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EXPANDING CANADA PENSION PLAN RETIREMENT BENEFITS: Assessing Big CPP Proposals

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ABSTRACT

Current and growing deficiencies in many workers' ability to maintain their accustomed living standards in retirement have evoked varied proposals for reform of Canada's retirement income system. This study focuses on proposals for expanding the retirement benefits of the Canada Pension Plan (CPP), and undertakes comparative analysis with proposals for reforms affecting workplace pensions and individual savings. It begins by reviewing key policy questions for the retirement income system and describing essential features of several proposals for CPP benefit expansion. It then uses these "Big CPP" proposals as a basis to assess the design issues for expanding CPP benefits and the implications for other components of the retirement income system. The paper assesses each of the major private and public savings vehicles based on multi-faceted criteria for a well-performing retirement income system; a mandatory public scheme with defined benefits ranks most highly on almost all criteria other than individual flexibility. Additional behavioural and institutional factors also support the use of mandatory public pensions: myopia in savings, individual investment behaviour, scale economies and costs of fund management, adverse selection and annuitization costs, the Samaritan's Dilemma, and labour market incentives.

The study provides an overview analysis of key design issues for the expansion of CPP retirement benefits. Major issues include the desirable scale of expansion for both the percentage of insurable earnings and the insurable earnings ceiling; mandatory versus voluntary coverage and options; the allocation of investment return risk; and the phasing-in of higher premiums and benefits. The study then assesses the implications of CPP expansion for other components of the retirement income system: Old Age Security and the Guaranteed Income Supplement, workplace pensions, tax provisions for savings, and individual savings. A Big CPP fits well within the overall retirement income system, with other components adapting to the increased CPP benefits over a long phase-in period. Alternative reform proposals relating to the regulation of workplace pensions and new voluntary supplemental or multi-employer pension schemes are potentially useful but no substitute for the expansion of CPP benefits. Mandating employers to offer adequate pensions could be an alternative to a Big CPP but without all the same advantages. In summary, diverse empirical and analytical considerations support the expansion of CPP retirement benefits as the centrepiece of pension reform to achieve benefit adequacy for all retirees.

INTRODUCTION*

Canada's retirement income system has attracted widespread attention recently. Diverse parties have advanced many proposals for incremental improvements and major reforms of both private and public components of the system. One proposal has been a major expansion of Canada Pension Plan (CPP) retirement benefits as a centrepiece for reforms. Advocates of what I call a "Big CPP" include the Canadian Labour Congress, the Canadian Association of Retired Persons (CARP), former Finance Canada tax policy analyst Keith Horner, and former CPP chief actuary Bernard Dussault.[1] A Big CPP has also been discussed in generally positive terms by the CPP Investment Board's head,[2] although he has not endorsed it. But proposals for an enlargement of CPP benefits are not new, having been carefully examined and favourably assessed as early as 1979 by the Canadian government's Task Force on Retirement Income Policy.[3] Moreover, while some would characterize it as a radical reform for Canada, a Big CPP would merely approach retirement income policies long established in many other countries.

In this paper, I undertake an extensive assessment of proposals for a Big CPP and the major issues that confront an expansion of CPP benefits.[4] I begin by posing basic policy questions for the retirement income system that suggest a role for a Big CPP. I then summarize key features of Big CPP proposals and some foreign counterparts. I next enumerate criteria for a desirable retirement income system and apply them to an assessment of major public and private vehicles for personal savings. The analysis then turns to factors of individual behaviour and the incentives of alternative savings vehicles that tilt the choice toward a mandatory public plan; these factors are also found to tilt the choice toward a defined benefit as opposed to a defined contribution scheme. I proceed to outline and discuss the major design choices of a Big CPP. I then examine the implications of a Big CPP for other major components of the retirement income system: Old Age Security and the Guaranteed Income Supplement (OAS/GIS), workplace pensions, tax provisions, and individual savings. I also briefly review other major proposals for reform of the retirement income system and assess them relative to a Big CPP. I conclude with discussion of a Big CPP's potential role within overall reform of the retirement income system.

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1 The leader of the New Democratic Party of Canada has stated publicly his party's intention to double CPP retirement benefits, and the Liberal Party leader has also pledged to increase CPP benefits (perhaps in a voluntary supplemental form), but neither has offered details of his proposal.

2 David Denison, "The Canadian Model: Moving from Sustainability to Sufficiency," notes for remarks at the 16th Annual International Conference of Social Security Actuaries and Statisticians, 16 September 2009 (Ottawa: CPP Investment Board).

