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The Nordic Dual Income Tax: Principles, Practices, and Relevance for Canada

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PRÉCIS

Le double régime d'impôt sur le revenu combine des taux progressifs d'impôt sur le revenu de travail et un faible taux uniforme d'impôt sur le revenu de capital et le revenu des sociétés. Les pays nordiques ont été les premiers à mettre en place un tel régime fiscal et leur expérience peut servir de guide pour d'autres pays qui pourraient tirer profit de leur expérience. Cet article porte sur les arguments en faveur d'un tel régime, en mettant l'accent sur l'imposition du revenu de travailleur indépendant et du revenu de sociétés à peu d'actionnaires, décrit d'autres méthodes d'imposition du revenu d'entreprise dans le cadre d'un tel régime et passe en revue les pratiques fiscales actuelles dans les pays nordiques. L'auteur présente les arguments à l'appui d'un tel régime au Canada et suggère comment ce régime ou des éléments de ce régime pourraient être mis en place dans le contexte du régime fiscal fédéral existant.

ABSTRACT

The dual income tax combines a progressive tax schedule for labour income with a low flat tax rate on capital income and corporate income. The Nordic countries have taken the lead in implementing a dual income tax system, and their experience can serve as a guide to other countries that may benefit from this approach. This article discusses the case for the dual income tax; describes alternative methods of taxing business income under such a system, focusing on the taxation of income from self-employment and income from closely held corporations; and reviews current tax practices in the Nordic countries. The author presents arguments for adopting a dual income tax in Canada and suggests how (elements of) the tax might be implemented in the context of the existing federal tax system.

KEYWORDS: CANADA ■ CAPITAL TAXES ■ CORPORATE INCOME TAXES ■ DOUBLE TAXATION ■ NORDIC ■ PERSONAL INCOME TAXES

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CONTENTS

INTRODUCTION

In the early 1990s, the Nordic countries introduced a so-called dual income tax (DIT), which systematically separates the taxation of capital income from the taxation of other types of income. More recently, several other European countries have adopted elements of dual income taxation by applying a separate flat tax rate to important forms of capital income, such as interest and dividends.

This article describes the principles of the DIT and discusses various policy choices and practical issues involved in the implementation of such a tax system. I begin by briefly comparing the DIT with other blueprints for the income tax, and then discuss the various reasons why governments might want to adopt a DIT. The main challenge raised by a DIT system is the taxation of business income that includes elements of labour income as well as capital income. Using numerical examples, and drawing on current practices in the Nordic countries, I describe several alternative methods of taxing income from small enterprises under a DIT. Finally, I explain why a DIT might be appropriate for Canada and how the tax might be designed in the Canadian context.

ALTERNATIVE DESIGNS FOR THE INCOME TAX

In order to highlight the special features of the DIT, this section briefly considers alternative "grand designs" for a system of income taxation.

The Progressive Comprehensive Income Tax

Historically, most income tax systems in developed countries have been inspired by the principle of "comprehensive" or "global" income taxation. Under a progressive comprehensive income tax, the taxpayer's income from all sources is added up and subjected to a common progressive tax schedule. This is in contrast to a "schedular" tax system, where different types of income are taxed separately.

Ideally, taxable income under a comprehensive income tax would equal the maximum amount that the taxpayer could consume during the year without reducing his or her real net wealth. Among other things, this would imply that all accrued real capital gains should be taxed, whether or not they have been realized. Further, only the costs necessary for acquiring and maintaining income should be deductible from taxable income, and income in kind—including, for example, fringe benefits and the rental value of owner-occupied housing—should be included in the tax base.

Thus, the comprehensive income tax is based on the idea that all of the taxpayer's income—regardless of its form—should be taxed in the same manner. In particular, under an idealized comprehensive income tax, all income should be taxed once (and only once). In such a system, the corporation tax would serve only as a preliminary withholding tax that would be fully credited against the personal tax on corporate-source income, thus avoiding any double taxation. The double taxation of dividends can be eliminated by granting an imputation credit for the underlying corporate tax

against the personal tax on distributed profits.[1] The double taxation of retained profits can be eliminated by allowing the basis (cost price) of shares to be stepped up by the amount of retained earnings that have already been subject to corporation tax, so that personal capital gains tax is levied only on capital gains in excess of retained taxable profits.[2]

During the 1980s and 1990s, many countries within the Organisation for Economic Co-operation and Development (OECD) made a serious attempt to move closer to a comprehensive income tax base. For example, the ambitious US tax reform of 1986 involved a significant broadening of the tax base as a means of financing reductions in marginal tax rates.

One virtue of the comprehensive income tax is that, by imposing the same marginal tax rate on all forms of income, it eliminates the possibility that taxpayers may reduce their tax bill by transforming one type of income into another.

One problem in implementing an ideal comprehensive income tax—and, indeed, any income tax—is the difficulty of taxing unrealized capital gains, stemming partly from the difficulty of assessing the magnitude of an unrealized gain, and partly from the fact that the taxpayer may lack the liquidity to pay tax on an unrealized gain. For these reasons, tax will normally have to be levied only on realized gains.

When unrealized capital gains on shares generated by retained corporate profits cannot be included in the personal tax base, a comprehensive income tax tends to work best if the corporate income tax rate is aligned with the top marginal personal income tax rate. In that case, no taxpayer will be able to gain by accumulating income within a corporation, rather than taking out income in the form of dividends or realized capital gains, assuming that the double taxation of corporate income is fully alleviated in the manner described above.

However, faced with growing capital mobility, countries throughout the world have lowered their corporate tax rates in recent decades in an effort to attract or retain corporate investment. If the corporate tax rate has to be kept considerably below the top marginal personal tax rate in order to avoid capital flight, a comprehensive income tax system with a capital gains tax based on realizations will tend to cause a "lock-in" of capital in the corporate sector, where taxpayers can accumulate income at the low corporate tax rate, thus deferring the higher marginal tax levied on labour and capital income outside the corporate sector. In this way, the tax system allows high income earners to (partly) escape from the progressivity of the personal income tax and hampers the reallocation of capital from existing enterprises toward potentially more productive investment projects in new enterprises or in the open capital market.

1 Rather than relying on an imputation system based on actual corporate taxes paid, policy makers may choose on administrative grounds to apply a notional imputation system in which the dividend tax credit is based on the assumption that the underlying profits have been subject to normal corporation tax.

2 Such a regime for capital gains taxation was proposed in Canada by the Carter commission in 1966 (Canada, *Report of the Royal Commission on Taxation* (Ottawa: Queen's Printer, 1966)) and was applied in Norway from 1992 through 2005.

Furthermore, because of the difficulties of enforcing domestic tax on foreign-source investment income, growing capital mobility makes it increasingly difficult to maintain high marginal tax rates on personal capital income without inducing capital flight. Hence, the increasing mobility of capital relative to labour makes it less attractive to stick to the principle that capital income should be taxed at the same (high) marginal tax rate as labour income.

For this reason, and because of the practical and political difficulties of taxing certain forms of capital income (such as imputed rents on owner-occupied housing and many types of capital gains), tax systems that are nominally based on the principle of comprehensive income taxation are in practice hybrids that allow exemptions or preferential treatment of many forms of capital income, often resulting in serious tax distortions to the pattern of saving and investment.

The Expenditure Tax

The difficulties of implementing a consistent comprehensive income tax on all forms of capital income have led many observers to advocate that personal taxation be based on consumption rather than income. Under a consumption-based personal tax—also referred to as an expenditure tax—all savings would be fully deductible from the tax base. Effectively, this would mean that all normal returns to capital would be exempt from tax, so in this sense all capital income would be given the same tax treatment. A simple numerical example may illustrate this point. Suppose that a taxpayer purchases an asset worth $100 in year 1 and sells the asset in year 2 at a price of $105, thus scoring a 5 percent rate of return before tax. (For simplicity, we assume that all of the return takes the form of the $5 capital gain.) In year 1, the taxpayer will be able to deduct the purchase price of $100 from his tax base, so that—assuming a marginal tax rate of 50 percent—his net outlay will be only $50. In year 2, his after-tax revenue from the asset sale will be $52.50, assuming that his marginal tax rate is still 50 percent. Thus, the taxpayer's net rate of return will be $2.50/$50 = 5 percent, which is equal to the pre-tax rate of return.

Since a taxpayer's consumption equals his cash receipts minus his cash outlays, the expenditure tax is a tax on the taxpayer's net cash inflow during the year.[3] For business owners, this means that all investment spending is fully deductible in the year of investment. For a "marginal" investment that only yields a normal rate of return, the present value of the cash inflows from the investment is just equal to the initial investment outlay. In present value terms, such an investment will therefore generate no tax liability, so in this sense the expenditure tax exempts the normal return to business investment from tax. However, inframarginal investments yielding above-normal returns will generate positive tax revenues in present value terms. This is one of the attractions of the expenditure tax: at the margin there is no distortion to saving and investment, but pure profits will indeed be taxed.

3 Insofar as the taxpayer has received income in kind during the year, this must be added to his expenditure tax base, as would be the case under a comprehensive income tax.

Despite the theoretical attractions, no country has yet adopted a fully developed expenditure tax.[4] The countries that have considered this option have been discouraged by the perceived transition problems and the international complications raised by a switch to expenditure taxation. However, it should be noted that under existing income tax systems, retirement saving is typically treated in the same way as all forms of saving under an expenditure tax: contributions to pension plans are deductible, the rate of return on savings is tax-exempt, and the pensions paid out are taxable.

The Dual Income Tax

As a compromise between the progressive comprehensive income tax and the expenditure tax, several countries have adopted a DIT. This combines a flat tax rate on capital income with progressive taxation of labour income and (possibly) other forms of non-capital income. Whereas the expenditure tax completely exempts the normal return to capital from tax, the DIT imposes some amount of tax on normal returns, but at a proportional rate that is typically considerably below the top marginal tax rate on labour income. In the pure form of the DIT, the personal tax rate on capital income is aligned with both the corporate income tax rate and the marginal tax rate on labour income in the first bracket.

The key distinction in a DIT system is that between capital income and other income. Indeed, the DIT is simply a particular form of schedular tax that applies a separate proportional tax to capital income and a progressive tax schedule to the sum of the taxpayer's income from other sources. Under a pure DIT, capital income would include interest, dividends, capital gains, rental income, imputed returns on owner-occupied housing, and an imputed return on capital invested in unincorporated firms. Negative capital income such as interest expenses and capital losses would be deductible only against other income from capital and would thus attract tax relief at the low flat tax rate applying to such income. In general, a key element of the philosophy of the DIT is that the flat capital income tax should be as broad-based as possible, so as to achieve the greatest possible degree of uniformity and neutrality in capital income taxation.

The DIT was pioneered by the Nordic countries. Table 1 provides an overview of current tax practices in Finland, Norway, and Sweden, which have implemented the most consistent versions of the system.[5] In these countries, the flat capital income tax rate ranges between 28 and 30 percent. This is roughly in line with both the corporate tax rate and the lowest marginal rate in the labour income tax schedule, but far below the top marginal tax rate on labour income. Because of the "flatness" of the capital income tax, in many cases it can conveniently be collected by final

4 Sri Lanka and India did briefly experiment with a rudimentary expenditure tax in the 1960s.

5 Denmark was the first country to introduce the DIT, in 1987, but has subsequently moved to a hybrid between the comprehensive income tax and the DIT. It is therefore not included in table 1.

TABLE 1 Dual Income Taxation in the Nordic Countries, 2006 (Tax Rates in Percent)

	Finland	Norway	Sweden
Year of implementation	1993	1992	1991
Personal tax rate			
Capital income	28	28	30
Labour income	27.4 to 50.9	28 to 49	31.5 to 56.5
Offset of negative capital income	Deductible against positive capital income	Deductible against other income in the first tax bracket	Tax credit
Corporate income tax rate	26	28	28
Integration of corporate and personal income tax	*Quoted companies* Only 70 percent of dividends are taxed (as capital income) *Unquoted companies* Dividends below an imputed return on shares are exempt from personal tax;[a] only 70 percent of dividends above that limit are taxed (as labour income)	Only dividends and capital gains in excess of an imputed rate of return on shares are taxed (as capital income)	*Quoted companies* No integration *Unquoted companies* Dividends and capital gains on unquoted shares are taxed at reduced rates (see below)
Personal tax rate			
Dividends	19.6[b]	28[c]	30[d]
Capital gains on shares	28	28[e]	30[f]
Withholding tax rate[g]			
Interest	28	28	30
Dividends	19	0	30

(The table is concluded on the next page.)

