g).$$

In algebraic terms, then, figure 1 presents t_d for eligible and non-eligible dividends, together with m , for the average Canadian shareholder in the years 1972-2016.

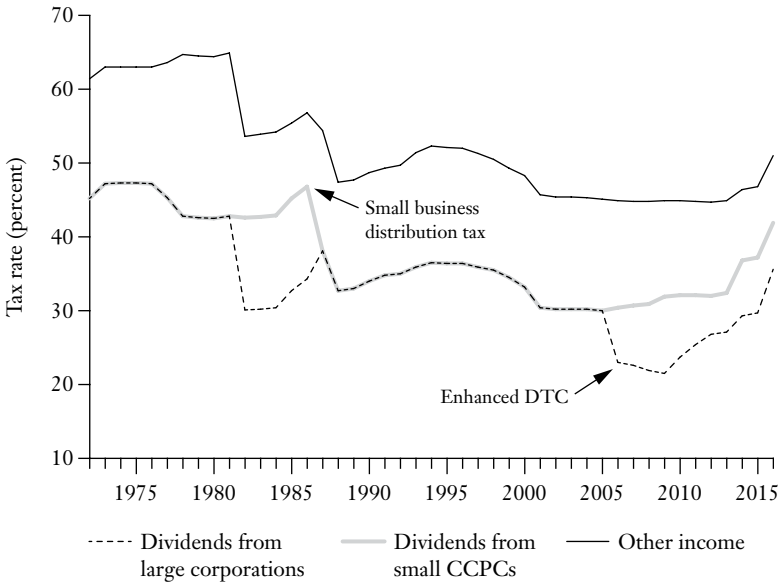
The data show a general downward trend in dividend taxes between 1972 and 2013. This reflects both the general decline in top marginal tax rates on ordinary income and increases in the credit rates. In 1978, the gross-up rate was increased to 50 percent of actual dividends, offering full relief for a corporate tax rate of 33.3 percent. Since the small business corporate tax rate remained at 25 percent following the 1978 change, dividends from small CCPCs were undertaxed relative to other income. In 1983, the federal government introduced a small business distribution tax of 12.5 percent, which effectively restored full integration of small business income. In 1987-88, as a part of a general base-broadening tax reform, the gross-up rate fell to one-quarter. This yielded full integration of the then-prevailing small business tax rate of 20 percent, so that the distribution tax was abolished. However, the dividend tax rate, t_d , fell again owing to reductions in the ordinary tax rate, m .

The system remained unchanged during 1988-2005, with a DTC equal to approximately 20 percent of grossed-up dividends, as compared with a statutory corporate tax rate falling to 35 percent for large corporations and to 17 percent for small CCPCs. Thus, the system delivered mild overintegration for small businesses during this period, but still featured partial integration for large businesses. The rise in the use of flowthrough entities such as income trusts to escape corporate taxation during the late 1990s and early 2000s then induced further reforms. In response to this apparent erosion of the corporate tax base, the DTC was increased in 2006. A gross-up rate of 45 percent was applied to “eligible dividends” of large corporations, and the federal DTC was increased to 19 percent of the grossed-up dividend. Coupled with provincial credits, and the planned reduction of corporate tax rates by 2010, this resulted in nearly full integration for both large corporations and small CCPCs.⁵

4 The calculations assume a taxable shareholder who is in the top tax bracket but is not subject to clawbacks in respect of old age security or any other income source. The rates presented are a simple average of those applying in the 10 provinces in each year. The underlying tax parameters are from the Canadian Tax and Credit Simulator (CTaCS v. 2016-2) created by Kevin Milligan of the University of British Columbia, which is itself included in the Finances of the Nation database maintained by the Canadian Tax Foundation.

5 While the enhanced DTC was advertised in the May 2006 federal budget as a response to the rise in income trusts (Canada, Department of Finance, 2006 Budget, Budget Plan, May 2, 2006, at 231-32), it was apparently not sufficient to deter them. The government acted again in October 2006, imposing the specified investment flowthrough (SIFT) tax at corporate tax rates

FIGURE 1 Top Personal Tax Rates on Dividends and Ordinary Income, 1972-2016



CCPC = Canadian-controlled private corporation. DTC = dividend tax credit.
 Note: Rates shown are a simple average of applicable rates in the 10 provinces in each year.

