



# C.D. Howe Institute COMMENTARY

PENSION PAPERS

## Legal for Life

Why Canadians Need a Lifetime  
Retirement Saving Limit

James Pierlot  
with Faisal Siddiqi



### **In this issue...**

A lifetime accumulation limit will put Canadians who do not enjoy career membership in a defined-benefit pension plan on the same footing as those who do.

## THE STUDY IN BRIEF

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\$12.00

ISBN 978-0-88806-853-8

ISSN 0824-8001 (print);

ISSN 1703-0765 (online)

Canadian tax rules allow accumulation of retirement savings in “tax assisted” plans, including defined-benefit (DB) pension plans, defined-contribution (DC) pension plans and RRSPs. These plans are intended primarily for workers with “middle class” incomes, who will not receive enough pension income from programs such as Old Age Security (OAS) and the Canada/Quebec Pension Plan (C/QPP).

With career membership in generous defined-benefit pension plans, a small minority of Canadian workers can and does accumulate good pensions with values ranging from \$550,000, for a worker with a career-end salary of \$50,000, to \$2.1 million with a career-end salary of \$150,000. With RRSP savings included, their accumulations of retirement wealth are even greater.

But more than 12 million Canadian workers do not participate in a DB pension. Many will need to save for retirement, and must do so in DC pension plans and RRSPs. In the current environment of low interest rates, an aging population, and increasing longevity, these workers have less time to save for retirement and must save more. But can they?

To answer this question, we compare the tax-deferred saving opportunities available in DB plans, DC plans, and RRSPs, using an actuarial modelling tool that incorporates Canadian tax rules for retirement saving from 1974 through 2011. The model also simulates career retirement-saving outcomes that would have occurred if “pension reform” tax rules implemented in 1990 had been in place from 1974 to 2011.

Our model demonstrates that tax rules are preventing many workers from saving enough, and indeed, from accumulating even half the retirement wealth of some DB pension plan members. This indicates a serious problem of inequity, the prospect of low living standards for future retirees and an increasing burden on income-support programs funded from general tax revenue. Those at particular risk of not having enough DC/RRSP contribution room include new Canadians, self-employed workers, and those who have incurred investment losses, experienced periods of unemployment or made RRSP withdrawals before retirement.

Major reform is needed, so that all workers for whom the “tax-assisted” retirement saving system is intended can save enough for their retirements. To make this a reality, we propose that Canada’s annual, income-based tax limits on retirement saving be discarded and replaced with a uniform, inflation-indexed lifetime accumulation limit of \$2 million – the value of pensions now accumulated by high-income workers with career membership in generous DB pension plans, especially in the public sector.

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ESSENTIAL POLICY INTELLIGENCE

**A** previous paper of this series (Pierlot 2008) introduced two couples with identical family incomes. Having both retired from public sector careers at age 58 with pension benefits worth \$1.2 million, Angie and Brad are now receiving almost five times more pension income than Courtney and Dave, who had \$248,000 in pension and Registered Retirement Savings Plan (RRSP) savings when they retired at age 62 from their private sector careers. We would now like to introduce you to seven other workers who are considering retirement. Each is 60 years old:

**Alice** has been working for 35 years as an elementary school teacher. The eight years of leave she took to care for children were counted as pension service. Her annual salary is \$85,000 and her pension is worth \$1.09 million. Having used half of her RRSP contribution room, she now has RRSP savings of \$83,000. Her annual pension income will be \$50,900.<sup>1</sup>

**George** is an assistant deputy minister with 35 years of service in the Department of Finance. His salary is \$150,000, his pension is worth \$2.08 million, and he has RRSP savings of \$40,000. George's annual pension income will be \$91,900.

**Candace** has worked for 35 years as an administrator in a provincial government department. Her salary is \$50,000 and her pension is worth \$556,000. Having used half of her RRSP contribution room, she has \$112,000 in RRSP savings. Her annual pension income will be \$29,000.

**Paulo** is an auto mechanic who immigrated to Canada at age 34. He earns \$50,000 and has been making the maximum allowable RRSP contributions since he began working, except for periods of unemployment totalling three years. Paulo has \$252,000 in RRSP savings, enough for a pension of \$10,900 per year.

**Sebastien** immigrated to Canada in 1991. He drove a taxi while working to complete licensing exams and obtain recognition of his qualifications as a professional engineer. In 1996, he found work in his field and began making maximum contributions to his RRSP. He earns \$75,000 per year and has RRSP savings of \$264,000, enough for a pension of \$11,500 per year.

**Sophia** started working as a hospital radiologist at age 35 following 12 years of post-secondary education. She and her employer made maximum contributions to the hospital's defined-contribution (DC) pension plan throughout her career. Her annual salary is now \$250,000 and her retirement savings are worth \$631,000, enough for a pension of \$27,400 per year.

**Anjani** launched a software firm in 1995. By the time her business became profitable in 2001, she had used all her personal and RRSP savings to

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We thank Steve Bonnar, Malcolm Hamilton, Alexandre Laurin, Bill Robson, Fred Vettese, and members of the C.D. Howe Institute Pension Policy Council for providing comments. Responsibility for any errors or omissions rests with the authors. This paper is a further development of policy recommendations first introduced by James Pierlot in a previous publication in this series. Faisal Siddiqi and Marta Spaic created the actuarial modeling tool used to determine the pension and RRSP values presented throughout.

1 For all workers, pensions are paid in the form described in Table A-1 (Panels C and D) of the Appendix. To allow for an apples-to-apples comparison with the pension incomes shown for the four private sector workers, the stylized pensions shown for each public sector worker reflect the conversion of the value (\$55,600) of indexed temporary bridging benefits paying \$11,520 annually from age 60 to 65 into a pension payable for life. Assuming post-retirement inflation of 2.5 percent, the nominal annual pensions for each public-sector worker at age 60 and 65 would be as follows: Alice – \$60,000 to age 65 and \$54,800 thereafter; George – \$101,000 to age 65 and \$101,300 thereafter; Candace – \$38,100 to age 65 and \$30,100 thereafter.

pay her living expenses. With 25 employees and expanding sales in Canada and abroad, Anjani now draws an annual salary of \$200,000. Having made maximum contributions to her RRSP since 2001, she now has \$218,000 in RRSP savings, enough for a pension of \$9,500 per year.

Alice and George are clear winners, as Table 1 shows. Even without using all of her RRSP contribution room, Alice has been able to accumulate pension and RRSP benefits worth 61.3 percent of her career income, which will provide pension income that replaces 59.8 percent of her career-end salary. George will get a pension of \$91,900 per year, replacing 61.3 percent of his salary. Alice and George are likely to have comfortable retirements.

Sophia and Anjani are clear losers. With no RRSP contribution room from the 12 years she spent in post-secondary education and because of limits on DC contributions, Sophia's pension will replace only 11.0 percent of her salary. Anjani took considerable personal risk to create a viable business that employs 25 workers, but did not have enough RRSP room because of low earnings while her business was launching and the RRSP withdrawals she made. Her pension of \$9,500 per year will replace only 4.7 percent of her final salary. Unless they have other savings, Sophia and Anjani cannot afford to retire.

The stories of Alice, George, Candace, Paulo, Sebastien, Sophia, and Anjani show the unfairness of Canada's retirement saving system, which favours workers with career membership in generous defined-benefit (DB) pension plans and penalizes everyone else, for the following reasons:

- pension and RRSP contribution limits have little or no connection to how much pension income workers need – or to how much they are willing to save;
- members of DB pension plans have more than twice as much room to accumulate retirement benefits as those who save in RRSPs and DC pension plans;
- public sector workers can accumulate much larger pensions than can private sector workers;
- early-starting savers have more tax room than late-starting savers;

- workers with stable incomes have more saving room than workers with fluctuating incomes; and
- Canadian-born workers have more saving room than immigrants.

As Canada's population ages, the negative effects of these "broad deficiencies" – as the federal government once described them (Canada 1984) – of the retirement income system will become more pronounced. Until now, retired workers have been able to maintain their post-retirement consumption rates "relatively well," but projections of future retirees' incomes suggest that tomorrow's retired workers will not enjoy the same standard of living because pension plan coverage, saving rates, and real investment returns have declined, even as life expectancy has increased (see Moore, Robson, and Laurin 2010).

To retire well, today's workers will need to save more. But without major reform to Canada's tax rules for retirement saving, most private sector workers – and workers who join the public service late in their careers – will not be able to accumulate enough pension and RRSP savings to maintain their standard of living in retirement. They will have to retire with less income than they need, or look to other saving strategies to make up the shortfall.

To address these issues, we proceed in six parts. First, we show the inequity of access inherent in Canada's tax rules for retirement saving. Second, we show how Canada's tax rules for retirement saving evolved to prevent many private sector workers from saving enough in their RRSPs. Third, we show that workers saving for retirement in RRSPs cannot reasonably hope to accumulate even half the pension values that routinely accumulate in DB pension plans. Fourth, we propose the immediate implementation of a lifetime retirement-saving accumulation limit that would apply to all Canadians equally, be indexed to wage inflation, and benchmarked to provide wealth-accumulation room similar to that now available to members of DB plans and actually attained by many public sector workers. Fifth, we explain how such an accumulation limit would deliver equity of access across all classes of workers,

Table 1: Seven Prospective Retirees

	Income		Pension/RRSP Wealth		Pension Income	
	Final Salary	Career Earnings	Value	As % of Career Income	Annual	As % of Final Salary
	(\$)	(\$ millions)	(\$ millions)	(%)	(\$)	(%)
<b>Alice</b>	85,000	1.91	1.17	61.3	50,900	59.8
<b>George</b>	150,000	3.37	2.12	62.7	91,900	61.3
<b>Candace</b>	50,000	1.12	0.668	59.5	29,000	58.1
<b>Paulo</b>	50,000	0.827	0.252	30.5	10,900	21.9
<b>Sebastien</b>	75,000	1.12	0.264	23.6	11,500	15.3
<b>Sophia</b>	250,000	4.60	0.631	13.7	27,400	11.0
<b>Anjani</b>	200,000	3.28	0.218	6.7	9,500	4.7

Source: Authors' calculations.

promote increased rates of pension coverage, decrease regulatory costs, and provide better information to pension policymakers about Canadians' retirement readiness. Finally, we describe how to implement a lifetime accumulation limit, address transitional issues, and conclude with a call for immediate action by legislators.

Although we focus considerable attention on public sector pensions, this is not intended as a commentary on public sector compensation, nor do we advocate any reduction in public sector pension benefits. The career public sector pension values shown throughout this *Commentary* are presented solely to show how Canada's tax rules for retirement saving effectively discriminate against private sector workers – and workers with partial careers in the public service – and to identify a reasonable benchmark for a lifetime

retirement-savings accumulation limit that would ensure that public and private sector workers alike have enough retirement-saving room.

### The Haves and the Have-nots

DB pension plans provide the best pension benefits, and about 4.5 million Canadian workers participate in them. These are the pension “haves,” of whom 2.8 million work in the public sector – with public sector employment at 3.5 million, that translates to a coverage rate of 80 percent. In the private sector, 1.7 million of 13.6 million workers participate in DB pension plans, for a coverage rate of 12 percent. This is down from 31 percent in 1977, reflecting an ever-widening gap between public and private sector

pension benefit security. Although only one worker in four is a public servant, more than half of all pension plan members work in the public sector (Statistics Canada Tables 4, 6, 11).

The public-private sector gap extends beyond coverage rates. Private sector DB plans usually provide less generous benefits, and benefits are less secure from the risk of employer insolvency. As at June 30, 2010, DB plans registered in Ontario had a median solvency ratio of 86 percent, and only 16 percent of plans were fully funded; at the same date, the average solvency ratio of federally registered DB plans was 87 percent. Practically, this means that most members of private sector DB plans would lose a portion of their pension benefits in the event of employer insolvency (FSCO 2011; OSFI 2010). Public sector pension plans are similarly underfunded, but the risk of employer insolvency is much lower.<sup>2</sup>

The pension “have-nots” are the 12 million Canadian workers who do not participate in a DB pension plan. More than half are employed by small and medium-sized businesses that often do not sponsor any kind of pension plan, and almost three million are self-employed (LaRochelle-Côté 2010). Private sector workers are more likely to change jobs, experience periods of unemployment, and have fluctuating incomes (LaRochelle-Côté and Gilmore 2009). These “have-nots,” if they save for retirement at all, do so in RRSPs, DC pension plans, and capital accumulation plans (CAPs). Under the *Income Tax Act*, however, CAP contribution limits are much lower than for DB pension plans.<sup>3</sup> After a full career of contributions at the maximum levels permitted, a CAP typically delivers less than half the retirement pension that a DB pension plan can provide – and that public

sector plans actually provide. In DB plans, tax rules allow “catch-up” contributions for periods of temporary absence from the workforce or to compensate for investment losses, but workers who save in CAPs do not have this catch-up contribution room.<sup>4</sup>

For Canada’s 3.2 million immigrant workers, annual, income-based retirement-saving limits are especially harsh. Immigrants have a harder time saving for retirement because they have lower wages, less stable employment, shorter job tenure than Canadian-born workers, and lower rates of pension coverage (see Pierlot 2008; Gilmore 2009). Mid-career immigrants have no accumulated RRSP room and therefore cannot accumulate the same tax-deferred retirement wealth as a Canadian-born worker can.