TABLE 1 Concluded

[a] Seventy percent of dividends exceeding €90,000 but falling below the imputed return are taxed as capital income.
[b] That is, (28 × 0.7).
[c] Applies only to dividends in excess of an imputed rate of return on the shares.
[d] For active owners of closely held companies, dividends below an imputed return are taxed at a reduced rate of 20 percent while dividends above the imputed return are taxed as labour income. Dividends received by "passive" owners of unquoted companies are taxed at a reduced rate of 25 percent.
[e] Applies only to capital gains in excess of an imputed rate of return on the shares.
[f] For active owners of closely held companies, capital gains below an imputed return are taxed at a reduced rate of 20 percent while gains above the imputed return are taxed as labour income. Gains realized by "passive" owners of unquoted companies are taxed at a reduced rate of 25 percent.
[g] For domestic residents.

Source: Author's compilation of information from the International Bureau of Fiscal Documentation.

withholding. However, for symmetry and neutrality, the Nordic countries offer a tax credit for negative net capital income, or allow it to be offset against positive income in the first tax bracket. While it was originally part of the DIT philosophy to avoid double taxation of corporate-source income, the Nordic countries have not fully done so—though Norway comes close by exempting an imputed normal return to all shares from taxes on dividends and capital gains.

THE RATIONALE FOR THE DUAL INCOME TAX

The Dual Income Tax, Income Distribution, and Public Revenue

The Nordic countries have abandoned progressive taxation of capital income as a means of redistributing income—not because they have given up on progressivity, but because they have concluded that progressive taxes on capital income are not good at achieving it, and may even have counterproductive effects. Taxing capital income when it is positive also means allowing a deduction for it when it is negative. In the Nordic countries prior to the DIT reforms, high income earners were often able to achieve a considerable reduction in their tax liability by exploiting the deductibility of interest payments against earned income while placing their savings in tax-favoured assets. Indeed, as a result of such practices, the net revenue from the personal tax on capital income in Norway and Sweden tended to be negative before the introduction of the DIT. By adopting the DIT, these countries actually *gained* revenue that was used to lower marginal tax rates on labour income. At the same time as the Nordic countries broadened their capital income tax base and lowered the capital income tax rate in order to strengthen public revenue, they continued to pursue their distributional goals by maintaining a progressive tax schedule for non-capital income.

The Case for the Dual Income Tax

In the Scandinavian countries with liberal rules for interest deductibility, the revenue argument stated above provided an important motivation for moving toward a DIT. In countries with tighter limitations on the deductibility of negative capital income, this argument may carry less weight. However, several other arguments have been given in favour of the DIT. These can be summarized as follows:[6]

1. *Accounting for capital mobility.* As capital becomes increasingly mobile across international borders, there is a growing risk that a high domestic capital income tax rate will induce taxpayers to move their wealth to foreign low-tax jurisdictions (making it very hard to bring that income into the domestic tax net). Separating the capital income tax rate from the labour income tax schedule allows policy makers to lower the capital tax rate and reduce the risk of capital flight.
2. *Improving tax neutrality.* Capital income accrues in many forms. Some of them (such as imputed rent on owner-occupied housing) are hard to tax, for practical or political reasons. Lowering the tax rate on those types of capital income that *can* be taxed reduces the distortions that arise when certain types of capital income cannot be included in the tax base. A low tax rate also makes it easier to include realized capital gains in the tax base without seriously discouraging and distorting asset trades.
3. *Accounting for inflation.* The income tax is typically levied on the full nominal return to capital, including an inflation premium, which only compensates for the erosion of the real value of nominal assets. Thus, (many forms of) capital income would be overtaxed if tax were charged at the top marginal rate applying to labour income. Applying a low flat tax rate to capital income is a pragmatic way of dealing with this problem.
4. *Reducing the scope for tax avoidance.* Aligning the corporate tax rate with the personal tax rate on capital income, and equalizing marginal capital income tax rates across taxpayers, eliminates the scope for tax arbitrage activities that seek to exploit differences in those rates.
5. *Reducing discrimination against saving.* By taxing the return to saving, a conventional income tax discriminates against taxpayers who save a relatively large part of their lifetime income in the early stages of their life cycle, since

6 For a more detailed discussion of the case for the DIT, see Peter Birch Sørensen, "From the Global Income Tax to the Dual Income Tax: Recent Tax Reforms in the Nordic Countries" (1994) vol. 1, no. 1 *International Tax and Public Finance* 57-79; Peter Birch Sørensen, ed., *Tax Policy in the Nordic Countries* (Basingstoke, Hampshire, UK: Palgrave Macmillan, 1998); Sijbren Cnossen, "Taxing Capital Income in the Nordic Countries: A Model for the European Union?" in Sijbren Cnossen, ed., *Taxing Capital Income in the European Union: Issues and Options for Reform* (Oxford: Oxford University Press, 2000), chapter 8; and Robin Boadway, "The Dual Income Tax System—An Overview" (2004) vol. 2, no. 3 *CESifo DICE Report* 3-8.

those individuals will end up paying a higher lifetime tax bill than people with similar earnings who choose to save less. Reducing the capital income tax rate alleviates this discrimination.

In the Nordic public debate, the so-called inflation argument (the third point above) played an important role in helping to persuade adherents to redistribution of the fairness of the DIT. The inflation argument has considerable force even given moderate inflation rates. For example, if the nominal interest rate is 4 percent and the rate of inflation is 2 percent, a 50 percent tax rate on nominal interest implies that all of the *real* interest of 2 percent is taxed away. Thus, if the top marginal tax rate on labour income is 50 percent, a 25 percent tax rate on nominal capital income would suffice to align the taxation of real income from capital with the taxation of income from labour.

For policy makers, the so-called capital mobility argument (the first point above) also played a crucial role in the push for the DIT. Aligning the marginal tax rate on capital income with the very high top marginal tax rates on labour income prevailing in the Nordic region was seen as an unsustainable policy in a world of growing capital mobility. Moreover, a sharp reduction in marginal tax rates on labour income was found to be too costly for the public coffers and unacceptable from a distributional viewpoint. Moving from a comprehensive income tax to a DIT was a way of escaping from this dilemma.

Similar considerations—especially the concern with international capital mobility—have led many countries outside the Nordic region to introduce elements of dual income taxation.[7] For example, several countries (including Austria, Belgium, Germany, Italy, Slovenia, and Turkey) have introduced final flat withholding taxes on interest and dividends at rates far below the top marginal labour income tax rate.

While several arguments can be advanced in favour of the DIT, this tax system also raises some administrative challenges. The main difficulty with the pure version of the DIT is the need to split the income of active owners of small firms into a capital income component and a labour income component. Indeed, this is often seen as the Achilles heel of the DIT. The discussion that follows will focus on possible solutions to this problem and the related problem of integrating the corporate and the personal income tax under a DIT. First, as an introduction to some of the issues involved, I will describe two alternative versions of the DIT.

Alternatives for the Design of a Dual Income Tax

As well as taking many forms, capital income may have several different components. These include the risk-free return that compensates savers for postponing consumption, a risk premium compensating investors for their exposure to risk, and

7 These developments are reviewed by Wolfgang Eggert and Bernd Genser, "Dual Income Taxation in EU Member Countries" (2005) vol. 3, no. 1 *CESifo DICE Report* 41-47.

an element of pure profit (rent) over and above the minimum return required by investors. In the design of a DIT, a basic policy choice is whether the low flat tax rate should apply to all of the components of capital income, or whether some components should be subject to the progressive tax schedule applying to labour income.

Apart from the implications for income distribution and public revenue, the policy decision on this issue is also important from the viewpoint of economic efficiency. While a tax on the risk-free return inevitably distorts savings decisions, a tax on pure rents is non-distortionary; and (as we shall see below) it is also possible to design a tax on the risk premium that is, in principle, neutral toward saving and investment decisions. Including risk premiums and pure rents in the base for progressive taxation therefore seems attractive, since it enables the government to raise revenue in a non-distortionary manner (at least in theory).

In practice, many "pure" profits are firm-specific, arising from the firm's possession of a special technology, organizational knowhow, trademark, or international market position. Such firm-specific rents are often internationally mobile—that is, they can be shifted abroad by relocating the business activity. In an open economy, a high tax on rents may therefore discourage domestic investment. However, while *firms* may be quite mobile across borders, their *owners* will typically be much less mobile. Hence, it may be possible to impose a non-distortionary residence-based tax on rents at the individual investor level while addressing the high mobility of business investment through a low source-based corporation tax.

The evolution of the Norwegian DIT illustrates the implications for tax design of the choice between the policy alternatives sketched above. The original version of the DIT introduced in Norway in 1992 allowed almost all components of capital income to be taxed at a low flat rate. For companies with "passive" owners, the double taxation of dividends was fully alleviated through an imputation system. Double taxation of retained profits was likewise avoided through a system that allowed shareholders to add retained profits to the basis of their shares for the purpose of calculating capital gains tax (the "RISK" system). As a consequence, all income from widely held corporations was taxed only once at the same low rate as that applied to other income from capital. In the case of proprietorships and closely held companies with "active" owners, an imputed return to the capital invested in the firm was taxed as capital income. This imputed return was calculated by adding a considerable risk premium to the interest rate on five-year government bonds. As a result, in most cases the risk premium, and probably in some cases even an amount of pure rent, was taxed at the low capital income tax rate. By contrast, under the new Norwegian tax system prevailing since the beginning of 2006, only a low imputed risk-free (after-tax) return to shareholding escapes double taxation, and only a similar low imputed risk-free return to capital invested in unincorporated firms is taxed as capital income. Thus, the new Norwegian tax system imposes a higher marginal tax rate on risk premiums and pure rents.

In the discussion below, I will describe in more detail how capital income is delineated under the two policy alternatives for the DIT. Since the mechanics of tax design for the owners of sole proprietorships and partnerships are the same under

the two versions of the DIT, I will start by considering the taxation of these two groups, which I shall refer to collectively as the self-employed.

TAXATION OF INCOME FROM SELF-EMPLOYMENT[8]

The Problem: Income from Self-Employment Derives from Both Capital and Labour

Since the self-employed work in their own business, part of their business income must be seen as labour income. At the same time, because the self-employed have invested (part of) their wealth in their business, another part of their income is a return to their business assets, which is clearly a form of income from capital. If all of the business income of the self-employed were taxed as labour income at progressive rates, their capital income would be overtaxed relative to other types of capital income. On the other hand, if all income from self-employment were taxed at the low flat rate applying to capital and corporate income, the self-employed would escape tax progressivity altogether, even though part of their income stems from their work effort.[9]

To avoid such unequal tax treatment, it is necessary to split the income of the self-employed into a labour income component and a capital income component. Since the working hours and effort of the self-employed cannot be observed by the tax authorities, whereas the stock of business assets can, in principle, be observed, it is natural (and common practice in DIT countries) to split the income of the self-employed by first imputing a rate of return to their business assets, which is categorized as capital income, and then treating the residual business profit as labour income.

Alternative Methods of Income Splitting

The imputed rate of return to business assets may be computed on either a "gross assets" or a "net assets" basis. Under the gross assets method, the net financial liabilities of the firm are not deducted from the asset base. The labour income of the entrepreneur is thus calculated by deducting an imputed return to gross business assets (the assets recorded in the firm's balance sheet) from the gross profits of the firm (defined as profits *before* interest on business debt), and taxable net capital income is calculated by deducting interest expenses from the imputed return to the gross assets.

8 This section draws on K.P. Hagen and P.B. Sørensen, "Taxation of Income from Small Business: Taxation Principles and Tax Reforms in the Nordic Countries," in *Tax Policy in the Nordic Countries*, supra note 6, chapter 2, where the taxation of the self-employed in the Nordic countries is discussed in more detail.

9 Note that the problem of securing equal treatment of the self-employed vis-à-vis wage earners also arises in countries that subscribe to a comprehensive personal income tax insofar as these countries also rely on social security taxes that are intended to fall only on labour income.

By contrast, under the net assets method, capital income is determined by imputing a return to the net assets of the firm (business assets minus business debt), and labour income is found by deducting this imputed return from net profits (profits *after* the deduction of interest). These methods are illustrated by the simplified numerical example in the accompanying table.

If the imputed rate of return equals the rate of interest paid on business debt, the two methods will be equivalent. Thus, in the table, where the imputed return and the interest rate are both assumed to be 10 percent, the imputed income from capital (20) and the income from labour (200) are exactly the same under the two methods.

The "Gross Assets" Versus the "Net Assets" Method of Splitting Income from Self-Employment

Income statement

1. Sales revenue	500
2. Business expenses	200
3. Gross profit (before interest on business debt) (line 1 – line 2)	300
4. Interest on business debt (10% of line 8)	80
5. Net profit (gross profit less interest) (line 3 – line 4)	220

Balance sheet

Assets		*Liabilities*	
6. Business assets	1,000	8. Business debt	800
		9. Net worth	200
7. Total business assets	1,000	10. Total liabilities	1,000

Income splitting on a gross assets basis

11. Gross business assets (line 7)	1,000
12. Imputed return (10% of line 11)	100
13. Labour income: gross profit less imputed return (line 3 – line 12)	200
14. Capital income: imputed return less interest (line 12 – line 4)	20

Income splitting on a net assets basis

15. Net business assets: gross assets less debt (line 7 – line 8)	200
16. Imputed return (10% of line 15)	20
17. Labour income: net profit less imputed return (line 5 – line 16)	200
18. Capital income: imputed return (line 16)	20

The equivalence between the two methods of income splitting breaks down if the imputed rate of return deviates from the interest rate on business debt. If the imputed rate of return exceeds the interest rate, a larger fraction of business income will be categorized as capital income (and a correspondingly lower fraction will be

taxed as labour income) under the gross assets method than under the net assets method. The opposite will occur if the imputed rate of return is lower than the interest rate.

