

# Risky Business

Canada's Retirement Income System

Hugh Mackenzie





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# Risky Business

## Canada's Retirement Income System

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### Executive Summary

For the first time in more than a generation, fundamental questions about the adequacy of Canada's retirement income system and about what to do in response have moved to political centre stage. Provincial premiers have achieved a degree of consensus unusual in recent years, naming the impending retirement income crisis and pointing to an expanded Canada/Quebec Pension Plan as critical to the system's repair. Ontario has gone one step further, and set in motion plans to establish an Ontario-only add-on to the CPP as a provincial initiative. The federal government's proposal for so-called Pooled Registered Pension Plans — essentially RRSPs by another name — has simply focused attention on the inadequacies of the RRSP system on which it is based. At the same time, millions of Canadians have finished facing their annual RRSP deadline dilemma: save for retirement through a system they know is stacked against them, or sit on the sidelines for another year. This paper brings those themes together. It reviews the performance of the three components of Canada's retirement income system: Old Age Security; the Canada and Quebec Pension Plans; and the private pension and individual retirement saving system.

It finds two aspects of Canada's retirement income system — the Canada (or Quebec) Pension Plan combined with the Guaranteed Income Supple-

ment and Old Age Security — can be credited for a substantial reduction in poverty among seniors, especially senior women:

- The poverty rate for elderly couples dropped from 17.7% in 1976 to 2.4% in 2011;
- The poverty rate for single men over 65 dropped from 55.9% in 1976 to 12.2% in 2011;
- The poverty rate for single women over 65 dropped from 68.1% in 1976 to 16.1% in 2011.

The Canada and Quebec Pension Plans are among the largest and most successful public pension systems in the world. That is not cause for complacency, but it is an opportunity. The logic of the paper leads to the conclusion that the next phase of pension reform in Canada must build further on that solid foundation.

As for the third aspect of Canada's retirement income system — private workplace pensions — the study deems it a “conspicuous failure”. Pension coverage never reached half the workforce. While governments, as employers, largely fulfilled the obligations implied by the system's reliance on workplace employer-sponsored pensions, that was never true of private sector employers. Defined benefit pension plan coverage in the private sector peaked at 28.6% of the workforce in 1982, and today sits at just over 11%.

At the same time, the evidence is clear that the private individual retirement saving system — RRSPs — has not filled the gap left by the collapsing pension system in the private sector, and that the Federal Government's proposal for Pooled Registered Retirement Plans (PRPPs) adds absolutely nothing that hasn't been tried — and found not to work — before.

Touted as the retirement savings option for middle-income Canadians, RRSPs have not delivered. Instead, they have delivered an upside-down equity.

- Canadians who earn \$80,000 or more are considerably more likely to be in a position to contribute to an RRSP: they account for 30% of RRSP contributors and their contributions make up 57% of all RRSP contributions (2010 data);
- Only a quarter of Canadians who earn \$40,000–\$60,000 contributed to an RRSP in 2010;
- The lower their income, the less likely Canadians are to contribute to a RRSP; the higher their income, the more likely;

- Even those Canadians who are contributing to a RRSP are not using up all the contribution room they're allotted: since 2007, unused RRSP contribution room has increased by 38%.

For most Canadians, RRSPs are also a bad investment.

- The fact that most RRSP contributors invest their savings either in low-interest fixed income products like Guaranteed Investment Certificates or in high-fee mutual funds means that their net investment returns are unacceptably low.

And finally, the exaggerated claims in the end-of-contribution-season advertising blitz notwithstanding, RRSPs are not an acceptable substitute for a pension plan.

- The weakness and high cost of Canada's annuity market leaves most RRSP savers with no choice but to gamble that they won't run out of money before they die.

PRPPs cannot be the answer to Canada's retirement income dilemma because they replicate every one of the essential characteristics of RRSPs that led to their failure.

- Participation will not be mandatory;
- Contributions from employers will not be required;
- They will offer no relief from exorbitant investment management fees and unacceptably low returns; and
- They will not offer participants the option of converting their accumulated retirement savings into a lifetime pension.

RRSPs, and their clone the PRPPs, fail because they are a bad investment on their own terms and because, when stacked up against the realistic alternative of an expanded Canada/Quebec Pension Plan, they deliver an inferior product at more than twice the cost.