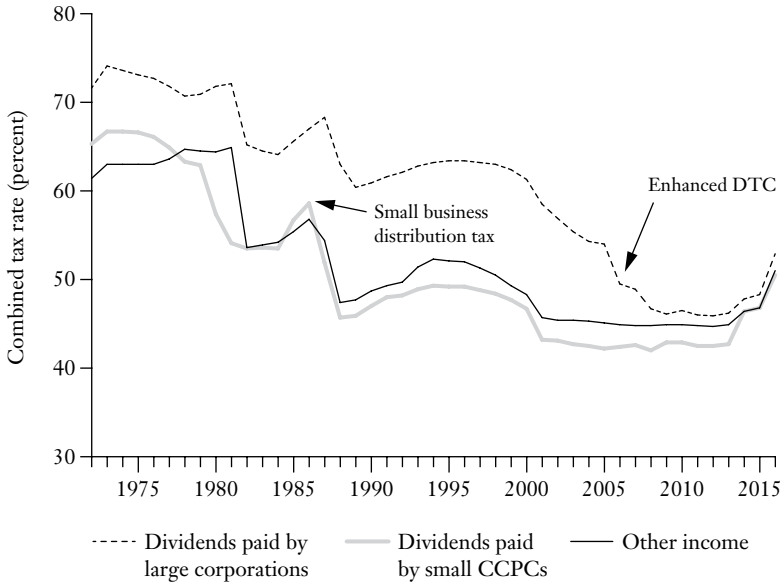
The implications of all these changes for integration are best understood by reference to figure 2, which plots the combined corporate and personal tax rates on new equity investments for large corporations and small CCPCs over the 1972-2016 period. That is, if the corporate tax rate is u , the effective tax rate on equity investments, t_e , as shown in figure 2, is calculated as

$$t_e = u + (1 - u) t_d,$$

together with the top marginal tax rate, m , applicable to debt-financed investments that are deductible from corporate taxes. The tax system is said to be overintegrated when t_e is less than m and underintegrated when t_e is greater than m .

on distributions from income trusts (Canada, Department of Finance, “Canada’s New Government Announces Tax Fairness Plan,” *News Release* 2006-061, October 31, 2006). For details of the reform and its implications for integration, see Jack M. Mintz and Stephen R. Richardson, “Income Trusts and Integration of Business and Investor Taxes: A Policy Analysis and Proposal” (2006) 54:2 *Canadian Tax Journal* 359-406; Kenneth J. McKenzie, “Income Taxes, Integration, and Income Trusts” (2006) 54:3 *Canadian Tax Journal* 633-56; and Craig Doidge and Alexander Dyck, “Taxes and Corporate Policies: Evidence from a Quasi Natural Experiment” (2015) 70:1 *Journal of Finance* 45-89.

FIGURE 2 Combined Corporate and Personal Tax Rates on Dividends, 1972-2016



CCPC = Canadian-controlled private corporation. DTC = dividend tax credit.

Figure 2 depicts a steady decline in effective tax rates since 1972, driven by the combined effects of reductions in corporate and top personal tax rates, together with the changes to the DTC discussed above. As noted, the system has historically been underintegrated for large corporations, but the excess tax on eligible dividends had all but disappeared by 2008. In contrast, small business dividends were overintegrated during 1978-1982 and 1988-2013, but with the decrease in federal gross-up and credit rates for non-eligible dividends in 2014, full integration has now been achieved for small businesses as well.

PROVINCIAL CREDITS

A source of additional complexity in the system is provincial taxation. Prior to 2000, the provincial governments outside Quebec levied taxes as a percentage of basic federal tax (BFT), and the federal gross-up and credit system was passed through to provincial tax liabilities by way of its effect on BFT. The federal government therefore was able to set the gross-up rate in the system to target the desired degree of integration, and scale the federal DTC rate to offset the impact of provincial tax on BFT rates on the resulting value of the credit. Since 2001, all provinces have levied tax directly on taxable income, and all have introduced DTCs of their own, including enhanced DTC rates for eligible dividends since 2006.