Moreover, significant deviations between the imputed return and the interest rate on debt will tend to distort business investment under the gross assets method. For example, suppose that the imputed return is 15 percent and the interest rate is only 10 percent, and that an entrepreneur can earn a pre-tax return of 10 percent on an additional business investment of 100. If the entrepreneur borrowed to finance the investment, in the absence of tax, he would just break even. However, in the presence of tax, he would score a net gain, because the investment would add 15 to his imputed capital income but only 10 to his total taxable profit. Hence, a larger share of total profit would be taxed at the low capital income tax rate rather than at the high labour income tax rate, thereby reducing the entrepreneur's total tax bill.

In contrast, under the net assets method of income splitting, the recorded net assets of the firm would not be affected by an additional debt-financed investment. Nor would the investment affect net profits in the example given above: gross profits would rise by 10, but so would interest expenses. Thus, this method of income splitting ensures that the DIT remains neutral toward marginal investment decisions.

Anti-Avoidance Measures

The above analysis seems to imply a preference for the net assets method on tax neutrality grounds, but unfortunately this method also allows greater scope for tax arbitrage. Specifically, the net assets method implies that interest expenses become deductible against the high marginal tax rate on labour income, because they reduce the residual net profit that is taxed as labour income at the margin. This provides a strong incentive for entrepreneurs to record private debt (debt incurred for non-business purposes—say, to finance the purchase of a consumer durable or a house) as business debt in order to benefit from interest deductibility.

To limit the scope for such transactions, the self-declared business income should be adjusted in cases where the declared net assets of the firm become negative, since negative net business assets are a strong indication that private debt has been transferred to the business sphere. Specifically, business income for tax purposes should be raised by the imputed return times the recorded negative net worth of the firm to (roughly) offset the fact that reported business income has been artificially lowered by allocating non-business interest expenses to the firm. To the extent that the tax law allows the deduction of non-business interest expenses, the upward adjustment of taxable business income should, of course, be accompanied by a corresponding downward adjustment of the entrepreneur's non-business capital income. (If the latter were negative, as it might well be, the entrepreneur would receive a tax credit equal to the capital income tax rate times the negative capital income.)

The net assets method may also require a similar adjustment of taxable business income in certain other cases in order to prevent tax arbitrage. For example, if the imputed return is based on net assets at the start of the year, the entrepreneur may reduce his taxable labour income by withdrawing funds from the firm during the

year (thereby reducing its recorded net profit by reducing its net interest income) and reinject the funds into the firm before the start of the next year in order not to reduce the base for calculating the imputed rate of return. Of course, the interest earned outside the firm on the funds withdrawn from it would attract capital income tax; but at the same time, the entrepreneur's imputed labour income would go down, implying a transformation of labour income into capital income. Hence, it may be necessary to undertake an upward adjustment of the firm's recorded net interest income (and a corresponding downward adjustment of the entrepreneur's "private" net capital income) in cases where the proprietor withdraws funds from the firm only to reinject them later in the same fiscal year.

Thus, the choice between the gross assets and the net assets methods involves a tradeoff between the superior neutrality properties of the net assets method and the greater simplicity and lower vulnerability to tax arbitrage offered by the gross assets method.

Another avoidance problem arising under both methods of income splitting is that entrepreneurs may gain by transferring low-yielding non-business assets (such as a piece of real estate or a motor vehicle used for private consumption) from the private sphere to the business sphere. By adding to the recorded stock of business assets an asset with little or zero (taxable) yield, the entrepreneur will have a higher proportion of his business income taxed as capital income, since the base amount for calculating the imputed return goes up while total business income stays (almost) unchanged. To prevent such transformation of labour income into capital income, the tax law must include clauses limiting the scope for transferring non-business assets to the business sphere.

The Treatment of Losses and the Choice of the Imputed Rate of Return

When determining the rate of return imputed to business assets, policy makers must decide whether to include a risk premium in the imputed return. The case for doing so depends critically on the tax treatment of losses. If the tax code allows full loss offsets[10] and the marginal tax rate on business income is constant over time, it is not necessary to include a risk premium in the imputed return to avoid discouraging investment and risk taking. Indeed, in this case, the DIT will actually *stimulate* risk taking even when the imputed return contains no risk premium, as shown in the analysis below (analysis 1). The reason is that, with full loss offsets, the high labour income tax rate imposed on residual business income works as an insurance device that reduces the variability (and hence the riskiness) of after-tax business income. Entrepreneurs are therefore induced to increase the fraction of their wealth invested in risky business assets in order to take advantage of the higher expected average return on such assets.

10 This would involve unlimited carryforward of losses with interest to preserve the present value of the deduction.

However, because of the risk of abuse, the tax code rarely allows full loss offsets. Moreover, if marginal business income is taxed progressively as labour income, losses incurred in bad years will often be deducted against a lower tax rate than the marginal tax imposed on profits accruing in good years. If these tax asymmetries are strong, the tax system will tend to discourage risk taking. In that situation, there is a case for including a risk premium in the imputed return on business assets that is taxed as capital income. Ideally, the imputed risk premium should vary with the risk characteristics of each individual investment project; but since tax authorities lack the information and the administrative capacity to undertake a detailed differentiation of risk premiums, they may choose to apply the same risk premium across the board. Inevitably, this premium will be too high for some investment projects and too low for others, implying some distortion in the pattern of risk taking.

Analysis 1 Taxation and risk taking under full loss offset

Consider an entrepreneur who may allocate his wealth between a safe asset yielding a fixed rate of return r^* and a risky business asset generating an uncertain but generally higher rate of return r. As a benchmark case, suppose initially that the rate of return imputed to business assets under the DIT is so high that the entire return to the risky as well as the safe asset is always taxed at the capital income tax rate t. If the entrepreneur allocates a fraction of his wealth, a_1, to the risky asset, the overall net rate of return to his wealth will be

$$\begin{aligned} y_1 &= (1 - a_1) r^* (1 - t) + a_1 r (1 - t) \\ &= r^* (1 - t) + a_1 (r - r^*) (1 - t), \end{aligned} \tag{1}$$

where the first term on the right-hand side of the upper line in equation 1 is the after-tax return to investment in the safe asset, and the second term is the after-tax return to the risky asset.

We may now compare the outcome in equation 1 with the outcome under a DIT where only a risk-free imputed return, r^*, on the entrepreneur's business assets is taxed as capital income, whereas the remaining return $r - r^*$ is taxed as labour income at the higher rate m. Suppose that, in this situation where the imputed return includes no risk premium at all, the entrepreneur decides to allocate a proportion of his wealth, a_2, to the risky business asset. Suppose further that the tax code offers a full loss offset so that all losses may be deducted against the marginal labour income tax rate m. The entrepreneur's overall return will then be

$$\begin{aligned} y_2 &= (1 - a_2) r^* (1 - t) + a_2 [r - t \cdot r^* - m (r - r^*)] \\ &= r^* (1 - t) + a_2 (r - r^*) (1 - m). \end{aligned} \tag{2}$$

Comparing equations 1 and 2, one easily sees that the entrepreneur's after-tax return will always be the same under the two tax regimes if he adjusts his portfolio share a_2 in accordance with the rule

$$a_2 = a_1 \left(\frac{1-t}{1-m} \right). \tag{3}$$

In other words, if he can freely adjust his portfolio, the entrepreneur can never be worse off under a DIT regime that does not include a risk premium in the imputed return (compared with one that does). Note also that the entrepreneur will in fact have an incentive to adjust his portfolio in accordance with equation 3 in order to avoid a decrease in his expected net return when the imputed return no longer includes a risk premium. Since $m > t$, it follows from equation 3 that the entrepreneur should *increase* the portfolio share devoted to risky assets when the residual returns to his wealth become subject to the high labour income tax rate. By doing so, the entrepreneur will on average obtain an increase in his total pre-tax return that exactly compensates for the higher tax on his risk premium; and at the same time, the higher tax rate on his marginal earnings will ensure that the variance (riskiness) of his overall net return is no greater than before.

Taxation of the Self-Employed in the Nordic Countries

The Nordic DIT countries all provide an option for the self-employed to have their income split into a capital income component and a labour income component. Norway uses a variant of the gross assets method, while Finland and Sweden practise variants of the net assets method. Apart from distinguishing between labour and capital income, the Swedish scheme also allows imputed labour income retained in the firm to be taxed at the low corporate income tax rate, postponing imposition of the progressive labour income tax until profits are distributed.

Although Denmark does not apply a pure DIT, having maintained some degree of progressivity in the taxation of capital income, it does tax labour income more heavily at the margin. Denmark therefore allows the self-employed to opt for a splitting of their business income into capital income and labour income. Entrepreneurs opting for income splitting may choose between the simpler gross assets method and a more complicated net assets method similar to the Swedish scheme.

Some Final Observations on Income Tax Design for the Self-Employed

In designing tax rules for the self-employed under the DIT, the following considerations should be kept in mind:

1. If the tax rate in the lowest bracket of the labour income tax schedule is aligned with the tax rate on capital income, entrepreneurs whose business income falls within the lowest tax bracket will have no need for income splitting, since they will face the same marginal tax rate on capital income and labour income. If the upper threshold for the lowest tax bracket is set at a fairly high income level, many self-employed will never need to have their income split, resulting in considerable administrative simplification.
2. Income splitting should be an option but not a requirement for the taxpayer, since it offers an opportunity for entrepreneurs to avoid overtaxation of the capital income component of their business income. If an entrepreneur does not opt for income splitting, his business income will automatically be taxed

as labour income. Since income splitting requires that taxpayers keep proper accounts of their assets and liabilities, taxpayers wishing to benefit from the low tax rate on capital income will have an incentive to keep proper books rather than relying on simplified accounting. Switching to a DIT may therefore help to promote modern business record keeping in small enterprises—a result that may be desirable in itself.

3. The gross assets method is administratively simpler than the net assets method, for the revenue authorities as well as for taxpayers, in part because it requires fewer anti-avoidance measures. If simplicity and low compliance costs are a priority, there is a strong argument for choosing this method of income splitting.

TAXATION OF INCOME FROM CLOSELY HELD CORPORATIONS

The Income-Shifting Problem

The taxation of small corporations with active owners working in their own business raises a similar issue as the taxation of the self-employed: part of the owner's income from the business must be seen as a return to the capital invested in the firm, and part is the reward for the work effort and skills of the owner. In the absence of special rules for these closely held companies, dividends and capital gains on shares realized by an owner would be treated as capital income under the DIT (perhaps with some form of relief for the underlying corporation tax), while management salary paid to the owner would be treated as labour income. If the *sum* of the corporation tax and the personal tax on dividends and/or capital gains is less than the marginal tax rate on labour income, the owner has an obvious incentive to pay himself dividends or to realize a capital gain on (part of) his shares rather than pay himself a realistic salary.

One Solution: Treating Small Companies like Proprietorships

A possible solution to this problem would be to tax the income from small companies accruing to active controlling shareholders in the same way as income from self-employment. This implies that a fraction of corporate profits equal to the fraction of shares owned by active shareholders working in their own company would be split into an imputed return on corporate assets, which would be taxed as capital income, and a residual profit that would be taxed as labour income. This income splitting would apply regardless of the actual amount of dividends or capital gains realized by the owners, so that the owners would be unable to transform labour income into capital income by paying themselves lower salaries and instead taking out higher dividends or capital gains. The corporation tax would serve as a withholding tax on corporate profits, but it would be credited against the shareholder's personal tax bill to prevent double taxation of corporate equity income.

The main problem with this scheme is the difficulty of identifying the active controlling shareholders who should be subject to mandatory income splitting. It

would seem natural to require mandatory income splitting only in cases where the shareholder carries out a certain minimum amount of work in the business and where, in addition, he has a certain minimum (controlling) ownership share in the company, possibly in conjunction with his closest relatives. It is in such cases that the shareholder will most likely be able to transform management salary or other labour income from the company into dividends or capital gains in order to reduce his tax bill.

However, one can easily imagine several ways in which such rules could be circumvented. For example, a controlling shareholder might invite relatives or friends to step in as minority shareholders so that he would no longer be subject to the income-splitting rules, even if he maintained effective control over the company's dividend policy. One can also imagine that dominant shareholders might exchange shares in each other's companies in order to avoid mandatory income splitting without giving up control of their respective companies.