## Retirement Saving Limits: A Brief History

Ottawa has allowed tax-deferred retirement saving since 1919 – see Table 2 for a timeline of some of the most important rule introductions and changes. As the adage goes, everything old becomes new again. Nowhere is this truer than in Canadian retirement savings policy. The stated policy goal of Canada’s tax rules for retirement saving is to help middle- and higher-income Canadians prepare for retirement, with fair access for all. As the federal government has stated,

Canadians in the middle and higher income brackets must supplement their public pensions with income from employer-sponsored pension plans [and] individual retirement saving plans (Canada 1984), and

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2 Recent sovereign debt crises demonstrate that governments can also become bankrupt, but most would agree that that members of Canadian public sector pension plans currently face little risk from employer insolvency: the balance sheets of the federal and provincial governments are healthier than those of troubled countries abroad.

3 *Income Tax Act* (ITA), c. 1 (5th Supp.) R.S.C. 1985, as amended.

4 Participants in individual pension plans (IPPs), which provide benefits based on a DB formula, can accumulate retirement benefits at higher levels than in CAPs and sometimes make past-service contributions calculated on the basis of a DB-style formula. The conditions under which this is possible and make financial sense are quite restricted, however, and the 2011 federal budget proposed to make them more restrictive still. Only about 10,000 IPPs are currently registered.



a new system of fairer, more comprehensive, and more flexible limits on tax-assisted retirement saving is required. Such a system could provide greater uniformity in the treatment of various pension arrangements....Improved flexibility could give older workers and workers with fluctuating employment earnings greater scope to compensate for not having contributed fully to their plans in certain years. (Canada 1982.)

These sensible policy aspirations, however, remain unfulfilled. Studies of the tax-deferred retirement saving system leading up to the pension reform of 1990 pointed to the problem of “unequal tax assistance” sourced in rules that treat workers differently depending on when they save for retirement, their employment situations, and the type of plan in which they participate:

The present tax treatment of these plans has three broad deficiencies. First, the rules result in unequal access to tax assistance owing to the vastly different pension-building potential available to workers in different employment situations. Second, the rules impose rigid requirements in the timing of retirement saving, providing little opportunity to individuals to make up for failure to contribute in earlier years. Third, there is no adjustment for inflation.... The problem of unequal tax assistance grows out of the fact that two essentially separate systems have evolved, one for *defined benefit* plans and the other – less favourable – for *money purchase* plans. (Canada 1984; emphasis in the original).

Twenty-seven years on, this continues to be a fair description of the deficiencies of Canada’s tax rules for retirement saving. In 1990, amendments were made to the *Income Tax Act* and regulations to reform pension and RRSP savings limits. But pension reform failed to deliver equitable access to tax-assisted retirement saving because it perpetuated much greater access for DB plan members and those with stable employment incomes. The 1984

Department of Finance study (Canada 1984) had recommended that saving limits for all plans be based on total career earnings, adjusted for wage inflation, but even after pension reform DB pensions continued to be based on a three-year average of the employee’s final or best earnings, while CAP contributions were limited to a percentage of career average earnings.

In fairness, pension reform did improve the situation somewhat for those who save in CAPs, by increasing the dollar limits for CAP contributions, by replacing the “use it or lose it” rule for RRSP contributions with the carry-forward of unused contribution room, and by indexing saving limits to the average wage – though indexing was not actually introduced until 2004, 14 years after the introduction of the pension reform.

### *Retirement Saving Limits Today*

Today, annual contributions to DC plans and RRSPs are limited to the least of 18 percent of income and fixed-dollar limits indexed to wage inflation.<sup>5</sup> In contrast, there is no limit on contributions required to fund permitted DB pensions, but benefits are limited to the lesser of 2 percent of the average of a worker’s best three years of earnings and an indexed amount (\$2,552 in 2011), multiplied by years of pension service. DB plans also may provide “ancillary” benefits such as inflation indexing and “bridge” pensions that are paid until the normal retirement age under public programs such as the Canada Pension Plan (CPP) and Old Age Security (OAS).

Pension reform purported to deliver the same saving room to those who save in DC plans and RRSPs as members of DB pension plans enjoy through the equalizing “factor of nine,” which presumes that it costs an average of nine dollars in contributions to buy one dollar of pension. This,

<sup>5</sup> In 2011, the DC contribution limit is \$22,970 and the RRSP limit is \$22,450 (the DC limit for 2010). The DB pension limit (\$2,552) is 1/9th of the 2011 DC contribution limit. These limits apply to a worker earning \$127,611 or more in 2011 and are reduced by the 18 percent limit for workers earning less.

Table 2: Federal Tax Rules for Retirement Saving

Year	New or Amended Tax Rules
1917	<ul style="list-style-type: none"> <li>• <i>Income Tax War Act</i> introduces Canada's first income tax.</li> </ul>
1919	<ul style="list-style-type: none"> <li>• <i>Income Tax War Act</i> amended to permit deduction of employee pension contributions.</li> </ul>
1936	<ul style="list-style-type: none"> <li>• Employee pension deductions limited to \$300 annually.</li> </ul>
1940	<ul style="list-style-type: none"> <li>• Employer pension contributions limited to \$300 per employee, up to a maximum of 5% of payroll.</li> </ul>
1957	<ul style="list-style-type: none"> <li>• RRSPs introduced; contributions limited to the least of \$2,500 and 10% of income, or \$1,500 less contributions to a pension plan.</li> </ul>
1964	<ul style="list-style-type: none"> <li>• DB pension limit set at \$1,143 per year of service.</li> </ul>
1972	<ul style="list-style-type: none"> <li>• Employer/employee DC contribution limits increased from \$1,500/\$1,500 to \$3,500/\$3,500.</li> <li>• RRSP limit increased to lesser of \$4,000 and 20% of income.</li> </ul>
1976	<ul style="list-style-type: none"> <li>• RRSP limit increased to lesser of \$5,500 and 20% of income.</li> <li>• DB pension limit increased to \$1,715 per year of service.</li> </ul>
1986	<ul style="list-style-type: none"> <li>• RRSP limit increased to lesser of \$7,500 and 20% of income.</li> </ul>
1991	<ul style="list-style-type: none"> <li>• Pension reform introduced; DB limit set at \$1,722 per year of service.</li> <li>• DC/RRSP contributions limited to \$12,500/\$11,500 as deficit-cutting measure.</li> </ul>
1995	<ul style="list-style-type: none"> <li>• Transfers of severance payments to an RRSP no longer permitted for years after 1995.</li> </ul>
1997	<ul style="list-style-type: none"> <li>• Pension adjustment reversal introduced to restore RRSP room to individuals who cease membership in DB pension plans.</li> <li>• Pension adjustment offset reduced from \$1,000 to \$600.</li> </ul>
1990–2010	<ul style="list-style-type: none"> <li>• DC limit: <ul style="list-style-type: none"> <li>– set at \$11,500 in 1990 and increased \$1,000 annually to \$15,500 by 1995;</li> <li>– reduced to \$13,500 from 1996 through 2002;</li> <li>– increased to \$15,500 in 2003 and to \$16,500 in 2004;</li> <li>– increased from \$16,500 to \$22,450 from 2004 to 2011.</li> </ul> </li> <li>• DB limit: <ul style="list-style-type: none"> <li>– frozen at \$1,722 from 1990 to 2003;</li> <li>– increased from \$1,833 to \$2,494 from 2004 through 2010.</li> </ul> </li> <li>• RRSP limit: <ul style="list-style-type: none"> <li>– \$7,500 (1990), \$13,500 (1996), and \$14,500 (2003);</li> <li>– for all other years after 1990, limit is the DC limit for the previous year.</li> </ul> </li> </ul>
2011	<ul style="list-style-type: none"> <li>• DC/DB limits indexed to wage inflation.</li> <li>• Inflation-indexed DC and DB limits are \$22,970 and \$2,552, respectively.</li> </ul>

Source: Canada 2010a; CCH Canadian Limited 1970-1990; and Morneau Sobeco 2004.



however, has always been a faulty assumption, and never more so than in the current economic environment. Earlier retirement, increasing life expectancy, and low investment returns mean that pensions routinely cost more than twice as much as the factor of nine would suggest, with the result that DC plans and RRSPs cannot realistically deliver even half the retirement income that DB plans can provide.

When pension reform was introduced, the DC limit was supposed to be \$15,500 – nine times the DB limit of \$1,722, with each limit indexed to inflation. As a deficit-cutting measure, the federal government froze the DB limit at \$1,722 from 1990 to 2003 and kept the DC limit at an average \$13,423. For 13 years, the factor of nine effectively became the “factor of 7.8,” even as the federal government rather disingenuously asserted that “the reductions in pension and RRSP limits will not compromise the integrity and effectiveness of the private retirement saving system” (Canada 1995). These reduced CAP contribution limits meant that savers in DC plans and RRSPs – already disadvantaged compared to DB plan members – sacrificed much more in support of the federal government’s fiscal austerity agenda. Moreover, because today’s indexed DB limits apply retroactively to all years of service, members of final-pay DB pension plans who are retiring now have been able to catch up partially for the years during which the DB limit was frozen, but those who have saved in DC plans and RRSPs will never get back the contribution room they lost from 1990 to 2003.

### *The Canadian Retirement Saving Hierarchy*

In practical terms, Figure 1 shows how tax limits on the accumulation of retirement benefits apply to workers with 35-year careers, depending on their annual income at retirement. In each group, the workers have the same career salaries. The explanation of the bars in the figure is as follows:

- Bar A shows the amount each worker could have accumulated by contributing 9 percent of earnings to an RRSP each year, up to the limits permitted under tax rules.

- Bar B shows the amount each worker could have accumulated by making maximum annual RRSP contributions permitted throughout the worker’s career.
- Bar C shows the value of the pension each worker would receive from the federal public sector pension plan.
- Bar D shows the values from bar C, added to the RRSP savings each worker would have accumulated by maximizing his or her annual RRSP contributions.
- Bar E shows the pension value each worker would have accumulated as a member of a DB pension plan that provided the most generous benefits permitted under the *Income Tax Act*.
- Bar F shows the pension value in bar E, added to the RRSP savings each worker would have accumulated by maximizing his or her annual RRSP contributions.

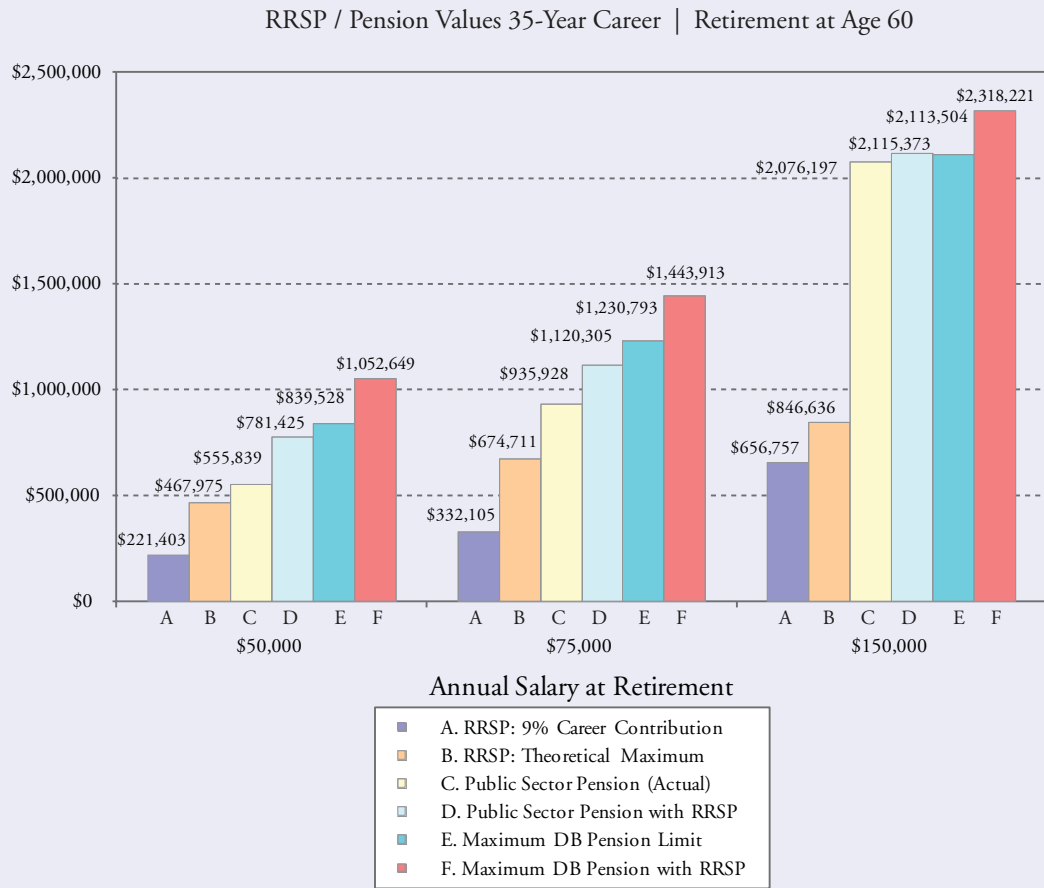
For each worker, bars A and C are the most instructive:

- Bar A shows the realistic, best-case RRSP accumulation scenarios for the large majority of private sector workers who do not participate in DB pension plans. Most workers saving in an RRSP do not actually accumulate these amounts.
- Bar C shows the pension values that career federal public sector workers are actually accumulating. Most public sector pension plans provide similar benefits, so the values shown are a reasonable estimate of the value of pensions provided to career public servants who work for other levels of government.

