
Comparative Tax Advantages of Canadian Pension Funds as Investors in Real Estate

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PRÉCIS

Cet article traite de la situation concurrentielle des caisses de retraite par rapport aux investisseurs imposables traditionnels en ce qui a trait à l'investissement dans des biens immeubles. Il analyse l'incidence sur les taux de rendement qui découle des différences dans les règles fiscales s'appliquant aux principaux véhicules de placement disponibles. Un accent particulier est mis sur la société d'investissement immobilier exonérée d'impôt dont il est question à l'alinéa 149(1)0.2), qui est disponible aux caisses de retraite pour les placements immobiliers avec peu d'investisseurs, par rapport aux fiducies de placement immobilier (FPI) intermédiaires. Les FPI sont disponibles pour les placements immobiliers à grand nombre d'investisseurs par les régimes de retraite et par les investisseurs imposables traditionnels qui investissent directement ou par l'intermédiaire de régimes d'épargne-retraite. L'analyse compare les placements immobiliers avec les rendements concurrentiels qui ont cours quand les placements sont faits par les investisseurs dans des actions traditionnelles du marché boursier. On y présente les résultats des scénarios de base reflétant les conditions d'investissement en Ontario en plus d'une analyse de sensibilité.

Les résultats des scénarios de base soutiennent quatre conclusions. Premièrement, les caisses de retraite et les régimes d'épargne à conditions fiscales avantageuses (REER, FERR et CELI) permettent une poussée de 12 pour cent du rendement des placements en actions par rapport aux investisseurs imposables qui investissent directement. Deuxièmement, les investisseurs imposables et les caisses de retraite ont un désavantage fiscal à investir dans des placements immobiliers avec peu d'investisseurs par l'intermédiaire d'une société imposable parce que les rendements nets sont inférieurs à ceux des placements en actions. Troisièmement, les caisses de retraite qui investissent dans des placements immobiliers avec peu d'investisseurs par l'intermédiaire d'une société d'investissement immobilier ont un avantage important par rapport aux investisseurs imposables qui investissent par l'intermédiaire d'entreprises constituées ou non en société. Quatrièmement, les caisses de retraite, les REER, les FERR et les CELI ont un avantage important et équivalent par rapport aux investisseurs

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imposables lorsqu'ils investissent dans des placements immobiliers à grand nombre d'investisseurs par l'intermédiaire d'une FPI, et les taux de rendement absolus sont plus élevés que les taux que de tels investisseurs gagneraient en investissant dans des actions. L'étude conclut avec un bref examen des facteurs qui pourraient empêcher l'investissement des caisses de retraite dans l'immobilier.

ABSTRACT

This article analyzes the competitive situation of pension funds vis-à-vis conventional taxable investors investing in real estate. It assesses the rate of return effects that arise because of differences in tax rules applying to the principal investment vehicles available. A particular focus is on the special paragraph 149(1)(o.2) tax-exempt real estate investment corporation (REIC), which is available to pension funds for closely held real estate investments, as compared with tax flowthrough real estate investment trusts (REITs). REITs are available for broadly held real estate investments by pension plans and by conventional taxable investors investing either directly or through retirement savings plans. The analysis contrasts real estate investments with the competing returns that prevail when investments are made by the investors in conventional stock market equities. Base-case simulation results reflecting the Ontario investment environment are presented along with sensitivity analysis.

Base-case simulation results support four conclusions. First, pension funds and tax-preferred savings plans (RRSPs/RRIFs and TFSA) provide a 12 percent boost to investment returns for market share investments compared to taxable investors investing directly. Second, both taxable investors and pension funds have a tax bias against investing in closely held real estate through a taxable corporation because net returns are lower than for market share investments. Third, pension funds investing in closely held real estate through a REIC have a significant advantage over taxable investors investing through either corporate or unincorporated arrangements. Fourth, pension funds, RRSPs/RRIFs, and TFSA have a significant and equivalent advantage relative to taxable investors when investing in broadly held real estate through a REIT, and absolute rates of return are higher than the rates that such investors would earn from investing in market shares. The study concludes with a brief discussion of factors that might be inhibiting pension fund investment in real estate.

KEYWORDS: PENSION FUNDS ■ RETIREMENT PLANS ■ TAXATION ■ INVESTMENT ■ REAL ESTATE ■ REIT

CONTENTS

Introduction	43
Net Return Equations for Equity Investments Under Various Investment Scenarios	44
The Investment Criterion	44
Market Investment in Corporate Shares	45
Taxable Investor	45
Pension Fund	46
Taxable Investor Investing Through a Registered Savings Vehicle	47
Investment in Closely Held Real Estate	49
Required Gross Rate of Return	49
Investment Through a Closely Held Corporation	51
Direct Unincorporated Investment in Real Estate by a Taxable Investor	52
Pension Fund Investing Through a REIC	53

Investment in a REIT: Broadly Held Real Estate	54
Taxable Investor	54
Pension Fund	56
Taxable Investor Investing Through a Registered Savings Vehicle	57
Summary and Comparison of the Net Return Equations	57
Empirical Analysis of Investment Advantages	57
Equation Parameters	57
Empirical Results	64
Sensitivity Analysis	69
Concluding Comments	75
Summary	75
Possible Policy Implications	76

INTRODUCTION

This article analyzes the competitive situation of pension funds vis-à-vis conventional taxable investors investing in real estate, both directly and through retirement savings plans. Specifically, the article explores the nature and magnitude of differences in comparative tax advantages imparted by the principal investment vehicles available to each type of investor. A particular focus is on the special real estate investment corporation (REIC)¹ available to pension funds, as compared with the real estate investment trust (REIT) available to both pension funds and conventional taxable investors who invest either directly or through a retirement savings plan. The REIC is a special non-taxable real estate investment vehicle that provides a pension plan with full corporate liability protection. A REIT, which may be either publicly listed or private, is a trust arrangement that permits a minimum of 150 investors to invest collectively in real estate. REITs that meet income payout rules are able to flow earnings tax-free to investors and to provide a relatively high degree of liability protection to them through the declaration of trust. The analysis that follows contrasts the situation that applies to real estate investments to the competitive situation that pension funds face with respect to other investments in real estate and the stock market through conventional taxable corporations.

The questions addressed in this article are intimately related to several important general tax policy issues that have been topical in the literature:

- tax neutrality: the attempt to remove unintended tax biases that may arise between different categories of taxpayers or under different investment arrangements for the same taxpayer category;

¹ This term refers to the type of corporation described in paragraph 149(1)(o.2) of the Income Tax Act: RSC 1985, c. 1 (5th Supp.), as amended (herein referred to as “the Act”). Unless otherwise stated, statutory references in this article are to the Act. It should be noted that neither the term “real estate investment corporation” nor the acronym “REIC” appears in the legislation; these terms are used here simply for convenience.

- corporate-personal tax integration: the attempt to remove inadvertent biases in the combined effect of the two tax regimes across different tax arrangements; and
- the taxation of income trusts: the tax-inducements, and even distortions, that such investment vehicles can give rise to.

With respect to the last point, while policy reforms were recently implemented to address this issue, the new restrictions on income trusts do not apply to REITs.

The following specific stock market investment scenarios are considered:

- a taxable investor investing directly,
- a pension fund investing directly, and
- a taxable investor investing through a registered savings plan.

The types of real estate investment arrangements considered include

- a taxable investor investing through a taxable corporation,
- a pension fund investing through a taxable corporation,
- a pension fund investing through a REIC,
- a taxable investor making a direct unincorporated investment,
- a taxable investor investing directly in a REIT,
- a pension plan investing in a REIT, and
- a taxable investor investing in a REIT through a registered savings plan.

To explore these issues, the article is structured as follows. The second section develops and examines a series of static equations specifying net investment returns accruing to pension funds and conventional investors that invest in turn in the stock market and in holdings of real estate, in the scenarios specified above. The third section presents and analyzes the empirical results that emerge from applying realistic parameter values, which reflect the investment environment, to the net return equations. This section also presents a sensitivity analysis for key model parameters, permitting an empirical assessment of the comparative advantages to pension funds and conventional investors in making the different types of investments considered. The fourth and final section summarizes the conclusions of the analysis and offers some comments on their implications.

NET RETURN EQUATIONS FOR EQUITY INVESTMENTS UNDER VARIOUS INVESTMENT SCENARIOS

The Investment Criterion

As summarized in equation 1 below, in order to make any equity investment (given a fixed expected rate of inflation), the nominal net after-tax return (r_n) accruing to an investor, which is also the investor's risk-adjusted discount rate (d), must exceed

his or her after-tax hurdle rate (H). The net return relates to all components of investment returns, including capital gains, after allowing for depreciation on depreciable investment assets. It is, by definition, equal to the required gross rate of return (r_g) minus the effective taxes per dollar of investment (t_e).²

$$\begin{aligned} r_n &= r_g(1 - t_e) \\ &= d \geq H. \end{aligned} \tag{1}$$

Equation 1 expresses the net after-tax return as a residual decision value that results from an asset's gross rate of return and the specific tax circumstances of the investor. As discussed later, the approach to measuring r_g in this article avoids the many unsettled issues associated with specifying a particular return-generating process.

It is possible to develop equation 1 to specify in detail the net return accruing to taxable investors and pension funds that invest both in stock market equities and in real estate under a variety of different scenarios.

Market Investment in Corporate Shares

Taxable Investor

Investment returns accrue to an equity investor in three forms: (1) net income returns gross of depreciation; (2) capital cost allowance (CCA) that can be deducted from the net income of the corporation as an allowance for the actual estimated book depreciation that would normally be used by accountants; and (3) capital gains.³ Letting the parameters a and b reflect the proportions of stock returns that accrue from, respectively, net income (including the CCA deduction) and capital gains, the equation for calculating net return for a taxable investor (T) investing in non-real-estate corporate shares (S), indicated as ($r_n^{T,S}$), is as follows:

$$r_n^{T,S} = r_g \left(a(1 - t_c + t_{c,cca}) (1 - t'_y) + b(1 - t_{ac}) \right). \tag{2}$$

There are two tax components affecting the a term. The first is the corporate profits tax (at tax rate t_c), taking into account the benefit of the CCA. CCA is claimed at the effective rate indicated by the variable cca , which (as discussed in the third section of the article) might be positive if the CCA rate exceeds the actual depreciation rate. The second tax component (t'_y) reflects the effect of partial corporate-personal tax integration under Canadian tax law. Partial integration is achieved by grossing up dividends for personal taxes but then providing a dividend tax credit (DTC) to eliminate

2 This approach is somewhat similar to standard earlier analyses of the cost of capital, such as that set out by Robin W. Boadway, Neil Bruce, and Jack M. Mintz, *Taxes on Capital Income in Canada: Analysis and Policy*, Canadian Tax Paper no. 80 (Toronto: Canadian Tax Foundation, 1987).