The Norwegian experience suggests that such tax avoidance is not just a theoretical possibility. As part of the transition to the DIT in 1992, Norway introduced mandatory income-splitting rules for active shareholders along the lines described above. Yet, between 1992 and 2000, the proportion of corporations subject to income splitting fell from 55 percent to 32 percent, indicating that a growing number of taxpayers were able to change status from active to passive shareholders.

More fundamentally, the dividing line between "active" and "passive" shareholders is essentially arbitrary and may lead to unequal tax treatment of shareholders who are, for practical purposes, in equal positions.

An Alternative Solution: A Shareholder Income Tax with a Rate-of-Return Allowance

Because of the difficulties discussed above, it seems desirable to avoid having to distinguish between active and passive shareholders. This section describes an alternative scheme that does not require this distinction. A version of this scheme has been implemented in Norway since January 1, 2006, following recommendations from an expert committee.[11]

The basic principle of the scheme is simple: shareholder income below an imputed "normal" return is tax-exempt at the shareholder level, since such income has already been subject to corporation tax at a rate corresponding to the capital income tax rate, but dividends and capital gains in excess of the imputed normal return are subject to a personal shareholder income tax. By an appropriate choice of tax rates, the sum of the corporation tax and the personal shareholder income tax corresponds to the top marginal tax rate on labour income. Since controlling shareholders can

11 Skatteutvalget, Forslag til endringer i skattesystemet, Norges offentlige utredninger 2003:9. I was a member of this committee. For a more formal analysis of the scheme described here, see Peter Birch Sørensen, "Neutral Taxation of Shareholder Income" (2005) vol. 12, no. 6 *International Tax and Public Finance* 777-801.

gain nothing by transforming labour income into shareholder income, there is no need to split the income of "active" shareholders.

The shareholder income tax is imposed only when income from the company is distributed as a dividend or is realized as a capital gain on shares. In other words, the tax base is the realized income from the shares minus a rate-of-return allowance (RRA). The realized income is the sum of dividends and any realized net capital gain on the shares in the company. Dividends and capital gains are thus treated symmetrically. If the realized income falls short of the RRA, the unutilized RRA may be carried forward and deducted in a later year.

The RRA is calculated as an imputed rate of return times the basis of the share. The basis for the current year is the sum of the original basis and all unutilized RRAs from previous years; that is, the original basis is stepped up year by year by any unutilized RRAs. This step-up is necessary to ensure that only capital gains in excess of the normal return are subject to shareholder income tax.

The imputed rate of return should correspond to a normal *after-tax* rate of return from investment in the capital market, since this is the taxpayer's opportunity cost of investing in, say, bonds rather than shares.[12] At the same time, since the corporate tax rate corresponds to the capital income tax rate under a consistent DIT, shareholder income not exceeding the imputed return should be left free of personal income tax so as to avoid double taxation of the normal return to investment.[13]

A simple numerical example (example 1 below) illustrates how the base for the shareholder income tax is calculated. Assume that a shareholder injects equity into a company at the start of year 1, receives a dividend at the end of year 1, and realizes a capital gain on the shares (scenario 1) or receives a dividend (scenario 2) at the end of year 2. The imputed return on shares, the after-tax interest rate, and the return to the company's investment after corporation tax are all assumed to be 5 percent. It is also assumed, plausibly, that $1.00 of retained profit will generate a $1.00 increase in the market value of shares in the company, as long as the retained profit does not exceed the shareholder's tax-free imputed return.

Example 1

Year 1

1. Injection of equity at the start of the year	1,000
2. Profit after corporation tax (5% of line 1)	50
3. Dividend	30
4. Retained profit (line 2 – line 3)	20
5. RRA (5% of line 1)	50
6. Unutilized RRA (line 5 – line 3)	20

12 I will discuss in a later section whether the imputed "normal" return should include a risk premium. See "The Imputed Return and the Treatment of Losses."

13 Companies could be required to keep a taxed profits account to ensure that only "normal" dividends paid out of taxed profits are exempt from personal tax.

Year 2

7. Stepped-up basis of shares (line 1 + line 6)	1,020
8. Profit after corporation tax (5% of (line 1 + line 4))	51
9. RRA (5% of line 7)	51

Scenario 1: Shares are realized at the end of year 2

10. Revenue from sale of shares at the end of year 2 (line 1 + line 4 + line 8)	1,071
11. Stepped-up basis of shares at the start of year 2 (line 7)	1,020
12. RRA for year 2 (line 9)	51
13. Taxable capital gain (line 10 – line 11 – line 12)	0

Scenario 2: All profits are distributed at the end of year 2

14. Dividend at the end of year 2 (line 4 + line 8)	71
15. Total RRA (line 6 + line 9)	71
16. Taxable dividend (line 14 – line 15)	0

Under the foregoing assumptions, we see that regardless of the form of the shareholder's return (whether dividends or capital gains), he will end up with zero taxable income in both scenarios. The example illustrates the important point that the shareholder income tax is neutral with respect to investment and financing decisions. In the absence of the shareholder income tax, the investment considered in the example is barely worth undertaking for the company since it yields a return that only just matches the market interest rate. The example shows that the shareholder income tax will not affect the profitability of such a "marginal" investment, whether profits are distributed or retained in the company.

The neutrality of the shareholder income tax reflects its equivalence to a cash flow tax that is known to be neutral. This equivalence result (which assumes full loss offsets) is demonstrated formally in my earlier analysis,[14] and it may be explained intuitively as follows. A cash flow tax is neutral because it effectively makes the government a silent partner in all investment projects, sharing symmetrically in all gains and losses. Thus, a cash flow tax allows full expensing of investment, generating an immediate tax reduction equal to the tax rate t times the investment outlay K. Alternatively, one might allow investors to deduct in all future periods a rate of return, RRA, on the initial investment outlay, as the shareholder income tax actually does. When the future tax savings from the RRA are discounted at the market interest rate i, their net present value will be $NPV = t \cdot RRA \cdot K/i$. If we set $RRA = i$, as in our numerical example, we get $NPV = t \cdot K$, indicating that a shareholder income tax with an RRA equal to the market interest rate will ensure equivalence with the neutral cash flow tax, generating exactly the same tax liability in present value terms.

14 Sørensen, supra note 11.

Holding Period Neutrality Under the Shareholder Income Tax

Another attractive aspect of the neutrality of the shareholder income tax is that it does not induce shareholders to postpone realization of their shares in order to defer capital gains tax, even though the tax is levied only upon realization. The reason is that the basis of the share is written up every year by the amount of any unutilized RRA. As shown in the following analysis, this effectively means that any postponed capital gains tax liability is carried forward with interest, thus eliminating the gain from deferral of realization.[15]

Analysis 2 Holding period neutrality under a realization-based capital gains tax with an RRA

Consider a share with a market value at time t of M_t and a basis value of B_t at that time. If the shareholder realizes his accumulated capital gain $M_t - B_t$ at time t, and if the tax rate is τ, his tax liability T_t will be

$$T_t = \tau(M_t - B_t). \tag{4}$$

If the realization is postponed until time $t + 1$, and assuming for simplicity that no dividends are paid in the meantime, the tax liability will be

$$T_{t+1} = \tau[M_{t+1} - (1 + r)B_t]. \tag{5}$$

That is, the basis of the share will be stepped up by the amount rB_t between time t and time $t + 1$, where r is the imputed rate of return and rB_t is the unutilized RRA during period t. From equations 4 and 5, we find that

$$\begin{aligned} T_{t+1} - T_t &= \tau\left[\left(\frac{M_{t+1} - M_t}{M_t}\right)M_t - rB_t\right] \\ &= \tau\left[\left(\frac{M_{t+1} - M_t}{M_t} - r\right)M_t + r\left(M_t - B_t\right)\right] \\ &= \tau\left(\frac{M_{t+1} - M_t}{M_t} - r\right)M_t + rT_t \;\Leftrightarrow \\ T_{t+1} &= (1+r)T_t + \tau\left(\frac{M_{t+1} - M_t}{M_t} - r\right)M_t. \end{aligned} \tag{6}$$

Equation 6 is the tax liability in period $t + 1$ expressed as the sum of the tax liability in period t, carried forward with interest, and the tax on the gain (in excess of the normal

15 The shareholder income tax is a special case of the generalized cash flow tax described in Alan J. Auerbach and David F. Bradford, "Generalized Cash-Flow Taxation" (2004) vol. 88, no. 5 *Journal of Public Economics* 957-80. The Auerbach-Bradford scheme ensures holding period neutrality even though tax is due only when assets are realized.

rate of return) from period t to period $t + 1$. Equation 6 shows that the tax system leaves no advantage from deferring the capital gains tax by postponing the realization from one period to the next. The reason is that the postponed tax liability is carried forward with interest, as reflected in the presence of the term $(1 + r)T_t$ on the right-hand side.

The neutrality of the shareholder income tax with respect to realization decisions may also be illustrated by example 2 below, where the shareholder at the end of year 0 holds shares with a current market value above the stepped-up basis, reflecting large capital gains accrued in the past. The shareholder may postpone the realization of his gain until the end of year 1 (scenario 1), or he may realize the gain immediately and invest his funds in the capital market (scenario 2). In both cases, he is assumed to earn a normal rate of return equal to 5 percent of his wealth before shareholder tax. In the absence of the tax, he will thus be indifferent in choosing between immediate and postponed realization of his accrued capital gain. The example shows that he will also be equally well off in the two scenarios after the introduction of the shareholder income tax (assumed here to be 30 percent).

Example 2

Shareholder's status at the end of year 0

1. Stepped-up basis of shares	1,000
2. Market value of shares	2,000

Scenario 1: The shares are held until the end of year 1

3. Revenue from sale of shares at the end of year 1 (105% of line 2)	2,100
4. RRA for year 1 (5% of line 1)	50
5. Taxable capital gain at the end of year 1 (line 3 – line 1 – line 4)	1,050
6. Tax on capital gain (30% of line 5)	315
7. Shareholder's wealth at the end of year 1 (line 3 – line 6)	1,785

Scenario 2: The shares are sold at the end of year 0 and the revenue is invested in the capital market

8. Revenue from sale of share at the end of year 0 (line 2)	2,000
9. Taxable capital gain at the end of year 0 (line 8 – line 1)	1,000
10. Tax on capital gain at the end of year 0 (30% of line 9)	300
11. Funds available for investment in bonds at the start of year 1 (line 8 – line 10)	1,700
12. Shareholder's wealth at the end of year 1 (105% of line 11)	1,785

We see that the shareholder income tax will neither encourage nor discourage the realization of shares. In a similar way, one can show that the tax will not distort the decision to realize a loss. As shown by analysis 2 above, the RRA is crucial for this neutrality property.

The Imputed Return and the Treatment of Losses

In a setting with uncertainty and risk, the neutrality of the shareholder income tax relies on the symmetry of the tax: whenever the realized rate of return r falls short of the rate-of-return allowance *RRA*, the shareholder should ideally be granted a tax reduction equal to $t \cdot (RRA - r)$ in present value terms, where t is the (marginal) shareholder income tax rate. This may be achieved by allowing the taxpayer to offset any realized loss on a share against any taxable income from other shares during the same year, and by allowing any remaining loss to be carried forward indefinitely with interest to be offset against future shareholder income. As long as the taxpayer earns sufficient taxable shareholder income in the future, such a carryforward rule will ensure a full loss offset in present value terms. In cases where the taxpayer does not receive (sufficient) future income from shares, full neutrality would require that he be granted a tax credit equal to the shareholder income tax rate times his remaining loss, to be offset against his tax liability on other income. Note that to preserve symmetry and neutrality, the "loss" on a share must be defined as $RRA - r$; that is, it must include the taxpayer's RRA. In other words, for tax purposes, the taxpayer is deemed to incur a loss whenever his realized capital gain falls short of his RRA for the current year plus any unutilized RRAs carried over from previous years.

With such fully symmetric tax rules, one can show that the imputed RRA does *not* have to include a risk premium to ensure neutrality of the shareholder income tax.[16] To understand this, note that if the future tax reductions attributable to the RRA accrue *with certainty*, as will in principle be the case with full loss offsets, the future tax breaks should be discounted at the risk-free (after-tax) interest rate i, even if the other cash flows associated with the stock investment are uncertain. Hence, the present value of the tax savings from an extra dollar of stock investment will be $NPV = t \cdot RRA/i$. If the RRA is set equal to the risk-free interest rate i, we therefore get $NPV = t$, showing that the government effectively finances a fraction of the investment outlay corresponding to the fraction of the cash receipts from the investment that must be paid in tax. Essentially, the government participates in the investment as a silent partner, and adding another partner sharing symmetrically in gains and losses cannot be distortionary.

Note that when the RRA does not include a risk premium, the shareholder income tax becomes a tax on the equity premium—that is, a tax on the difference between the return on shares and the risk-free interest rate. Since the equity premium is on average positive and quite substantial, the shareholder income tax will on average collect a non-negligible amount of revenue, even with full loss offsets.