### **Pension Reform: Tried – but Not Tested**

Pension Reform is often assumed to have equalized “tax assistance” for retirement saving and to have removed the relative tax advantage that DB pension plans enjoyed before the reform was implemented (see Li 2007). This conventional wisdom has not been tested in any methodical way, however, and it is surprising that, after 20 years, there is no evidence that the Department of Finance has attempted to evaluate how well its pension reform project has performed by finding the answers to two key questions. First, do

Figure 1: Career-End Comparison of RRSP and DB Pension Outcomes



Source: Authors' calculations; see the Appendix.

workers in all sectors of the economy have enough saving room to achieve adequate retirement income from tax-assisted retirement saving plans? Second, does the factor of nine equalize the retirement benefit accumulation room of DB pension plans and RRSPs? Answering these questions would require calculating the retirement savings that a real-world worker can accumulate in an RRSP or DC pension plan, an assessment of whether those accumulations can provide adequate pension income, and a comparison with pension values accumulated by career members of DB pension plans.

We, in fact, have undertaken this analysis using a model that incorporates tax rules from 1974 through 2011. The results are presented in Figures

2 through 7, which show retirement wealth accumulations for workers earning \$50,000, \$75,000, and \$150,000 at retirement. Each worker retires at age 60 in 2011 after a career of 33, 35, or 37 years. Accumulations are shown for four types of tax-deferred plans: an RRSP, a DC pension plan, the federal public sector pension plan, and a DB pension plan providing the most generous benefits permitted under the *Income Tax Act*. (See the Appendix for a summary of the actuarial methods and assumptions we used to determine the values presented in each figure.)

For each salary level, there are two figures. The first figure in each set shows the accumulations that would have occurred under the tax rules that were in effect from 1974 to 2011. The factor of

Figure 2: Career Accumulations – \$50,000 Salary at Retirement (Actual Tax Rules)

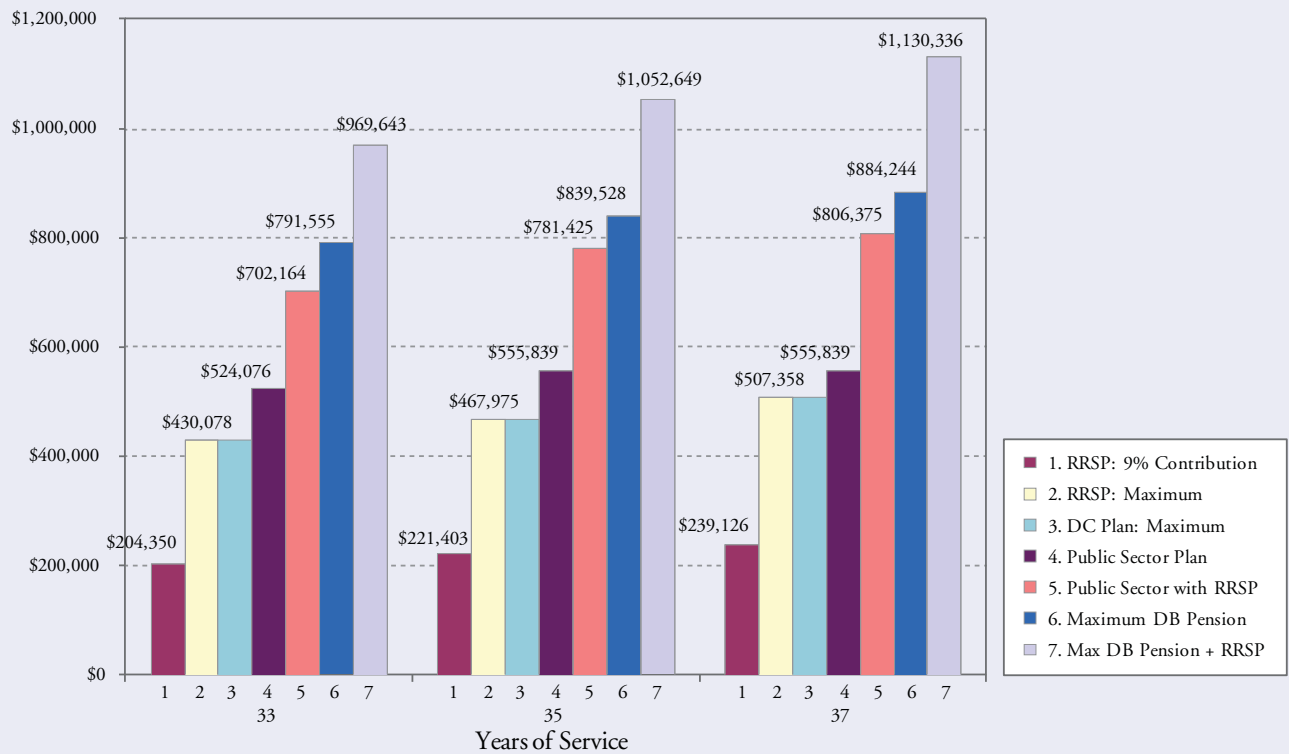
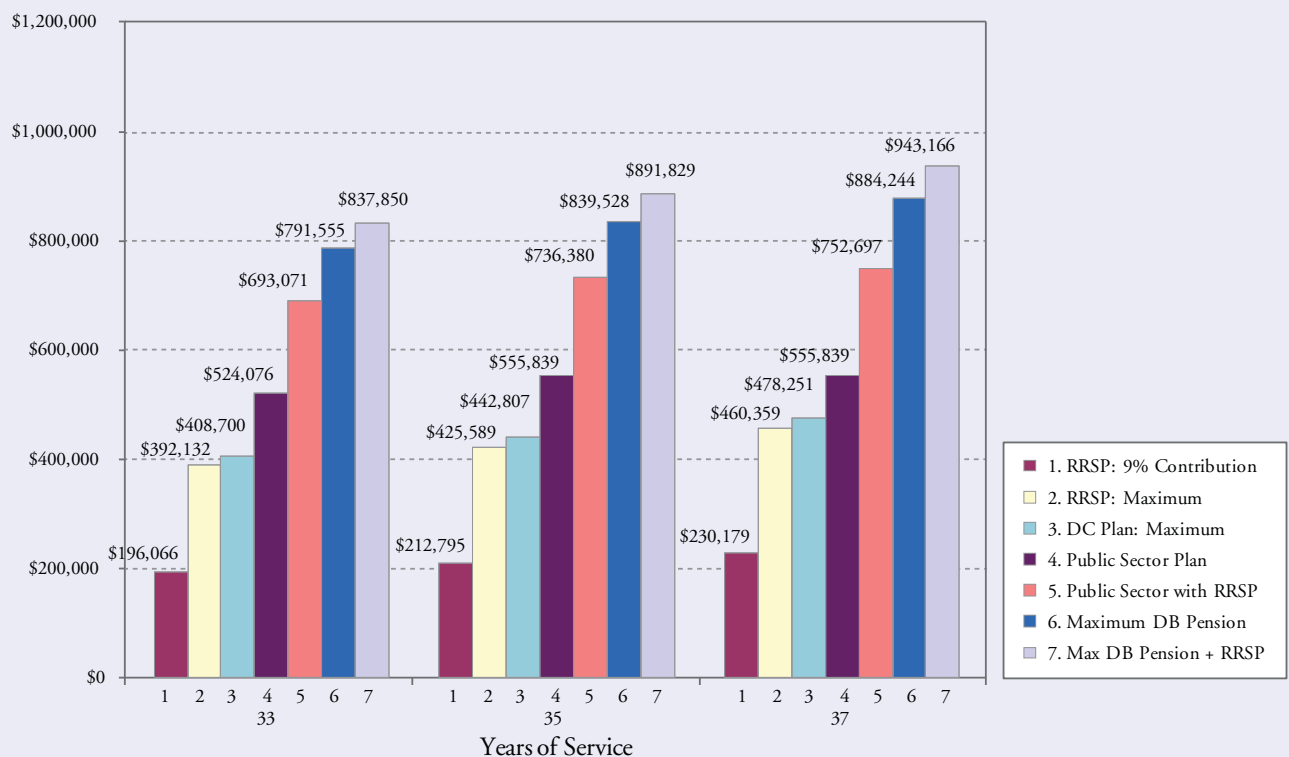


Figure 3: Career Accumulations – \$50,000 Salary at Retirement (Theoretical Full Career under “Factor of 9”)



Source for Figures 2 and 3: Authors’ calculations; see the Appendix.

Figure 4: Career Accumulations – \$75,000 Salary at Retirement (Actual Tax Rules)