3 To avoid needlessly overcomplicating the analysis, I ignore investment tax credits and other forms of explicit government investment incentives.

a portion of the double corporate-personal tax burden that would otherwise arise. Effectively, the net outcome of the gross-up and DTC is that a reduced supplemental personal tax at rate t'_y is levied on investors. The dividend gross-up and credit rules differentiate between non-eligible dividends, essentially those from small businesses (Canadian-controlled private corporations [CCPCs]) that qualify for the regular DTC, and dividends qualifying for an enhanced DTC, which are essentially dividends paid by large corporations that do not qualify for the small-business corporate tax rate.

The b term in the equation reflects the capital gain component of total return and relates to the proceeds received from the sale of the shares at the end of the holding period—that is, proceeds received on a realization basis. In the equation, however, all variables are expressed as annualized components of net return so that capital gains are assumed to be taxable at an accrual-equivalent tax rate (AETR), which is designated in the equation as t_{ae} . The procedure used to empirically estimate t_{ae} is discussed later in the article.

The relative size of the parameters a and b is an empirical question. There is no implicit assumption in the net return equation that all of the annual earnings are necessarily paid out as dividends versus being retained in the corporation.

Pension Fund

Contributions to a pension fund are tax-deductible, and investment earnings accumulate in the fund tax-free—that is, at the investor's pre-tax rate of return. All withdrawals from the plan, both principal and investment returns, are fully taxable at the taxpayer's prevailing marginal tax rate at the time of the withdrawal. When a tax-exempt pension fund invests in a non-real-estate taxable corporation, the equation for calculating net return (now referenced by $r_n^{PF,S}$) is modified from equation 2 as follows:

$$r_n^{PF,S} = r_g \left(a(1 - t_c + t_c \alpha) + b \right) \left(1 - \frac{t_y}{(1+d)^q} \right) \quad (3)$$

The t'_y term disappears and the a and b components of the equation are now multiplied by $1 - t_y/(1+d)^q$, where t_y is the statutory marginal personal tax rate, q is the average number of years that earnings are retained in the pension fund before being paid out to beneficiaries, and (as described above) d is the discount rate.

These changes reflect a number of considerations. First, a tax-exempt pension fund does not, of course, pay personal tax and is not eligible for the DTC available to a taxable investor. Second, both net income streams and any realized capital gains are now fully taxable as regular income when eventually paid out to beneficiaries. A pension fund thus also loses the partial (50 percent) inclusion rate for capital gains. Since the fund is non-taxable, it serves as a deferral vehicle for the personal tax that must ultimately be paid by beneficiaries when they receive pension payments, irrespective of whether the funds paid out accrue by way of net income streams or through realized capital gains. Whether or not the tax deferral provides a net advantage in comparison with the advantages of the lost corporate-personal tax integration and the partial taxation of capital gains depends on the length of the deferral period.

Taxable Investor Investing Through a Registered Savings Vehicle

There are three principal types of registered savings vehicles that receive preferential income tax treatment: registered retirement savings plans (RRSPs); registered retirement income funds (RRIFs); and tax-free savings accounts (TFASAs). As in the case of pension funds, the preferential tax treatment granted to these vehicles is intended to encourage individuals to save.

The tax advantage of an RRSP, like that of a pension fund, is that investment earnings in the fund accumulate at the pre-tax rate of return rather than the post-tax rate. Contributions to an RRSP are deductible from taxable income at the time of the contribution, and taxes are deferred until the money is withdrawn, at which point they are taxable at the taxpayer's then-prevailing marginal tax rate. All earnings on assets in the RRSP, whether income earnings or capital gains, accumulate tax-free but are also taxable at the taxpayer's marginal tax rate when withdrawn.

A RRIF provides an option for an investor to convert a registered retirement plan into an annuity stream at any time before the end of the year in which he or she turns 71. By that time, it is mandatory either to withdraw all funds from the RRSP, in which case they become taxable, or to convert the RRSP into a RRIF. There are government requirements for minimum annual withdrawals from a RRIF, but investment income earned within the RRIF continues to accumulate tax-free. As with an RRSP, withdrawals are taxable at the taxpayer's marginal tax rate. A RRIF can therefore be viewed as a vehicle that permits a smooth phaseout of an RRSP.

As expressed in equation 4, the calculation of net return when a taxpayer uses an RRSP/RRIF vehicle to invest in market shares ($r_n^{RRSP,S}$) is identical to that for a pension fund, since both have equivalent tax-incentive features

$$r_n^{RRSP,S} = r_g \left(a(1 - t_c + t_c cca) + b \right) \left(1 - \frac{t_y}{(1+d)^g} \right). \quad (4)$$

TFASAs, which were introduced on 1 January 2009, provide a different form of tax incentive for savings.⁴ Contributions are not deductible for income tax purposes, and withdrawals are not taxable. Investment income therefore accumulates fully free from personal tax throughout the period in which the investment is maintained within the TFSA. In contrast to an RRSP (which, as noted, must be closed or converted to a RRIF by the end of the investor's 71st birthday year), there is no maximum age for holding a TFSA.

4 For an early discussion of savings plans similar to the TFSA, see Jonathan R. Kesselman and Finn Poschmann, "Expanding the Recognition of Personal Savings in the Canadian Tax System" (2001) 49:1 *Canadian Tax Journal* 40-101.

The net return equation for a TFSA is expressed as follows:

$$\begin{aligned} r_n^{TFSA,S} &= \left(1 - \frac{t_y}{(1+d)^q} \right) r_g (a(1-t_c + t_c cca) + b) \\ &= r_g (a(1-t_c + t_c cca) + b) \left(1 - \frac{t_y}{(1+d)^q} \right). \end{aligned} \quad (5)$$

The first bracketed term after the first equals sign shows the effect of the personal tax on the gross investment return (r_g). Specifically, the return is reduced by 1 minus the marginal personal tax rate discounted over the period (q) in which investment earnings are sheltered in the plan. While the corporate tax remains (including the CCA effect), both income earnings and capital gains completely escape further personal income tax, as does the principal amount of the investment. The intuition behind the personal tax term of a TFSA is that, with tax on the income paid up front in the year earned and with no further personal tax applying to investment earnings, the average effect on the after-tax rate of return of the initial personal tax payment diminishes as the TFSA shelter period increases. For example, if

- q is 0,
- both r_g and the pre-tax discount rate are 8 percent, and
- the personal tax rate (t_y) is 50 percent,

then the bracketed personal tax term in the first line of equation 5 is $1 - 0.5/(1 + 0.04)^0 = 0.5$. Since the bracketed personal tax term is 1 minus the full personal tax rate, no tax advantage applies to the investment. If q is 1, the bracketed tax term is $1 - 0.5/(1 + 0.04)^1 = 1 - 0.48 = 0.52$; if q is 10, it is $1 - 0.5/(1 + 0.04)^{10} = 1 - 0.34 = 0.66$. As q approaches infinity, the bracketed personal tax term approaches 1, so that there is no personal tax effect on the rate of return. Thus, the personal tax rate discounting effect, which applies to both the a and the b components of return, depends on the period of time during which the investment is sheltered in the TFSA.

Rearranging terms as in the expression following the second equals sign of equation 5 makes it clear that the net return is identical to that for a pension fund and for an RRSP/RRIF. This confirms the well-known tax-equivalence of tax-in-advance and tax-deferred registered savings plans for the same type of investment made in an identical tax and investment environment. Moreover, this equivalence is independent of the level of the specified discount rate and the gross rate of investment return.

The equivalence between an RRSP/RRIF and a TFSA can be confirmed empirically by a simple example in which it is assumed that the pre-tax earnings amount is \$100 and that the other equation parameters have the values specified above. For a TFSA, the value of the investment after five years would be determined as follows: $\$100 \times (1 - 0.5) \times (1 + 0.08)^5 = \73.47 . In the case of an RRSP/RRIF, the final investment value would be $\$100 \times (1 + 0.08)^5 \times (1 - 0.5) = \73.47 . The discounted investment values would also obviously be the same—that is, $\$73.47/(1 + 0.04)^5 = \60.38 . By way of comparison, if no tax assistance were provided to the investment, the

value after five years would be as follows: $\$100 \times (1 - 0.5) \times (1 + 0.04)^5 = \60.83 , which, with a post-tax discount rate of 4 percent gives a discounted value of $\$60.83 / (1 + 0.04)^5 = \50 , or the original after-tax investment principal amount. The difference between the discounted investment values for the TFSA and the RRSP/RRIF options in comparison with the unassisted investment option is the net present value of the investment tax assistance provided—that is, $\$60.38 - \$50 = \$10.38$.

It should be noted that while the net returns from an RRSP/RRIF and a TFSA are technically equivalent, from a psychological perspective the tax-incentive effects might be subtly different. With an RRSP/RRIF, the full amount of the taxes owing becomes determinable and payable only after the investment has been made and the funds withdrawn from the plan. In the case of a TFSA, however, personal income tax is always payable up front, whether or not any investment is made with the income. Once the decision is made to invest the income in a TFSA, the initial investment amount and the investment earnings on it fully escape subsequent personal tax for as long as the funds remain in the tax-sheltered plan. Thus, the taxes paid *per dollar invested* in a TFSA are always completely free of personal tax, as measured by the following expression: $r_g(a(1 - t_c + t_{c,cca}) + b)$. In the empirical analysis in this article, it is assumed that the tax-incentive effects of TFSAs and RRSPs/RRIFs are identical.

Investment in Closely Held Real Estate

Required Gross Rate of Return

The measurement of the required gross rate of return in this article sidesteps the thorny issues associated with specifying a particular return-generating process (for example, the capital asset pricing model [CAPM], multi-factor models, arbitrage pricing models, and so on), which is a matter of considerable controversy in the finance literature. That said, when investment is through a broadly held corporate vehicle, market risk⁵ for real estate might be similar to that for the overall market, as would be the ease of investment. The same argument would apply for investments through REITs, which are discussed later. Indeed, the Globe Fund's real estate industry three-year group average estimate of beta (systematic or non-diversifiable risk) as of December 5, 2011 was 0.98.⁶ This estimate indicates that, on average for broadly held real estate holdings, rate of return volatility almost exactly matches that of the overall market. What is further striking is that most of the funds have individual betas that are fairly tightly clustered around the mean. Therefore, on the basis of market risk alone, it would be expected that the required gross rate of return would essentially be the same as for non-real-estate share investments (r_g).

5 This is referred to as beta risk, systematic risk, or non-diversifiable risk in CAPM and multi-factor CAPM-based models.

6 The Globe real estate funds can be found at https://secure.globeadvisor.com/review/20101231/TABRET_1.html. Group average beta, as well as individual fund betas, can be found by clicking on any fund.

When real estate investment is through a closely held corporation or other closely held vehicle, market or beta risk for such investment would not be expected to equal that of the overall market. It is well established in the real estate finance literature that real estate betas can vary along several dimensions, including property type (residential, commercial, retail, etc.), location, and reference year.⁷ On average, however, beta risk is often found to be less than 1 (the market-risk value) for direct real estate holdings, though the precise magnitude is not settled.⁸ This would lead to the required gross rate of return for real estate, which we can label r_g^{re} , being less than r_g .