3 The Task Force considered raising the benefit rate to between 40 and 45% of average lifetime insured earnings and raising the maximum covered earnings by 50%. Its detailed analysis and assessment of a Big CPP bear review by contemporary analysts; see Task Force on Retirement Income Policy, *The Retirement Income System in Canada: Problems and Alternative Policies for Reform*, vol. 1 (Hull, QB: Supply and Services Canada, 1980), pp. 242-259.

4 For my earlier "popular" statement of circumstances favouring movement toward some form of Big CPP, see Jonathan R. Kesselman, "Who will pay to end the looming pension crisis?" *Globe and Mail*, 19 December 2009. Note that the current paper does not discuss issues relating to the Quebec Pension Plan (QPP) or the desirability of QPP reforms paralleling any movement toward a Big CPP in the rest of Canada.

RETIREMENT INCOME SYSTEM POLICY QUESTIONS

Numerous basic policy questions arise with respect to reform of the retirement income system that are relevant to assessing proposals for a Big CPP. For example, what are the gaps and deficiencies in the current system? How are these gaps likely to evolve for future cohorts of retirees? Even for groups that appear to be saving adequately for retirement (through all channels combined), would alternative policies better serve them through higher investment returns, lower costs, and/or reduced risks? To what extent should provision for retirement income be made through public versus private means? To what extent should saving for retirement be voluntary versus mandatory? What degrees of flexibility for saving, investment, and dissaving should be afforded individuals within mandatory schemes? What issues of coverage and options arise particularly for lifetime low earners and lifetime high earners? To what extent can various risks be reduced by public versus private provision? And how should the irreducible risks in public pension schemes be distributed across various cohorts of workers and retirees?

Benefit Adequacy and Replacement Rates

A primary goal of a well-designed retirement income system is to ensure that all workers will have retirement income that replaces enough of their pre-retirement income to maintain their accustomed living standards. The standard measure of retirement income adequacy is the replacement rate, which has been implemented in various ways.[5] One approach is income in retirement relative to pre-retirement earnings (the gross replacement rate); another is the consumption level in retirement relative to pre-retirement consumption level (the net replacement rate, which accounts for many factors that differ in the two periods, such as taxes, expenses, savings, and family size). Also commonly used are intermediate replacement rate measures that neglect some of the factors considered in the net replacement rate. Clearly, persons wishing to maintain their living standards desire a 100% net replacement rate, but depending on the other factors omitted in the gross replacement rate measure, this might correspond to a gross replacement rate of 70% or even less. For example, a survey of its members by the Canadian Association of Retired Persons (CARP) asked, "What percentage of your pre-retirement income do you need to live comfortably after you retire?" This question elicited a response of "70%" by 53% and "more than 70%" by another 14%.[6] Note that these figures relate to *gross* replacement rates and imply substantially higher *net* replacement rates on account of taxes and other factors.

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[5] Methodological issues and applications related to replacement rates are discussed in Michael Baker and Kevin Milligan, "Government and Retirement Incomes in Canada," paper prepared for the Research Working Group on Retirement Income Adequacy (Ottawa: Department of Finance, 2009), available online at http://www.fin.gc.ca/activty/pubs/pension/ref-bib/baker-eng.asp; Bob Baldwin, "Research Study on the Canadian Retirement Income System," prepared for the Ontario Ministry of Finance (November 2009), pp. 37-42; and Michael Wolfson, "On the Replacement of Canada's Retirement Income System: Estimates Using Statistics Canada's LifePaths Microsimulation Model" (paper prepared for the Institute for Research on Public Policy pension reform conference, Toronto, 4-5 May 2010).

[6] Canadian Association of Retired Persons, "Time for a Universal Pension Plan" (Toronto: CARP, 2009), appendix A; available online at http://www1.carp.ca/PDF/Universal%20Pension%20Plan%20FINAL.pdf.