In Norway, where a version of the shareholder income tax was introduced effective January 1, 2006, the imputed rate of return is set equal to the (after-tax) interest rate on three-month government bonds. These are practically risk-free, but despite the fact that the RRA does not include a risk premium, Norwegian policy makers

16 See Sørensen, supra note 11.

decided to impose certain limitations on loss offsets in order to prevent abuse. Specifically, an unutilized RRA for one share cannot be used to reduce taxable capital gains on other shares or to reduce other taxable income. The concern was that unless such a limitation was introduced, taxpayers would engage in so-called year-end transactions simply for the purpose of reducing tax liability.

In the Norwegian context, this potential tax-avoidance problem arises because the RRA on a share is assigned to the taxpayer who owns the share at the end of the year. If an unutilized RRA from a realized share were fully deductible against other income, a Norwegian personal taxpayer could purchase a share from a tax-exempt corporate or institutional investor or from a foreign investor (for whom the RRA has no value) just before the start of the new year and sell it immediately after. This would leave the taxpayer with an unutilized RRA that could be used to shield other taxable income.

The problem with year-end trades could be avoided if the amount of a taxpayer's RRA for any given year corresponded to the fraction of the year in which the taxpayer owned the share; indeed, this appears to be the most accurate and consistent way of calculating the RRA. However, it would also increase the burden of administering the shareholder income tax by requiring the authorities to keep track of trades in shares occurring during the fiscal year.[17] For administrative reasons, the Norwegian authorities therefore decided to assign RRAs to taxpayers who owned shares at the end of the year, relying on limitations on loss offsets to deal with the problem of tax-motivated year-end transactions.

As indicated by these observations, the rules for loss offsets and for the assignment of RRAs under a shareholder income tax require careful consideration and may involve difficult tradeoffs between the goals of tax neutrality and administrative simplicity.

The Treatment of Debt Versus Equity

The shareholder income tax implies that returns to shares above the going (risk-free) market interest rate will be subject to double taxation, whereas interest on debt will be taxed only once at the ordinary capital income tax rate. This asymmetry might induce companies to distribute their earnings in the form of interest on debt rather than in the form of equity income. Subordinated debt is often a close substitute for equity, and interest on such debt typically includes a substantial risk premium. Hence, it may be possible to avoid the shareholder income tax by paying out above-normal rates of return in the form of interest on loans from shareholders to the company. This may be prevented by an anti-avoidance clause stating that whenever the interest rate on a loan from a personal taxpayer to an unlisted company exceeds

17 Since unquoted shares are rarely traded, the problem would relate mainly to quoted shares. Because trades in such shares are computerized, it should, in principle, be possible to require financial intermediaries and professional traders to report investor holding periods to the tax authorities.

the imputed rate of return on shares, the difference will be subject to the shareholder income tax.[18]

The Treatment of Cross-Border Shareholdings

The shareholder income tax is a residence-based personal tax on the income from foreign as well as domestic shares. In principle, the tax thus ensures equal treatment of foreign and domestic investment. In practice, residence-based taxation may be hard to enforce, since it is difficult for domestic tax authorities to monitor foreign-source income, but the incentive to evade the shareholder income tax is reduced by the existence of the RRA combined with a credit for foreign withholding taxes against domestic personal tax. Given these two elements of the tax code, the gain from evasion will often be limited.

A country adopting the shareholder income tax must decide whether it wants to allow a deduction for the RRA before imposing any withholding tax on dividends paid out to non-resident individual shareholders in domestic companies. Norway has chosen to do so for dividends paid to individual shareholders resident within the European Economic Area (EEA), in order to avoid charges of discrimination against non-resident investors in the EEA. However, a country that is not bound by EEA treaty obligations would probably want to allow non-residents to deduct the RRA only where a bilateral tax treaty with the foreign jurisdiction likewise offers some kind of double tax relief to non-residents.

The Treatment of Corporate Shareholders

In principle, a shareholder income tax could be applied to corporate as well as to individual shareholders. However, this would imply that dividends distributed through a chain of subsidiaries in a corporate group would attract multiple layers of tax, since each distribution would be subject to shareholder income tax. Realizations of capital gains stemming from improved earnings (prospects) in a subsidiary of a conglomerate could likewise attract multiple layers of tax. The shareholder income tax might therefore distort the structure of corporate organizations if it were imposed on corporate as well as individual shareholders. For this reason, it seems desirable to exempt corporate shareholders from the shareholder income tax. As an anti-avoidance measure, the exemption might be modified by a rule stipulating that a domestic (resident) corporation is subject to shareholder income tax when the income originates from subsidiaries in certain foreign low-tax countries.

If corporate shareholders are exempt, the shareholder income tax will be levied only when corporate earnings are distributed from the corporate sector to (or when capital gains on shares are realized by) a domestic personal taxpayer. This provides an incentive for domestic individual shareholders to accumulate earnings within a

18 For investors in listed companies, there is little need for such an anti-avoidance rule, since interest payments from public corporations are unlikely to include an element of "hidden" labour income generated by the company's shareholders.

domestic corporation free of shareholder income tax and then move abroad to a low-tax country before selling the shares, thereby realizing a capital gain that will escape domestic tax. To prevent such avoidance, the tax code could treat the termination of domestic residency as a realization of shares that triggers domestic capital gains tax.

Small Versus Large Companies

The shareholder income tax is supposed to be levied on the equity premium on all shares owned by domestic individual shareholders. It might be argued that quoted shares could be exempt from the tax, since the problem of income shifting that the shareholder income tax is supposed to address mainly exists in smaller companies whose shares are typically unquoted. Leaving income from quoted shares out of the base for the shareholder income tax would clearly facilitate the administration of the tax. However, such asymmetry in the tax rules might distort the decision of companies to go public. More importantly, the attraction of the shareholder income tax is that, because the equity premium is on average positive, the tax raises revenue in a non-distortionary manner. An exemption for quoted shares would imply a revenue loss that would necessitate heavier reliance on distortionary taxes.

A popular view in the Nordic tax policy debate is that double taxation of corporate equity income drives up the cost of capital for small companies but not for large corporations with access to the international stock market, because domestic personal taxes on shareholder income do not affect the returns required by international investors. To limit the revenue loss from the RRA under the shareholder income tax, it might therefore seem natural to offer the RRA only to shareholders of small domestic companies. Motivated by this line of reasoning, the Swedish government previously allowed a deduction for an imputed risk-free return for holders of Swedish shares that are not listed on a stock exchange.[19] As I have demonstrated in a previous article,[20] by reducing the relative attractiveness of investment in quoted shares, a selective RRA available only to holders of unquoted shares will tend to lower the cost of capital for unquoted companies, since it will induce domestic investors to substitute unquoted for quoted shares. For the same reason, a selective RRA will also tend to increase the degree of foreign ownership of domestic quoted companies as domestic investors sell off (some of) their shares in these companies. In a later section of this article, I will discuss whether a selective RRA applying only to investors in small companies could, in fact, be a desirable policy.

19 Under these tax rules, the RRA was only deductible against dividend income and capital gains on shares were subject to separate special tax rules. Hence, the Swedish regime was not a "clean" shareholder income tax that fully integrated the taxation of dividends with the taxation of capital gains.

20 P.B. Sørensen, "Taxation of Shareholder Income and the Cost of Capital in an Open Economy: Theory and Applications to the Nordic Countries" (2005) vol. 143, no. 3 *Danish Journal of Economics* 433-47.

The Tax Schedule for Shareholder Income: Full Integration of the Corporate and the Personal Income Tax?

To ensure that active shareholders cannot transform labour income into lightly taxed capital income under the DIT, the sum of the corporation tax and the (marginal) personal tax on shareholder income must be roughly equal to the top marginal tax rate on labour income. Under the new Norwegian tax system, this is achieved by taxing shareholder income in excess of the RRA at the ordinary capital income tax rate of 28 percent. Since the corporate tax rate is also 28 percent, the total marginal tax rate on corporate equity income is $28 + (1 - 0.28) \times 28 = 48.16$ percent, which is close to Norway's top marginal tax rate on labour income, currently 47.8 percent.

Taxing shareholder income at the flat capital income tax rate has pedagogical advantages, since dividends and capital gains on shares are normally perceived as income from capital. However, under the Norwegian tax regime, the need to keep the total marginal tax rate on corporate equity income in line with the marginal tax burden on labour obviously constrains the choice of tax rate structure, since it (roughly) requires that $\tau + t\,(1 - \tau) = m$, where τ is the corporate income tax rate, t is the capital income tax rate levied on the marginal return to shares, and m is the top marginal tax rate on labour income. This constraint implies a loss of flexibility. In particular, if future increases in international capital mobility force a reduction in the tax rates on corporate income and capital income, the marginal tax rate on labour income will also have to come down. Hence, it appears that a major advantage of the DIT—that it allows a spread between the marginal tax rates on capital and labour to account for differences in factor mobility—could be lost.

This problem may be avoided by taxing shareholder income above the imputed return as labour income. Shareholder income exceeding the RRA would then be "grossed up" by the underlying corporation tax (by dividing the excess of the dividend or capital gain over the RRA by 1 minus the corporate tax rate), and the progressive tax on labour income would be calculated on this grossed-up basis, with a credit being given for the corporation tax already paid. In this way, the marginal tax rate on shareholder income would always correspond to the taxpayer's marginal tax rate on labour income, whether or not the taxpayer was in the top tax bracket, and the labour income tax schedule could be chosen independently of the tax rate on corporate and capital income. The disadvantage of this solution is that the proposed crediting mechanism is more complex than the current Norwegian tax regime.

Introducing and Administering the Shareholder Income Tax

In principle, the shareholder income tax utilizes the same information on dividends, acquisition prices, and realized selling prices that is needed to implement a conventional income tax on dividends and on realized capital gains on shares. However, under a conventional capital gains tax, the tax authorities do not need to verify the basis value of the share until the time it is realized. Since many unquoted shares are never traded, this reduces the need for checking the basis value of shares. Under the shareholder income tax, the basis value of the share must already be determined when

the share is acquired, and the basis must be stepped up every year in which there is any unutilized RRA. Therefore, in practice, tax administrators will have to process more information under the shareholder income tax than under a conventional capital gains tax. On the other hand, it will often be easier to document and verify the acquisition price of a share at the time of purchase than when it is subsequently realized.

The shareholder income tax requires information on each taxpayer's shares in each company. The administration and enforcement of the tax will be facilitated if it can be based on a central shareholder register that records the acquisition and sale of shares, with corresponding values, and the payment of dividends by companies. With such a register, the tax liability on each share may be calculated on a computerized basis. In fact, since the beginning of 2004, Norway has maintained a shareholder register recording shareholdings and share values based on information reported by Norwegian companies and shareholders.

If a central shareholder register is not available, the administration of the shareholder income tax will have to rely on self-assessment combined with random audits. If the RRA is granted only to shareholders in small domestic companies (as discussed above and subsequently), such a system should not impose unreasonable administration and compliance costs.

To the extent that the tax authorities have not already recorded a basis (acquisition price) for existing shares, these basis values have to be determined at the time of introduction of the shareholder income tax. A valuation of shares may be needed in cases where the taxpayer cannot document the historical cost price. If an imputation system or some other system of double tax relief is in place before the reform, considerations of fairness suggest that the RRA should be granted to all existing shareholdings for deduction against dividends as well as capital gains, since the RRA is just a new form of double tax relief. However, if the starting point is a classical corporate tax system with full double taxation of corporate income, it seems natural not to offer an RRA for deduction against dividends on existing shares, since doing so would only generate a windfall gain to current shareholders and a corresponding tax revenue loss, without improving corporate investment incentives. To strengthen incentives for new corporate investments, it would be sufficient to allow an RRA for dividends on new equity issued after the time of reform. Similarly, when calculating taxable capital gains, only (unutilized) RRAs accumulated after the reform would be deductible, ensuring an improved incentive for new investment financed by retained earnings.

Double Tax Relief for Companies or for Shareholders?

As an alternative to alleviating the double taxation of corporate income at the individual shareholder level, double tax relief could, in principle, be granted at the corporate level. For example, in line with the "allowance for corporate equity" (ACE) proposal of the British Institute for Fiscal Studies,[21] companies could be allowed to deduct an

21 Institute for Fiscal Studies, Capital Taxes Group, *Equity for Companies: A Corporation Tax for the 1990s*, IFS Commentary C026 (London: Institute for Fiscal Studies, April 1991).

imputed normal return on their equity (or on new equity issued after the reform), just as they are allowed to deduct interest on debt.

At least two arguments can be made in favour of double tax relief at the company level rather than at the shareholder level. First, for companies with access to the international equity market, tax relief at the level of domestic shareholders may not be very effective in reducing the cost of capital (as explained above). By contrast, relief at the level of domestic (resident) companies would significantly strengthen the incentive for domestic investment, including direct investment by foreign companies. Second, double tax relief at the corporate level would presumably be simpler to administer than a shareholder income tax with an RRA, since the shareholder tax involves large numbers of taxpayers and transactions.