On the other hand, it is widely recognized in the literature that there are unique factors associated with closely held real estate investments that may tend to increase the required rate of return in comparison with stock investments.⁹ Prudent investors choosing to add real estate to their portfolios require additional portfolio asset advisory/management expertise.¹⁰ This could include

7 Manuel Breidenbach, Glenn R. Mueller, and Karl-Werner Schulte, "Determining Real Estate Betas for Markets and Property Types To Set Better Investment Hurdle Rates" (2006) 12:1 *Journal of Real Estate Portfolio Management* 73-80.

8 Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence" (2004) 18:3 *Journal of Economic Perspectives* 25-46, provide a detailed review of the CAPM model.

9 See, for example, Piet M.A. Eichholtz, Martin Hoesli, Bryan D. MacGregor, and Nanda Nanthakumaran, "Real Estate Portfolio Diversification by Property Type and Region" (1995) 6:3 *Journal of Property Finance* 39-59; Jarl G. Kallberg, Crocker H. Liu, and D. Wylie Greig, "The Role of Real Estate in the Portfolio Allocation Process" (1996) 24:3 *Real Estate Economics* 359-77; Colin Lizieri and Scarlett Palmer, "Environmental Legislation, Real Estate Appraisal and Investment in the UK" (1997) 28:1 *Growth and Change* 110-29; S. Rothweiler, *Measuring Risk for Private Property Funds* (Amsterdam: Amsterdam School of Real Estate, March 2006); Shaun A. Bond, Soosung Hwang, Zhenguo Lin, and Kerry D. Vandell, "Marketing Period Risk in a Portfolio Context: Theory and Empirical Estimates from the UK Commercial Real Estate Market" (2007) 34:4 *Journal of Real Estate Finance and Economics* 447-61; Matteo Iacoviello and Marina Pavan, "An Equilibrium Model of Lumpy Housing Investment" (2007) 97:2 *Rivista di Politica Economica* 15-44; Jim Clayton, David C. Ling, and Andy Naranjo, "Commercial Real Estate Valuation: Fundamentals Versus Investor Sentiment" (2009) 38:1 *Journal of Real Estate Finance and Economics* 5-37; Ronald W. Kaiser and Jim Clayton, "Assessing and Managing Risk in Institutional Real Estate Investing" (2008) 14:4 *Journal of Real Estate Portfolio Management* 287-306; Elli Pagourtzi, Vassilis Assimakopoulos, Thomas Hatzichristos, and Nick French, "Real Estate Appraisal: A Review of Valuation Methods" (2003) 21:4 *Journal of Property Assessment & Finance* 383-401; and Andrew Baum and Kieran Farrelly, "Sources of Alpha and Beta in Property Funds: A Case Study" (2009) 2:3 *Journal of European Real Estate Research* 218-34.

10 Jordan Berger, "Managing Reputational Risk and Alternative Investment," *Mercer Bulletin*, August 29, 2008 (www.mercer.com/referencecontent.htm?idContent=1311965). Information obtained from my interviews with a large and diverse range of real estate investors and advisers in an unrelated study provides at least a rough indication of the potential cost of the added expertise involved. For a segregated real estate fund, the rates as a percentage of the equity invested are approximately as follows: large fund, inside management (0.25 percent); large fund, outside management (0.5 percent); medium fund (1 percent); small fund (1.5 percent).

- assessing the role of real estate risk in minimizing overall portfolio risk;
- choosing the most effective investment vehicles and legal arrangements;
- identifying suitable existing properties and executing purchases;
- participating in new developments;
- ensuring adequate diversity of properties by type (residential, retail, industrial, commercial) and location;
- tracking and assessing markets and trends;
- monitoring property performance and valuation; and
- handling property sales efficiently to meet liquidity needs.

On balance, the precise size of r_g^{re} relative to r_g is uncertain. It is not the objective of this study to resolve this issue; rather, the objective is to assess the comparative tax advantages and biases confronting different investors under different investment scenarios, given a pre-specified gross rate of return for each investment situation. In the empirical analysis, therefore, it is assumed that the required gross rate of return for real estate investments is r_g , the same as for non-real-estate share investments.

Investment Through a Closely Held Corporation

TAXABLE INVESTOR

When a taxable investor invests in real estate (RE) through a taxable corporation (C), the equation for calculating net return ($r_n^{T, RE, C}$) will effectively be the same as equation 2 (the equation for a taxable investor investing in non-real-estate corporate shares). One difference is introduced, however, in allowing flexibility in the ratio of income to capital gains earnings. Such a difference might arise between an investment in a broadly held real estate corporation listed on a stock exchange and an investment in a closely held, private real estate corporation. The net return ($r_n^{T, RE, C}$) equation for a closely held corporate real estate investment is therefore expressed as follows, replacing the variables a and b with a' and b' :

$$r_n^{T, RE, C} = r_g \left(a' (1 - t_c + t_c cca) (1 - t'_y) + b' (1 - t_{ac}) \right). \quad (6)$$

For real estate investments through a broadly held corporation, the net return equation would remain the same as equation 2.

PENSION FUND

When a tax-exempt pension fund invests in real estate through a broadly held corporation, the net return equation will be the same as equation 3 for market share investments. When the vehicle is a closely held real estate corporation, the parameters

A large segregated investment would be greater than \$400 million, a medium investment would range from \$200 million to \$400 million, and a small investment would range from \$100 million to \$200 million.

reflecting relative shares of income and capital gains change, for the reasons described above. Now the equation for calculating net return ($r_n^{PF, RE, C}$) is as follows:

$$r_n^{PF, RE, C} = r_g \left(a'(1 - t_c + t_{cca}) + b' \right) \left(1 - \frac{t_y}{(1 + d)^q} \right). \quad (7)$$

TAXABLE INVESTOR INVESTING THROUGH A REGISTERED SAVINGS PLAN

Closely held real estate is not an eligible investment for a registered savings plan.

Direct Unincorporated Investment in Real Estate by a Taxable Investor

An option that exists for taxable investors is the direct ownership of real estate with no intervening investment vehicle. This may be undertaken by individual investors or by groups of investors who are co-owners of a real estate property, perhaps as general partners in a limited partnership arrangement. Direct ownership is a popular form of real estate investment, as evidenced by the growth in personal investment in condominium units that are rented out to third parties, particularly in major metropolitan areas.

Under Canada's income tax legislation, income from the rental of unincorporated real estate is considered income from property. Individuals are taxed on rental income at their regular marginal tax rates. Rental property expenses—including mortgage interest, property taxes, CCA, and maintenance and repair costs—are allowable deductions in computing taxable rental income. Consistent with the normal logic underlying the calculation of total income for tax purposes, a rental loss on a commercial real estate investment may generally be used to offset other sources of income. There is, however, one constraint on the ability to use a rental loss to offset other positive income: the CCA deduction is limited to the taxpayer's net rental income before CCA, after taking into account recapture or terminal losses on other rental properties; it cannot be used to offset other sources of income.¹¹

For a taxable investor who makes an unincorporated (*U*) direct investment in real estate—that is, with no intervening investment vehicle—the net return equation is as follows:

$$r_n^{T, RE, U} + r_g \left(a'(1 - t_y + t_{cca}) + b'(1 - t_{ac}) \right). \quad (8)$$

Now, of course, there are no corporate tax effects. The rental income stream is subject to tax at the taxpayer's marginal personal tax rate (t_y), and the benefit of the

11 The CCA restriction does not apply to a corporation whose principal business is the leasing, renting, development, or sale of real property. CCA can generate a loss for such a principal business corporation.

CCA deduction depends on that tax rate as well. The capital gain component of return is again measured after application of the AETR. Since the investments are closely held, the income share and capital gains share parameters (a' and b') may differ from those for broadly held investments.

Pension Fund Investing Through a REIC

Pension funds in Canada have a variety of options for investing directly in real estate through non-taxable (or tax flowthrough) investment vehicles.¹² Some of the options are available to other types of investors, including direct investment, limited partnerships,¹³ joint venture arrangements,¹⁴ pooled funds,¹⁵ and, of course, REITs.

By far the principal vehicle utilized by pension funds for direct closely held real estate investment is the type of real estate investment corporation described in paragraph 149(1)(o.2) of the Act—that is, a REIC. A pension fund may use a REIC to invest in real estate, either alone or with other participating funds, with full corporate liability protection. Hybrid arrangements involving REIC participation in limited partnerships or joint ventures are also popular. When a REIC investment arrangement is used, the equation for calculating net return (now $r_n^{PF, RE, REIC}$) is as follows:

$$r_n^{PF, RE, REIC} = r_g \left[1 - \frac{t_y}{(1+d)^q} \right]. \quad (9)$$

Since pension funds are themselves tax-exempt, income tax liability arises only when earnings that have accrued to the fund through a tax-exempt REIC are paid out to beneficiaries. There are a number of significant differences between this case and the case where investment was assumed to be made by a pension fund through a conventional taxable corporation. First, corporate tax on earnings, of course, disappears. Second, any extra tax advantage arising from CCA deductions evaporates because there is no intermediary tax on rental income in any event. Third, recapture

12 For earlier analyses on this, see Eva M. Krasa, "Pension Real Estate Investment Corporations: Compliance Issues" (1995) 43:3 *Canadian Tax Journal* 610-38; Eva M. Krasa, "Income Tax Implications of Joint Investment by Pension Plans Through a Private Pooled Fund Vehicle" (1997) 45:1 *Canadian Tax Journal* 1-24; and Joel Shafer, "Investments in Real Estate by Tax-Exempt Entities and Intermediaries," in *Real Estate Transactions: Tax Planning for the Second Half of the 1990s*, 1995 Corporate Management Tax Conference (Toronto: Canadian Tax Foundation, 1996), 13:1-17.

13 To reduce risk and to avoid going offside active business prohibitions, one or more participating pension funds would typically invest as limited partners, with a property management firm or developer investing as the general partner.

14 In this case as well, active business functions would be handled by the non-pension-fund investors.

15 Here, "pooled funds" refers to the investment amounts of a number of pension funds being pooled by a third-party investment firm in a joint real estate fund. Pooled real estate funds may be less liquid than the other vehicles, with a 25-year commitment being common.

tax is eliminated. Fourth, capital gains tax is eliminated, and any realized capital gains become fully taxable as personal income on a deferred basis.

Investment in a REIT: Broadly Held Real Estate

Taxable Investor

Conventional investors can also invest through a tax-flowthrough REIT.¹⁶ In the finance literature, REIT investments are not considered direct real estate investments. Yau et al. distinguish clearly between direct investment and indirect financial investment, with REIT investments being assigned to the latter category.¹⁷ My own discussions with investment management firms in Canada confirmed this distinction; decisions on REIT investments are typically handled by general securities divisions of such firms, not by their real estate divisions.