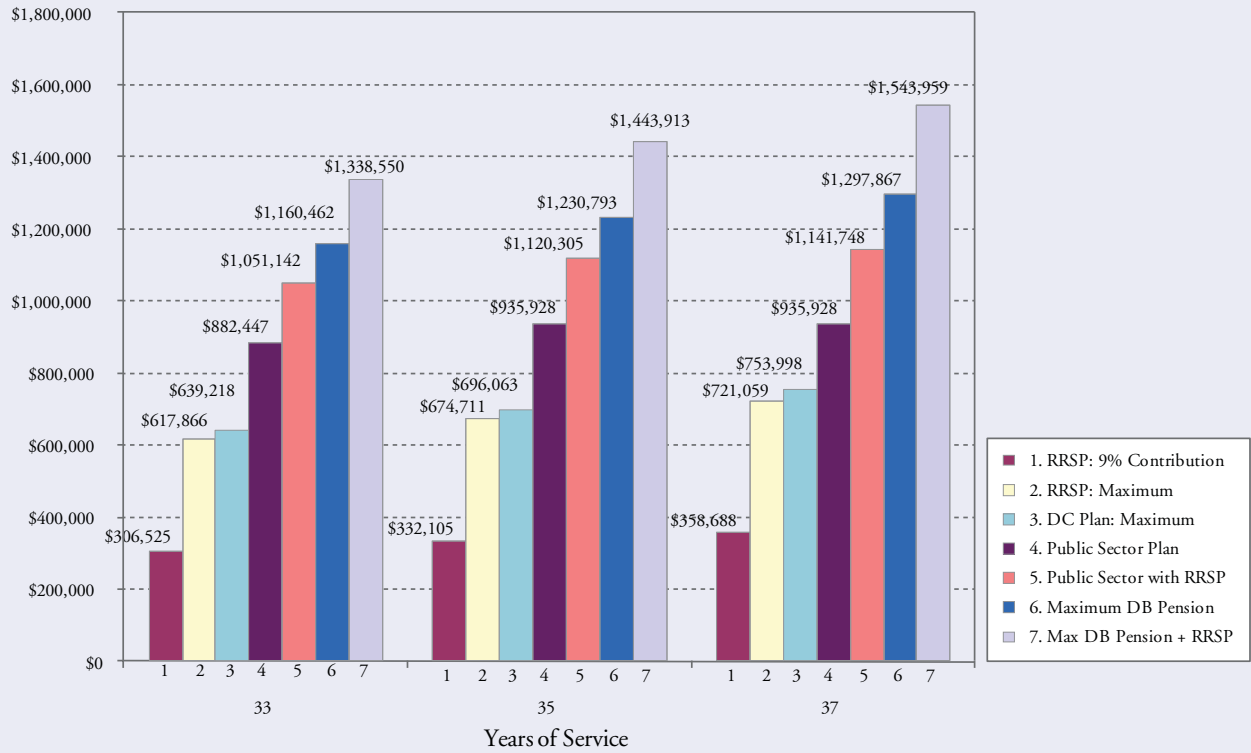
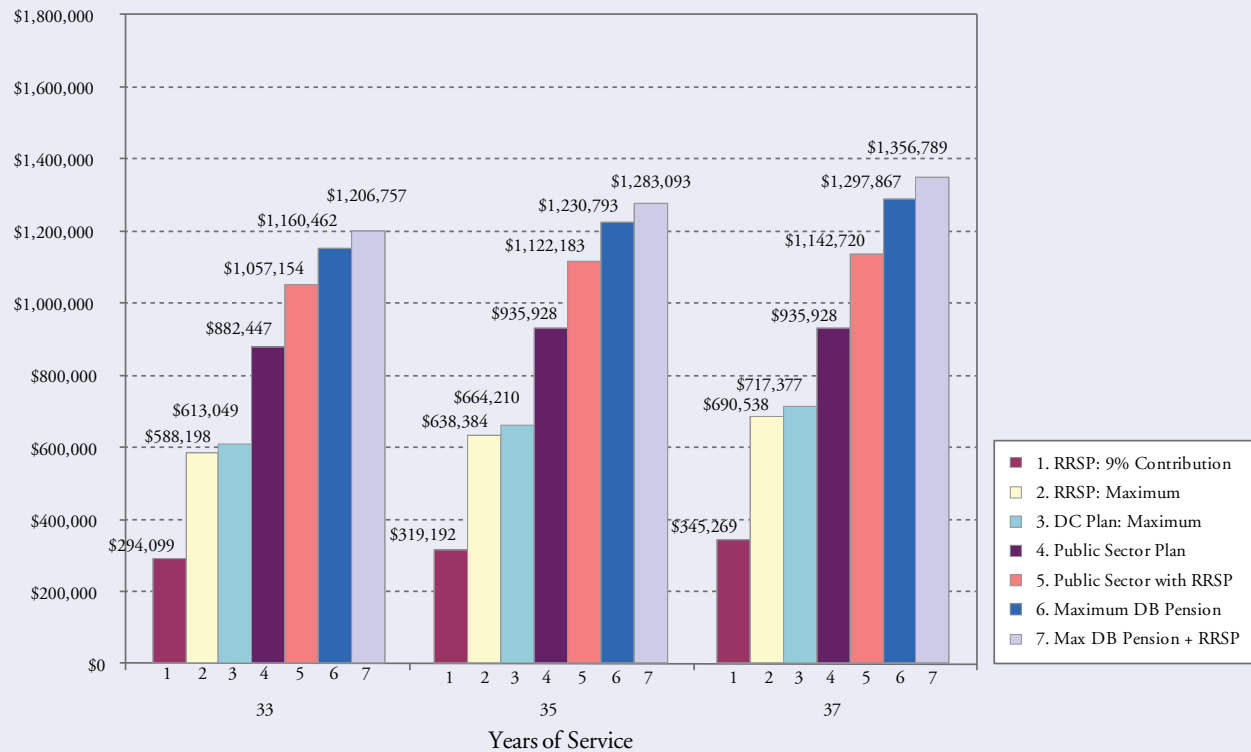


Figure 5: Career Accumulations – \$75,000 Salary at Retirement (Theoretical Full Career under “Factor of 9”)



Source for Figures 4 and 5: Authors’ calculations; see the Appendix.

Figure 6: Career Accumulations – \$150,000 Salary at Retirement (Actual Tax Rules)

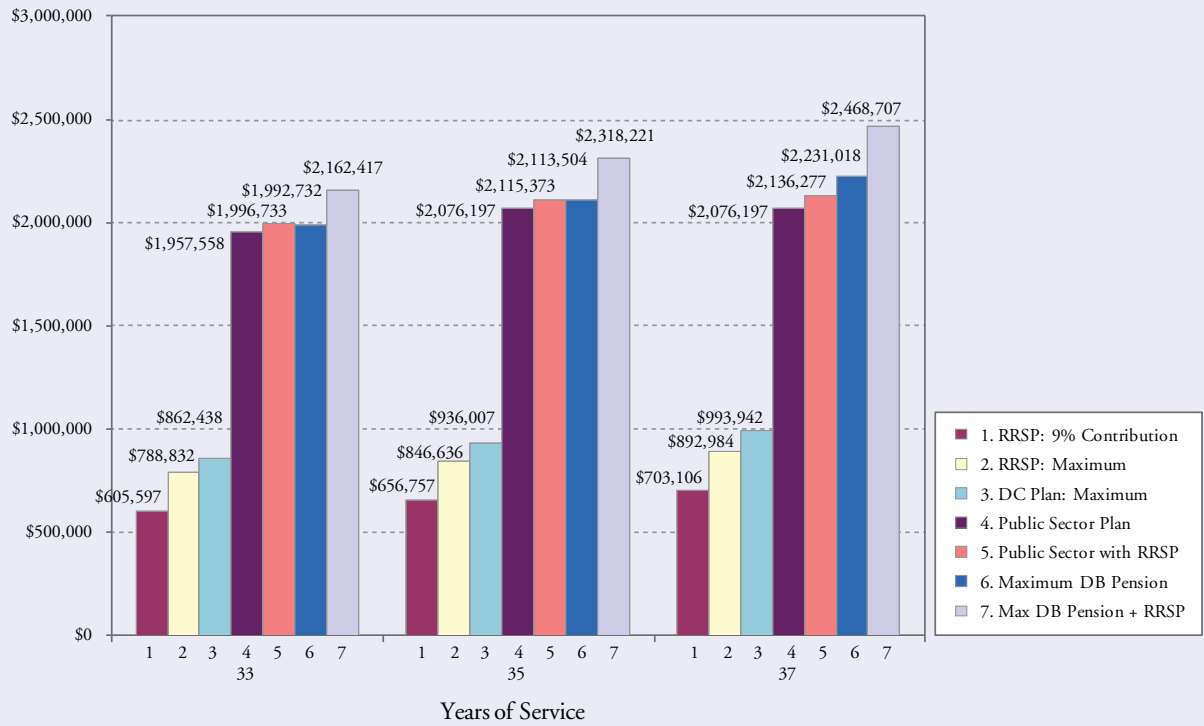
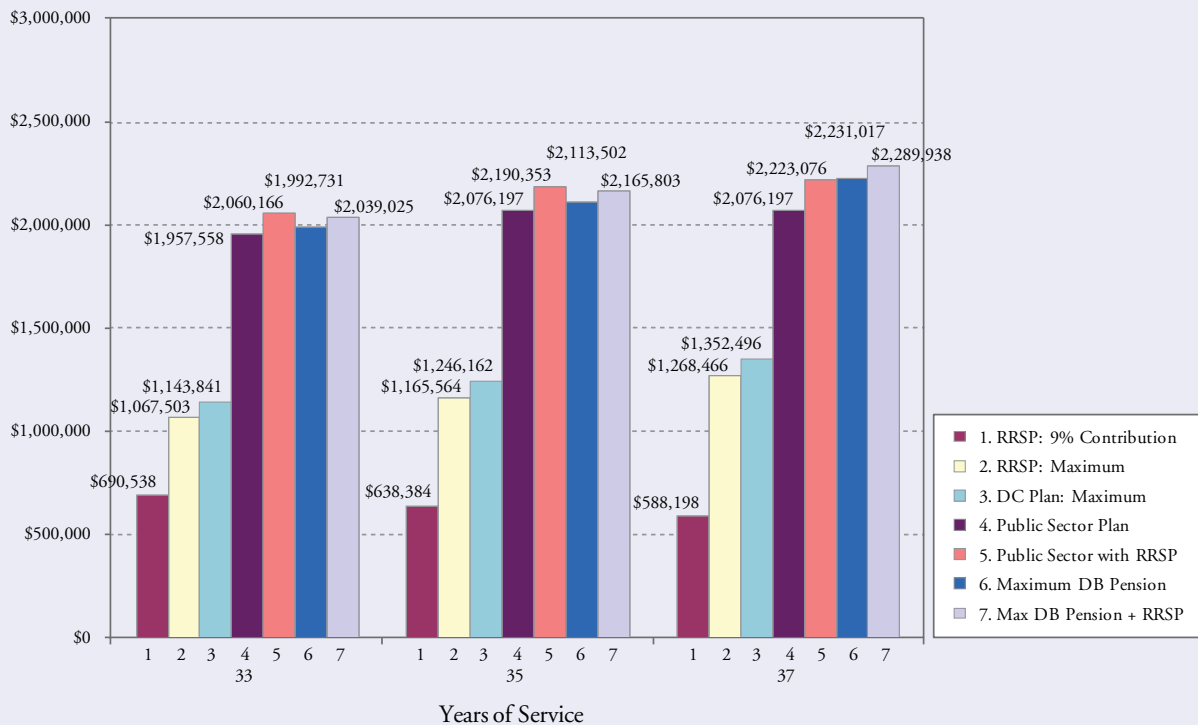


Figure 7: Career Accumulations – \$150,000 Salary at Retirement (Theoretical Full Career under “Factor of 9”)



Source for Figures 6 and 7: Authors’ calculations; see the Appendix.

nine became effective when pension reform was implemented in 1990 – at the midpoint of each worker’s career. This raises the question of what the accumulations might have been if the pension reform regime had been in effect during the entire 1974-2011 period. If pension reform really did make the tax rules fairer, one would expect that the value of DB and DC/RRSP accumulations over a full career would have been similar. Accordingly, the second figure in each set shows the retirement wealth that each worker would have accumulated if pension reform had been in effect during the entire period.

The following points should be noted regarding each figure:

- The second and third bars show the accumulations that would occur if the RRSP annuitant or DC plan member had made the maximum contribution permitted in each and every year of his or her career.<sup>6</sup> This would not have happened in practice, however, because RRSP room is often reduced by temporary workforce absences and no worker can or does maximize RRSP contributions throughout an entire career. These theoretical maximum accumulations in DC plans and RRSPs thus illustrate that, even in the most improbably optimistic scenario, savers in such plans cannot hope to match the accumulations of DB plan members.
- Each figure shows accumulation values in DC plans and RRSPs that would result from annual contributions of 9 percent of earnings, a rate that shows more realistic – albeit optimistic – outcomes for savers in DC plans and RRSPs.
- DB pension plan members also have RRSP room, so each figure shows the aggregate value of pension and RRSP accumulations for public and private sector DB plan members who maximize their RRSP contributions in each year of their career. As with workers who save in DC plans and RRSPs, it is unlikely that DB plan members would maximize their RRSP contributions every year. The bars

showing aggregate DB and RRSP accumulations are presented to provide an apples-to-apples comparison with the theoretical maximum accumulations in DC plans and RRSPs.

- The federal public sector pension values reflect the *actual* pension values each worker accumulates. The 35-year and 37-year amounts are equal because the plan has a 35-year service limit.

The figures tell a dismal story. Those who save for retirement in DC pension plans and RRSPs cannot realistically hope to accumulate even half the pension income of a career public sector worker. Moreover, as income rises, the gap between savers in DC plans and RRSPs and members of DB pension plans increases. The career outcomes under the factor of nine are similar to the outcomes under actual tax rules, so it is evident that pension reform has not delivered equity of access. Those saving in DC plans and RRSPs with earnings of \$50,000 or \$75,000 actually would have been in a *worse* position if the factor-of-nine regime had been in place during their full careers.

## The Solution: A Lifetime Accumulation Limit

The central weakness of Canada’s tax rules for retirement saving is that the opportunity to accumulate pension income varies as a function of factors unconnected, or only remotely connected, to an individual’s need for retirement income, including duration of labour force participation in Canada, earnings history, earnings volatility, the opportunity to participate in a DB pension plan, the timing of pension or RRSP contributions, and investment returns or losses. A major reform is needed to render these factors irrelevant to how much saving room each worker receives.

<sup>6</sup> The *Income Tax Act* did not limit DC contributions to a percentage of income until 1990, so it theoretically would have been possible for employer/employee DC contributions before that year to be more – as much as 40 percent of salary for a worker earning \$50,000 at retirement and 26 percent of salary for a worker earning \$75,000 at retirement. However, this would have been very unlikely to happen in practice, so the calculations apply the same 20 percent cap on pre-1990 DC contributions that applied on pre-1991 RRSP contributions.



The simplest and best fix is to replace the factor of nine with a uniform lifetime retirement-savings accumulation limit. As are current retirement-saving limits, a lifetime limit should be indexed to the average industrial wage. It should be high enough to ensure that most workers have enough saving room to provide for adequate income replacement when they retire, but not so high as to facilitate excessive tax deferral.