The study concludes that RRSPs and PRPPs are a boon to mutual fund managers — who “earn” among the world's highest mutual fund fees from investors — but fall short on the promise to Canadian retirement savers. For example, the study shows that an individual Canadian who contributes a constant percentage of his or her income over a working lifetime to these retirement income savings plans pays an average of 2.07% annually in in-

vestment management fees to mutual fund managers. Over a working lifetime, that soaks up about 36% of his or her retirement savings.

The study cites data showing that large defined benefit plans earn 1.5% per year higher returns than even large defined contribution plans, and that individual retirement savings plans in the United States perform relatively even worse, earning a further 1.8% per year less than 401(k) plans, the U.S. equivalent to Canadian defined contribution plans.

But the problems with RRSPs and the PRPP proposal don't stop there. Neither offers the retirement saver any option on retirement other than a very high-stakes bet on his or her own life expectancy. Pension plans are designed to share the risk of running out of retirement savings among all members; with an RRSP, there's no-one to share that risk with. And for an individual, the study finds, even reducing that risk — much less eliminating it — is prohibitively expensive. For example, the cost to reduce the odds that a male will outlive his retirement savings from one in two to one in four is an 18% increase in required retirement savings. For a female, the tab would be 13%.

Putting these two factors — returns and longevity risk — together, and the cost contrast between individual savings through RRSPs or PRPPs and an expanded Canada/Quebec Pension Plan is dramatic. For a male, to provide a given retirement income with a one-in-four probability of outliving retirement savings would require at least 2.5 times the savings required to fund the same benefit with a zero probability of outliving savings through a large pension plan. For a woman, the costs for both options are higher, but the RRSP option would cost 2.4 times as much to deliver an inferior benefit.

One message is clear from this analysis. The Canadian retirement income system may be working well for the mutual fund industry. For individual Canadians, not so much.

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## Introduction

When Canada's retirement income system was conceived in the mid-1960s, private workplace-based and individual retirement saving was intended to play an important role in Canadians' retirement income security.

Policymakers pictured retirement security as a three-legged stool: a publicly funded universal system for all seniors, regardless of their employment history; a mandatory, publicly run, employer-employee financed employment-based pension plan — the CPP/QPP; and private, workplace-based pensions supplemented by individual private savings for retirement.



The first leg has largely been successful. Combined with the Guaranteed Income Supplement and further add-ons in some provinces, Old Age Security can legitimately be credited for a substantial reduction in poverty among seniors — especially among senior women — in Canada over the past 40 years. The poverty rate for elderly couples dropped from 17.7% in 1976 to 2.4% in 2011. While poverty among single seniors is still high, it is dramatically lower than it was in 1976. In 1976, the poverty rate for single males over the age of 65 was 55.9%. In 2011, it was 12.2%. In the same time period, the poverty rate for single females over the age of 65 dropped from 68.1% to 16.1%.<sup>1</sup>