A public REIT must have a minimum of 150 unitholders and be listed on an exchange. A private REIT does not have to meet the listing requirement.¹⁸ REITs are not strictly tax-exempt vehicles; however, tax at the trust level is avoided if essentially all of the earnings (for practical purposes, taken to mean at least 95 percent, measured net of depreciation and including both current earnings and realized capital gains) are paid out to unitholders annually. A REIT can also distribute to investors as a return of capital the portion of its income that is equivalent in amount to the CCA deduction. Tax on the distributed return of capital is deferred until the underlying units are sold, at which time the adjusted cost base for the units is reduced by the cumulative amount of the capital distributed, so that any capital gain realized is increased accordingly. Tax recapture can also arise, which is also taxed at capital gains tax rates when the REIT units are disposed of.

The following simple example, and accompanying table 1, illustrates the functioning of a REIT. A new REIT unit is purchased for \$10, held for three years, and then sold for \$14. The income return each year is \$1. The taxpayer's marginal tax rate is 50 percent, as is the capital gain inclusion rate. The CCA rate is 4 percent,¹⁹ and the full claim is distributed as a return of capital each year. It is assumed that the

16 Hybrid arrangements that provide investment flexibility are possible—for example, a limited partnership or a joint venture investing through a corporation or a REIT.

17 Jot K. Yau, Thomas Schneeweis, Thomas R. Robinson, and Lisa R. Weiss, "Alternative Investments Portfolio Management," in John L. Maginn, Donald L. Tuttle, Dennis W. McLeavey, and Jerald E. Pinto, eds., *Managing Investment Portfolios: A Dynamic Process*, 3d ed. (Hoboken, NJ: Wiley, 2007), 477-578, at 485. This paper is required reading for candidates for the Chartered Financial Analyst exam level III (highest). See Barry E. Feldman, "Investment Policy for Securitized and Direct Real Estate" (2003) 29:5 *Journal of Portfolio Management* 112-21, for an analysis of the comparative investment characteristics of REITs and direct real estate investments.

18 A private REIT is not an eligible investment for a tax-sheltered registered retirement plan.

19 To simplify the presentation, it is assumed that CCA applies to the full value of the REIT, whereas in actual fact it would apply only to the building (the depreciable) portion.

TABLE 1 Investment in a Unit of a Real Estate Investment Trust — Purchase Price \$10; Selling Price \$14

	Earnings	CCA return of capital	UCC	Economic depreciation	Undepreciated balance	CCA recapture	
						Taxed as income	Taxed as capital gain
<i>dollars</i>							
Investment period							
Year 1.....	1.00	0.400	9.600	0.200	9.800	na	na
Year 2.....	1.00	0.384	9.216	0.196	9.604	na	na
Year 3.....	1.00	0.369	8.847	0.192	9.412	na	na
Total.....	3.00	1.153	na	0.588	na	na	na
Disposition—after-tax return ^a							
Income.....	na	na	na	na	na	1.50	1.50
Capital gain.....	na	na	na	na	na	3.00	3.00
CCA gain.....	na	na	na	na	na	0.28 ^b	0.42 ^c
Total.....	na	na	na	na	na	4.78	4.92

Notes:

CCA = capital cost allowance

UCC = undepreciated capital cost

^a Undiscounted.

^b This is derived by subtracting the three-year cumulative economic depreciation (\$0.59) from the three-year CCA return of capital (\$1.15) and then subtracting the recapture tax owing (50 percent): $(\$1.15 - \$0.59) \times (1 - 0.5) = \0.28 .

^c This calculation is equivalent to that in note b except that the tax rate applied to the recapture amount is the personal rate (50 percent) times the capital gain inclusion rate (50 percent): $(\$1.15 - \$0.59) \times (1 - (0.5 \times 0.5)) = \0.42 .

actual depreciation rate is 2 percent; as a result, there is a CCA tax advantage in the year in which CCA is claimed, but recapture arises when the unit is sold. From the example, it can be seen that the undepreciated capital cost (UCC) is \$8.85 at the end of the holding period, compared to a true undepreciated capital balance of \$9.41. The last two columns of the table show the total after-tax (undiscounted) gain under two scenarios—one in which recapture is taxed as income, and a second in which the recapture receives the capital gains treatment accorded to REITs. In the first case, there is a CCA gain of \$0.28, ignoring discounting effects; in the second, there is an addition to total return of \$0.42.

The capital gains treatment accorded to the recapture component of REIT returns is most likely a policy compromise; it reflects the difficulty or impossibility of accurately tracking capital distributions for a non-tax-paying entity. The effect of the capital gains treatment of recapture for REITs is to increase the tax value of *cca* in the net return equation, as compared with the value for a vehicle to which normal recapture rules would apply. This reflects the preferential treatment of recapture as a capital gain. I return to this issue in the third section of the article.

For REIT investments, the equation for calculating net return ($r_n^{T, RE, REIT}$) is specified as follows:

$$r_n^{T, RE, REIT} = r_g \left(a(1 - t_y + 1.5t_y cca) + b(1 - t_a) \right). \quad (10)$$

Now, as in the case of a direct investment, annual earnings are taxable at regular personal income tax rates (t_y) as they flow through to investors. The tax value of CCA is also calculated on the basis of the personal rather than the corporate tax rate, after taking into account the effect of the capital gain inclusion rate on recapture, as indicated by the term $1.5t_y cca$. The AETR on the capital gain portion of return relates to the proceeds received from sale of the REIT units at the end of the holding period. The parameters a and b reflect again that the real estate investments are not closely held.

Pension Fund

If a pension fund invests in real estate through a REIT,²⁰ the net return equation is as follows:

$$r_n^{PF, RE, REIT} = r_g (a + b) \left(1 - \frac{t_y}{(1 + d)^q} \right) = r_g \left(1 - \frac{t_y}{(1 + d)^q} \right). \quad (11)$$

With annual income payouts from the REIT assumed to be reinvested in the same or a similar REIT vehicle, tax effects arise only when earnings are withdrawn from the pension fund. At that time, they are taxable at the investor's marginal tax rate, which is discounted to reflect the holding period effect.

20 Private REITs are seldom used by pension funds, undoubtedly because of the minimum investor rule and the availability of the preferred REIC vehicle.

Taxable Investor Investing Through a Registered Savings Vehicle

For a taxable investor investing in a REIT through an RRSP/RRIF, the tax treatment is identical to that for a pension fund. Therefore, the net return equation in this case is as follows:

$$r_n^{RRSP, RE, REIT} = r_g(a + b) \left(1 - \frac{t_y}{(1 + d)^q} \right) = r_g \left(1 - \frac{t_y}{(1 + d)^q} \right). \quad (12)$$

If the investor instead uses a TFSA to invest in a REIT, the net return equation looks like this:

$$\begin{aligned} r_n^{TFSA, RE, REIT} &= \left(1 - \frac{t_y}{(1 + d)^q} \right) r_g(a + b) \\ &= r_g \left(1 - \frac{t_y}{(1 + d)^q} \right). \end{aligned} \quad (13)$$

Here again, the first bracketed term after the first equals sign reflects the tax-in-advance characteristic of a TFSA and the discounting effect that determines the effective personal tax rate, which is uniquely determined by the length of time (q) during which the REIT investment is retained in the TFSA. Rearranging terms after the second equals sign emphasizes again the equivalence between an RRSP/RRIF and a TFSA in terms of after-tax return, given a fixed tax and investment environment. As discussed above, the taxes paid *per dollar invested* in a TFSA are always free of personal tax, in this case giving a net return of r_g , or the pre-tax gross rate of return.

Note that the preferential recapture treatment of CCA distributions that arises when a taxable investor invests in REIT units does not apply when the investment is by either a pension fund or a registered savings vehicle (RRSP/RRIF or TFSA). This is because investment earnings accruing in these vehicles are non-taxable in any event, so that the *cca* term does not appear in the net return equations.

Summary and Comparison of the Net Return Equations

For convenience of comparison, table 2 gathers together the net return equations that apply under the different investment scenarios discussed above (equations 2 through 13).

EMPIRICAL ANALYSIS OF INVESTMENT ADVANTAGES

Equation Parameters

Because of the complexity of the net return equations, to make meaningful comparative assessments it is necessary to conduct empirical analysis within precisely specified investment environments. Empirical results obtained from substituting

TABLE 2 Summary of Net Return Equations

Equation	Investor	Investment	Vehicle	Net return equation
<i>Market investment in corporate shares</i>				
2	Taxable investor	Market shares	Taxable corporation	$r_n^{T,S} = r_g \left(a(1 - t_c + t_{cca}) (1 - t'_y) + b(1 - t_{ac}) \right)$.
3	Pension fund	Market shares	Taxable corporation	$r_n^{PF,S} = r_g \left(a(1 - t_c + t_{cca}) + b \right) \left(1 - \frac{t_y}{(1+d)^y} \right)$.
4	RRSP/RRIF	Market shares	Taxable corporation	$r_n^{RRSP,S} = r_g \left(a(1 - t_c + t_{cca}) + b \right) \left(1 - \frac{t_y}{(1+d)^y} \right)$.
5	TFSA	Market shares	Taxable corporation	$r_n^{TFSA,S} = r_g \left(a(1 - t_c + t_{cca}) + b \right) \left(1 - \frac{t_y}{(1+d)^y} \right)$.
<i>Investment in closely held real estate</i>				
6	Taxable investor	Real estate	Taxable corporation	$r_n^{T,RE,C} = r_g \left(a'(1 - t_c + t_{cca}) (1 - t'_y) + b'(1 - t_{ac}) \right)$.
7	Pension fund	Real estate	Taxable corporation	$r_n^{PF,RE,C} = r_g \left(a'(1 - t_c + t_{cca}) + b' \right) \left(1 - \frac{t_y}{(1+d)^y} \right)$.
8	Taxable investor	Real estate	Direct unincorporated	$r_n^{T,RE,U} = r_g \left(a'(1 - t_y + t_{ycca}) + b'(1 - t_{ac}) \right)$.
9	Pension fund	Real estate	REIC	$r_n^{PF,RE,REIC} = r_g \left(1 - \frac{t_y}{(1+d)^y} \right)$.

(Table 2 is concluded on the following page.)

TABLE 2 Concluded

Equation	Investor	Investment	Vehicle	Net return equation
<i>Investment in REIT units: Broadly held real estate</i>				
10	Taxable investor	Real estate	REIT	$r_n^{T, RE, REIT} = r_g \left(a(1 - t_y + 1.5t_{y,cca}) + b(1 - t_a) \right).$
11	Pension fund	Real estate	REIT	$r_n^{PF, RE, REIT} = r_g(a + b) \left(1 - \frac{t_y}{(1 + d)^y} \right) = r_g \left(1 - \frac{t_y}{(1 + d)^y} \right).$
12	RRSP/RRIF	Real estate	REIT	$r_n^{RRSP, RE, REIT} = r_g(a + b) \left(1 - \frac{t_y}{(1 + d)^y} \right) = r_g \left(1 - \frac{t_y}{(1 + d)^y} \right).$
13	TFSA	Real estate	REIT	$r_n^{TFSA, RE, REIT} = r_g \left(1 - \frac{t_y}{(1 + d)^y} \right).$

realistic parameter values into the equations could shed light on a number of issues, including the following:

1. the absolute investment advantage by one type of investor over the other for each investment category;
2. the comparative advantage that each type of investor has—that is, the investment category that it should tend to specialize in;
3. the optimal vehicle for real estate investment for each type of investor;
4. the relative importance of different factors that contribute to net returns for different investors and vehicles; and
5. the sensitivity of the results to changes in key parameter values.