### *The (Two) Million Dollar Question*

How much should the lifetime accumulation limit be? Below, we present six benchmarks, summarized in Figure 8, that could be used to establish the limit. Each is determined by reference to current, historical, or proposed retirement saving limits under the *Income Tax Act*, or to benefits now provided under DB pension plans.

1. *RRSP – 9 percent contribution*: The maximum RRSP savings for a 2011 retiree who contributed 9 percent of earnings to an RRSP in each year of a 35-year career would be \$657,757. This is slightly higher than the typical member contribution rate for a public sector pension plan.<sup>7</sup>

*Benchmark 1: \$0.66 million*

2. *Theoretical RRSP maximum*: A high-income worker retiring in 2011 having made maximum RRSP contributions for 35 years could have accumulated \$846,636. Though not practically achievable, this amount could be used as a benchmark.

*Benchmark 2: \$0.85 million*

3. *Pension reform target*: Pension reform originally was intended to allow a maximum annual pension

of 70 percent of the amount that is 2.5 times the year's maximum pensionable earnings (Canada 1995). With the YMPE at \$48,300 in 2011, that would translate to a career-end salary of \$120,750 and an annual pension of \$84,525. The cost of this pension at age 60 is \$1,945,935.<sup>8</sup>

*Benchmark 3: \$1.95 million*

4. *Federal public sector pension plan*: The federal public sector pension plan currently pays an annual lifetime benefit of \$87,769 to a worker earning \$150,000 at retirement, plus temporary bridging benefits of \$11,520 after 35 years of service. The cost of this pension at age 60 is \$2,076,197.

*Benchmark 4: \$2.08 million*

5. *Current DB limit*: A DB pension plan can pay a maximum annual lifetime benefit of \$89,328 plus temporary bridging benefits of \$11,817 annually after 35 years of pension service. The cost of this pension at age 60 is \$2,113,504.

*Benchmark 5: \$2.11 million*

6. *1976 DB limit (real)*: In 1976, the *Income Tax Act* limited DB pension benefits to \$1,715 per year of service to a maximum of 35 years. With the exception of an \$8 increase in 1990, the 1976 limit remained essentially unchanged until 2004. In real terms, the 1976 limit would be \$4,070 per year of service in 2011 – 2.4 times more than the nominal limit in 1976. After 35 years of service, the annual benefit would be \$142,450. The cost of this pension at age 60 is \$3,279,522.<sup>9</sup>

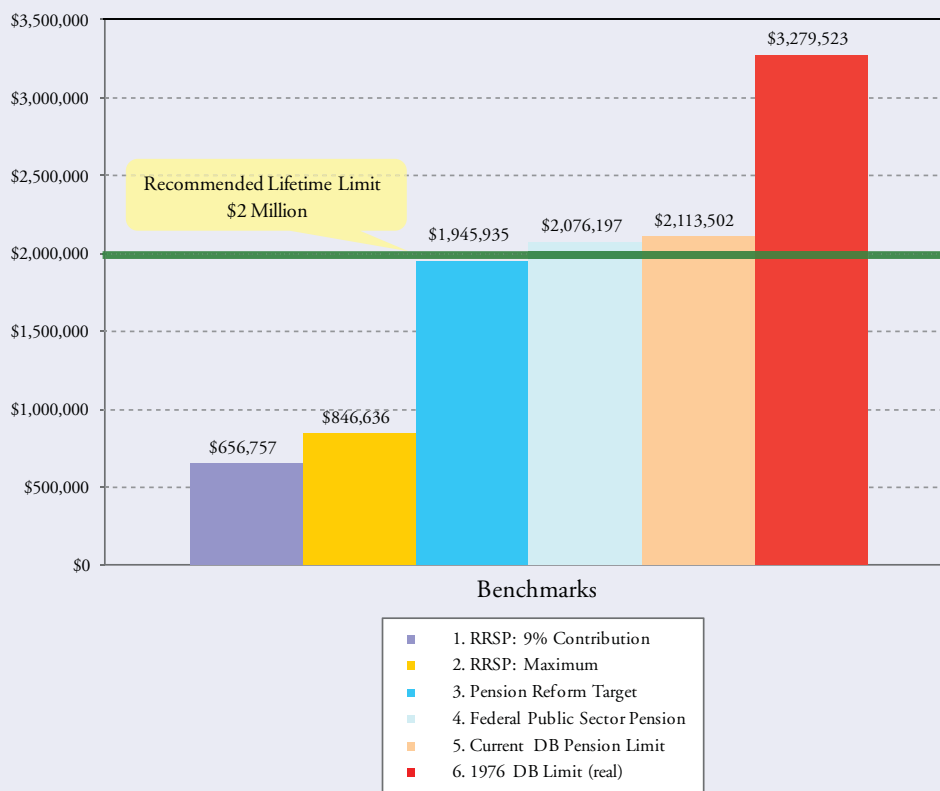
*Benchmark 6: \$3.28 million*

7 By way of example, member contributions to the federal public sector pension plan are currently 5.8 percent of earnings up to the year's maximum pensionable earnings (YMPE) and 8.4 percent on earnings above the YMPE. Member contributions to the British Columbia Public Sector Pension Plan are 7.8 percent up to the YMPE and 9.3 percent above the YMPE. Required member contributions to the Ontario Municipal Employees Retirement System (for members with a normal retirement age of 65) are 7.4 percent of earnings up to the YMPE and 10.7 percent on earnings above the YMPE.

8 Excluding temporary bridge benefits worth approximately \$56,000.

9 Assuming wage inflation of 2.5 percent from 1976 to 2011 and not including bridging benefits worth approximately \$56,000.

Figure 8: Benchmark Accumulations and Recommended Lifetime Limit



Source: Authors' calculations; see the Appendix.

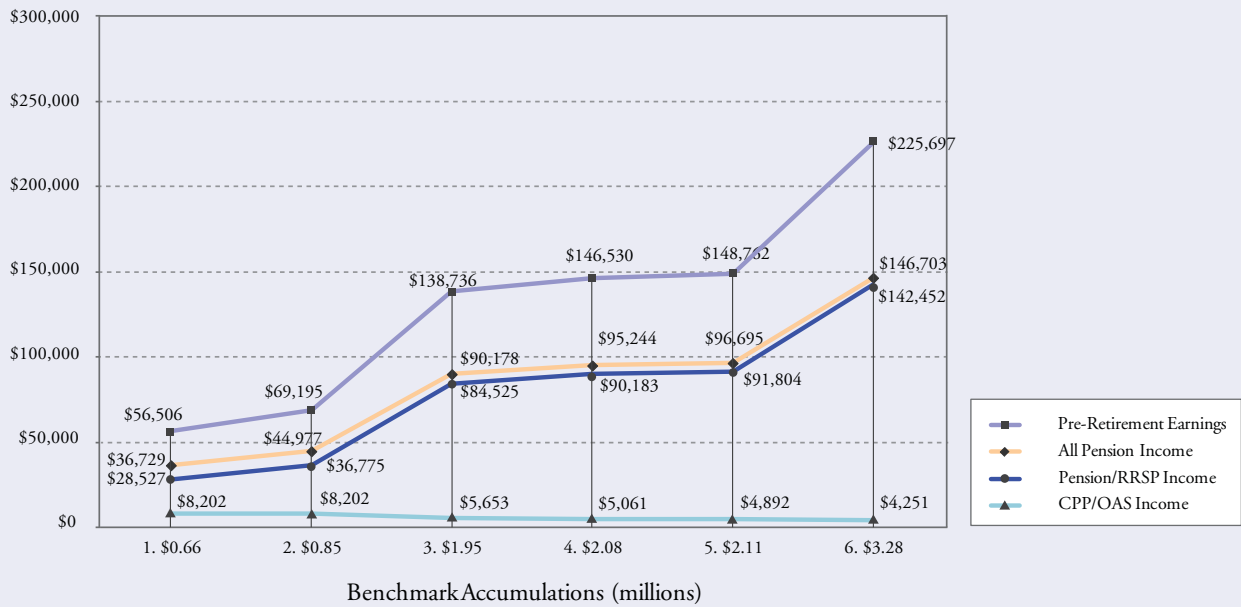
Figure 8 suggests that the starting amount for an indexed lifetime accumulation limit should be \$2 million. Post-retirement expenses are likely to be lower than during working life, so most workers would not need a pension that replaces all of their pre-retirement income. Many regard a pension of 60 percent of final earnings as the right replacement ratio, reducing to 50 percent for higher-income workers (see Baker and Milligan 2009; Horner 2009; Whitehouse 2009). The investment management industry tends to suggest a higher replacement ratio – say, 80 percent (Fidelity Investments 2007). A 70 percent target replacement ratio has long been a central feature of Canada’s tax rules for retirement saving: after a 35-year career, a DB pension plan can pay a pension that replaces 70 percent of the best three-year average earnings.

For each benchmark accumulation, Figures 9 and 10 show pension incomes and pre-retirement

salaries for retirement at ages 60 and 65, based on a 65 percent replacement ratio. This is the mid-point between the 60 percent target suggested by many experts and the 70 percent target under current tax rules.

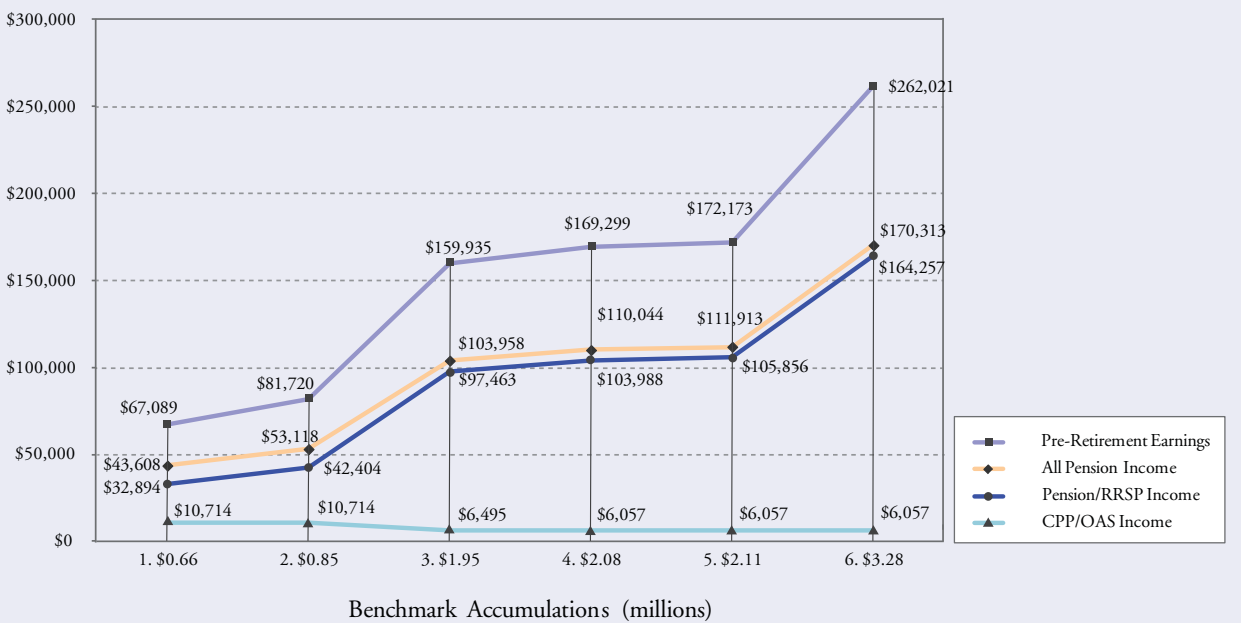
The amount at which a lifetime accumulation limit should be established is ultimately a policy question: what level of income replacement should the “tax-assisted” retirement saving system support? Irrespective of the answer, it seems obvious that the same level of tax deferral for retirement saving should be available to everyone. A quick scan of the pension amounts in Figure 11 – which do not include CPP/OAS benefits – suggests that \$1 million is enough for some workers, \$2 million is enough for most workers, and almost no one needs \$4 million. A lifetime accumulation limit in the range of \$1-2 million thus seems appropriate since it is enough accumulation room for most workers to maintain

Figure 9: Pension/RRSP Income for Benchmark Accumulations, Retirement at Age 60



Note: The stylized CPP/OAS pension amounts reflect the conversion of the age-60 actuarial present value of the 2016 estimated average OAS pension and the average age 65 CPP pension (reduced 6 percent per year for retirement before age 65 and payable immediately) to a standard form of pension (see Appendix Table A-1, panels A-D). The OAS clawback is applied using nominal average CPP/OAS amounts payable at age 65, which were determined by applying a 2 percent inflation rate to the 2011 OAS average benefit of \$495.68 and to the 2011 clawback threshold of \$67,688.  
 Source: Authors' calculations; see the Appendix.