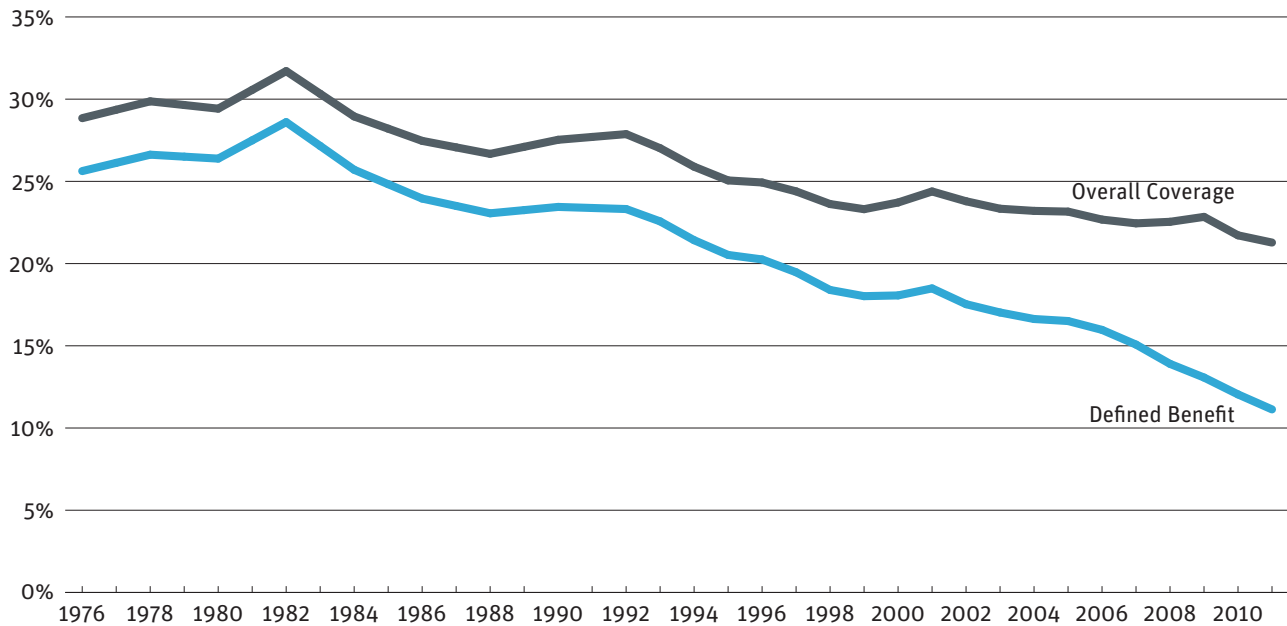
The Canada Pension Plan and the Quebec Pension Plan — limited as they were to 25% of an earnings base capped at the average wage — are a world-recognized success. Originally conceived as a pay-as-you-go plan based on an assumption of continuing rapid labour force growth, the federal government and the provinces concluded in the early-1990s that the original assumption no longer held: they solidified financing to the point where forecasts demonstrate financial viability throughout the passage of the baby boom generation through the system. The CPP and QPP funds, managed by the Canada Pension Plan Investment Board and the Caisse de depot et placement du Quebec, respectively, are among the largest and most successful pension funds in the world.

By contrast, the third, privately initiated leg — private, workplace pensions — has been a conspicuous failure. While governments generally met the expectations of the original design for their own employees, pension coverage in the private sector never approached half the private sector workforce and had dropped to 21.4% by 2011. Private sector coverage in defined benefit pension plans had slipped to 11% by 2011.<sup>2</sup>

As *Figure 1* demonstrates, weak pension coverage in the private sector is not new. Between 1976 and 2011 private sector pension coverage peaked in 1982 when it reached 31.7%. There has since been a steady decline in overall pension coverage as well as in defined benefit pension coverage. Defined benefit coverage dropped from its peak in 1982 of 28.6% to 11.1% in 2011.

The Registered Retirement Savings Plan (RRSP), which was intended as a substitute for employees who did not have a workplace pension plan, has fallen far short of the goals the system's designers originally set for it. Participation is limited. Unused contribution "room" is significant and growing. Significant amounts are withdrawn from RRSPs before retirement every year, defeating the intended purpose of the system. Participation, contri-

**FIGURE 1** Pension Coverage in the Private Sector, 1976–2011, Overall and Defined Benefit



Source CANSIM 282-0089

butions and the benefit from the tax deferral in RRSPs are all positively related to income.

What has been clear for decades is now generally accepted: the privately initiated part of Canada's retirement income system is a failure. The result is that the system as a whole is failing a whole generation of middle-income Canadians.

## Federal Response

The recognition of this failure has prompted an energetic public debate about the future of Canada's retirement income system — in particular, debate about the expansion of the Canada/Quebec Pension Plan to fill the gap left by the largely non-existent private system.

The response of the federal government to this growing concern was to propose the creation of so-called Pooled Retirement Pension Plans (PRPPs). These are essentially RRSPs with a built-in mutual fund. PRPPs may be appealing to the insurance industry, which sees the proposal as an opportunity to break into a money making field currently dominated by banks and

## RRSP Facts

In 2010, more than 1.5 million Canadians under the age of 50 withdrew a total of \$3.35 billion from RRSPs.

In 2010, 16% of tax filers had incomes over \$80,000. They accounted for 30% of RRSP contributors and 57% of RRSP contributions. 66% of tax filers over \$80,000 made RRSP contributions.

By contrast, tax filers with incomes between \$40,000 and \$60,000 made up 25% of tax filers and 27% of RRSP contributors. But they accounted for only 16% of contributions. 39% of tax filers with incomes between \$40,000 and \$60,000 contributed to RRSPs.