The purpose of this section is to explore these issues empirically.

In order to derive quantitative estimates from the net return equations, in addition to the assumed holding period for the investments, the following parameter values must be specified: $t_y, t'_y, t_c, cca, q, r_g, d, a, b, a', b', t_{ae}$.

Since Ontario is the largest investment market in Canada, I assume that Ontario tax rates apply. The statutory regular personal income tax rate is therefore taken to be 46.41 percent, which is the top combined marginal tax rate for the 2011 tax year (a federal rate of 29.0 percent plus an Ontario rate of 17.41 percent, applying to income over \$128,800).²¹ Taking into account the 50 percent inclusion rate, the combined statutory rate for capital gains, on a realization basis, is therefore 23.205 percent (14.5 percent federal plus 8.705 percent Ontario). The statutory corporate tax rate (t_c) is assumed to be the large corporation rate,²² which was 28 percent (16.5 percent federal and 11.5 percent Ontario) effective July 1, 2011. This rate applies to both real estate and non-real-estate corporations. The personal tax rate on income from dividends (t'_y) is assumed to be the rate that applies to dividends paid by businesses that pay corporate tax at the large corporation rate (that is, the rate applying to “eligible dividends”), which is 28.19 percent (17.72 percent federal and 10.47 percent Ontario). These are the rates on actual dividends received, after taking into account the combined effects of the dividend gross-up and the DTC.²³

As noted above, one component of return may derive from the tax allowance for CCA, which is a substitute for book depreciation. In the case of stock market investments, in the absence of any alternative evidence of a more reasonable assumption for such a heterogeneous group of investments and asset classes, it is assumed that CCA rates are on average equal to actual depreciation rates. The implication is that cca , the extra tax value of CCA, is zero.

21 All tax data, unless otherwise noted, are taken from www.taxtips.ca. Rates include all surtaxes.

22 A corporation investing in real estate does not qualify for the small-business tax rate.

23 For the 2011 taxation year, the gross-up was 41 percent and the DTC rates were as follows: (1) as a percentage of grossed-up dividends, 22.84 percent (16.44 percent federal and 6.4 percent Ontario); and (2) as a percentage of actual dividends, 32.29 percent (23.27 percent federal and 9.02 percent Ontario).

Consider now the case of real estate investments. The statutory CCA rate for most types of buildings is 4 percent. In any given situation, the actual CCA rate claimed in respect of real estate investments in a year would be an effective rate that would be affected by three considerations: (1) that only a portion of the property from which earnings arise is depreciable property; (2) that it may not always be possible or desirable to claim the full amount of CCA each year; and (3) that recapture tax, which will become apparent only when the property is sold, might arise if CCA claims turn out to have been excessive relative to the actual change in property values. Also of relevance, of course, is the magnitude of the statutory CCA rate as compared with the actual average building depreciation rates.

In a thorough and detailed review of studies relating to real estate depreciation and its tax implications, Gravelle²⁴ emphasized the methodological challenges in estimating depreciation for such a diverse asset. She concluded that “structures probably depreciate at rates in excess of 2%, but probably less than 4%.”²⁵ By way of comparison, the ratio of book depreciation to net capital value for the “real estate” industry category of Statistics Canada’s *Financial and Taxation Statistics for Enterprises* 2010 was 3.2 percent,²⁶ a rate that has remained steady over a wide range of years. Some real estate studies have estimated or used low depreciation rates—some as low as 1 percent. It is common for REIT offerings to emphasize the tax benefits that can arise from the CCA rules applying to such investments (discussed previously).

Figures provided to me by the Toronto office of Altus Group for apartment building costs in the downtown Toronto core indicate that construction costs per buildable square foot are about 70.45 percent of total costs and land costs are about 29.55 percent. The land component may be somewhat high in comparison with other locations and other types of real estate; therefore, in the empirical analysis that follows, it is assumed that construction and land costs are, respectively, 75 percent and 25 percent of total property costs. Since the net return equations relate to annual flows, the stock values must be converted to that basis to be compatible. Using a statutory CCA rate of 4 percent, and a base-case value of the gross before-tax rate of return after real depreciation (r_g) of 8 percent, the gross value of the CCA deduction expressed in relation to annual gross return would therefore be 37.5 percent. This is derived from the following equation:

$$\begin{aligned} &\text{CCA as a percentage of gross return} \\ &= (\text{CCA rate} \times \text{percentage of depreciable property})/r_g \times 100\% \\ &= (0.04 \times 0.75)/0.08 \times 100\% = 37.5\%. \end{aligned} \tag{14}$$

24 Jane G. Gravelle, *Depreciation and the Taxation of Real Estate*, CRS Report for Congress (Washington, DC: Congressional Research Service, May 12, 1999) (www.nmhc.org/content/servefile.cfm?fileid=240).

25 *Ibid.*, at 9.

26 Statistics Canada, *Financial and Taxation Statistics for Enterprises* 2010, catalogue no. 61-219-X, at table 63-1.

If the statutory CCA rate equals the actual economic depreciation rate, then no tax value derives from the CCA deduction—that is, $cca = 0$. If, however, the economic depreciation rate is 3 percent, 2 percent, or 1 percent, then cca is, respectively, 9.38 percent, 18.75 percent, and 28.13 percent. These figures are derived by multiplying 37.5 percent by, respectively, 0.25, 0.5, and 0.75. In the empirical analysis, the three cca values are tested, with a base-case value of 0 percent. In the case of non-REIT real estate investments, these effective CCA rates are multiplied by either the corporate tax rate or the personal tax rate, depending on the investment scenario, to calculate the tax benefit. As discussed earlier, in the case of REIT investments, the rates are multiplied by 1.5 times the personal tax rate, which reflects the preferential effect of taxing any recapture amounts at the capital gains tax rate.

The estimated tax deferral period for pension fund assets is approximated by dividing the stock of pension assets by the annual payouts after adjusting for the fund growth rate. It is based on the following simple formula:

$$q = \left(\frac{\text{total pension assets}}{\text{annual benefits paid to retirees}} \right) \times \left(\frac{\text{annual contributions by members}}{\text{annual benefits paid to retirees}} \right). \quad (15)$$

Total pension fund assets in the first quarter of 2011 were \$1.08 trillion.²⁷ Total contributions by members were \$10.4 billion, or \$41.6 billion annualized, and total quarterly benefits paid to retirees were \$10.3 billion, or \$41.2 billion annualized. The estimated base-case tax deferral period for pension plans is therefore 26.5 years and is assumed to be the same for RRSPs/RRIFs.

The required gross rate of return (r_g) for market security investments is taken to be the S&P/TSX total return (average annual compound return). Over the 10-year period ended September 30, 2011 the total return was 8.0 percent, which is the parameter used in the empirical analysis.²⁸

A common after-tax discount rate (d) is used to discount cash flows in calculating t_{ae} under all investment scenarios. The discount rate is based on a taxable investor investing in taxable corporate shares through the stock market, as reflected in the following equation:

$$d = r_g(1 - t_c)(1 - t'_y). \quad (16)$$

The equation includes tax effects that take into account corporate-personal tax integration through the dividend gross-up and tax credit regime. This approach reflects a reasonable common standard, whereas incorporating different tax effects

27 Statistics Canada, "Employer Pension Plans (Trusteed Pension Funds)," *The Daily*, September 13, 2011.

28 See www.globefund.com/static/romf/generic/tabbench.html.

for different investors and investment arrangements in the discount rate would simply obfuscate the interpretation of empirical results.

Consider now the importance of the different components of returns—the a and b (and a' and b') terms in the equations. The dividend portion of total returns for the S&P/TSX universe, which reflects the general equity market, has been increasing—from 25.1 percent over the past 20 years, to 36.4 percent over the past 10 years, and 44.9 percent over the past 5 years.²⁹ RBC Global Asset Management attributes this development to two factors: an increase in corporate dividend payout ratios, and the conversion of many income trusts to high-yield dividend-paying stocks. The increasing importance of dividends is a trend that RBC expects to continue. For the base-case simulations, the dividend and capital gain portions of return for the most recent 5-year period—44.9 percent and 55.1 percent, respectively—are used in the empirical analysis.

To estimate the components of return for real estate equity, data for the Great West Life Real Estate Fund (GWL REF) were used for the base-case investments. The GWL REF, with \$3.6 billion in total assets, is Canada's largest real estate segregated fund.³⁰ Since property holdings in the fund are diversified by type (office, residential, industrial, and retail) and region across Canada, the fund's performance provides a reasonable proxy for the sector. The composition of returns appears more stable than in the case of the overall market, with dividends increasing in importance only slightly for the past 5-year period compared to the past 10-year period—from 71.8 percent to 75.7 percent of total returns.³¹ Since this trend may reflect the factors discussed in the preceding paragraph, for the base-case simulations the most recent figures are used in the empirical analysis—that is, 75.7 percent for dividends and 24.3 percent for capital gains.

As discussed, the dividend and capital gain components for closely held real estate—the a' and b' variables in the equations—may differ from those for either broadly held real estate (that is, REITs) or large real estate corporations. Sensitivity testing is therefore done using alternative assumed ratios for capital gains of 50 percent and 75 percent, with the assumed ratios for dividend earnings declining proportionately. To further test the robustness of the empirical results, simulations are also conducted that vary a and b for market share investments.

Investment holding periods differ significantly between the two classes of assets considered in the analysis. Holding periods for listed Canadian stocks are estimated

29 RBC Global Asset Management, "Dividends: Income, Growth and Diversification," May 2011 (www.cibcwg.com/c/document_library/get_file?uuid=14f933b2-b603-4f9d-bcd0-87f9ab7781e5&groupId=118158).

30 Great West Life Realty Advisors, "Fund Information: Great West Life Real Estate Fund," various years (www.gwlrealtyadvisors.com/GWLRA/default.asp?pID=208&sID=213&cID=12&lang=E).

31 Ibid.

to be less than 2 years, averaging 1.7 years over the 15-year period 1991-2005.³² This is the holding period assumed in the base-case simulations. It contrasts significantly with holding periods for real estate, which are typically estimated to be much longer; for example, in US studies, optimal holding periods have been estimated to be in the range of 15 years.³³ In the empirical analysis, a 15-year holding period is assumed for the base-case simulations.