However, the price to be paid for these benefits would be reduced tax revenues: while the RRA under the shareholder income tax would be granted only to resident individual shareholders, relief at the corporate level would accrue to all holders of shares in domestic companies, including foreign investors and tax-exempt institutional investors. Hence, tax relief would be granted whether or not domestic tax was paid on the imputed return. Moreover, in cases where the home countries of foreign investors would have granted a foreign tax credit for corporation tax paid to the domestic source country, exempting the imputed return from domestic company tax would simply be a giveaway to the foreign fisc that would do nothing to improve the incentive to invest in the domestic economy.

For these reasons, alleviation of double taxation at the domestic individual shareholder level may be preferable after all, as Norwegian policy makers have decided.

Discrimination in Treatment of Proprietorships and Small Companies?

Under the personal shareholder income tax, the shareholder is not taxable until his income is realized in the form of dividends or capital gains. By contrast, the income-splitting system for the self-employed described earlier implies that the income of proprietors is taxed on a current basis, whether or not it is retained in the firm. One might think that the ability of owners of corporations to postpone taxation until the time of distribution/realization would imply an unfair tax advantage compared with the tax treatment of the self-employed. The following simplified example shows that in principle this is not the case.

Consider an entrepreneur who establishes a proprietorship and invests one unit of capital in his firm at the start of year 1. This capital yields a pre-tax return, r, that is equal to the pre-tax market interest rate. In addition, the entrepreneur's work effort generates business income w. All of the after-tax business income generated in year 1 is retained in the firm, and at the end of year 2, the entrepreneur sells the firm. If he organizes the firm as a proprietorship, his imputed capital income under the income-splitting system will be r times the stock of business capital at the start of each year. This imputed income will be taxed at the capital income tax rate t, while the remaining business income will be taxed as labour income at the rate m. The after-tax interest rate is denoted by $i \equiv r(1 - t)$. Example 3a summarizes the

proprietor's situation, assuming that the value of the firm at the end of year 2 equals the value of its accumulated assets at that time.

Example 3a Scenario 1: The firm is organized as a proprietorship

Year 1

1. Initial capital stock: 1
2. Income before tax: $r + w$
3. Tax bill: $tr + mw$
4. Retained after-tax business income (line 2 – line 3): $i + w(1 - m)$

Year 2

5. Initial capital stock (line 1 + line 4): $1 + i + w(1 - m)$
6. Income before tax ($r \times$ line 5 + w): $r[1 + i + w(1 - m)] + w$
7. Tax bill: $tr[1 + i + w(1 - m)] + mw$
8. Retained after-tax business income (line 6 – line 7): $(1 + i)\,[i + w(1 - m)]$
9. Revenue from sale of firm (line 5 + line 8): $(1 + i)^2 + (2 + i)w(1 - m)$

As an alternative, the entrepreneur may organize his firm as a corporation. Under the DIT, the corporate income tax rate equals the capital income tax rate t. This is the rate at which business income is taxed, provided that it is retained in the firm. When the entrepreneur sells his shares in the firm at the end of year 2, the excess of his sales revenue over his RRA is taxed at the shareholder income tax rate, which is assumed to be equal to t. Example 3b illustrates the situation for an entrepreneur choosing the corporate organizational form, assuming that the RRA imputed to his shares equals the after-tax interest rate i.

Example 3b Scenario 2: The firm is organized as a corporation

Year 1

10. Initial capital stock = initial basis of shares: 1
11. Business income before tax: $r + w$
12. Corporate income tax bill: $t(r + w)$
13. Retained after-tax business income (line 11 – line 12): $i + w(1 - t)$

Year 2

14. Initial capital stock (line 10 + line 13): $1 + i + w(1 - t)$
15. Basis of shares at the start of the year: $1 + i$
16. Business income before tax ($r \times$ line 14 + w): $r[1 + i + w(1 - t)] + w$
17. Corporate income tax: $t\{r[1 + i + w(1 - t)] + w\}$
18. Retained after-tax business income (line 16 – line 17): $(1 + i)\,[i + w(1 - t)]$
19. Capital stock at the end of the year = revenue from sale of shares (line 14 + line 18): $(1 + i)^2 + (2 + i)w(1 - t)$
20. Basis of shares plus RRA for year 2: $1 + i + i(1 + i) = (1 + i)^2$
21. Shareholder income tax [$t \times$ (line 19 – line 20)]: $t(2 + i)w(1 - t)$
22. Net revenue from sale of shares (line 19 – line 21): $(1 + i)^2 + (2 + i)w(1 - t)^2$

Comparing rows 9 and 22, we see that the entrepreneur will be equally well off under the two organizational forms if $(1 - t)^2 = 1 - m$. As the reader may easily verify, this will be the case when

$$t + t(1 - t) = m. \qquad \text{(A)}$$

The magnitude on the left-hand side of equation A is the sum of the corporate tax and the shareholder income tax on labour income earned within the corporation. If this is equal to the tax rate m on the imputed labour income of proprietors, the tax system will, in principle, be neutral toward the choice of organizational form. As explained above, this neutrality is (roughly) achieved under the Norwegian shareholder income tax.

The reason why the corporate organizational form does not necessarily imply any advantage from tax deferral is that when a shareholder retains and reinvests income in his company, and when the condition in equation A is met, the accumulated returns to this reinvested income will be taxed at the same total rate as labour income when the returns are ultimately distributed (since the retention does not add to the basis value of the shares). Thus, the initial liquidity gain from postponement of the (high) labour income tax is offset by the fact that the postponed tax liability is effectively carried forward with a normal return, provided that the reinvested income generates a normal return.

Thus, in principle, there is no inherent tax discrimination between the self-employed and the owners of closely held companies under the shareholder income tax. However, in practice, many small enterprises may be subject to credit constraints and may therefore have to rely on retained earnings as the only realistic source of investment finance. In such cases, the entrepreneur's subjective discount rate will exceed the market interest rate, and he will prefer to be able to postpone the progressive tax on labour income by retaining income in the firm. Under the tax regime described above, the corporate form of organization would then be favoured. Furthermore, by organizing the firm as a company, the entrepreneur would be able to engage in income averaging by appropriate timing of the realization of his shareholder income, and thereby minimize the impact of the progressive labour income tax by exploiting the RRA to the greatest possible extent. The self-employed will have no similar opportunity for income averaging.

To eliminate these sources of unequal tax treatment, one could allow the self-employed to postpone the progressive tax on their imputed labour income until the time the income is distributed from the firm to the owner, in line with current practice in Denmark and Sweden, for example. For tax accounting purposes, this requires that the income and wealth of the self-employed be split into a "business" sphere and a "private" sphere. However, this is administratively complex for this group of non-corporate taxpayers.

Taxation of Closely Held Corporations in the Nordic Countries

The discussion above has described alternative ways of taxing income from closely held corporations under a DIT, assuming that policy makers give high priority to the

goal of tax neutrality. This section briefly summarizes actual tax practices in Finland, Norway, and Sweden, each of which has enacted special tax rules for the owners of closely held companies.[22]

Until 2005, Finnish tax law required that the grossed-up dividends from shares in unlisted companies exceeding an imputed return to the company's net assets be taxed as labour income, with a credit being granted for the underlying corporation tax. Dividends below the imputed return were effectively exempt from tax at the shareholder level, as a consequence of the Finnish imputation system and the correspondence between the tax rates on corporate and capital income. Realized capital gains on shares were fully taxed as capital income. To reduce the tax incentive for owners of small companies to transform labour income into capital gains, Finland has thus accepted double taxation of retained corporate earnings.

In 2005, Finland abolished its imputation system. To maintain some alleviation of double taxation, only 70 percent of dividends from quoted companies are included in the shareholder's capital income. For unquoted companies, any dividend below the imputed return is tax-exempt insofar as it does not exceed €90,000 for the individual shareholder. As long as the dividend remains below the imputed return, 70 percent of any dividend above €90,000 is included in taxable capital income, while 70 percent of any dividend above the imputed return is included in taxable labour income. Essentially, Finnish tax law thus includes a schematic version of the shareholder income tax for unquoted companies, combined with partial double tax relief for quoted companies.

Until recently, Sweden also allowed an imputed return to be deducted from the taxable income from shares in unquoted companies. However, in 2006, this RRA was replaced by a reduced tax rate on dividends and capital gains on unquoted shares.[23] To address the income-shifting problem, Swedish tax law imposes progressive labour income tax on dividends and realized capital gains above an imputed return to the basis value of shares in closely held companies. However, this is only done for shareholder income realized by active shareholders carrying out a certain amount of work in their own companies. If the dividend or realized capital gain falls short of the imputed return in any year, the residual amount is carried forward with interest and is added to the basis for calculating future imputed returns, as well as to the amount of shareholder income that may be taxed as capital income in the future.

As discussed earlier, from the introduction of the DIT in 1992 until the end of 2005, Norway treated active shareholders in much the same manner as the self-employed, applying a (complex) version of the DIT income-splitting scheme. However, because of the difficulties of distinguishing between active and passive shareholders, in 2006,

22 Denmark does not have special tax rules for closely held companies. Instead, the government relies on a separate schedular progressive tax on dividends and capital gains on shares to ensure that the total corporate and personal tax burden on corporate equity income is roughly in line with the marginal tax rate on labour income.

23 See notes d and f in table 1 above.

Norway introduced a variant of the shareholder income tax. Various aspects of this new Norwegian tax regime have been analyzed in the previous discussion.

A DUAL INCOME TAX FOR CANADA?

This final section of the article considers the case for introducing (elements of) dual income taxation in Canada and how a DIT might be implemented in the Canadian federal context. In the first part of the discussion, I will leave aside the issue of the integration of the corporate and the personal income tax, and instead focus on other aspects of the DIT. Then, addressing the need for corporate-personal tax integration, I will discuss whether a Norwegian-type shareholder income tax could be a model for such integration, even if Canadian policy makers do not wish to adopt other elements of the DIT. Finally, I will consider whether a broader-based RRA combined with progressive taxation of above-normal returns could be an attractive alternative to a conventional DIT.

The Canadian Income Tax System: Current Situation

Although certain forms of saving for retirement are subject to expenditure tax treatment, the current Canadian system of personal income taxation is inspired by the ideal of comprehensive income taxation. Under current Canadian tax law, taxable income from all the different sources is added up to arrive at total taxable income, which is subject to a common progressive tax schedule at the federal as well as the provincial levels. Thus, (taxable) capital income is subject to the same marginal tax rate as labour income.

The personal and the corporate income tax are currently partially integrated via a notional imputation system for the taxation of dividends. However, increases in federal and provincial dividend tax credit rates, as well as a gradual reduction of the federal corporate income tax rate, will further improve the integration of the income tax regimes. These changes are expected to be fully phased in by 2011.

As of 2006, at the federal level, dividends received by personal shareholders are grossed up to 145 percent of the amount received and included in taxable income, and a dividend tax credit of 19 percent of the grossed-up dividend is then subtracted from the shareholder's tax bill. The federal corporate income tax rate is 22.1 percent and the top personal income tax rate is 29 percent. At the provincial level, the same gross-up rate of 145 percent and a dividend tax credit rate averaging 9.5 percent also apply. By 2010, however, the federal corporate income tax rate will be reduced to 19 percent[24] and certain provincial dividend tax credit rates will be increased, raising the average provincial credit rate from 9.5 percent to 10.8 percent. These figures are summarized in table 2.

24 A further reduction to 18.5 percent effective January 1, 2011 was proposed in the fall of 2006 as part of the government's Tax Fairness Plan: Canada, Department of Finance, "Canada's New Government Announces Tax Fairness Plan," *News Release* 2006-061, October 31, 2006. Since Parliament had not yet approved that proposal at the time I prepared this article, the calculations that follow use the 19 percent rate that is to take effect in 2010.

TABLE 2 Selected Statutory Tax Rates in the Canadian Tax System, 2006 and 2010

	2006	2010
	percent	
Top personal income tax rate		
Federal	29.0	29.0
Provincial[a]	16.6	16.6
Combined	45.6	45.6
Dividend tax credit rate		
Federal	19.0	19.0
Provincial[a]	9.5	10.8
Combined	28.5	29.8
Top personal tax rate on dividend income		
Federal	14.5	14.5
Provincial[a]	10.3	8.4
Combined	24.8	22.9
Corporate income tax rate		
Federal	22.1	19.0
Provincial[b]	12.4	12.8
Combined	34.5	31.8

[a] Weighted on the basis of total personal taxable income reported in each province.
[b] Weighted on the basis of total corporate taxable income reported in each province.

Realized capital gains are subject to personal income tax, but in general, only 50 percent of the gain is included in taxable income. This rule also applies to capital gains on shares. Moreover, a so-called lifetime capital gains tax exemption for gains up to Cdn $500,000 applies to shares in Canadian-controlled private corporations and to farm and fishing property.

Should Canada Move Toward a Dual Income Tax?