Table 2 shows corporate tax and DTC rates for Canada and the provinces in 2014. Under the tax-on-income system, federal credit rates have been set to integrate federal corporate tax rates on large corporations and small CCPCs. But not all provinces have fully integrated their own corporate tax rates. Most provinces offer DTC rates for eligible dividends below their top corporate tax rates—substantially below in the Atlantic provinces. This is perhaps unsurprising. Taxpayers in each province hold shares in corporations that pay taxes in all provinces, not just their own. Provincial governments may offer credits only to taxpayers resident in their respective jurisdictions, offsetting corporate tax revenues that may accrue to other governments. Whatever the benefits of integration perceived by provincial governments, there is therefore an incentive for each provincial government to free-ride on the dividend tax relief offered to corporations operating in that province. This incentive is perhaps strongest in the Atlantic provinces, where the corporate tax base is comparatively small, so that a greater share of the provincial DTC is paid in respect of dividends received from corporate income that is taxable outside the province.

INCIDENCE OF THE DTC

Perhaps the most important question about the DTC is “Who benefits?” Since taxable shareholders are much richer than the average taxpayer (as shown below), the statutory incidence of the dividend tax preference is highly regressive. But the economic incidence could, in principle, be very different than the statutory incidence.

DIVIDEND TAXES AND INTERNATIONAL CAPITAL MARKETS

Understanding economic incidence requires a model of how the DTC affects the cost of capital paid by firms and received by investors, and how this in turn affects the rate of return to capital, labour, and other factors of production in the economy. This is a difficult question. In the traditional view, dividend taxes affect the cost of capital and so reduce investment. If capital is elastically supplied, the principal effect of the DTC should be to increase savings and investment, rather than the net return to investors, and ultimately to increase wages paid to domestic labour. If this is so, the DTC is a productivity-enhancing tax measure with no particularly regressive distributional effect.

But there are reasons to doubt this view. The DTC subsidy is available only for dividends received by taxable Canadians. It does not affect the cost of investment that is financed by debt or by retained earnings.⁶ Moreover, it is not available to pension funds or foreigners who purchase shares of Canadian companies. According to

6 Here I am applying the “new view” of dividend taxation, most closely associated with Alan J. Auerbach, “Wealth Maximization and the Cost of Capital” (1979) 93:3 *Quarterly Journal of Economics* 433-46. According to the new view, retained earnings may be paid to shareholders as dividends, or reinvested and paid as dividends later. Since retention affects only the timing of the dividend tax liability and not its present value, the dividend tax rate is neutral for investment.

TABLE 2 Federal and Provincial Corporate Tax and Dividend Credit Rates, 2014

| Tax jurisdiction | Large corporations | | Small CCPCs | |
|-------------------------------------|--------------------|------|-------------|------|
| | DTC | CIT | DTC | CIT |
| | <i>percent</i> | | | |
| Canada | 15.0 | 15.0 | 11.0 | 11.0 |
| Newfoundland and Labrador | 7.6 | 14.0 | 5.2 | 4.0 |
| Prince Edward Island | 10.5 | 16.0 | 3.2 | 4.5 |
| Nova Scotia | 8.9 | 16.0 | 5.9 | 3.0 |
| New Brunswick | 12.0 | 12.0 | 5.3 | 4.5 |
| Quebec | 11.6 | 11.9 | 7.1 | 8.0 |
| Ontario | 10.0 | 11.5 | 4.5 | 4.5 |
| Manitoba | 8.0 | 12.0 | 0.8 | 0.0 |
| Saskatchewan | 11.0 | 12.0 | 3.4 | 2.0 |
| Alberta | 10.0 | 10.0 | 3.1 | 3.0 |
| British Columbia | 10.0 | 11.0 | 2.6 | 2.5 |

CCPC = Canadian-controlled private corporation. DTC = dividend tax credit.