The AETR for capital gains is a calculation based on the tax rate, which, if applied to accruing capital gains on an annual basis, would be equivalent in net present value terms to the capital gains taxes actually paid when realized and taxed under prevailing statutory tax rules.³⁴ The following equation is used to solve for t_{ae} , assuming that assets are held for n years:

$$\sum_{i=1}^n \frac{t_{ae} g_i}{(1+d)^i} = t_y (incl) \frac{\sum_{i=1}^n g_i}{(1+d)^n}. \quad (17)$$

In the equation, the portion of total pre-tax return that accrues as capital gain each year is represented by g_i , the capital gain inclusion rate is $incl$, the discount rate is d , and t_{ae} is the rate that equates the two sides of the equation. The left-hand side of the equation applies t_{ae} to the gain of each year and then sums the discounted yearly values back to the base year. The right-hand side of the equation reflects the status quo in which the statutory tax rate times the inclusion rate is applied to the total gain over the entire holding period discounted back from the terminal holding period year to the base year. The AETR will differ for different assumed asset holding periods and different market rates of return (as discussed further below). When the equation is applied to stock market investments, for which the holding period is 1.7 years, t_{ae} is 22.82 percent. When the equation is applied to real estate investments, with an assumed holding period of 15 years, t_{ae} is 17.21 percent.

Empirical Results

Table 3 presents the base-case results for each of the net return equations. The base-case parameter values are as follows:

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- 32 Hillsdale Investment Management, "Canadian Stock Market Inefficiencies," June 2005 (www.hillsdaleinv.com/portal/index.php/private/publications/canadian-stock-market-inefficiencies). The holding period for S&P 500 stocks is only 19 months (*ibid.*). See also "Duration of Stock Holding Periods Continue To Fall Globally [sic]," September 6, 2010 (<http://topforeignstocks.com/2010/09/06/duration-of-stock-holding-period-continues-to-fall-globally>).
- 33 See, for example, Anthony J. Pellechio, "Taxation, Rental Income, and Optimal Holding Periods for Real Property" (1988) 41:1 *National Tax Journal* 97-107; and Patric H. Hendershott and David C. Ling, "Trading and the Tax Shelter Value of Depreciable Real Estate" (1984) 37:2 *National Tax Journal* 213-23.
- 34 Mervyn A. King and Don Fullerton, eds., *The Taxation of Income from Capital: A Comparative Study of the United States, the United Kingdom, Sweden, and Germany* (Chicago: University of Chicago Press, 1984), at 23, discuss an approach to calculating AETR.

- the market rate of return is 8 percent;
- the tax-deferral period for pension funds is 26.5 years;
- the asset holding period is 15 years for real estate and 1.7 years for stock market investments;
- the capital gain portion of total return is 55.1 percent for the stock market and 24.3 percent for real estate; and
- the value of *cca* for real estate investments is 0 percent.

The table shows the simulation results for the *a* (income) and *b* (capital gain) components of net after-tax return, as well as the total return. Under the “Ratio” heading, the base for market share investments is the total return for a taxable investor; for all real estate investments, including those involving REITs, the base is the total return for a taxable investor investing through a taxable corporation.

Focusing first on market share investments and the total net after-tax return column, it can be seen that pension funds, RRSPs/RRIFs, and TFSAs have a distinct advantage over taxable investors. All three types of tax-assisted investors have an after-tax rate of return of 5.9 percent, which is 12 percent greater than the return for a taxable investor investing directly. While the corporate taxes paid by taxable and tax-assisted investors are the same, the net present value of the personal tax payable on the earnings when they are paid out of the savings or pension plan (at a discounted effective rate of 16.1 percent over a 26.5-year shelter period) is considerably lower than the tax rate on dividends under the DTC mechanism for a taxable investor (28.2 percent). It is also lower than the AETR that applies to capital gains for taxable investors (22.8 percent). These realities are reflected in the fact that both the *a* and the *b* components of return are higher for tax-assisted investors. Thus, the tax-deferral advantage of pension funds and registered savings plans more than offsets the advantages that derive to a taxable investor, by way of the favourable treatment accorded to dividends through the DTC and to capital gains through the 50 percent inclusion rate and the deferral of tax until realization.

Now consider the case where the investment is in closely held real estate, as presented in the middle section of table 3. As mentioned above, RRSPs/RRIFs and TFSAs do not make closely held real estate investments, so the comparison is strictly between taxable investors and pension funds. Not surprisingly, the capital gain component of total return is much more important for stock market investments than for real estate because, as discussed above, that is what recent (base-case) values for the *a* and *b* parameters reveal. This has an important effect when investment is made through a taxable corporation. In that case, the net rate of return for both taxable investors and pension funds drops in comparison with investment in market shares. In the case of taxable investors, this higher weighting (75.7 percent versus 44.9 percent for stock market investments) means that a greater portion of return is taxed at the corporate tax rate than at the lower AETR on real estate capital gains (17.2 percent versus 22.8 percent for stock market investments). In the case of pension funds, the higher weighting means that a greater portion of return is taxed at the corporate rate than at the deferred personal income tax rate applying to both components of

TABLE 3 Empirical Results for the Various Net Return Equations (Base Case)^a

Equation	Investor	Investment	Vehicle	Realized net after-tax rate of return			
				<i>a</i> term	<i>b</i> term	Total r_n	Ratio ^b
<i>Market investment in corporate shares</i>							
2	Taxable investor	Market shares	Taxable corporation	1.86	3.40	5.26	1.00
3	Pension fund	Market shares	Taxable corporation	2.18	3.71	5.89	1.12
4	RRSP/RRIF	Market shares	Taxable corporation	2.18	3.71	5.89	1.12
5	TFSA	Market shares	Taxable corporation	2.18	3.71	5.89	1.12
<i>Investment in closely held real estate</i>							
6	Taxable investor	Real estate	Taxable corporation	3.13	1.61	4.74	1.00
7	Pension fund	Real estate	Taxable corporation	3.67	1.64	5.30	1.12
8	Taxable investor	Real estate	Direct unincorporated	3.25	1.61	4.85	1.02
9	Pension fund	Real estate	REIC	6.73		6.73	1.42
<i>Investment in REIT units: broadly held real estate</i>							
10	Taxable investor	Real estate	REIT	3.25	1.61	4.85	1.02
11	Pension fund	Real estate	REIT	6.73		6.73	1.42
12	RRSP/RRIF	Real estate	REIT	6.73		6.73	1.42
13	TFSA	Real estate	REIT	6.73		6.73	1.42

Notes:

^a Base-case parameter values are used for the following variables: *cca*, 0 percent; *a*, market shares 44.9 percent, real estate 75.7 percent; and *b*, market shares 55.1 percent, real estate 24.3 percent.

^b The base in the case of market shares is the total return for a taxable investor; for all real estate investments, including those involving REITs, the base is the total return for a taxable investor investing through a taxable corporation.

investment return (15.9 percent). Therefore, there is a tax bias against these forms of real estate investments.

Comparing rates within the real estate investment category, a pension fund has a 12 percent higher rate of return than a taxable investor when both invest through a conventional taxable corporation. Again, the tax-deferral advantage of the pension fund more than offsets the loss of the DTC and the taxation of capital gains on a realization basis. Most of the advantage is with the *a* component of return. This is because the capital gain advantage is reduced by the fact that, with the much longer holding period in the case of real estate (15 years), the AETR on capital gains for a taxable investor (17.2 percent) is much closer to the deferred personal tax rate applying to a pension fund (15.9 percent).

The rate of return for direct unincorporated investments by a taxable investor (4.85 percent) is only marginally higher than the rate realized when the same investor invests through a taxable corporation (4.74 percent). The capital gain component of return is identical because both investment scenarios receive the same tax treatment. However, the DTC mechanism does not quite offset the personal tax treatment accorded the income stream component of return for unincorporated investments. Given the liability protection provided by the corporate vehicle, larger investors would almost certainly choose that option. In the case of smaller investors, questions of convenience and costs of incorporation would likely come into play as well.

As reflected in the last row of the middle section of table 3, the greatest advantage with respect to closely held real estate investments under the base-case scenario arises where a pension fund invests through a tax-exempt REIC. In this case, the rate of return (6.73 percent) exceeds the return accruing to the taxable investor by 42 percent. The only tax paid by the pension fund is the personal tax on payouts to beneficiaries, again at the discounted effective tax rate of 15.9 percent. It is notable that the net rate of return accruing to a pension fund is significantly higher than the rate that the pension fund would receive from investing in corporate market shares, so that there is a tax bias in favour of closely held real estate investments for a pension fund.

Now consider the third section of table 3, which shows the results for broadly held real estate investments through a REIT. Broadly held real estate investments through a corporate vehicle are not considered separately because the net returns and tax biases for the different categories of investors would be identical to those for corporate market share investments.

In the case of a taxable investor investing directly in a REIT, the total net return (4.85 percent) is lower than that for market share investments (5.26 percent), so that there is a tax bias against this form of investment, at least under the base-case assumptions. The corporate market investment is taxed slightly higher on both the *a* and the *b* components of return than is the REIT investment, because the DTC does not provide perfect integration and because, with the shorter holding period, the AETR on capital gains is higher for market share investments. However, this result is more than offset by the higher weight applying to the *b* component of return in the case of the corporate investment (55.1 percent versus 24.3 percent for the REIT) together

with the fact that AETRs applying to capital gains for both types of investments are significantly lower than the rates applying to the *a* component of return.

The story changes, however, when the investment is made by a pension fund or a registered savings vehicle (RRSP/RRIF or TFSA). All of these investors gain a 42 percent advantage in comparison with the scenario where a taxable investor invests in real estate through a taxable corporation. This is because of the tax-flowthrough nature of the REIT combined with the tax-deferral advantage of the fund or plan. For a pension fund, the advantage is equivalent to that provided by investment through a REIC, because the tax treatment is essentially the same for both vehicles. However, the REIC provides greater liability protection and permits investment in closely held real estate.

The following conclusions are supported by these base-case simulation results.

1. Pension funds and tax-preferred savings plans (RRSPs/RRIFs and TFSAs) provide a 12 percent boost to investment returns for market share investments, compared to the returns for taxable investors investing directly.

The tax-deferral advantage of pension funds and registered savings plans more than offsets the advantages that derive to a taxable investor by way of the favourable treatment accorded to dividends and capital gains. The net present value of the personal tax payable on earnings when they are paid out of the fund or plan (at a discounted effective rate of 16.1 percent over a 26.5-year shelter period) is considerably lower than both the tax rate on dividends under the DTC mechanism (28.2 percent) and the AETR on capital gains that applies to a taxable investor (22.8 percent).

2. Both taxable investors and pension funds have a tax bias against investing in closely held real estate through a taxable corporation. Net returns are lower than for investments in market shares.