The marginal tax rates on labour income in Canada are somewhat lower than the rates in the Nordic countries that currently have a DIT. In the Canadian context, the case for separating the taxation of capital income from the taxation of labour income by adopting a low flat tax rate on capital income might thus seem to be weaker.

However, the return on ordinary saving that does not benefit from expenditure tax treatment is in effect taxed much more heavily than labour income in Canada. For example, assuming a nominal interest rate of 4 percent, an inflation rate of 2 percent, and a top combined marginal tax rate of 45.6 percent on nominal interest income, the effective marginal tax rate on *real* interest income is 45.6% × 4/(4 – 2)% = 91% (since the real pre-tax rate of return to saving equals the nominal interest rate minus the rate of inflation). For any realistic combinations of nominal interest and inflation, the returns to ordinary saving are thus taxed much more heavily than labour income under current Canadian tax law, owing to the lack of inflation adjustment of nominal capital income.

Distributed corporate profits are also taxed more heavily in Canada than labour income. With an average combined corporate tax rate of 34.5 percent in 2006 and an effective top personal tax rate on dividend income of 24.8 percent, the total corporate and personal tax burden on distributed profits is 34.5% + (1 – 0.345) × 24.8% = 50.7% (compared with 45.6 percent for labour income). By 2010, however, the combined tax rate on dividend income will fall to 47.4 percent, 1.8 percentage points above the top rate on labour income, assuming that personal tax rates remain constant.

Moreover, although Canada's statutory corporate tax rate is lower than the corporate tax rate in the United States, it is relatively high compared with the rates in most OECD countries. Even with the planned reduction in the federal rate, the combined corporate tax rate in Canada is still likely to remain considerably above the rates prevailing in most small developed economies.

More generally, the growing international mobility of capital is likely to continue to put downward pressure on capital income tax rates and corporate tax rates around the world and to make it increasingly difficult to enforce high residence-based taxes on capital income. Against this background, and if Canadian policy makers wish to strengthen incentives for saving and investment, it might be worthwhile for Canada to consider introducing elements of dual income taxation, as also suggested by Mintz.[25]

Outline of a Dual Income Tax for Canada

A possible move toward dual income taxation in Canada could proceed in several steps. Given the high degree of fiscal autonomy enjoyed by the Canadian provinces, it seems most likely that a DIT would initially be introduced only at the federal level (assuming that the introduction of a federal DIT would be in compliance with the current tax collection agreements with the provinces). If the federal experience with the new tax system proved to be positive, the provinces might then want to voluntarily adopt a dual tax rate structure, relying on the federal split between capital income and other income.

As I have explained, one complication associated with a pure DIT is the need to split the income from self-employment into capital income and labour income. In several European countries outside the Nordic region, policy makers have wanted to avoid this complication but have nevertheless introduced a low flat tax rate on certain forms of capital income, such as interest and dividends. Similarly, a first step toward dual income taxation in Canada could be to introduce a separate low flat tax rate on personal capital income, but without including imputed returns to business assets in the capital income tax base. The capital income tax base could include those sources of income that are currently categorized as income from property (mainly interest, dividends, royalties, and rental income) as well as realized capital gains.

25 Jack M. Mintz, *The 2006 Tax Competitiveness Report: Proposals for Pro-Growth Tax Reform*, C.D. Howe Institute Commentary no. 239 (Toronto: C.D. Howe Institute, September 2006).

Under such a rudimentary DIT, non-corporate business income would continue to be taxed according to the progressive rate schedule that is applied to labour income. As I have pointed out, this would imply some tax discrimination against savings invested in unincorporated firms. Therefore, as a second step toward a full-fledged DIT, after considering the alternative methods of income splitting described earlier, Canadian policy makers might want to introduce an option (but not an obligation) for the self-employed to include an imputed return to their business assets in the capital income tax base. If low administration and compliance costs are a priority, there is a strong case for choosing the gross assets method of income splitting, which has worked quite well in Norway.

The federal capital income tax rate could be set at 15 percent, corresponding (roughly) to the marginal personal income tax rate in the first tax bracket. Assuming a nominal interest rate of 4 percent and an inflation rate of 2 percent, as in our previous example, a 15 percent tax rate on nominal interest income would imply an effective federal tax rate on real interest income equal to 30 percent, which is close to the top marginal federal tax rate on labour income (29 percent). Assuming that the average top provincial tax rate on interest income would match the 2006 personal tax rate of 16.6 percent, the effective top combined marginal tax rate on real interest income would then be equal to 63 percent. This is still considerably higher than the top combined marginal personal tax rate on labour income of 45.6 percent, but it would imply a substantial reduction from the 91 percent rate implied by the current tax rules (given the nominal interest and inflation rates assumed above).

As I have argued in this article, there is a case for aligning the flat tax rate on capital income with the corporate income tax rate, for reasons of tax neutrality. Further, there is a case for lowering Canada's corporate tax rate, in order to make the country a more attractive location for international investment. These considerations suggest that the federal corporate income tax rate should be further reduced from the 19 percent rate planned for 2010 (or 18.5 percent for 2011) to 15 percent, in line with the suggested federal capital income tax rate.

An important justification for lowering the statutory tax rates on capital income and corporate income is that lower rates should facilitate base broadening to achieve more uniform and consistent taxation of all returns to capital. Apart from contributing to greater tax neutrality, base broadening would help to compensate for the revenue loss from the reduction of statutory tax rates. In particular, with significantly lower tax rates on capital income and corporate income, it would be natural to abolish the current tax preference for capital gains by including all (and not just half) of realized capital gains in taxable capital income. Indeed, since one justification for a separate low tax rate on capital income is that the tax is levied on all of the nominal return (and not just on the real return), the capital income tax base should include the entire nominal capital gain. The case for imposing full tax on capital gains is further strengthened by the fact that the capital income tax is flat under the DIT, so that realization of large gains in a single year does not push the taxpayer into a higher tax bracket. This will help to reduce the well-known lock-in effect of a realization-based capital gains tax.

By similar reasoning, the move toward a DIT would provide a case for eliminating the current Canadian lifetime capital gains tax exemption. In line with the goal of greater tax neutrality, the proposed cut in the corporate tax rate also makes it natural to consider removing the small business deduction so that all corporations are taxed at the same 15 percent rate at the federal level. Small corporations are currently taxed at 13.1 percent (11 percent by 2009) on their first $400,000 of taxable income. It has been suggested in the Canadian tax policy debate (although no strong evidence exists to support the claim) that the steep increase in the marginal tax rate beyond the small business threshold creates a disincentive to grow, and potentially affects Canada's productivity performance. Furthermore, the proposed cut in the corporate income tax rate provides a good case for broadening the corporate tax base by eliminating special provisions that tend to distort corporate investment. Mintz presents several concrete proposals for such base broadening.[26]

The above proposal for a Canadian DIT assumes that the current Canadian imputation system for dividend taxation would be abolished at the same time as the tax rates on capital income and corporate income are lowered. The discussion that follows examines the implications of such a reform and considers whether there is a need to introduce some other form of corporate-personal tax integration, such as a shareholder income tax with an RRA.

The Income-Shifting Problem Under a Canadian Dual Income Tax

Despite the abolition of the imputation system for dividend taxation, the proposed federal DIT would still imply a cut in the tax burden on distributed corporate profits. Under the 2010 Canadian tax system, with a federal corporate tax rate of 19 percent, an average provincial corporate tax rate of 12.8 percent, and federal and provincial tax credit rates of 19.0 percent and 10.8 percent, respectively (as shown in table 2), the total corporate and personal tax burden on Cdn$100 of distributed corporate profits would be calculated as set out in example 4a.

Example 4a Total tax burden on Cdn$100 of distributed corporate profits under the 2010 tax system

Dividend after corporation tax: $100 × (1 – 0.19 – 0.128) = $68.20
Federal personal dividend tax: 1.45 × (0.29 – 0.19) × $68.20 = $9.89
Provincial personal dividend tax: 1.45 × (0.166 – 0.108) × $68.20 = $5.74
Effective total personal dividend tax rate: ($9.89 + $5.74)/$68.20 = 22.9%
Total tax rate on distributed profits: ($19.00 + $12.80 + $9.89 + $5.74)/$100 = 47.4%

Under the proposed federal DIT, the federal corporate income tax rate would be cut to 15 percent, dividends would be taxed at the flat 15 percent capital income tax rate, and the current imputation system would be abolished. Assuming that the provinces would still want to collect the same amount of corporate and personal tax

26 Ibid., at 26.

on distributed profits after the reform, the total tax burden on dividends may be calculated as shown in example 4b.

Example 4b Total tax burden on Cdn$100 of distributed corporate profits after the federal tax reform

Dividend after corporation tax: $100 × (1 – 0.15 – 0.128) = $72.20
Federal personal dividend tax: 0.15 × $72.20 = $10.83
Provincial personal dividend tax: $5.74 (same as before)
Effective total personal dividend tax rate: ($10.83 + $5.74)/$72.20 = 23.0%
Total tax rate on distributed profits: ($15.00 + $12.80 + $10.83 + $5.74)/$100 = 44.4%

Example 4 shows that under the proposed DIT, the total tax burden on distributed profits would be reduced by an average of 3 percentage points, from 47.4 percent to 44.4 percent.

The example also shows that the switch to the proposed federal DIT would imply a total tax burden on distributed profits slightly below the average top combined marginal personal tax rate on earned income (assumed, in table 2, to remain at 45.6 percent). Hence, the owners of closely held companies would have a limited incentive to reduce their tax bill by transforming management salaries into dividends, and there would be no need for special anti-avoidance rules to prevent such income shifting.

When profits are retained by the company, the return to the shareholder accrues as a capital gain. Realized capital gains are currently taxed at only half the ordinary tax rate (since only half of the gain is included in taxable income)—that is, at an average rate of 0.5 × (0.29 + 0.166) = 22.8% for a taxpayer in the top bracket. Assuming for simplicity that $1.00 of retained profit generates a $1.00 increase in the value of the company's shares and that this capital gain is realized immediately, the total corporate and personal tax burden on a dollar of *pre-tax* retained profit under the 2010 Canadian tax system would thus be 19.0 + 12.8 + (1 – 0.19 – 0.128) × 22.8 = 47.3%. The provincial personal tax contributes 0.5 × 16.6 × (1 – 0.19 – 0.128) = 5.7 percentage points to this overall tax wedge.

Under the proposed federal DIT, realized capital gains would be fully taxed at the flat 15 percent federal capital income tax rate. Assuming that the provinces would want to maintain an unchanged provincial tax burden on capital gains, the total tax rate on retained profits under the proposed federal DIT would become 15 + 12.8 + (1 – 0.15 – 0.128) × 15 + 5.7 = 43.8%. Again, this would be close to the top marginal tax rate on labour income, thus minimizing the scope for tax avoidance through the transformation of management salary into capital gains.[27] At the same time, this example shows that the federal tax reform would reduce the tax burden on retained profits by about 3.5 percentage points (from 47.3 percent to 43.8 percent).

27 In practice, a controlling shareholder could, of course, reduce the effective tax burden on accrued capital gains by deferring realization of the gain, but this would involve sacrificing some current consumption, unless he chose (and was able) to borrow against the accrued gain.

Is There a Need for Integration of the Corporate and the Personal Income Tax?

Although the proposed federal DIT implies a slight reduction of the total tax burden on corporate equity income, even when one accounts for the abolition of the imputation system and for the tightening of capital gains taxation, corporate-source equity income would still be subject to double taxation, in contrast to other forms of income from capital. In particular, while nominal interest income would be taxed at a combined federal and average provincial rate of 15 + 16.6 = 31.6%, the total corporate and personal tax burden on corporate profits would be around 44 percent, as illustrated by example 4b above. This raises the question whether some form of relief from the double taxation of corporate income is called for.

In discussing this issue, it is useful to distinguish between "large" and "small" corporations. Shares in large public corporations listed on a stock exchange are traded (or at least are tradable) in the international equity market, and hence they must offer an expected rate of return equal to the return required by international investors. This means that in Canada—a small open economy with an open stock market—the marginal holder of shares in a domestic public corporation is likely to be a foreign investor whose required return is unaffected by Canadian personal taxes. These taxes are therefore unlikely to have any significant impact on the cost of equity finance for Canadian public corporations. For example, if a residence-based personal tax on equity income makes shareholding less attractive to Canadian individual investors, those investors will sell off (some of) their domestic shares to foreign investors who stand ready to buy the shares at prices determined from the world stock market. Thus, although Canadian personal taxes on equity income will influence the pattern of corporate ownership and the level of domestic savings, they should have no noticeable effect on the cost of equity finance for Canadian public corporations.[28] Similarly, to the extent that unlisted shares in large private corporations are tradable in the international equity market, the required return on such shares may be closely linked to the return required in the international market.