CIT = corporate income tax.

some economic theories, this should make the DTC largely irrelevant to corporate financial and investment decisions.⁷ If so, then the main effect of the DTC is to increase the incomes of taxable Canadian shareholders, and the statutory incidence and economic incidence of the credit largely coincide. In this view, the policy also imposes a welfare cost by inducing taxable shareholders to increase their holdings of domestic dividend stocks, thereby reducing international portfolio diversification.⁸

The choice between the traditional view of dividend taxation and the alternative views summarized above is ultimately an empirical matter, but the question is still not settled in the empirical literature. There is evidence that domestic dividend tax rates do affect share valuations in Canada and elsewhere.⁹ But a dividend tax capitalization

7 For example, under the tax clientele theory, taxable Canadian shareholders have a tax preference for dividends but are inframarginal investors, and the cost of capital is determined by tax-exempt investors who do not receive the DTC, such as pension funds and foreign investors. See Merton H. Miller, "Debt and Taxes" (1977) 32:2 *Journal of Finance* 261-75; and Merton H. Miller and Myron S. Scholes, "Dividends and Taxes" (1978) 6:4 *Journal of Financial Economics* 333-64. For a more detailed discussion of this tax irrelevance view, see McKenzie, *supra* note 5.

8 See the analysis in Laurence Booth, "The Dividend Tax Credit and Canadian Ownership Objectives" (1987) 20:2 *Canadian Journal of Economics* 321-39; and Kevin Milligan and Michael Smart, "What's the Cost of the Foreign Property Limit in Canada's Pension Rules?" (2000) 21:2 *Policy Options* 36-40. Lacking estimates, I ignore this welfare cost in the calculations in this article.

9 See L.D. Booth and D.J. Johnston, "The Ex-Dividend Day Behavior of Canadian Stock Prices: Tax Changes and Clientele Effects" (1984) 39:2 *Journal of Finance* 457-76, for the first estimates of tax capitalization for Canada. Also see Kenneth J. McKenzie and Aileen J. Thompson, "Dividend Taxation and Equity Value: The Canadian Tax Changes of 1986" (1995) 28:2 *Canadian Journal of Economics* 463-72, which found significant share price effects of the 1986 dividend tax reform in Canada. Finally, in recent work Wakil and Nemiroff found that dividend

effect is consistent with both the traditional view and the new view of dividend taxation, and so need not imply that dividend taxes affect marginal investment decisions. Direct evidence on the effects of shareholder-level taxes on corporate decisions is comparatively rare for Canada, but there is as yet no persuasive evidence that dividend tax reforms have affected corporate financial and investment decisions.¹⁰

Setting this debate aside, it is still worthwhile to understand who receives the DTC, and what it costs. Below, I present new estimates of the cost of the DTC to federal and provincial governments in forgone revenues, and the distribution of the tax benefit among taxpayers.

FISCAL COST AND DISTRIBUTIONAL IMPACTS

My calculations are based on data available for the 1991-2013 tax years from the Canada Revenue Agency's (CRA's) T1 final taxation statistics, which record the aggregate amount of taxable dividends received and DTCs claimed by taxpayers in each province and in each of a series of narrow ranges of total income.¹¹ As discussed above, my estimates are informative about the statutory incidence of the DTC tax benefit among taxpayer income levels, which may not correspond to the true distribution of economic burdens and benefits if the DTC affects the return to capital and other factors of production in the economy.

An estimate of the fiscal cost of the DTC for the federal government is produced as part of the federal Department of Finance's annual *Tax Expenditures and Evaluations* (TEE) report.¹² But the TEE data do not include the cost of provincial credits,

taxes do affect share prices: Gulraze Wakil and Howard Nemiroff, "Dividend Taxation and Stock Returns: Time Series Analysis of Canada and Comparison with the United States" (2017) 65:1 *Canadian Tax Journal* 1-36.

- 10 For Canada, see Andrew Bird, *Dividends and Shareholder Taxation: Evidence from Canada*, Technical Report (Pittsburgh: Carnegie Mellon University, Tepper School of Business, July 2013), who found that the 2006 dividend tax reform caused no significant change in dividend payout policies among publicly traded Canadian corporations. In contrast, the 2003 dividend tax reduction in the United States appears to have caused substantial increases in payouts, especially among closely held firms. See Raj Chetty and Emmanuel Saez, "Dividend Taxes and Corporate Behavior: Evidence from the 2003 Dividend Tax Cut" (2005) 120:3 *Quarterly Journal of Economics* 791-833. Several recent studies examined Canadian income trusts (flowthrough entities that permit avoidance of corporate taxation) and found evidence that corporate tax-avoidance opportunities do affect corporate decision making. (See, for example, Doidge and Dyck, *supra* note 5; and Alexander Edwards and Terry Shevlin, "The Value of a Flow-Through Entity in an Integrated Corporate Tax System" (2011) 101:2 *Journal of Financial Economics* 473-91.) But these results pertain to the effect of source-based corporate taxes, and are not informative about the effect of residence-based dividend taxes on the investor side of the market.
- 11 See Canada Revenue Agency, "Final Statistics (T1 Data)" (www.cra-arc.gc.ca/gncy/stts/t1fnl-eng.html). The T1 taxation statistics will soon be available through the Finances of the Nation data portal.
- 12 Now titled *Report on Federal Tax Expenditures* (www.fin.gc.ca/purl/taxexp-eng.asp).