In the case of taxable investors, this higher weighting of the income component of return (75.7 percent versus 44.9 percent for stock market investments) means that a greater portion of return is taxed at the corporate tax rate than at the lower AETR on real estate capital gains (17.2 percent). In the case of pension funds, the higher weighting means that a greater portion of return is taxed at the corporate rate than at the deferred personal income tax rate applying to both components of investment return (15.9 percent).

3. Pension funds investing in closely held real estate through a REIC have a significant advantage over taxable investors making similar investments, irrespective of whether those investments are made through corporate or unincorporated arrangements.

Rates of return for taxable investors investing through a taxable corporate or unincorporated arrangement are fairly similar. When a pension fund invests through a tax-exempt REIC, the investment return exceeds that accruing to a taxable investor investing in a taxable corporation by 42 percent. The only tax paid by the pension fund is the personal tax on payouts to beneficiaries, at a discounted effective tax rate of 15.9 percent, whereas in the case

of the taxable investor, corporate tax of 28 percent is paid on the income component of return and the AETR on the capital gain component is 17.2 percent. The net rate of return accruing to a pension fund is significantly higher than the rate that the fund would receive from investing in corporate market shares, so that there is a tax bias in favour of closely held real estate investments for a pension fund.

4. Pension funds, RRSPs/RRIFs, and TFSAs have a significant and equivalent advantage relative to taxable investors when investing in broadly held real estate through a REIT.

For a pension fund, the investment advantage is equivalent to that gained from investing in closely held real estate through a REIC. The absolute rates of return for REIT investments by these investors are higher than the rates that they would earn from investing in market shares or in real estate through a corporation (whether closely or broadly held), thus creating a tax bias in favour of REIT units.

Sensitivity Analysis

The robustness of the results was tested against differences in assumed values for base-case model parameters. The sensitivity analysis involved the following scenarios:

1. The assumed market rate of return was increased incrementally from 5 percent to 11 percent.
2. The tax-deferral period for pension fund assets was increased from 15 to 35 years.
3. The asset holding period was increased from 5 to 25 years in the case of real estate investments and from 1 to 5 years in the case of stock market investments.
4. The portion of capital gain in total return was varied from 25 percent to 75 percent for stock market investments and from 24.3 percent to 75 percent for real estate investments, with the portion of income earnings declining proportionately.
5. The value of *cca* on closely held real estate investments was increased from 0 percent to 9.38 percent, 18.75 percent, and 28.13 percent.
6. The value of *cca* for REIT investments used the above CCA rates but any tax advantage was calculated by multiplying the personal tax rate by the capital gain inclusion rate.

Tables 4 through 7 show the results from the sensitivity analysis along with the base-case results for comparison. Tables 4, 5, and 6 report the simulation results for two variables, and table 7 reports the results for one variable. For ease of reference, shading is used in each table. The two shaded rows in each table highlight, first, pension fund investments in stock market equities and, second, pension fund investments in closely held real estate investments through a REIC. The two shaded columns in each table highlight the base-case results.

TABLE 4 Sensitivity Analysis: Assumed Differences in Market Rates of Return and the Pension Fund Tax-Deferral Period

Equation	Investor	Investment	Vehicle	Differences in market rate of return (r_m) (percent)					Differences in pension fund tax-deferral period (years)				
				5	8	11	15	26.5	35				
2	Taxable investor	Market shares	Taxable corporation	3.28	1.00	5.26	1.00	7.24	1.00	5.26	1.00	5.26	1.00
3	Pension fund	Market shares	Taxable corporation	3.34	1.02	5.89	1.12	8.59	1.19	5.23	0.99	5.89	1.12
4	RRSP/RRIF	Market shares	Taxable corporation	3.34	1.02	5.89	1.12	8.59	1.19	5.23	0.99	5.89	1.12
5	TFSA	Market shares	Taxable corporation	3.34	1.02	5.89	1.12	8.59	1.19	5.23	0.99	5.89	1.12
6	Taxable investor	Real estate	Closely held taxable corp.	2.94	1.00	4.74	1.00	6.57	1.00	4.74	1.00	4.74	1.00
7	Pension fund	Real estate	Closely held taxable corp.	3.01	1.02	5.30	1.12	7.74	1.18	4.71	0.99	5.30	1.12
8	Taxable investor	Real estate	Direct unincorporated	3.01	1.02	4.85	1.02	6.73	1.02	4.85	1.02	4.85	1.02
9	Pension fund	Real estate	REIC	3.82	1.30	6.73	1.42	9.82	1.50	5.98	1.26	6.73	1.42
10	Taxable investor	Real estate	REIT	3.01	1.02	4.85	1.02	6.73	1.02	4.85	1.02	4.85	1.02
11	Pension fund	Real estate	REIT	3.82	1.30	6.73	1.42	9.82	1.50	5.98	1.26	6.73	1.42
12	RRSP/RRIF	Real estate	REIT	3.82	1.30	6.73	1.42	9.82	1.50	5.98	1.26	6.73	1.42
13	TFSA	Real estate	REIT	3.82	1.30	6.73	1.42	9.82	1.50	5.98	1.26	6.73	1.42

TABLE 5 Sensitivity Analysis: Assumed Differences in the Holding Periods for Real Estate and Stock Market Equities

Equation	Investor	Investment	Vehicle	Differences in real estate holding period (years)					Differences in stock market equities holding period (years)				
				5	15	25	1	1.7	5	15	25	1	1.7
2	Taxable investor	Market shares	Taxable corporation	5.26	1.00	5.26	1.00	5.24	1.00	5.26	1.00	5.32	1.00
3	Pension fund	Market shares	Taxable corporation	5.89	1.12	5.89	1.12	5.89	1.12	5.89	1.12	5.89	1.11
4	RRSP/RRIF	Market shares	Taxable corporation	5.89	1.12	5.89	1.12	5.89	1.12	5.89	1.12	5.89	1.11
5	TFSA	Market shares	Taxable corporation	5.89	1.12	5.89	1.12	5.89	1.12	5.89	1.12	5.89	1.11
6	Taxable investor	Real estate	Closely held taxable corp.	4.66	1.00	4.74	1.00	4.74	1.00	4.81	1.00	4.74	1.00
7	Pension fund	Real estate	Closely held taxable corp.	5.30	1.14	5.30	1.12	5.30	1.12	5.30	1.10	5.30	1.12
8	Taxable investor	Real estate	Direct unincorporated	4.77	1.02	4.85	1.02	4.85	1.02	4.92	1.02	4.85	1.02
9	Pension fund	Real estate	REIT	6.73	1.44	6.73	1.42	6.73	1.42	6.73	1.40	6.73	1.42
10	Taxable investor	Real estate	REIT	4.77	1.02	4.85	1.02	4.85	1.02	4.92	1.02	4.85	1.02
11	Pension fund	Real estate	REIT	6.73	1.44	6.73	1.42	6.73	1.42	6.73	1.40	6.73	1.42
12	RRSP/RRIF	Real estate	REIT	6.73	1.44	6.73	1.42	6.73	1.42	6.73	1.40	6.73	1.42
13	TFSA	Real estate	REIT	6.73	1.44	6.73	1.42	6.73	1.42	6.73	1.40	6.73	1.42

TABLE 6 Sensitivity Analysis: Assumed Differences in the Portion of Capital Gain in Total Return

Equation	Investor	Investment	Vehicle	Differences in portion of stock market capital gain in total return (b) (percent)			Differences in portion of real estate capital gain in total return (b) (percent)								
				25.0	55.1	75.0	24.3	50.0	75.0						
2	Taxable investor	Market shares	Taxable corporation	4.65	1.00	5.66	1.00	5.26	1.00	5.26	1.00	5.26	1.00		
3	Pension fund	Market shares	Taxable corporation	5.32	1.14	6.26	1.11	5.89	1.12	5.89	1.12	5.89	1.12		
4	RRSP/RRIF	Market shares	Taxable corporation	5.32	1.14	6.26	1.11	5.89	1.12	5.89	1.12	5.89	1.12		
5	TFSA	Market shares	Taxable corporation	5.32	1.14	6.26	1.11	5.89	1.12	5.89	1.12	5.89	1.12		
6	Taxable investor	Real estate	Closely held taxable corp.	4.74	1.00	4.74	1.00	4.74	1.00	4.74	1.00	5.38	1.00	6.00	1.00
7	Pension fund	Real estate	Closely held taxable corp.	5.30	1.12	5.30	1.12	5.30	1.12	5.30	1.12	5.79	1.08	6.26	1.04
8	Taxable investor	Real estate	Direct unincorporated	4.85	1.02	4.85	1.02	4.85	1.02	4.85	1.02	5.46	1.01	6.04	1.01
9	Pension fund	Real estate	REIC	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.25	6.73	1.12
10	Taxable investor	Real estate	REIT	4.85	1.02	4.85	1.02	4.85	1.02	4.85	1.02	5.46	1.01	6.04	1.01
11	Pension fund	Real estate	REIT	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.25	6.73	1.12
12	RRSP/RRIF	Real estate	REIT	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.25	6.73	1.12
13	TFSA	Real estate	REIT	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.42	6.73	1.25	6.73	1.12

TABLE 7 Sensitivity Analysis: Assumed Differences in *cca* for Closely Held Real Estate and REITs

Equation	Investor	Investment	Vehicle	Value of <i>cca</i> (percent)					
				0	9.38	18.75	28.13		
2	Taxable investor	Market shares	Taxable corporation	5.26	1.00	5.26	1.00	5.26	1.00
3	Pension fund	Market shares	Taxable corporation	5.89	1.12	5.89	1.12	5.89	1.12
4	RRSP/RRIF	Market shares	Taxable corporation	5.89	1.12	5.89	1.12	5.89	1.12
5	TFSA	Market shares	Taxable corporation	5.89	1.12	5.89	1.12	5.89	1.12
6	Taxable investor	Real estate	Closely held taxable corp.	4.74	1.00	4.85	1.00	4.97	1.00
7	Pension fund	Real estate	Closely held taxable corp.	5.30	1.12	5.44	1.12	5.57	1.12
8	Taxable investor	Real estate	Direct unincorporated	4.85	1.02	5.12	1.05	5.38	1.08
9	Pension fund	Real estate	REIC	6.73	1.42	6.73	1.39	6.73	1.35
10	Taxable investor	Real estate	REIT	4.85	1.02	5.25	1.08	5.65	1.14
11	Pension fund	Real estate	REIT	6.73	1.42	6.73	1.39	6.73	1.35
12	RRSP/RRIF	Real estate	REIT	6.73	1.42	6.73	1.39	6.73	1.35
13	TFSA	Real estate	REIT	6.73	1.42	6.73	1.39	6.73	1.35

When the market rate of return is varied from 5 percent to 11 percent (see table 4), the pattern of comparative return advantages remains essentially the same as in the base case.³⁵ This is also the case when the pension fund tax-deferral period is increased from 15 to 35 years (table 4), when the asset holding period for real estate is increased from 15 to 25 years (table 5),³⁶ and when the holding period for stock market equities is increased from 1 to 5 years (table 5).