	<20,000	20-40,000	40-60,000	60-80,000	80,000 +
% of tax filers	10%	35%	25%	14%	16%
% of contributors	5%	20%	27%	19%	30%
% of contributions	2%	8%	16%	17%	57%
% contributing	19%	21%	39%	51%	66%

Source: Canada Revenue Agency, Taxation Statistics, 2010; CANSIM 111-0039

In 2011, more than 21 million Canadians had unused RRSP contribution room.

Unused contribution room exceeded \$683 billion.

Since 2007, unused RRSP contribution room has increased by 38%.

their mutual fund subsidiaries, but it is completely non-responsive to the problems with the current system. PRPPs will not be mandatory. They will not even require contributions from employers. They will not ensure an increase in Canadians' savings for retirement. And they duplicate the two big issues in the current RRSP system: (1) the unfavourable relationship between contributions and benefits in the current system driven by poor returns and high mutual fund fees; and (2) the lack of an affordable mechanism for converting retirement savings into a secure post-retirement income.

## A Cash Cow for the Mutual Fund Industry

In Canada, the first two months of every year are big ones for the mutual fund industry.

That is when Canadians with employment income have their last chance to make a contribution to an RRSP and have it count against income in the

previous tax year. It is also a time when a lot of Canadians pay more attention to their RRSPs than at other times of the year, making decisions about buying and selling and about changing the mix of assets they hold in their plans.

The stage is set by an unusual provision of the Income Tax Act that enables taxpayers to claim as a deduction in one tax year an expenditure that does not take place until early in the next tax year.

The gold rush mentality is reinforced by a torrent of advertising by the retail retirement income industry and by almost daily coverage of the industry in the media. Canadians are exhorted to avoid leaving a valuable deduction on the table<sup>3</sup> and to make “responsible” plans for their own retirement by contributing as much as they can to their RRSPs. Other than vague claims about making yourself a retirement income millionaire, or touting the dream of “freedom 55”, very little attention is paid to the actual purpose of the exercise – generating a retirement income – and what one can actually expect at the other end.

What comes out at the other end of the process matters, both for individual Canadians – because investment returns have a significant impact on the income one’s savings actually generate in retirement – as well as for Canadian society in general. Individually it matters because, at historical market rates, you should expect returns on your retirement savings to account for more of your retirement income than the original contributions themselves – as much as 70% to 75%.<sup>4</sup> Societally it matters, since the federal government is determined to rely on a new retirement savings vehicle that is indistinguishable from an RRSP, the PRPP, to stave off demands for real reform of Canada’s retirement income system.

A close look at Canada’s mutual fund industry, the most common RRSP investment vehicle, reveals that mutual funds are great investments – for mutual fund managers. They’re not so great for mutual fund investors.

Data in a recent report on mutual fund fees issued by the Canadian Securities Administrators’ organization paint a vivid picture.<sup>5</sup> As of the end of 2011, the Canadian mutual fund industry managed funds totaling \$763 billion. The major banks accounted for 43% of that total; independent fund managers 49%; life insurance companies 4.6%; and others – mostly smaller financial institutions, unions and associations – 3%.

The asset-weighted average fee charged for managing this money, including brokerage fees, came to a total of 2.07%, generating a fee income for the industry of \$16.9 billion.<sup>6</sup>

That’s a pretty hefty return to the industry, but what about the return to the investor? That requires a bit of analysis.

In principle, the fee the investor pays to a mutual fund does two things. First, it gives investors access to an investment market, like the bond market or the Canadian, U.S. or other equity markets. Although anyone can get access to equity markets these days at relatively low cost, mutual funds make it easy. And bond markets are not nearly as accessible to the individual investor as equity markets. That gives mutual funds a real advantage. Second, the fund manager must be promising to do better than the market, to “beat the market” by making investment choices that return more than the market.

It has not always been easy to distinguish between what you are paying for market access and what you are paying for better investment choices, but with the advent of exchange traded index funds (ETFs), it is now very straightforward to do so.

Canadian bond index ETFs typically charge management fees of 0.25% to 0.30%.<sup>7</sup> The equity index ETF market in particular has become much more competitive in recent years. Because they are based in accessible public markets, Canadian equity index ETFs carry much lower fees — as low as 0.2% for funds that buy the actual securities in an index and as low as 0.06% for funds that use derivatives to track the index.<sup>8</sup> Even specialized products like emerging markets ETFs are now charging fees as low as 0.2%.