The situation is different for small corporations since normally the shares in these companies are not traded internationally. Because they typically have different risk characteristics, and are less liquid, shares in small private corporations (and perhaps also shares in small listed companies) are imperfect substitutes for shares in large public corporations; as a result, the required return on shares in small companies cannot simply be taken as given by reference to the world equity market. Since investors have the option of investing in interest-bearing assets instead of shares, one may expect that a personal tax on equity income (dividends and/or capital gains) will tend to drive up the required return on shares in small domestic companies,

28 See Robin Boadway and Neil Bruce, "Problems with Integrating Corporate and Personal Income Taxes in an Open Economy" (1992) vol. 48, no. 1 *Journal of Public Economics* 39-66; and Peter Birch Sørensen, "Changing Views of the Corporate Income Tax" (1995) vol. 48, no. 2 *National Tax Journal* 279-94, for an elaboration of this point.

thereby increasing the cost of equity finance for this category of firms. In principle, there may be cases where the insurance properties of a capital gains tax with full loss offsets could make investment in certain high-risk shares more attractive; but even if a personal tax on equity income may not always drive up the cost of equity finance for small corporations, it will do so in many situations. In any case, as I have demonstrated in a previous article,[29] it will tend to distort the *pattern* of risk taking within the sector of small companies.

The foregoing discussion suggests that there may be a case for some form of relief from the double taxation of corporate income even when one allows for the openness of the Canadian economy. To gain further insight into this problem, it is useful to consider a simple numerical example. According to the calculations in example 4a above, under the existing tax system, the total corporate and personal tax burden on corporate equity income is estimated at 47.4 percent in 2010 (when profits are distributed), whereas the average top combined marginal personal tax rate on interest income is around 29 + 16.6 = 45.6%. For an investor who considers the alternative of investing in interest-bearing assets yielding a pre-tax interest rate i, the required pre-tax (risk-adjusted) return on corporate investment r is therefore given by the arbitrage condition[30]

$$r\,(1 - 0.474) = i(1 - 0.456) \Leftrightarrow r = 1.03i.$$

Under a neutral tax system that neither favoured nor discriminated against corporate investment, one would have $r = i$ in the notation above, as would be the case in the absence of taxation. We see that the Canadian tax system planned for 2010 comes close to being neutral in this dimension. By comparison, under the proposed federal DIT, the estimated total tax burden on distributed corporate profits is around 44 percent, and the average combined personal tax rate on interest income is roughly 15 + 16.6 = 31.6%. Thus, the required pre-tax return on corporate investment is given by

$$r\,(1 - 0.44) = i(1 - 0.316) \Leftrightarrow r = 1.22i.$$

Compared with the present situation, the reform would thus raise the cost of corporate capital by about (1.22 – 1.03)/1.03 = 18%. This is a considerable increase. However, our simplified example probably overstates the tax discrimination against equity-financed investment. The reason is that, whereas the inflation component of the nominal interest rate is always subject to current taxation, shareholders may defer tax on the inflation component of their nominal income by receiving that income in the form of an unrealized nominal capital gain on their shares, thus receiving only the *real* rate of return in the form of a dividend subject to current taxation.

29 Sørensen, supra note 20.

30 For simplicity, this analysis assumes that taxable corporate income corresponds to the true economic income of the company.

Still, it seems clear that the proposed federal DIT combined with the abolition of the federal dividend tax credit implies some bias against corporate equity finance. The next section discusses how this bias could be eliminated.

A Shareholder Income Tax for Canada?

One way of ensuring full tax neutrality between the corporate and the non-corporate sectors would be to adopt a full imputation system for dividend taxation (granting full credit against the personal dividend tax for all of the underlying corporation tax) and to allow the basis of shares to be stepped up by the amount of retained corporate profits when calculating taxable capital gains on shares. This would correspond to Norwegian tax practice from 1992 until 2006. While such a tax system has desirable neutrality properties, it tends to be administratively complex. In particular, the step-up of the basis of shares by the amount of retained corporate profit poses some administrative challenges, although the Norwegian experience shows that implementing such a system—originally proposed by Canada's Carter commission back in the 1960s[31]—is indeed feasible.

Furthermore, combining the DIT with a full imputation system for dividends and some form of double tax relief for capital gains on shares would open the door to income shifting by the owners of closely held corporations, by giving these taxpayers an incentive to transform management salaries into lightly taxed dividends or capital gains. As the Norwegian experience suggests, any attempt to prevent such income shifting through mandatory income splitting for active shareholders is likely to be administratively demanding and rather ineffective.

Finally, a system of full imputation and a capital gains tax regime like the previous Norwegian regime implies full double tax relief for all returns to corporate investment, including "pure" profits. But as I have pointed out in this article, investment neutrality requires double tax relief only for the *normal* return to capital; indeed, provided that the tax code allows full loss offsets, it is even possible to tax the "normal" equity premium on shares without discouraging corporate investment. By avoiding double taxation of pure profits and of the normal equity premium, the previous Norwegian tax regime thus sacrificed some tax revenue that could have been collected without distorting corporate investment. This insight was the motivation for the introduction of the new Norwegian shareholder income tax, which grants double tax relief only for a risk-free return on the value of shares.

The shareholder income tax described above is in principle neutral toward investment, financing, and realization decisions, even though, on average, it will generate positive revenues. Hence, it seems an attractive blueprint for alleviating the double taxation of corporate income. Under the proposed tax rate structure for a Canadian federal DIT, there would be no need for a separate tax rate on shareholder income. Instead, dividends and realized capital gains on shares exceeding the imputed risk-free rate of return on the shares could simply be taxed as capital income at a rate of

31 Supra note 2.

15 percent at the federal level. Assuming that the provinces would want to maintain the same revenue from personal taxes on dividends (say, through an appropriate adjustment of the provincial dividend tax credit), the combined federal and provincial tax rate on dividends in excess of the imputed return would then correspond roughly to the top marginal tax rate on labour income, as illustrated by the calculations in example 4. This rough correspondence would prevent any significant gain from income shifting; and at the same time, the RRA would, in principle, eliminate any distortions from the double taxation of corporate equity income.

Indeed, even if Canadian policy makers did not wish to adopt a DIT, they could still choose to replace the current imputation system and the current regime for taxing capital gains on shares with a shareholder income tax, as an alternative way of coordinating the corporate and the personal income tax. Such a reform would achieve neutral tax treatment of retained and distributed profits and a neutral regime for taxing capital gains on shares (again assuming full loss offsets and careful design of the RRA, as described below).

The discussion of equity financing above suggests that, if policy makers are primarily concerned about avoiding an increase in the cost of corporate capital, they should focus on double tax relief for small corporations, since domestic personal taxes are unlikely to affect the cost of capital for large corporations in Canada's small open economy. This would have significant administrative advantages, because it would eliminate the need to keep track of (changes in) shareholdings in large corporations, and because shares in small corporations are typically concentrated in the hands of relatively few people and are rarely traded. When shares were traded during the fiscal year, it would not require too many administrative resources to split the annual RRA between the previous and the current shareholders in proportion to the fraction of the year in which each shareholder owned the shares. This approach differs from the current Norwegian practice of assigning all of the RRA to the taxpayer holding the share at the end of the fiscal year. As discussed earlier, the allocation of the RRA in this manner would eliminate potential abuse of the loss offset rules through year-end trades,[32] and would allow liberal loss offsets to ensure the greatest possible degree of tax neutrality.

Also as discussed earlier, introducing an RRA only for shareholders of small companies would increase the attractiveness of investing in such shares rather than shares in large corporations or bonds. This should tend to reduce the cost of equity finance for small companies. In principle, such a difference in the tax treatment of large and small corporations implies a tax distortion in favour of the latter. However, introducing this distortion could be defensible because it would tend to compensate for an inefficient allocation of risk. Specifically, the owners of small corporations often invest a large fraction of their wealth in their own company, thus failing to fully diversify their risk by holding a broad "market portfolio" of shares. To the extent of this under-diversification, the owners of small companies may be perceived

32 See the discussion under the heading "The Imputed Return and the Treatment of Losses."

to take too little risk from a social perspective. If that is the case, the overall level of investment in these corporations will tend to be suboptimal. Introducing an RRA for shareholders of small companies would tend to offset this effect and could thereby enhance economic efficiency.

In addition, granting an RRA only to holders of shares in small companies would reduce the revenue loss from double tax relief. It would also strengthen the case for removing the current small business deduction in Canada and subjecting all corporations to the same 15 percent corporate income tax rate. This could help to compensate for the revenue loss from the RRA.

An RRA for shareholders of small companies would obviously require a distinction between "small" and "large" corporations for tax purposes. Given that the current small business deduction already requires a similar distinction, this would not likely cause (additional) administrative problems. However, the distinction could create some distortions: shareholders in a company that crossed the borderline from a "small" to a "large" corporation would lose their RRA, implying a disincentive for business expansion beyond the borderline. It is difficult to evaluate the seriousness of this distortion. In any case, a similar type of barrier to business expansion exists in all countries offering special tax provisions to small enterprises. The distortion might be reduced if the RRA were phased out gradually as the company moved out of the "small business" category.

Another issue is the tax treatment of debt versus equity. A shareholder income tax with an RRA does not eliminate the double taxation of above-normal returns to equity. As explained earlier, this may give controlling shareholders an incentive to take out income from the company in the form of interest on debt rather than equity income. Hence, it is advisable to introduce an anti-avoidance provision stating that when the interest rate on a loan from a personal taxpayer to a small company exceeds a certain threshold, the difference will be taxed as labour income.

In summary, granting the RRA only to shareholders of small companies has administrative advantages and implies a lower revenue cost. On the other hand, it may imply some barrier to business expansion. Moreover, full double taxation of income from large corporations may increase the degree of foreign ownership of large domestic companies (since some domestic personal taxpayers may be induced to sell their shares). This may be seen as politically undesirable. Choosing between a general RRA for all shareholders and a selective RRA for shareholders of small companies involves a tradeoff between these different considerations. In Norway, policy makers decided in favour of a general RRA, whereas Finnish policy makers have decided to grant an RRA only to holders of shares in unquoted companies (as did Sweden until recently).

Double Tax Relief at the Corporate Level?

The purpose of granting an RRA when calculating the taxable shareholder income of individual taxpayers is to reduce the cost of equity finance for small companies that lack access to the international stock market. As I have explained, even if the RRA were granted to holders of quoted as well as unquoted shares, it would have little, if

any, noticeable impact on the cost of capital for public corporations, although it might cause some shares in these companies to change hands from domestic to foreign investors.

Implementing double tax relief through a shareholder income tax with an RRA is thus a policy aimed mainly at avoiding the negative implications of double taxation for small companies, including startup firms. However, if the policy goal is to stimulate domestic investment more broadly, a more effective policy would be to grant double tax relief at the corporate rather than the individual shareholder level. This would involve full taxation of dividends and realized capital gains for individual shareholders, but some form of tax relief for all companies investing in Canada.

In practice, such relief at the corporate level could be implemented through an allowance for corporate equity (ACE) of the type proposed by the British Institute for Fiscal Studies[33] and recently introduced in Belgium. Under this system, companies operating in Canada would be allowed to deduct an imputed normal return to the equity (assets minus liabilities) recorded in their tax accounts, just as they are currently allowed to deduct interest on debt. An ACE would strengthen the incentive of all companies to invest in Canada, and since the number of corporate taxpayers is smaller than the number of personal shareholders, it should be easier to administer than a broad-based shareholder income tax with an RRA for all shareholders.

An ACE would also have the advantage of offsetting the distortions to investment caused by accelerated depreciation: if companies write down their assets at an accelerated pace, the current tax saving from accelerated depreciation will be offset by a reduction in future RRAs of equal present value, since accelerated depreciation reduces the book value of the assets to which future deductible rates of return are imputed.[34] More generally, an ACE reduces investment distortions by exempting the normal return to domestic investment, recognizing that in a small open economy with high capital mobility, a tax on the normal return will, to a large extent, be shifted (via an outflow of capital) onto less mobile domestic factors of production, such as labour and land. Thus, although a tax exemption for the normal return to domestic corporate investment may cause a significant loss of revenue, one can argue that it would be more efficient to raise this revenue via less distortionary taxes on domestic labour and land, given that these factors are in any event likely to bear most of the burden of a source-based tax on the normal return.

However, in the Canadian context, this line of reasoning may need to be modified: a large part of direct investment in Canada by foreign investors is undertaken by US multinationals that receive a foreign tax credit for Canadian taxes paid on profits repatriated to the United States. To the extent that profits are repatriated, a

33 See supra note 21.

34 See Robin Boadway and Neil Bruce, "A General Proposition on the Design of a Neutral Business Tax" (1984) vol. 24, no. 2 *Journal of Public Economics* 231-39.

Canadian ACE for US investors would likely amount to a giveaway to the US Treasury that would not increase the incentive for US companies to invest in Canada. In other words, a Canadian ACE would increase the incentive for US multinationals to invest in Canada only to the extent that such investment was financed by the retained profits of their Canadian subsidiaries. Hence, the case for introducing a Canadian ACE may not be persuasive as long as the United States maintains a foreign tax credit system.