Figure 10: Pension/RRSP Income for Benchmark Accumulations, Retirement at Age 65



Note: The stylized CPP/OAS pension amounts reflect the conversion of the age 65 actuarial present value of the 2011 average CPP/OAS pensions to a standard form of pension (see Appendix Table A-1, panels A-D). The OAS clawback is applied using the 2011 threshold of \$67,688 and the 2011 average CPP/OAS monthly benefits of \$512.38 and \$495.68, respectively.  
 Source: Authors' calculations; see the Appendix.

their living standards in retirement. To narrow it down further, \$2 million seems like a good choice for the following reasons:

- \$2 million corresponds approximately to benchmarks 4 and 5 – the value of pensions received by high-income career members of generous DB pension plans. A limit based on the actual value of pensions currently in pay is intuitively defensible.
- \$2 million is enough for all workers up to the highest income level that could reasonably be characterized as “middle class” to achieve adequate income replacement in retirement. This is consistent with the stated policy objectives of Canada’s tax-assisted retirement saving system.
- Since a \$2 million limit would amount to a *decrease* in the current DB pension limit, it would address federal Finance Department concerns about excessive tax deferral.

### What about Unused RRSP Room?

Unused RRSP room is often cited as evidence that Canadians are not saving as much for retirement as they could, or should (see, for example, Ontario 2010; TD Economics 2010). Since Canadians had more than \$670 billion of unused RRSP room in 2010, why do they need a \$2 million accumulation limit? Appearances, however, can be deceiving. Though large in total, unused RRSP contribution room does not amount to much per person. Canadians with new RRSP room in 2010 were, on average, 42 years of age and had average carry-forward and new RRSP room (shown in Table 3) of \$31,200 (Statistics Canada Tables 1 and 2). A worker of average age who contributed this amount to an RRSP immediately and earned a net investment return of 5 percent would accumulate \$75,000 by age 60 – enough for a pension of only \$3,300 annually, or \$275 monthly.

#### *A 60 percent Pension: The Impossible Dream?*

In 2007, the average family income for a two-earner couple with children was \$99,500 (Statistics Canada Table 12).

Let us assume that each earner in the couple is of median workforce age (41 years), has \$60,000 in retirement savings and the average carry-forward RRSP room shown in Table 3, and the couple’s goal is to retire at age 60 – the mid-point between median public and private sector retirement ages – with an indexed annual pension income that replaces 60 percent of pre-retirement family income. Further, let us assume that the couple expects family income and invested RRSP savings to grow at 3 percent and 5 percent, respectively, from age 41 to age 60.

To reach its goal, our couple needs to accumulate retirement benefits worth \$2.34 million at age 60. The couple also expects to receive average CPP/OAS benefits at age 65, which have an estimated present value of \$635,000 at age 60 (see Appendix Table A-2). To accumulate the additional \$1.71 million the couple needs for its target 60 percent pension, the two will need to top up their RRSPs immediately to the extent of their unused room and then contribute 31 percent of their family income to their RRSPs every year until they retire. But the tax rules limit their annual RRSP contributions to 18 percent of earnings, which means they will have only 58 percent of the RRSP contribution room they need to achieve their target pension. They must accept a lower standard of living in retirement, or save in other ways.

Of course, the 18 percent RRSP contribution limit would not prevent our couple from achieving the target if it had sufficient RRSP savings at age 41. How much? With RRSP savings of \$387,000, the couple could achieve its target retirement income with an 18 percent contribution rate. But our couple would not have \$387,000 of RRSP savings because this amount is 4.8 times more than the reported average \$80,000 of RRSP savings for families with after-tax incomes of \$85,000 or greater (Statistics Canada 2008b).

#### *The Uneven Distribution of RRSP Room*

Exactly how many Canadians do not have enough RRSP room? This question is impossible to answer with certainty because the required data

Figure 11: Pension Income for Accumulations of \$1-4 million



Source: Authors' calculations; see the Appendix.

Table 3: RRSP Contribution Room in 2010

	Carry-Forward Room from 2009	New Room for 2010
	<b>\$589 billion</b>	<b>\$82 billion</b>
<b>Persons with carry-forward or new room</b>	22.1 million	17.6 million
<b>Average per person</b>	\$26,600	\$4,600

Source: Statistics Canada 2010b, tables RR-01, RR-02.

are difficult or impossible to obtain.<sup>10</sup> Available information suggests fairly clearly, however, that Canadians' average holdings of retirement savings and unused RRSP contribution room are modest – particularly for those in the private sector. As

income rises, Canadians contribute to RRSPs at greater rates and have less accumulated RRSP room (Canada 2010b; TD Economics 2010). This makes sense, given that low-income workers should not be contributing to RRSPs and would

10 There are no reliable data for accumulated retirement savings and RRSP room correlated with age and income. Statistics Canada's Longitudinal Administrative Databank, however, tracks RRSP room and contributions correlated with income and age, and would be expected to show that older, higher-income Canadians without pension coverage use all their RRSP room.

be better off saving for retirement in Tax Free Savings Accounts (Shillington 2003; Laurin and Poschmann 2010). In 2000, Canadians earning more than \$60,000 held less than 12 percent of all unused RRSP room (Holt 2000). Older studies have arrived at similar conclusions: most unused RRSP room is held by lower-income workers, while higher-income workers contribute to RRSPs at significantly greater rates:

“A large proportion of unused RRSP room is held by workers with low incomes, many of whom may never be in a financial position to contribute to RRSPs.” (Frenken 1998.)

“Not unexpectedly, filers with personal incomes of \$30,000 or over (1990 dollars) were responsible for the bulk of...growth [in RRSP contributions].” (Frenken 1997.)

Indeed, no insights can be gained by looking at Canadians' RRSP room as an aggregate phenomenon because retirement savings and unused RRSP room vary substantially depending on personal factors, including include years of residency in Canada, earnings, annual fluctuations in earnings, absences from the workforce, pension plan membership, RRSP contribution history, investment returns or losses, and in-career RRSP withdrawals.

### *Withdrawals and Investment Losses*

Between June 2008 and May 2009, the S&P/TSX Composite Index lost half its value. Such capital market losses affect DB pension funds and RRSP investors alike, with one important difference: sponsors of DB pension plans can and do increase contributions to compensate for investment losses, whereas the tax rules prohibit RRSP investors from doing so. The inability to increase RRSP contributions to make up for investment losses increases the likelihood that RRSP room will not be sufficient.

Many Canadians ages 35 to 54 make withdrawals from their RRSPs, mostly for reasons of financial hardship. A February 2011 survey of more than 1,500 Canadians revealed that four out of ten individuals have withdrawn funds from their RRSPs for emergencies such as job loss (36 percent), debt repayment (26 percent), home purchases/renovations (25 percent), and personal or children's education (10 percent); only 6 percent of withdrawals were for discretionary vacation and leisure expenses.<sup>11</sup> Contribution room is not restored when withdrawals are made, except to a limited extent for principal-residence and education costs. This suggests that many Canadians who have withdrawn funds from their RRSPs before retirement will not have enough RRSP contribution room.

### *Delayed RRSP Saving Means Less RRSP Room*

Many Canadians who have not used their RRSP contribution room will not have enough. This seems counterintuitive, but it makes sense if one considers typical lifetime earning and consumption patterns. Individuals typically defer retirement saving to later in their careers, when their earnings are likely to be highest and their non-discretionary expenses lowest. When they do start to save, the value of unused RRSP room carried forward from past years will have been eroded by inflation. As the example of the average couple above demonstrates, they will not be able to catch up.

### *The Verdict on RRSP Room*

The only conclusions that can be drawn from available data are that some Canadians have more RRSP room than they need and some do not have enough – even though they may not yet have used all the RRSP room they have.

With a lifetime accumulation limit, all Canadians will have enough RRSP contribution room. And,

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11 “BMO Study: Troubling Trend Sees Canadians Dipping into Their RRSPs Prior to Retirement,” *Marketwire*, February 26, 2011.



as is now the case, some will have more than they need or can use.

## Retirement Benefits: A Lifetime Accumulation Limit Would Deliver

A retirement income system that serves all Canadian workers would be expected to have certain features and benefits, which we summarize in Table 4. In terms of delivering on these expectations, how would a lifetime accumulation limit compare to the factor of nine? Again, we provide the answers in Table 4. Some features, however, deserve particular mention, especially those that would promote better pension coverage and address the challenges of an aging population.

### *Allow New Retirement Plan Designs*

Canada's tax rules stifle innovation in pension plan design because pension plans must be either DB or DC and be sponsored by an employer. DB pension coverage has declined dramatically as employers have sought to shift pension risks to employees by establishing DC pension plans and group RRSPs in which the employer's only obligation is to contribute a percentage of salary. This shifting of risk comes at a price: those who save in CAPs must select their own investments and often realize lower net investment returns than large DB plans typically deliver (Bauer and Frehen 2008; Jog 2009). Canada's tax rules create a dilemma: DB pension plans offer economy of scale but force employers to shoulder funding risk. Employers do not want the risk, so they offer DC pension plans and group RRSPs, which have higher costs.

A lifetime accumulation limit would cut the Gordian knot that ties pension plan design to the DB/DC paradigm and to employer sponsorship. With only one design restriction – that benefits should not exceed the accumulation limit – a practically infinite range of pension designs would become available, limited only by the creativity of retirement plan consultants. Here are some examples of new pension designs that a lifetime accumulation limit would facilitate.

- *Target-benefit plans:* Such plans would pay DB-like benefits and be funded entirely by workers, by a fixed employer contribution, or both, leveraging economies of scale of large DB pension plans with more sustainable allocations of risk.
- *Profit-based plans:* Contributions to a profit-based plan could be linked to salary or to a target benefit, subject to employer profits. Unlike DB pension plans, which typically require increased contributions during economic downturns, the employer's contribution obligations would be anti-cyclical, making the plan more sustainable over the long term.
- *Third-party administration plans:* As proposed in a previous paper in this series (Pierlot 2008), pension plans could be established on a subscription basis by employer or industry associations, consultancies, financial institutions, and even public sector pension plans. Third-party administration would improve access to high-quality, cost-effective pension administration services.<sup>12</sup> Ideally, pension plans administered by third parties should be permitted to operate on a target-benefit and/or DC basis, funded by contributions from members and/or employers. With appropriate rules for governance and conflicts of interest, any entity capable of providing competent service should be eligible to be a third-party administrator.<sup>13</sup>

12 In December 2010, the federal government made a timid first step in this direction by proposing pooled registered pension plans (PRPPs) that could offer individual pension accounts analogous to RRSPs. PRPPs have received an enthusiastic endorsement from financial institutions in the retail and group asset management businesses (Scott-Clarke and Lamb 2010), but labour-side pension reform advocates have concluded that "PRPPs reproduce most of the problems individual investors characteristically face with individual and group RRSPs" (Canadian Labour Congress 2011).

13 At least one major public sector pension plan – the Ontario Municipal Employees Retirement System – has indicated a strong interest in managing private sector pension assets (see Perkins 2011), and there is no apparent reason why this should not be an option given that public sector pension plans have a demonstrated capacity for effective pension fund management.

Table 4: Lifetime Accumulation Limit versus the Factor of Nine

Feature / Benefit	Lifetime Accumulation Limit	Factor of Nine		
		DB Pension Plan	DC Pension Plan	RRSP
1. Compensates for investment losses with increased contribution room	yes	yes	no	no
2. Provides contribution/accumulation room for temporary workforce absences	yes	sometimes <sup>a</sup>	sometimes	no
3. Workers with fluctuating income can have the same pension as workers with steady income	yes	no	no	no
4. Allows maximum accrual irrespective of plan type or design	yes	no	no	no
5. Promotes new, innovative retirement plan designs, especially risk-shared, target benefit, and pooled pension plans <sup>b</sup>	yes	no	no	no
6. Provides enough pension saving room for most workers	yes	sometimes	rarely	rarely
7. Complete flexibility in terms of timing and amount of contributions	yes	no	no	no
8. Accommodates typical “back-loaded” retirement saving behaviour; provides equal saving room to late-career savers	yes	no	no	no
9. Provides same saving room to public sector, private sector, employed and self-employed workers	yes	no	no	no
10. Equal access for Canadian-born and immigrant workers	yes	no	no	no
11. Prevents “excessive” tax deferral	yes	yes	no	no <sup>c</sup>
12. Provides equal saving room independently of employer sponsorship	yes	no	no	no
13. Simple, comprehensible regulatory structure	yes	no	no	no
14. Low regulatory/compliance costs/risks	yes	no	no	no
15. Facilitates use of severance payments for retirement saving	yes	no	no	no
16. Restores contribution room for in-service withdrawals; promotes greater horizontal equity through tax-rate averaging; facilitates temporary income replacement during periods of absence from workforce due to employment, disability, retraining or childcare	yes	no	no	no
17. Promotes extended labour force participation by allowing value of early retirement incentives to be preserved and paid as larger pension when retirement is delayed	yes	no	not applicable	not applicable
18. Provides reliable, up-to-date statistical information about how much Canadians have saved for retirement	yes	no	no	no

a Subject to prescribed limits, pension plans may allow accrual during periods of absence.

b As recommended in previous papers of this series (see esp. Pierlot 2008) and in reports of the Ontario Expert Commission on Pensions, the Alberta/B.C. Joint Expert Panel on Pension Standards and the Nova Scotia Pension Review Panel.

c DC Plans and RRSPs do not limit accumulations, so skilled investors who start saving early and maximize their contributions have – in theory – an opportunity to accumulate large amounts of tax-deferred retirement wealth. But this opportunity is unavailable to the vast majority of DC/RRSP savers.