and they do not include information on the distribution of tax expenditures by income of the taxpayer.¹³

The current policy increases taxable income through the gross-up of dividends, but reduces revenues through the federal and provincial credits. To compute the revenue cost, I define the net subsidy rate for actual dividends received as the difference between the taxpayer's marginal tax rate on ordinary income and the rate on dividend income expressed in algebraic terms as the rate

$$m - t_d = d(1 + g) - mg$$

per dollar of actual dividends received. My tax expenditure estimates simply apply the net subsidy rate to the estimated dividends received by taxpayers in the tax return data. So these are "static" tax expenditure estimates that assume that the value of dividends paid would be unchanged if the subsidy were eliminated.

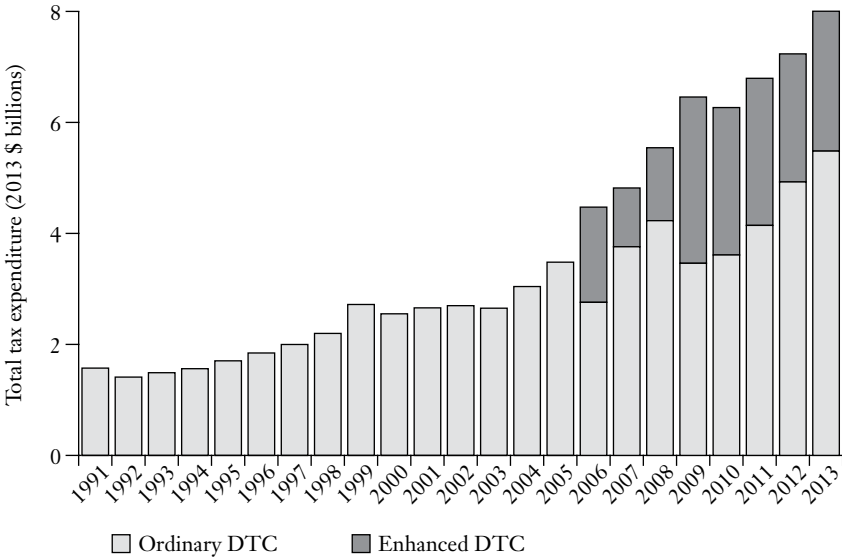
The CRA data report the total amount of grossed-up dividends and total DTCs received in each income range. For years after 2005, I require separate information on the amount of eligible and ordinary dividends, which receive different credit rates. I impute the fraction of grossed-up dividends that are eligible dividends in each income range and taxation year by comparing the ratio of DTCs received to taxable dividends in the data with the statutory credit rates that applied in that year. This imputation may be inaccurate in lower income ranges, where DTCs can reduce tax payable to zero, reducing the ratio of DTCs to taxable dividends in a way that is unpredictable. Fortunately, for incomes above \$40,000, the range in which the large majority of dividends are reported, the fraction of non-taxable returns is negligible in all years, so that the discrepancies resulting from this problem should be small. To deal with this problem, I assume that the fraction of eligible dividends for taxpayers with incomes below \$40,000 is the same as for the average of other taxpayers, and I ignore the (very small) effect of non-taxable returns above \$40,000.

Figure 3 shows the rise in aggregate DTC tax expenditures from \$1.6 billion (in real 2013 dollars) in 1991 to just over \$8 billion in 2013. The detailed results for ordinary and eligible dividends, and for federal and provincial tax measures, are reported in appendix table A1. The growth is especially pronounced after 2005, reflecting both the DTC enhancement and the rise in dividend payments (as discussed below).