Several studies have examined how well the Canadian retirement income system has been fulfilling the income replacement goal, and how well it is likely to perform in future years.[7] The studies reach varying conclusions on the adequacy and/or deficiencies of the current system. However, they agree that the system performs adequately for the lowest earners (mainly through the OAS/GIS and with some CPP benefits) in maintaining pre-retirement living standards. While most studies find adequate income replacement for most middle-income earners *on average*, they also find that a significant proportion of middle- and upper-middle-income earners face deficiencies in sustaining pre-retirement living standards. And using varying assumptions on future savings rates, investment returns, and inflation, they tend to find that future cohorts of retirees will face increasing income deficiencies on account of secular trends.[8] One recent study of requisite savings rates finds that a gross replacement rate of 60% implies savings rates exceeding those of most workers at middle and higher incomes, and also that a replacement rate of 70% implies higher savings rates that sometimes exceed the 18% of earnings allowable for workplace defined contribution pension plans and Registered Retirement Savings Plans (RRSPs) with carryforwards.[9]

Most previous studies have used representative earners to test retirement income adequacy. Thus, their findings relate to the average person at a given earnings level, which obscures the issue of dispersion in experience among workers with differing saving, investing, and other conditions. Moreover, most studies ignore the experience of retirees beyond the post-retirement period into the later years of their lives, and they rely on numerous assumptions about individual behaviour and financial markets rather than on hard data. One exception to these limitations is a study that uses a longitudinal dataset to derive findings that are based on actual experience, including the heterogeneity of outcomes for each cohort and earnings group.[10] Similar to the findings in other studies, this study finds that replacement rates for the lowest earners are quite high, often approaching 100%. It further projects that mid-quintile earners in their mid-50s *on average* have adequate replacement rates (based on incomes) of 70 to 80% by their mid-70s. However, when examining the dispersion of outcomes, the study finds that one-quarter of that group of middle earners experience replacement rates of less than 60% of their income from 20 years earlier. For top-quintile earners, more than one-third have replacement rates of less than 60% over the same periods.

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7 These studies include, among others, Baker and Milligan, "Government and Retirement Incomes in Canada; Baldwin, "Research Study on the Canadian Retirement Income System"; Keith Horner, "Approaches to Strengthening Canada's Retirement Income System," *Canadian Tax Journal* 57 (3, 2009): 419-459; idem, "Retirement Saving by Canadian Households," paper prepared for the Research Working Group on Retirement Income Adequacy (Ottawa: Department of Finance, 2009), available online at http://www.fin.gc.ca/activty/pubs/pension/ref-bib/horner-eng.asp; Sébastian LaRochelle-Côté, John Myles, and Garnett Picot, "Income Security and Stability during Retirement in Canada," in *Retirement Policy Issues in Canada* edited by Michael G. Abbott et al. (Montreal; Kingston, ON: McGill-Queen's University Press, 2009); and Wolfson, "On the Replacement of Canada's Retirement Income System." See also David A. Dodge, Alexandre Laurin, and Colin Busby, "The Piggy Bank Index: Matching Canadians' Saving Rates to Their Retirement Dreams," *e-brief* 95 (Toronto: C.D. Howe Institute, 2010). For a review of some studies of replacement rates and savings adequacy, see Jack M. Mintz, "Summary Report on Retirement Income Adequacy Research," prepared for the Research Working Group on Retirement Income Adequacy of Federal-Provincial-Territorial Ministers of Finance (Ottawa: Department of Finance, 18 December 2009); available online at http://www.fin.gc.ca/activty/pubs/pension/pdf/riar-narr-BD-eng.pdf.

8 These trends include growing longevity, delayed labour force entry, lower personal savings rates, decreasing workplace pension plans in the private sector (and a shift of workplace plans from defined benefit to defined contribution), and lower real rates of return on capital with a shrinking labour force.

9 Dodge, Laurin, and Busby, "The Piggy Bank Index."

10 LaRochelle-Côté, Myles, and Picot, "Income Security and Stability during Retirement in Canada."

A recent study employing sophisticated analytical methods and longitudinal data provides further evidence of income inadequacy for growing numbers of retirees.[11] Preliminary findings from the study indicate sizeable and secularly growing deficiencies in retirement income for a broad range of middle earners ($35,000 to $80,000 per annum). The study adjusts for factors such as changing family size in the pre- and post-retirement periods and tests for sensitivity to factors such as the times used for those periods and the presence of home equity. It finds that roughly half of middle-earning Canadians in the 1945-1960 birth cohort will face a decline of at least one-quarter in their living standards at age 70 (net replacement rates of 75% or less). Moreover, the proportions of both men and women in this range with net replacement rates below 75% are projected to rise sharply (by 25 to 30 percentage points, rising to between 75 and 90%) when moving from the early baby boom to later birth cohorts. The study also simulates the impacts of two Big CPP variants and finds they would significantly improve but not eliminate the incidence of declining living standards in retirement; because of the phase-in period, the impacts are greatest for the youngest cohorts.[12]

Voluntary or Mandatory?