Source: Authors' calculations.

### *Make Catch-up Retirement Saving Possible*

Canadians are having children later, spending more, and saving less (TD Economics 2010). As a result of these decisions, however, their failure to contribute to retirement saving or to accumulate savings beginning early in their careers results in a permanent loss of RRSP accumulation room. For those who have the ability to save later in their careers, a lifetime accumulation limit would allow them to accumulate the same pension amounts as those who began earlier, and would ensure that contribution room was restored if investment losses depleted the value of their retirement savings.

### *Promote Longer Workforce Participation*

Figure 11 offers an obvious but important insight: pensions cost more when one retires early and less when one retires later. Private sector DB pension plans often have early retirement penalties, but public sector plans typically waive these penalties when an age-plus-service milestone of 85 is attained. Delaying retirement means losing the value of early retirement benefits. For example, a 55-year-old federal public sector worker earning \$75,000 with 30 years of pension service is entitled to an immediate life pension of \$32,777 per year, plus “bridging” benefits of \$9,874 per year, payable to age 65. If the worker chooses not to retire immediately, the value of his or her annual compensation reduces from \$75,000 per year to \$32,349 per year – the difference between salary and forgone pension payments. Not surprisingly, workers in this situation decide to retire, even though they might prefer to continue working. As the population ages and the workforce shrinks, this will have significant and undesirable implications for the labour supply (Schirle 2008).

Under current tax rules, the value of forgone early retirement benefits cannot be preserved. A lifetime accumulation limit, however, would allow the value of early retirement benefits to be “repackaged” on a value-equivalent basis as a larger pension payable later. This would encourage higher rates of labour force participation among

older workers and facilitate phased retirement. One study suggested that 25 percent of retirees would not have retired if they could have continued working part-time without their pensions being affected (Morissette et al. 2004). A lifetime accumulation limit would offer an opportunity to slow the erosion of the labour income tax base as the population ages. For workers in “phased retirement” arrangements who are receiving a blend of employment and pension income, it would increase retirement saving flexibility by restoring contribution room as pension income is paid.

### *Increase Future Tax Revenue*

As the population ages, governments will face an increasing burden to support retired workers who have not saved enough. Since pension and RRSP saving only defers tax, the government is a “saving partner” because increased contributions today mean more tax tomorrow. As entitlement spending increases for an aging population, the increased contributions that a lifetime accumulation limit would make possible might well smooth governments’ cash flows over the long term and partially replace an eroding labour income tax base with tax revenue from pension plans and RRSPs (Brown 2002).

### *Manage What You Measure*

Pension adjustments now reported to the Canada Revenue Agency (CRA) provide little information about how much Canadians have saved for retirement, so it is little wonder that governments have difficulty in deciding what policies might be necessary or effective in promoting adequate retirement saving. The annual reporting that a lifetime accumulation limit would require would provide granular, accurate, and timely information about how much wealth Canadians have accumulated in their pension plans and RRSPs, giving federal and provincial governments a powerful new tool with which to develop targeted policy measures to promote adequate retirement saving.

## How the Lifetime Limit Would Work

As noted, a lifetime accumulation limit would require the annual reporting of pension and RRSP values to the CRA. The required data could be generated using information now available to plan administrators and custodians. Analogously to current rules for excess contributions, excess accumulations would be subject to a penalty tax until withdrawn, with benefit payments to commence no later than the end of the year an individual attains age 71 – or perhaps later, given that life expectancy is increasing (Robson 2008).

Using the CRA's RRSP Deduction Limit Statement as a model, Table 5 shows the kind of annual pension accumulation statement the CRA might issue each year. An optional feature, the pension income estimates, would contribute to financial literacy by helping workers to answer for themselves the most important questions in retirement saving: how much do I need to retire, and how close am I to my goal?

### *Transitioning to a Lifetime Limit*

In implementing a lifetime accumulation limit, a number of transitional and administrative issues would arise.

- *Reporting pension values:* Similar to the annual reporting of RRSP contributions and pension adjustments that current rules require, a lifetime limit would require annual reporting of each individual's pension and RRSP values to the CRA. For members of DC pension plans and RRSP annuitants, the reported amount would be the year-end market value of their assets. For those in DB pension plans, the standard for determining lump-sum pension values in section 3500 of the Canadian Institute of Actuaries Standards of Practice (Canadian Institute of Actuaries 2010a) could be used because it is broadly accepted by pension regulators as an appropriate methodology for determining the present (lump-sum) value of DB pension benefits for individual members. While plan administrators would incur expenses to establish automated reporting systems, they would

also realize some savings by no longer having to report pension adjustments.

- *Pre-existing accumulations:* Since pension and RRSP accumulations of some individuals would exceed the lifetime accumulation limit, existing accumulations should be grandfathered, as would be consistent with Canada's established practice of avoiding retroactive tax increases.
- *Withdrawal grace period:* Since individuals might not always know if the year-end value of their pension and RRSP wealth exceeded the accumulation limit, there should be a one-year grace period in which to withdraw excess accumulations.
- *Locking-in:* Since pension standards legislation generally prohibits cash withdrawals of pension benefits, the legislation would have to be amended to accommodate the withdrawal of pension values that exceed the lifetime accumulation limit.
- *Reporting and compliance:* Since the administration of a lifetime accumulation limit would require the annual reporting of pension, RRSP, and RRIF values to the CRA, pension plan administrators, RRSP/RRIF issuers, and the CRA would need a reasonable time in which to develop reporting and compliance systems.
- *De-accumulation:* Current tax rules require RRIF payments, pension payments, and benefits from an annuity purchased with pension or RRSP funds to commence by the end of the year in which a pension plan member or RRSP annuitant attains age 71. These rules could continue to apply under a lifetime accumulation limit regime. However, the current minimum-payment RRIF withdrawal rules erode the purchasing power of retirees over time, force premature liquidation of investments that have lost value in a market downturn, and prevent low-income RRIF annuitants from receiving income-tested benefits such as the GIS (Robson 2008). These problems could be addressed by replacing the current minimum-withdrawal rules with a declining-limit RRIF withdrawal schedule that would require all RRIF assets to be exhausted by a particular age – say, 95. For many RRIF holders, a declining-limit withdrawal schedule would not force withdrawals and would help them manage their retirement savings more effectively.

Table 5: A Sample Pension Accumulation Statement

Date	Name	Social Insurance No.	Tax Year	Tax Centre
May 1, 2012	JANE DOE	111-222-333	2011	Sudbury ON P3A 5C1
<b>2012 Pension Accumulation Statement</b>				
Amounts marked with an asterisk (*) cannot be less than zero.				
<b>Pension Accumulation Account Summary</b>				
Your Pension Accumulation Account value at the end of 2010				\$150,000 *
Net increase (decrease) in 2011				\$50,000
Your Pension Accumulation Account value at the end of 2011				\$200,000 *
<b>2012 Pension Accumulation Room</b>				
Pension Accumulation Limit for 2011				\$2,000,000 *
<b>Minus:</b> Your Pension Accumulation Account value at the end of 2011				\$200,000 *
Excess Pension Accumulation				\$0 *
Your Pension Accumulation Room for 2012				\$1,800,000 *
<b>Pension Income Estimates</b>				
Your age at the end of 2011				50 Years
Your Pension Accumulation Account value at the end of 2011				\$200,000
<b>Divided by:</b> Your Pension Annuity Factor for retirement at Age 55				24.22
<b>Equals:</b> Your estimated annual pension income if you retire at age 55				\$8,257.64
<b>Divided by:</b> Your Pension Annuity Factor for retirement at Age 60				19.92
<b>Equals:</b> Your estimated annual pension income if you retire at age 60				\$10,040.16
<b>Divided by:</b> Your Pension Annuity Factor for retirement at Age 65				16.07
<b>Equals:</b> Your estimated annual pension income if you retire at age 65				\$12,445.55

**Important Information**

- Your Pension Accumulation Account includes the total value of all retirement benefits held on your behalf in your Registered Retirement Plans (RRPs) as reported to the Canada Revenue Agency.
- An Excess Pension Accumulation is the amount (if any) that exceeds the current-year Pension Accumulation Limit. A penalty tax of 1% per month is applied to an Excess Pension Accumulation that you do not withdraw within the one-year period following the date of this Pension Accumulation Statement. Withdrawals are included in your taxable income.
- The net increase or decrease in your Pension Accumulation Account reflects all changes in the value of benefits in your RRPs since the end of the previous year. New pension service credits, contributions and investment earnings increase the value of your Pension Accumulation Account. Withdrawals, investment losses and reductions in pension service credits decrease the value of your Pension Accumulation Account.
- The Pension Accumulation Limit increases annually by the percentage increase in the Year's Maximum Pensionable Earnings under the Canada Pension Plan and the Quebec Pension Plan. After the end of the year you attain age 71, the Pension Accumulation Limit decreases by a prescribed amount, unless you have applied the full balance of your Pension Accumulation Account to purchase a lifetime pension annuity that meets prescribed requirements.
- You cannot accumulate new benefits in an RRP in which you participate after the end of the year in which you attain age 71. You cannot contribute to your spouse's RRP after the end of the year in which he or she attains age 71.
- The Pension Income Estimates are provided to help you decide whether you are meeting your retirement-saving goals. For each retirement age, the estimates show the annual retirement income that could be purchased from an annuities provider with the current-year value of your Pension Accumulation Account for a life pension guaranteed for 5 years with a spousal survivor benefit of 66 2/3% and indexed at 3% per annum. Each Pension Annuity Factor is determined for your age on a unisex basis using generally-accepted actuarial principles. The actual amount of pension income you receive when you retire could be more or less depending on a number of factors, including your age at retirement, whether you have a spouse when you retire, the form in which you choose to receive your retirement income, and prevailing interest rates. The Canada Revenue Agency does not provide financial advice. Should you have any questions regarding your Pension Income Estimates, consult with your financial advisor.

Source: Authors' calculations.



## Conclusion

A consensus is developing that Canada's rules for retirement saving are unfair and ought not to continue in their present form. In 2010, legislation was introduced in Parliament that would have guaranteed all Canadians "the same opportunity to accumulate pension income as any other individual" without regard to age, occupation or country of origin.<sup>14</sup> It seems obvious that all workers should have the same opportunity to prepare for a comfortable retirement, but there is no doubt that this is not the case right now.

The best way to reform Canada's tax rules for retirement saving would be to implement a lifetime accumulation limit. Such a limit would be the simplest way to ensure equitable and equal access to pension and RRSP accumulation room, while preventing excessive deferral of tax. A lifetime accumulation limit would help middle- and upper-middle-income workers, for whom the tax-assisted retirement saving system has always been intended, but it would not ensure that every Canadian worker will be a happy retiree. Lower-income workers who cannot save would continue to rely on programs such as the CPP, the OAS, and the Guaranteed Income Supplement. For those who are able to save but do not, "push" approaches might well prove necessary, including auto-enrollment in new kinds of sustainable plan designs administered by employers or third parties, or perhaps through the voluntary or compulsory expansion of the Canada and Quebec Pension Plans. In any event, a lifetime accumulation limit would

make these solutions easier to implement and provide good information about who needs them.

Because of the federal government's broad constitutional authority over "The Raising of Money by any Mode or System of Taxation,"<sup>15</sup> the rules for retirement saving under the *Income Tax Act* have always been the "dog that wags the tail" of provincial and federal pension standards rules, which were designed to comply with federal tax law. The federal government takes the largest share of the income tax pie and administers income tax for all provinces except Quebec. This means that, to ensure equity of access to "tax-assisted" accumulation room, only the federal government can take the lead on the pension reform file. The time for action is now; the action needed is the immediate implementation of an indexed lifetime retirement benefit accumulation limit that applies equally to all Canadian workers.