In table 3, I present the estimated tax expenditure for various ranges of income, per taxpayer with dividend income. It is evident that receipt of the credit is highly unequal. In 2013, the average shareholder with income above \$250,000 received a tax benefit of \$17,841 from the DTC, representing about 11.6 percent of the shareholder's total tax payable. Put differently, abolishing the DTC would have increased

13 The TEE reports eschew the term "tax expenditure" and instead record the DTC as a "memorandum item" because "its purpose is to reduce or eliminate the double taxation of income earned by corporations." This distinction is essentially arbitrary, and I use the term "tax expenditure" for convenience.

FIGURE 3 Growth in Real DTC Tax Expenditures, 1991-2013



DTC = dividend tax credit.

the average effective tax rate for this group from 28.9 percent to 32.3 percent of total income assessed. Table 3 also reports results for 2005, prior to the DTC enhancement. There has been a marked increase in credits received by high-income shareholders since the reform. For taxpayers with incomes over \$250,000, the average tax expenditure per shareholder increased from \$13,187 to \$17,841—and the total tax expenditure from \$1.2 billion to \$3.0 billion—in real terms.

But distributional comparisons across years are difficult with the CRA data, because income thresholds are specified in nominal dollar terms. Thus, the increase in tax expenditures reflects the increase in the average income and the number of taxpayers in the top income category, as well as changes in the DTC. To provide a better sense of the distribution of tax expenditures, I estimate the distribution of the tax expenditure before and after enhancement using non-parametric methods. First, I compute the share of income and of dividend subsidies in each income bin reported by the CRA for each taxation year from 1999 to 2013. I then impute the share of dividend subsidies in each income vingtile before and after the 2006 reform by local linear interpolations around the income quintiles actually reported in the data. For example, the 75th percentile of the distribution is imputed on the basis of dividends reported by tax filers with incomes over \$60,000 in 2013 and incomes over \$50,000 in 2007, and so on for the other quintiles.

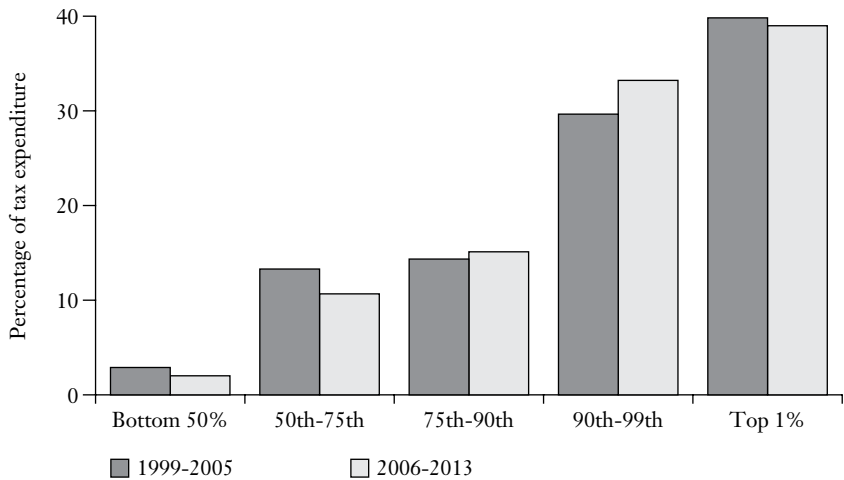
The estimated distributions of tax expenditures are reported in figure 4. On balance, the distribution is extremely skewed, but it is fairly constant over time. About 39 percent of the benefit accrues to taxpayers in the top 1 percent of the income

TABLE 3 Average Federal and Provincial Tax Expenditures per Taxpayer with Dividend Income, by Income Range

| Income range (\$) | 2005 | 2013 |
|----------------------------|----------------|--------|
| | <i>dollars</i> | |
| Loss-60,000 | 402 | 627 |
| 60,000-100,000 | 945 | 1,500 |
| 100,000-150,000 | 1,857 | 2,461 |
| 150,000-250,000 | 3,214 | 4,207 |
| 250,000 and over | 13,187 | 17,841 |

Note: Estimated amounts are calculated in real 2013 dollars per tax filer claiming a dividend tax credit.

Source: Canada Revenue Agency, “Final Statistics (T1 Data)” (www.cra-arc.gc.ca/gncy/stts/t1fnl-eng.html) and author’s calculations.