Using ETF fees as a proxy for the market access component of mutual fund fees, a reasonable assumption for the costs of market access would be 0.275% for bond markets and 0.2% for public equity markets, or an average of approximately 0.23% (assume a 60/40 equity bond split). That implies that, on average across the market, mutual funds are charging approximately 1.84% annually for market-beating performance.

Here, market players like mutual fund managers face a difficult challenge. It is a mathematical certainty that, on average, market players cannot do any better than match the market, before fees. For every participant who performs better than the market, short term, another participant would have to underperform. It is possible that market sectors could outperform or underperform. For example, it is often suggested that retail investors, in the aggregate, underperform the market. On the other hand, the evidence suggests that large institutional investors tend to outperform the market, leaving mutual funds somewhere in between. Long-term, where reversion to the mean takes hold, one would expect a manager to perform no better than or worse than the market.

This means that the asset-weighted cost differential of 1.84% comes directly out of market returns.

While 1.84% does not immediately look like a substantial number, thanks to the power of compound arithmetic (and accounted for over a lifetime of retirement savings), it accumulates to represent a massive drain on potential retirement income.

For example, for an individual who contributes a constant percentage of his or her income over a working lifetime, from age 25 to age 65, investment management fees at the Canadian mutual fund average of 2.07% would soak up 36% of his or her retirement savings. Savings at retirement would be 33% lower than they would have been if the funds had been invested in ETFs with average fees of 0.23%.<sup>9</sup>

The consensus view of the investment industry — a view that has been embraced by the federal government — is that Canada faces a looming retirement income crunch because Canadians aren't saving enough for their retirement. As the examples above suggest, that is only part of the story. A significant and difficult to justify proportion of individual Canadians' retirement savings actually ends up in the bank accounts of investment managers, courtesy of a combination of inefficiency and high fees. Canadians' reluctance to save adequately for retirement may not be irrational at all; it may simply be their rational response to a system that isn't really working in their interest.<sup>10</sup>

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## Longevity Risk — The RRSP Disadvantage

The problems with the RRSP system do not end there. Even with the investment management leakage from the system taken into account, Canadian retirees relying on RRSP savings confront a very difficult issue as soon as their actual retirement begins: the risk that they will outlive their retirement savings.

Quantifying the value of that risk is a challenge at the individual level, because each individual makes his or her own choice about whether to convert RRSP or DC (defined contribution) pension plan lump sums into annuities or Registered Retirement Income Funds (RRIFs). If a RRIF is utilized, they need to decide on what rate of decumulation to choose.

It is relatively straightforward to figure out what value the industry places on that risk, by comparing the benefit that could be purchased with a given amount of money for a fixed time period equal to the average life expectancy at retirement and the annuity that could be purchased for that same sum at

the same time. The difference between those two amounts represents the value the industry places on longevity risk at retirement.

The single life registered annuity that could be purchased with \$100,000 in January 2014 from the average of the nine major annuity suppliers in Canada was \$582 for a male and \$527 for a female.<sup>11</sup>

Using the most recent Canadian data<sup>12</sup> for life expectancy at age 65 (83 for men, 87 for women), and assuming a 50/50 fixed-income and equity portfolio earning 3% for fixed income and 6% for equities, a \$100,000 investment at age 65 would support monthly incomes to life expectancy of \$685 and \$605, respectively. This implies a value for the risk of 13–15%.

One of the big challenges in retirement savings is picking a savings target. One possible savings target would be to save enough to provide a retirement income that would last as long as the average life expectancy. While this sounds reasonable, it is actually quite risky. If you save enough to provide for an average life expectancy, there's a 50/50 chance that you will run out of money before you die. You can reduce the likelihood that you will run out of money by saving more. But that is an expensive proposition. Using the most recent Statistics Canada life tables, we can determine, for each age, the probability that a man or woman aged 65 would live beyond that age. For example, for a male, the probability of living beyond age 83 is 50%; the probability of living beyond 89 is 25%; the probability of living beyond 94 is 10%.

For a male, using the above economic assumptions, savings would have to be 18% higher to reduce the probability of running out of savings from 50% to 25%. To reduce that probability to 10%, savings would have to be 29% higher. For a female, savings would have to be 12% higher than for a male in the first place — because women have a greater life expectancy than men. And for a woman, reducing the probability of running out of money to 25% would require a further savings boost of 13%. To reduce it to 10% would require a savings boost of 20%.