Developed in a previous century for a very different workforce, Canada's tax rules for retirement saving presume that most workers spend their careers with employers willing and able to shoulder the task of providing for their employees' retirement. Except in the public sector, this presumption is demonstrably wrong. Today, Canada's tax rules deprive most workers of the opportunity to have the adequate and secure pensions they will need.

We can do better. A lifetime accumulation limit is a simple, elegant, and workable fix for Canadians who do not have career membership in generous pension plans, and its guarantee of equal and sufficient access would benefit all Canadian workers.

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14 Bill C-574, the *Retirement Income Bill of Rights*, passed Second Reading but died on the Order Paper when the May 2, 2011, federal election was called.

15 *The Constitution Act*, 1867, Section 91.



## Appendix

Table A-1: Summary of Actuarial Assumptions

Panel A: Economic Assumptions	
Annual average industrial wage increases	2.5%
Annual salary increases	3.0%
Annuity purchase discount rate (base case)	4.5%
Post-Retirement Indexing (base case)	3.0% fixed
Net Return on DC/RRSP and Public-Sector Employee Contributions	5.0%

Panel B: Demographic Assumptions	
Mortality table	UP 1994 projected to 2020, scale AA , unisex, 50% male
Member's marital status	100% married
Spouse's age	same age as member
Termination assumption	nil
Retirement age	55, 60, or 65
Disability rates	none

Panel C: Federal Public Sector Pension Assumptions <sup>a</sup>	
Base formula	$[(1.3\% \leq YMPE5 + 2\% FAE5 > YMPE5) \leq \$2,552] \times \text{Service} \leq 35$
Earliest unreduced pension	age 60
Normal form	66 2/3% survivor benefit, guaranteed 5 years
Post-retirement indexing	3% fixed
Bridge benefit	25% YMPE5 x service/35
Employee contributions	5% of salary $\leq$ YMPE + 8% of salary $>$ YMPE

a Benefits in respect of employees in public safety occupations are not included in these assumptions; generally, such benefits have a higher value.

Sources: Canada 2010a; Canadian Institute of Actuaries 2010; and OSFI 2009.

Table A-1: Summary of Actuarial Assumptions

Panel D: Maximum Defined-Benefit Pension Assumptions <sup>b</sup>	
Base formula	(2% FAE3 $\leq$ \$2,552) x service
Earliest unreduced pension	Age 60
Normal form	66 2/3% survivor benefit, guaranteed 5 years
Post-retirement indexing	3% fixed
Bridge benefit	CPP/OAS to age 65, up to tax limits
Employee contributions	none

Panel E: Canada Pension Plan and Old Age Security Pension Assumptions	
Average CPP in 2011	\$512.38 per month
Average OAS in 2011	\$495.68 per month
CPP/OAS pre-retirement indexing	3% / 2%
CPP/OAS post-retirement indexing	3% fixed
Annuity purchase discount rate	4.5%
CPP form of pension	60% survivor benefit, no guarantee
OAS form of pension	life only, no guarantee
Mortality	UP 1994 projected to 2020, Scale AA , unisex, 50% male

<sup>b</sup> There is no determinable “maximum” DB pension because the value of such a pension varies as a function of a number of variables, including the benefit formula of the plan, the rate of post-retirement indexing (if any), age at retirement, salary and years of service, discount rates, life expectancy, and marital status. The assumptions shown for a maximum DB pension are selected to show reasonable values for career membership in a generous DB pension plan. Earlier retirement dates, longer service, and a spouse significantly younger than the member would increase the value of DB pensions significantly compared with the values shown throughout this *Commentary*. Sources: Canada 2010a; Canadian Institute of Actuaries 2010; and OSFI 2009.

Table A-2: YMPE &amp; OAS Amounts; Money Purchase, RRSP, and Defined Benefit Limits, 1974-2011

	YMPE			OAS				Pension and RRSP Limits			
	YMPE	YMPE5	YMPE3	Jan. 1	Apr. 1	July 1	Oct. 1	MP Limit PR <sup>a</sup>	DC/MP Limit <sup>b</sup>	RRSP Limit	DB Limit
	<i>(dollars)</i>										
1974	6,600	5,680	5,900	108.14	110.09	112.95	117.02	9,213	5,000	4,000	1,143
1975	7,400	6,100	6,533	120.06	123.42	125.76	129.28	9,443	5,000	4,000	1,143
1976	8,300	6,680	7,433	132.90	135.43	137.06	139.39	9,679	7,000	5,500	1,715
1977	9,300	7,440	8,333	141.34	143.46	147.05	150.43	9,921	7,000	5,500	1,715
1978	10,400	8,400	9,333	153.44	156.66	159.79	164.74	10,169	7,000	5,500	1,715
1979	11,700	9,420	10,467	167.27	170.39	174.82	179.02	10,423	7,000	5,500	1,715
1980	13,100	10,560	11,733	182.42	186.80	191.78	196.33	10,684	7,000	5,500	1,715
1981	14,700	11,840	13,167	202.14	208.20	214.86	221.74	10,951	7,000	5,500	1,715
1982	16,500	13,280	14,767	227.73	232.97	239.73	246.92	11,225	7,000	5,500	1,715
1983	18,500	14,900	16,567	250.62	254.13	256.67	260.52	11,505	7,000	5,500	1,715
1984	20,800	16,720	18,600	263.78	266.28	269.74	272.17	11,793	7,000	5,500	1,715
1985	23,400	18,780	20,900	273.80	276.54	280.14	282.94	12,088	7,000	5,500	1,715
1986	25,800	21,000	23,333	285.20	288.34	291.51	294.43	12,390	7,000	7,500	1,715
1987	25,900	22,880	25,033	297.37	300.34	303.64	308.19	12,700	7,000	7,500	1,715
1988	26,500	24,480	26,067	310.66	313.15	315.97	320.08	13,017	7,000	7,500	1,715
1989	27,700	25,860	26,700	323.28	325.87	330.43	337.04	13,342	7,000	7,500	1,715
1990	28,900	26,960	27,700	340.07	343.13	347.93	351.41	13,676	11,500	7,500	1,722
1991	30,500	27,900	29,033	354.92	362.37	369.62	373.32	14,018	12,500	11,500	1,722
1992	32,200	29,160	30,533	374.07	374.44	376.31	378.19	14,368	12,500	12,500	1,722
1993	33,400	30,540	32,033	378.95	381.60	383.51	384.66	14,728	13,500	12,500	1,722
1994	34,400	31,880	33,333	385.81	387.74	387.74	387.74	15,096	14,500	13,500	1,722
1995	34,900	33,080	34,233	387.74	388.52	392.41	394.76	15,473	15,500	14,500	1,722
1996	35,400	34,060	34,900	394.76	395.55	397.92	399.91	15,860	13,500	13,500	1,722
1997	35,800	34,780	35,367	400.71	403.51	405.12	406.34	16,256	13,500	13,500	1,722
1998	36,900	35,480	36,033	407.15	407.15	408.78	410.82	16,663	13,500	13,500	1,722
1999	37,400	36,080	36,700	410.82	411.23	413.70	417.42	17,079	13,500	13,500	1,722
2000	37,600	36,620	37,300	419.92	420.34	424.12	428.79	17,506	13,500	13,500	1,722
2001	38,300	37,200	37,767	431.36	433.52	436.55	442.66	17,944	13,500	13,500	1,722
2002	39,100	37,860	38,333	442.66	442.66	443.99	449.32	18,393	13,500	13,500	1,722
2003	39,900	38,460	39,100	453.36	456.08	461.55	461.55	18,853	15,500	14,500	1,722
2004	40,500	39,080	39,833	462.47	463.39	466.63	471.76	19,324	16,500	15,500	1,833
2005	41,100	39,780	40,500	471.76	473.65	476.97	479.83	19,807	18,000	16,500	2,000
2006	42,100	40,540	41,233	484.63	484.63	487.54	491.93	20,302	19,000	18,000	2,111
2007	43,700	41,460	42,300	491.93	491.93	497.83	502.31	20,810	20,000	19,000	2,222
2008	44,900	42,460	43,567	502.31	502.31	505.83	516.96	21,330	21,000	20,000	2,333
2009	46,300	43,620	44,967	516.96	516.96	516.96	516.96	21,863	22,000	21,000	2,444
2010	47,200	44,840	46,133	516.96	516.96	518.51	521.62	22,410	22,450	22,000	2,494
2011	48,300	46,080	47,267	521.62	521.62	521.62	521.62	22,970	22,970	22,450	2,552

a The money purchase limit for a full career under the current pension reform system is the 2011 limit discounted at wage inflation of 2.5 percent. The DB and RRSP limits (not shown) used for full-career calculations are derived from these values. DB accumulations under the full-career scenarios are the same as under actual tax rules because current DB limits apply to all years of service.

b A cap of 20 percent of salary was applied to pre-1990 DC contributions.

Sources: Canada 2010a; CCH Canadian Limited 1970-90; and Canadian Institute of Actuaries 2010b.

Figure A-1: Alternative Pension Valuation Bases



Source: Authors' calculations; see the Appendix.

### Sensitivity Analysis: The Value of a Pension

Determining the value of lifetime pension benefits is a science, but not an exact one. This is because the cost of providing a promised pension depends upon future events that are unknowable. Valuing a pension therefore requires making educated guesses about a pensioner's longevity and the rate of return on invested pension assets, among other things. For a pension indexed to inflation, an assumption must be made about future inflation rates. We use annuity purchase rates that reflect the value of pensions with full inflation indexing because current tax rules permit DB pension plans to provide fully indexed pensions and because the federal public sector plan actually does pay fully

indexed pensions, as do many other public sector pension plans and some private sector plans.

Our "base case" for determining DB pension values uses a 4.5 percent discount rate and fixed-rate post-retirement indexing of 3 percent. These rates are considered to be the most reasonable estimate of the value of a fully indexed pension because they reflect experience with actual quotes for group purchases of pension annuities with full inflation indexing; in other words, the "base case" reflects the real-world market value of pensions. It should be noted that these group rates would not be available to individuals, who must pay retail annuity purchase rates. Retail annuity purchase rates would be expected to be higher due to sales commissions and adverse-selection risk.<sup>16</sup>

16 Annuity providers establish annuity prices based on average life expectancy. In the context of pensions, adverse selection refers to an annuity provider's risk that an individual is more likely to purchase a lifetime pension annuity if he or she has reason to believe that his or her life expectancy will be longer than average.

The pension values we present in this *Commentary* would be different if we used different assumptions to determine those values. Figure A-1 shows the sensitivities of our 35-year DB pension values to four alternative valuation bases:

- the 1993 Canadian Institute of Actuaries basis;
- a 4.5 percent discount rate with 2 percent fixed-rate indexing;
- a 5.5 percent discount rate with 3 percent fixed-rate indexing; and
- a 3.5 percent discount rate with 3 percent fixed-rate indexing.

We do not show a retail annuity purchase basis because it would overstate the value of pensions paid from large DB pension plans. In these plans, there are no commission expenses and little adverse selection risk because all retirees normally must receive their benefits in the form of a lifetime pension annuity.

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*The following tables are not available online. Some were obtained on a user-fee basis:*

Table 1: RR-01 RRSP Room (Contribution Limit) – People with Room, 2010. Cat. No. 17C0011.

Table 2: RR-02 RRSP Room (Contribution Limit) – Characteristics of People with 2010 New Room. Cat. No. 17C0011

Table 3: Pension Plans in Canada: Key Tables. Cat. No. 74-508-XWE. 2004. September.

Table 4: Percentage of paid workers covered by a Registered Pension Plans [SIC] by province and type of plans – 1977-2007. Source: Statistics Canada, Pension Plan in Canada and Labour Force Survey. Last modified: 2009-06-19.

*The following tables, or their updated versions, are available on-line:*

Table 5: Labour force characteristics, population aged 65 and older, by age group and sex, 1995 to 2008. Source: CANSIM table 282-0002. Last modified: 2010-03-15

Table 6: Employment by age, sex, type of work, class of worker and province (monthly) 2009. Sources: Statistics Canada, tables 282-0087 and 282-0089. Last modified: 2010-05-07.

Table 7: Employment by Industry. Source: Statistics Canada, CANSIM, table 282-0008 and Catalogue no. 71F0004XCB. Last modified: 2010-01-29.

Table 8: Registered pension plan membership by sector and type of plan (2010)

Table 9: Registered pension plan membership by sector and type of plan. *The Daily*. Tuesday, May 25, 2010

Table 10: Registered pension plan membership by sector and type of plan. *The Daily*. Monday, May 9, 2011.

Table 11: Registered pension plans (RPPs) and members, by funding instrument, sector and type of plan (2009). CANSIM table 280-0014. Last modified: 2010-05-24.

Table 12: Median total income by selected family types – Canada. Cat. no.: 75-202-XWE. Date Modified: 2009-06-03.

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