When the assumed contribution of capital gains to the returns of stock market equities is increased from 25 percent to 75 percent (table 6), the pattern of comparative return advantages is enhanced somewhat relative to the base case. That is, the higher the importance of capital gains to the total return of market equities, the greater are the comparative advantages of pension fund REIC investments in closely held real estate and of pension fund, RRSP/RRIF, and TFSA investments in REITs. The reason for this is that the tax treatment of pension funds and registered savings plans does not favour capital gains.

When the assumed contribution of capital gains to real estate is increased from 24.3 to 75 percent (table 6), the pattern of comparative return advantages is reduced. That is, the higher the importance of capital gains to total return of real estate, the smaller are the comparative advantages of pension fund REIC investments in closely held real estate and of pension fund, RRSP/RRIF, and TFSA investments in REITs. When the capital gain portion is 50 percent of total return, there is still a small advantage. When the capital gain portion is 75 percent of total return, there is a small disadvantage. Thus, as long as capital gains are below 50 percent of total investment returns, REICs retain their real estate investment advantage for pension funds, and REITs retain their advantage for RRSPs/RRIFs and TFSAs, as well as pension funds. A high value for b (the capital gain portion of return) could most obviously happen during a housing price bubble, and in such periods, REICs and RRSP/RRIF and TFSA REIT investments temporarily lose their investment advantage in real estate.³⁷

Table 7 shows the results when cca is increased to reflect larger tax advantages from CCA deductions. The absolute rates of return for taxable investors and pension funds investing in real estate through a taxable corporation go up, as do the rates for

35 The calculated AETR on the capital gain component of return is sensitive to the assumed market rate of return. When the market rate of return drops to 5 percent, the AETR for stock market capital gains increases from 22.82 percent to 22.96 percent, and the AETR for real estate capital gains increases from 17.21 percent to 19.29 percent. When the market rate of return increases to 11 percent, the AETR for stock market capital gains decreases to 22.68 percent, and the AETR for real estate capital gains decreases to 15.31 percent.

36 The calculated AETRs are also sensitive to the assumed asset holding periods. When the stock market holding period drops to 1 year, the AETR on capital gains increases to 23.21 percent; when the holding period increases to 5 years, the AETR decreases to 21.36 percent. When the real estate holding period drops to 5 years, the AETR on real estate gains increases to 21.36 percent; when the holding period increases to 25 years, the AETR decreases to 13.68 percent.

37 Note that even though taxable investors may not have a tax incentive to invest in real estate, this does not mean that they will not overinvest if there is a price bubble.

taxable investors investing in REITs.³⁸ However, the basic comparative investment advantages described above remain.

CONCLUDING COMMENTS

Summary

The base-case simulation results, which use currently prevailing model parameter values, support the following conclusions:

1. Pension funds and tax-preferred savings plans (RRSPs/RRIFs and TFSA) provide a 12 percent boost to investment returns for market share investments, compared to the returns for taxable investors investing directly.

The tax-deferral advantage of pension funds and registered savings plans more than offsets the advantages that derive to a taxable investor by way of the favourable treatment accorded to dividends through the DTC, and to capital gains through the 50 percent inclusion rate and deferral of tax until realization. The net present value of the personal tax payable on earnings when they are paid out of the fund or plan (at a discounted effective rate of 16.1 percent over a 26.5-year shelter period) is considerably lower than both the tax rate on dividends under the DTC mechanism (28.2 percent) and the AETR on capital gains that applies to a taxable investor (22.8 percent).

2. Both taxable investors and pension funds have a tax bias against investing in closely held real estate through a taxable corporation. Net returns are lower than for investments in market shares.

In the case of taxable investors, this higher weighting of the income component of return (75.7 percent versus 44.9 percent for stock market investments) means that a greater portion of return is taxed at the corporate tax rate than at the lower AETR on real estate capital gains (17.2 percent). In the case of pension funds, the higher weighting means that a greater portion of return is taxed at the corporate rate than at the deferred personal income tax rate applying to both components of investment return (15.9 percent).

3. Pension funds investing in closely held real estate through a REIC have a significant advantage over taxable investors making similar investments, irrespective of whether those investments are made through corporate or unincorporated arrangements.

Rates of return for taxable investors investing through a taxable corporate or unincorporated arrangement are fairly similar. When a pension fund invests through a tax-exempt REIC, the investment return exceeds that accruing to a taxable investor investing in a taxable corporation by 42 percent. The only tax paid by the pension fund is the personal tax on payouts to beneficiaries, at a discounted effective tax rate of 15.9 percent, whereas in the case of the

38 Note that from the investment equations, *cca* is not relevant for a REIC investing in closely held real estate or for a pension fund or registered savings plan investing through a REIT.

taxable investor, corporate tax of 28 percent is paid on the income component of return and the AETR on the capital gain component is 17.2 percent. The net rate of return accruing to a pension fund is significantly higher than the rate that the fund would receive from investing in corporate market shares, so that there is a tax bias in favour of closely held real estate investments for a pension fund.

4. Pension funds, RRSPs/RRIFs, and TFSAs have a significant and equivalent advantage relative to taxable investors when investing in broadly held real estate through a REIT.

For a pension fund, the investment advantage is equivalent to that gained from investing in closely held real estate through a REIC. The absolute rates of return for REIT investments by these investors are higher than the rates that they would earn from investing in market shares or in real estate through a corporation (whether closely or broadly held), thus creating a tax bias in favour of REIT units.

Sensitivity analysis was conducted for a variety of model parameters, and the consistency of the general pattern of advantages in all but one case was quite striking. The base-case results held for simulations entailing broad changes in values for the following environmental parameters: the market rate of return; the pension fund tax-deferral period; the holding periods for both real estate and stock market equities; and the magnitude of the tax advantage accruing from CCA claims for both closely held real estate and REITs.

When the share of capital gains in total returns for stock market equities was increased beyond the base-case value, there was an enhancement of the comparative advantages of pension fund investments in closely held real estate and pension fund, RRSP/RRIF, and TFSA investments in REITs. The reason for this is that the tax treatment of pension plans and registered savings plans does not favour capital gains. However, when the assumed contribution of capital gains to real estate returns was increased beyond 50 percent, the investment advantage of pension fund, RRSP/RRIF, and TFSA investments in real estate was lost. A high value for the portion of capital gain in real estate returns could most obviously happen during a housing price bubble, and in such periods, REICs, RRSPs/RRIFs, and TFSAs temporarily lose their investment advantage in real estate. Moreover, the existence of a housing price bubble might overcome the tax disincentive for taxable investors to invest directly in real estate.

Possible Policy Implications

Employer-sponsored private pension plans in Canada, with assets totalling \$1.1 trillion,³⁹ constitute a major potential source of equity funding in real estate. Pension

39 *Supra* note 27.

funds currently allocate 7.4 percent of their assets to that asset class.⁴⁰ Without considerable additional research, it is impossible to determine either the optimal holdings of real estate for pension funds or whether they should increase holdings beyond current levels. However, there is at least some evidence available that investments can certainly be much higher than they currently are. For example, pension funds in Australia, Germany, and Switzerland allocate 11 percent, 12 percent, and 16.5 percent, respectively, of their portfolios to real estate assets,⁴¹ and funds in the Netherlands have in the past allocated about 15 percent.⁴² A study of seven countries (the United States, the United Kingdom, France, the Netherlands, Sweden, Switzerland, and Australia) for the period 1986–2001 found consistently that optimal holdings were in the 15 to 25 percent range.⁴³ Pension investment advisers whom I have interviewed have expressed the view that most Canadian pension funds could prudently allocate at least 10 percent of their assets to real estate equity without compromising fiduciary standards. Indeed, a common view is that real estate is in many respects an ideal potential investment for pension funds because the required long holding periods are consistent with the long-term investment horizons of pension funds.

The empirical analysis in this article suggests that pension funds face competition from registered savings plans (RRSPs/RRIFs and TFSA) that make broadly held real estate investments through REITs. Pension funds do, however, have the clear advantage in making closely held real estate investments. While any conclusions are only conjectural, it may be useful to consider briefly some considerations, other than tax and financial factors, that might be playing in the background to impede pension fund real estate investments, and initiatives that might possibly improve the situation.

Aside from a relatively small number of very large pension funds, there is comparatively little knowledge about direct real estate equity investments within the pension fund industry. Prior to the adoption of the flexible prudent investor regulatory environment for pension funds, real estate was a tightly restricted “basket clause” investment. Residual stigma still seems to linger. This is reflected in the regulatory restrictions that limit the amount that can be invested in any single parcel of real estate to 5 percent of the book value of a fund’s total assets, and also limit

40 Ibid.

41 Data for Germany and Australia from PREA Research, “An International Comparative Study of the Pension Plan Community and Real Estate Investments” (January 2006), table 4 (www.reading.ac.uk/rep/prea.pdf); data for Switzerland from Nicole Schlegel, “Low Interest Rates Plague Swiss Pension Funds,” Credit Suisse, April 18, 2012 (<https://infocus.credit-suisse.com/app/article/index.cfm?fuseaction=OpenArticle&aoid=345962&coid=157&lang=EN>).

42 Dirk P.M. De Wit, “Real Estate Portfolio Management Practices of Pension Funds and Insurance Companies in the Netherlands: A Survey” (1996) 11:2 *Journal of Real Estate Research* 131–48.

43 Martin Hoesli, Jon Lekander, and Witold Witkiewicz, “International Evidence on Real Estate as a Portfolio Diversifier” (2004) 26:2 *Journal of Real Estate Research* 161–206.

total real estate and Canadian resource property investments to a maximum of 25 percent of the asset book value. The existence of these rules seems contrary to the prevailing prudent investment philosophy currently governing pension investment regulation, which is generally free of quantitative restrictions. While these limits may or may not be overly constraining given current investment levels, they may contribute to a feeling that there is something to be particularly cautious about and that real estate is inherently more risky than other assets.

Investing in real estate adds to pension funds' internal infrastructure requirements. Even with reliance on outside asset advisory/management expertise, at least a minimum level of in-house expertise must be developed or acquired. Moreover, it is a statutory requirement for pension plan administrators to establish a written statement of investment policies and procedures (SIP & P), and generally to provide any supplementary documentation required to ensure regulators that their investment scope and approach conforms to the prudent investor philosophy. Before funds can invest in real estate equity the fund's SIP & P must be modified to a satisfactory regulatory standard. This requires motivation and expertise.

It may be possible to develop solutions to these potential obstacles within the pension industry. For example, consideration could be given to removing the 5 percent/25 percent restrictions. Additionally, regulatory authorities could provide guiding principles on how the prudent investment philosophy should apply in the case of real estate. Further, training could be provided to funds in relation to such things as the steps involved in entering the sector; the development of in-house infrastructure and expertise; the revision of SIP & P documents; the effective utilization of the paragraph 149(1)(o.2) (REIC) investment vehicle; and the design of hybrid investment vehicles, including limited partnerships involving participation by a number of pension funds and active business partners.