For individual Canadians, saving for retirement is an expensive and risky proposition. It's expensive because investment management costs in Canada eat up a significant proportion of investment earnings on those savings. It's risky because once an individual RRSP saver hits retirement, he or she has to make a high-stakes bet balancing living costs and longevity.

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## CPP/QPP Expansion vs. RRSP/PRPPs

There are two reasons why providing for retirement income through an expanded CPP/QPP or an alternative large, universal public defined benefit pension plan makes so much more sense than individual saving for retirement through RRSPs or PRPPs: return and risk.

On the return side, there are three key reasons why a large public defined-benefit-based fund will perform better than individual savings.

First, as outlined above, investment management costs are much lower for large defined benefit pension plans than they are for individual mutual fund savings through RRSPs or PRPPs.

Second, asset type by asset type, large funds simply generate better returns than smaller funds. They are able to hire better managers. And they are able to buy private assets like real estate, large infrastructure projects and private companies that generate higher returns over the long term.

Third, and most important, a large defined benefit plan can afford to adopt a higher risk and return investment strategy using a more aggressive mix of assets. Individual retirement savers, and those who manage money for individual savers, have to tailor the risk profile of their investments to their age, adopting progressively more conservative strategies as they get closer to retirement. They also have to invest even more conservatively once they have retired and have to live on the money. Managers of money for defined benefit pension plans have to pay attention to the overall demographic profile of the plan membership, but because risks are shared across a broad group of beneficiaries over a wide age range, they don't face nearly the same pressure to avoid short-term fluctuations in values. So they can afford to take more risk in the short term to generate better returns in the longer term.

A study by the pension performance measurement firm CEM recently compared 20-year returns earned by large defined benefit pension plans and large defined contribution pension plans in the United States. They found that the large defined benefit plans outperformed the large defined contribution plans over a 20-year period by 1.51% annually. Part of that difference was attributable to costs — the defined benefit plans' costs were less, by 0.06% annually. Part of the difference was attributable to having better asset managers. Defined benefit plan managers outperformed defined contribution plan managers by 0.17% annually — 0.11% after costs. But the big difference — 1.34% annually — was attributable to differences in asset mix. The defined benefit plans adopted higher-return, higher-risk asset mixes than DC plans.<sup>13</sup>



These significant differences do not reflect differences in size; the comparison was between large defined contribution plans and large defined benefit plans.

A study published by Boston College in the United States in 2006 found a 1.8% annual differential between returns on 401(k) plans (equivalent to Canadian defined contribution pension plans or group RRSPs) and returns on IRAs (Individual Retirement Accounts, equivalent to Canada's individual RRSPs).<sup>14</sup>

Two aspects of risk management favour defined benefit plans over defined contribution plans in general and individual retirement savings in particular: financial risk and longevity risk. Because risk can be spread across a larger pool of assets, any larger plan will be able to generate higher returns from a riskier asset mix than a smaller plan. And because a defined benefit plan can pool risk over time as well, it will be in a better position to move up the risk-return curve compared to a defined contribution plan. Looking at the comparison from a risk perspective, the cost of bearing risk will be lower in a large plan than in a small plan. It will also be lower in a defined benefit plan than in a defined contribution plan.

The ability to pool longevity risk is also a substantial advantage for a defined benefit plan relative to a defined contribution plan or RRSP. In a defined contribution plan or RRSP, the only option available to reduce the likelihood that a retiree will run out of money is to target a much higher rate of savings. In the calculation above, we found that reducing the probability of running out of money to 25% from 50/50 would require 18% in higher savings to plan for life to age 89 instead of the average of 83. A defined benefit plan, however, only requires assets sufficient to cover the average life expectancy, since the extra costs incurred by retirees who live beyond the average will be offset by reduced costs incurred by retirees whose life spans fall short of the average.<sup>15</sup> In other words, for an individual, additional savings are required to reduce the probability of running out of money to below 50/50. In a pension plan, the risk of running out of money is already accounted for. It costs the individual nothing to reduce that risk to zero.

If we put these two factors — returns and risk — together, the comparison between the retirement income available through a well-managed large pension plan and that available through mutual funds puts Canada's retirement income crunch into sharp relief.

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## Case Study

Let's use, as an example, a male with a pre-retirement income of \$60,000 and a target retirement income replacement ratio of 50%, with the retirement income indexed to the cost of living to preserve its purchasing power.