FIGURE 4 Distribution of DTC Tax Expenditures by Percentiles of Total Income

DTC = dividend tax credit.

distribution, and 72 percent to those in the top 10 percent of incomes. Since this distribution is virtually unchanged since 2006, it suggests that the share of eligible and non-eligible dividends is about the same at high and low incomes—and both types of dividends are highly skewed to rich taxpayers.

CONCLUDING REMARKS

The data presented in this article show that corporate-personal tax integration in Canada has resulted in substantial declines in the effective tax rate on equity-financed investments in the past 50 years, and substantial fiscal costs. Arguably, integration

plays an important role in creating a neutral tax system with limited opportunities for tax avoidance and appropriate incentives for corporate investment. On the other hand, the benefits of integration are distributed extremely narrowly, and they distort portfolio choices of taxable investors. While I hope that the data presented in this short article go some way toward illustrating these effects and their magnitude, more research is required for an understanding of the economic benefits for corporate decision making resulting from integration through the DTC, and conversely the economic costs resulting from the narrow application of the credit.

APPENDIX

TABLE A1 Federal and Provincial Total Tax Expenditures by Category and Year

| Year | Federal | | | Provincial | | | Combined federal-provincial | | |
|------|--------------------|--------------------|---------|--------------------|--------------------|---------|-----------------------------|--------------------|---------|
| | Eligible dividends | Ordinary dividends | Total | Eligible dividends | Ordinary dividends | Total | Eligible dividends | Ordinary dividends | Total |
| 1991 | | | 952.7 | | | 620.2 | | | 1,573.0 |
| 1992 | | | 851.9 | | | 559.3 | | | 1,411.2 |
| 1993 | | | 862.6 | | | 627.4 | | | 1,490.0 |
| 1994 | | | 880.1 | | | 682.3 | | | 1,562.4 |
| 1995 | | | 967.3 | | | 736.9 | | | 1,704.2 |
| 1996 | | | 1,052.4 | | | 793.2 | | | 1,845.6 |
| 1997 | | | 1,151.0 | | | 847.8 | | | 1,998.7 |
| 1998 | | | 1,313.0 | | | 885.1 | | | 2,198.1 |
| 1999 | | | 1,650.0 | | | 1,069.5 | | | 2,719.4 |
| 2000 | | | 1,535.5 | | | 1,015.9 | | | 2,551.4 |
| 2001 | | | 1,667.7 | | | 990.9 | | | 2,658.6 |
| 2002 | | | 1,707.0 | | | 991.1 | | | 2,698.1 |
| 2003 | | | 1,688.3 | | | 964.3 | | | 2,652.6 |
| 2004 | | | 1,931.5 | | | 1,111.2 | | | 3,042.7 |
| 2005 | | | 2,218.7 | | | 1,263.1 | | | 3,481.7 |
| 2006 | 1,142.2 | 1,832.3 | 2,974.5 | 572.9 | 926.2 | 1,499.1 | 1,715.0 | 2,758.5 | 4,473.5 |
| 2007 | 691.3 | 2,568.0 | 3,259.3 | 368.1 | 1,191.2 | 1,559.4 | 1,059.5 | 3,759.2 | 4,818.7 |
| 2008 | 839.3 | 2,943.7 | 3,783.0 | 475.0 | 1,285.7 | 1,760.7 | 1,314.2 | 4,229.5 | 5,543.7 |
| 2009 | 1,871.7 | 2,560.9 | 4,432.7 | 1,124.0 | 901.1 | 2,025.1 | 2,995.7 | 3,462.0 | 6,457.7 |
| 2010 | 1,659.6 | 2,716.7 | 4,376.3 | 996.8 | 894.5 | 1,891.3 | 2,656.4 | 3,611.2 | 6,267.6 |
| 2011 | 1,558.5 | 3,135.6 | 4,694.1 | 1,091.8 | 1,008.8 | 2,100.6 | 2,650.3 | 4,144.4 | 6,794.7 |
| 2012 | 1,269.8 | 3,745.7 | 5,015.5 | 1,037.8 | 1,181.7 | 2,219.5 | 2,307.6 | 4,927.3 | 7,235.0 |
| 2013 | 1,388.2 | 4,195.5 | 5,583.7 | 1,131.9 | 1,287.6 | 2,419.5 | 2,520.1 | 5,483.1 | 8,003.2 |

2013 \$ millions