A key policy issue in structuring components of the overall retirement income system is the extent to which individual savings should be voluntary or mandatory. This choice affects both the relative reliance on private versus public pensions and the provisions and options provided within each. Hence, this choice is important in any move to enlarge the CPP as well as any options for individual flexibility within a Big CPP design. Often this issue is fixed at the outset by one's philosophy or ideology relating to individuals' freedom to choose as opposed to collective decisions. However, pro-choice and pro-market rhetoric needs to confront empirical reality about how individuals actually behave in their savings and investment decisions and about the real-world operation of particular markets. My later review of evidence on individual savings and investment behaviour as well as deficiencies of investment management and annuity markets bears on the resolution of this policy issue. Mandatory pension schemes are a form of "forced savings," which remove some discretion from the individual about major savings and investment decisions. Chief among these decisions are when and how much to save, how to invest those savings, and when and how much to withdraw savings for needs in retirement or earlier.

The importance of mandatory versus voluntary provisions might differ as between lifetime low earners and lifetime high earners. Workers whose earnings are well above average do not need the same protections — either for themselves or for their potential drain on the public treasury in old age — as those with average or lower earnings. They are typically more astute in their financial knowledge and better able to access a wider range of investment vehicles. Moreover, the high earner who fails to save at a high rate or reap a good investment return will still have retirement income from public and private sources at a level that prevents dependence on income-tested public transfers. Thus, a mandatory public pension plan such as the CPP can sensibly set an upper limit, the year's maximum pensionable earnings (YMPE), above which

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[11] See Wolfson, "On the Replacement of Canada's Retirement Income System." This study omits financial assets other than pensions, RRSPs, and housing. This is a major deficiency for assessing the highest-income households but is of lesser concern for assessing the situation of lower- and middle-income households (the focus of the current study), since non-tax-sheltered financial assets are heavily concentrated at the very top of the income distribution.

[12] The two Big CPP variants that Wolfson simulates are: 1) doubling the CPP benefit to 50% of average insured earnings, as proposed by the Canadian Labour Congress; and 2) a "wedge" scheme with a benefit rate of 40% between half the year's maximum pensionable earnings (YMPE; its value was $47,200 in 2010) and twice the YMPE (leaving the 25% rate up to half the YMPE).

no premiums are levied and no benefits are attributable.[13] That is, paternalistic constraints are less justified for the savings and investment decisions of high earners. At the same time, their incremental savings and investment returns face higher personal tax rates without deferral provisions. While the current YMPE is likely too low, as suggested by the cited studies, a Big CPP scheme should still retain some upper limit on earnings coverage.

For workers with low lifetime earnings, studies of current retirees (and projections for future retirees) suggest that replacement of their pre-retirement earnings is already very high. Moreover, forcing low earners to save more while working would subject their incremental pension benefits (whether through a Big CPP or mandatory workplace pensions) to the high tax-back rates of the GIS in retirement. Thus, their return on additional savings would be low or, in some instances, even negative.[14] The first $3,500 of annual earnings is currently exempt from CPP premiums (the year's basic exemption, or YBE), which offers limited relief for low earnings. Should low earners, and perhaps all earners, be offered a larger YBE to shield them from the burden of higher premiums imposed to finance a Big CPP scheme? Such an approach would be a very crude way to relieve low earners, since earners at all levels access the YBE. Low earners are also large beneficiaries of general-revenue-financed redistributive public pensions such as OAS/GIS. Thus, the overall system of public pensions is highly redistributive, so that requiring lifetime lower earners to finance more of their own retirement income might be acceptable. This choice is mainly value based, though it does implicate some incentive effects, such as early retirement decisions.

Risks and Their Allocation in the Retirement Income System

An individual faces various risks in lifetime saving and investing and in converting the cumulative funds into a reliable income stream during retirement, including the risk on investment for a given rate of return (or, conversely, the rate of return for a given level of risk); the risk of the state of financial markets upon retirement ("timing risk"); longevity risk during retirement; inflation risk during retirement; and sponsor/plan risk (consisting of both the security of the funds and the durability of the savings vehicle). In a workplace defined benefit scheme, most of these risks are shifted from the worker and beneficiary to the employer or plan sponsor.[15] In a workplace or public defined contribution scheme and for individual savings (whether tax sheltered or not), more of these risks fall on the worker and retiree. The public defined benefit scheme does best at insulating the individual from most of these risks with the exception of that relating to investment returns; unanticipated variations in long-run investment returns must be distributed in some manner across the various cohorts of workers and retirees. My later analysis evaluates the various types of savings vehicles with respect to each type of risk, and I subsequently discuss some of the options for the sharing of investment return risk in a mandatory public defined benefit plan.