To compare a large pension plan to individual retirement savings, we need to make two sets of assumptions: what rate of return retirement savings will earn and what provision the individual saver will make with respect to his risk of running out of money in retirement.

For investment returns, we make the conservative assumption that a large defined benefit plan will earn an annual return 1.5% higher than that of the individual retirement saver during his working lifetime (4.5% nominal, 2.5% real for the individual; 6.0% nominal, 4% real for the pension plan) and 2.5% higher than the individual saver post-retirement (3.5% nominal, 1.5% real for the individual; 6% nominal, 4% real for the individual). The wider gap in returns post-retirement reflects the fact that, whereas a prudent individual would adopt a more conservative investment strategy once he or she begins drawing down retirement savings, the pension plan need not do so.

With respect to longevity risk management, we assume that the individual's savings target is one that reduces the probability of running out of money in retirement to 25%.

For the individual, the required accumulated savings target at retirement would be \$777,000. For the pension plan, the required accumulation would be \$465,000. The savings required by the pension plan would be \$312,000 lower than the cost of providing for an inferior benefit (a 25% probability of running out of money vs. a 0% probability). Individual savings would have to be 67% higher.

But that is just the difference at retirement. To determine the overall cost differential, we have to take into account the differences in investment returns prior to retirement.

Here, we assume a 1% annual rate of increase in pay, after inflation, for a working lifetime beginning at age 25 and continuing to age 65.

Funding for the pension plan would require a contribution of 7.3% of pay. To provide for the comparable benefit in retirement through individual savings would require a contribution of 17.1% of pay. To save enough to reduce the odds of running out of money to 10%, it would require a contribution of 19.9% of pay.

The cost with individual saving would be 2.5 times the cost of providing a better benefit through a large pension plan like an expanded CPP/QPP.

Reducing the probability of running out of money to 10% from 25% would push the cost differential up to 2.7 times.

The corresponding figures for a female would be 8.1% of pay for the large pension plan; 19.25% of pay for an RRSP or other individually based system. That's 2.4 times as much.

These differences cannot be attributable to unusual assumptions. In fact, all of the key assumptions used would tend to favour the individually based savings option in the comparison. The assumed 1.5% pre-retirement return differential is the observed differential between large defined benefit and defined contribution plans in the United States. Given that the observed differential between defined contribution plan returns and individual retirement accounts in the United States is a further 1.8%, this assumption is extremely conservative. Furthermore, in Canada, other things being equal, one would expect the differential to be even greater, given the much higher investment management fees paid by individuals in Canada.

The assumed security for the individual options (25% probability of running out of money) is substantially inferior to the security offered in the pension plan.

And finally, no allowance has been made for the impact of differences in the timing of returns on final investment outcomes. In the pension plan, these differences are evened out over time. In the individual savings alternative, they cannot be evened out over time, exposing the saver to significant risk that timing differences will result in returns falling below the assumed rates.

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## Conclusion

These dramatic differences in retirement income security are entirely structural. They are attributable to a retirement income system design that delivers lower overall returns, that rewards inefficiency, and that protects high costs at the expense of Canadian employees saving for their retirement.

With pension plan coverage now below 20% of private sector workers, the RRSP system is the only game in town for most private sector workers in Canada, and it is clearly not working.

The federal government has responded to this problem by, in gamblers' terms, doubling down on the inadequate and leaky RRSP system. Its proposed solution — Pooled Registered Pension Plans — is really a system of RRSPs by another name and managed by a different set of financial institutions. The fact that PRPPs are strongly supported by the life insurance

industry is hardly a surprise.<sup>16</sup> The PRPP idea as articulated by the federal government is designed to be an appealing vehicle for the insurance industry and would, if implemented, assist the industry in increasing its current very small share (4.6%) of the mutual fund market.

Even PRPP defenders base their arguments in favour on what the system could do, rather than on what it is actually likely to do. They argue that PRPPs could benefit from larger scale, ignoring the fact that the federal government has not even contemplated restricting entry into the PRPP field. They argue that PRPPs could address longevity risk by bundling an annuity conversion option into their design, ignoring the fact that the insurance industry could do that now, with RRSPs, and has chosen not to. And they argue that PRPPs would support employers who want to offer their employees a retirement savings benefit, ignoring the fact that so-called group RRSPs already offer that support. They have, generally, been introduced by employers only as a way-station on their way out of better defined benefit or registered defined contribution pension plans.