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[13] This analysis assumes public pension schemes operate on the "fair" basis that the lifetime premiums each individual pays balance (with investment returns) his or her expected benefits in retirement. Hence, no redistributive motive arises for compelling participation in the scheme on earnings above a specified level.

[14] See Keith Horner, "Savings Incentives and OAS/GIS Costs," *Canadian Public Policy* 34 (4, 2008): 127.

[15] For an intriguing argument that some of the risks conventionally assumed to be borne by defined benefit plan sponsors (employers) might be transferred to plan members (employees) through various market processes, such as wage bargaining to compensate for variations in pension fund investment performance, see James E. Pesando, "Risky Assumptions: A Closer Look at the Bearing of Risk in Defined-Benefit Plans," *C.D. Howe Institute Commentary* 266 (Toronto: C.D. Howe Institute, 2008). These effects are of unknown magnitude and would take place only over the longer run. Limits on the reliability of private pension defined benefit "guarantees" are also described in David Laidler and William B.P. Robson, "Ill-Defined Benefits: The Uncertain Present and Brighter Future of Employee Pensions in Canada," *C.D. Howe Institute Commentary* 250 (Toronto: C.D. Howe Institute, 2007).

RECENT BIG CPP PROPOSALS

Four recent proposals for expanding CPP retirement benefits illustrate the range of Big CPP concepts and also foreshadow the policy design issues that I discuss in greater detail later. These proposals include variants advanced by the Canadian Labour Congress (the CLC plan); CARP (a Universal Pension Plan, or UPP); Keith Horner, a tax policy analyst formerly with Finance Canada (the Horner plan); and Bernard Dussault, chief actuary of the CPP from 1992 to 1998 (a full-scale expansion of the CPP, or FSE-CPP). The proposals display many commonalities but also embody noteworthy conceptual design differences. Table 1 summarizes key features of the proposals alongside those of the current CPP. Note that most formulators of these proposals do not regard their specific features or parameters as definitive but rather as open to refinement. All proposals use defined benefits, but some state explicitly that they would include risk sharing similar to existing CPP provisions in the event that realized investment returns fell short of projected returns.[16] All schemes share the characteristic that their increased retirement benefits would be phased in very slowly, so that each worker's prospective benefits would balance the value of his or her lifetime additional contributions. Hence, none of the schemes addresses income inadequacy for current retirees, nor do any of the plans intentionally redistribute across cohorts.[17]

TABLE 1: The Current CPP and Four Big CPP Proposals

Feature/Proposal	CPP	CLC	UPP	Horner	FSE-CPP
YBE	$3,500	$3,500	$3,500	$3,500	$0
YMPE	$47,200	$47,200	$124,700	$94,400	$124,700
Benefit replacement rate	25%	50%	60-70%	40%, $3,500-$47,200; 25%, $47,200-$$94,400	70%
Premium rate increase (level)*	(9.9%)	6.0%	Not specified	3.6%, $3,500-$47,200; 6.0%, $47,200-$94,400	9.9%, $0-$47,200; 15.4%, $47,200-$124,700
Tax provisions	Unchanged	Unchanged	Unchanged	Employee premiums tax deductible	Eliminate RPP & RRSP deductions
Opt-out for workplace pension	No	No	Possibly	No	No
Opt-out for individual	No	No	No	No	No
Fund management	CPP Investment Board	CPP Investment Board	CPP Investment or several regional funds	Not specified	Provincial funds
Implementation	In place	7 to 10 years	Not specified	Not specified	2 stages, each over 5 years

* All proposed schemes would maintain the 50-50 split of premiums between employer and employee; hence the rate increase for employer and employee would each be half of the tabulated figures.

[16] While CPP retirement benefits are commonly described as pure defined benefit, they contain an element of risk sharing in the event that the steady-state premium rate is forecast to exceed the current 9.9%. If provincial and federal finance ministers do not agree on a premium rate hike, CPP legislation prescribes default consequences, including cessation of benefit indexation. For details, see *Canada Pension Plan Act*, subsections 113.1 (11.05) to (11.11).