In short, the “pool” in PRPPs will be far too small to offer any real advantage to participants. The “registered” in PRPPs isn’t anything new. RRSPs are also registered. And the “pension plan” in PRPPs is a deception. A PRPP is not, in any way, shape or form, a pension plan.

Small wonder that Canadians have not embraced the PRPP idea. Small wonder that employers are not lining up clamoring for a PRPP to put their employees into. Small wonder that the movement to expand the CPP/QPP is gaining momentum.

# Notes

**1** Source: CANSIM 202-0804

**2** Membership in pension plans as a percentage of total employment in the private sector (employed in the private sector plus self-employment). Sources: CANSIM 280-0089 and CANSIM 280-0016.

**3** What the ads rarely say is that income tax on RRSP contributions is not avoided; it is simply deferred until the money is withdrawn. That has two important implications. First, the question of whether an RRSP contribution actually generates a tax saving depends on how the individual's tax rate at the time of contribution compares with the tax rate at the time of withdrawal. This is particularly important for low-income retirees who receive part of their income from the Guaranteed Income Supplement. The GIS formula builds in a very high tax back rate for income other than Old Age Security (50%) — higher than even the highest personal income tax bracket. The result is that a low-income senior with RRSP income will end up having paid much more tax than if he or she had never contributed to an RRSP. For low-income earners, the Tax Free Savings Account is a much better option. Second, because earnings on RRSP investments don't incur tax while they are accumulating, they get no benefit from special breaks like the dividend tax credit and the exemption for 50% of capital gains income.

**4** For example, assuming an investment period from age 25 to age 65; a starting salary of \$35,000; an annual salary increase of 3%; an average investment return of 6%; and an annual RSP contribution of 18% of salary — the Canada Revenue Agency maximum, 70% of the accumulated assets at the end of the investment period are attributable to investment returns. Even with investment returns as low as 5%, the share is still a solid 60%.

**5** CSA Discussion Paper and Request for Comment 81-407 Mutual Fund Fees, CSA/ACVM December 13, 2012. Cited here as CSA.

**6** CSA The fees break down as follows: 1.93% average MER 0.14% for securities trading costs

**7** Rob Carrick “Bond ETFs confuse you? Here's a simple guide” The Globe and Mail, Friday, Dec. 16 2011, Last updated Monday, Sep. 10 2012

**8** Shirley Won “ETF providers take low-fee fight to new extremes” The Globe and Mail, Thursday, Oct. 04 2012, 7:44 PM EDT, Last updated Thursday, Oct. 04 2012, 11:43 PM EDT

- 9** Other assumptions for this specific calculation were: initial salary, \$40,000; annual increase 3%.
- 10** “How Fees and Expenses Affect Your Investment Portfolio”, Investor Bulletin, U.S. Securities and Exchange Commission, Office of Investor Education and Advocacy, SEC Pub. No. 164 (2/14) February 2014. [http://www.sec.gov/investor/alerts/ib\\_fees\\_expenses.pdf](http://www.sec.gov/investor/alerts/ib_fees_expenses.pdf).
- 11** Source: GlobeInvestor, Single Life Male, No Guarantee (Registered), age 65.
- 12** Calculations related to longevity based on life tables produced by Statistics Canada. Life Tables, Canada Provinces and Territories, Statistics Canada Catalogue #84-537-XWE, September 2013.
- 13** Source: CEM Benchmarking Inc.
- 14** Alicia H. Munnell, Mauricio Soto, Jerilyn Libby and John Prinzivalli, “Investment Returns: Defined Benefit vs. 401(k) Plans”, Issue in Brief for the Center for Retirement Research at Boston College, September 2006 Number 52. The study also found a differential of 1.0% between average DB returns and average 401(k) returns. For the largest 20% of DB plans, the differential was 1.3%, a result which is remarkably close to the findings from the CEM study referred to above.
- 15** In fact, the age target would be the cost-weighted average life expectancy, slightly higher than the simple average life expectancy.
- 16** See policy statement on PRPPs issued by the Canadian Life and Health Insurance Association, “Pooled Registered Pension Plans: An Industry Perspective on an Important Initiative for Canadians”, Canadian Life and Health Insurance Association Inc., 30 May 2011.





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