[17] Nevertheless, pre-funding does not necessarily ensure intergenerational fairness, since the precise methods used to phase in both the higher premiums and the higher benefits will affect outcomes.

The Canadian Labour Congress Plan. The CLC plan would retain both the CPP's existing YBE of $3,500, frozen in nominal terms, and the YMPE of $47,200, with indexing for future wage growth. Benefits would be computed at 50% (double the existing 25%) of the retiree's lifetime average insured earnings. The requisite total employer-employee premium rate would be 15.9%, an increase of 6 percentage points from the existing 9.9%.[18] The additional funds would be managed jointly with existing CPP funds by the CPP Investment Board, and tax provisions for retirement savings would be unchanged. The higher premium rates would be phased in over seven to ten years. Participation in the CLC plan would be mandatory and universal, like the current CPP, with no opt-out choices for workers, including those with adequate workplace pension plans.

A Universal Pension Plan. CARP's proposal for a UPP would be modeled on the CPP but not part of it or an extension of it.[19] Funds of the UPP would be managed by an independent central body similar to the CPP Investment Board or several regional or provincial bodies. The scheme would retain the existing YBE of $3,500, while the YMPE would be increased to the tax limit for pensionable earnings ($124,700 in 2010). The total (existing CPP and OAS plus UPP) replacement rate of an individual's pre-retirement earnings would be set in the range of 60 to 70%. Tax provisions for contributions to tax-deferred savings schemes would not be altered. Workers with an adequate workplace pension scheme might be allowed to opt out of UPP coverage; otherwise, participation would be mandatory for individuals and employers without qualifying workplace pension plans.

The Horner Plan. Keith Horner proposes a two-tiered benefit structure "to attempt to balance the benefits of higher saving in a cost-effective plan against the welfare costs of forced over-saving among some individuals or families."[20] As noted earlier, lower earners already enjoy high replacement rates in retirement, so forcing them to save more through much higher CPP contributions could lower their lifetime utility, since the GIS would claw back half of those savings in retirement. Horner's scheme would raise the CPP benefit rate by 15 percentage points (to 40%) for earnings between the existing YBE and the existing YMPE; it would provide a new 25% benefit rate for earnings between the existing YMPE and twice that figure (or $94,400 in 2010). Total premium rates would rise by 3.6 percentage points for earnings up to the current YMPE and by 6 percentage points between the current YMPE and the new doubled YMPE. Tax treatment for employee CPP premiums would be changed from the current credits to full deductions.

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[18] The CLC documentation states that the requisite premium rate increase would be 5.4 percentage points, but correspondence with Bernard Dussault (who undertook computations for the CLC) reveals that that figure was predicated on a YBE of zero and that the larger rate hike would be needed with a $3,500 YBE.

[19] This description of the UPP departs in some details from official documentation and relies on private correspondence from Susan Eng of CARP.

[20] Keith Horner, "Assessing Options for Pension Reform" (paper prepared for the Institute for Research on Public Policy pension reform conference, Toronto, 4-5 May 2010), p. 27. Another example of an expanded CPP benefit structure that seeks to avoid overburdening lower earners is the "wedge" scheme described in Wolfson, "On the Replacement of Canada's Retirement Income System."

A Full-Scale Expansion of the CPP. By far the most sweeping proposal for enlarging the CPP is Bernard Dussault's FSE-CPP (2010).[21] This plan, like the existing CPP, would impose mandatory, universal coverage without any opt-out choices either for workers and employers with adequate workplace pensions or for any other individuals, including the self-employed. The FSE-CPP would cover all earnings from the first dollar (that is, YBE would be reduced to zero) up to the income tax ceiling of $124,700, which would also become the YMPE for benefit computation. Tax deductions for future contributions to Registered Pension Plans (RPPs) and RRSPs would be eliminated, as they would be superseded by forced savings via the FSE-CPP premiums. The total CPP premium rate from the first dollar up to the current YMPE of $47,200 would double to 19.8%, and between the existing YMPE and the new higher YMPE the total premium rate would be 15.4%. Retirement benefits would be set to replace 70% of the individual's lifetime average insured earnings once the scheme was fully mature. The scheme's higher premiums would be initiated in two stages of five years each, and the funds above the current CPP amounts would be placed under the investment management of provincial bodies. In short, a fully mature FSE-CPP would displace almost all retirement savings through workplace pensions, RRSPs, and non-tax-sheltered vehicles; the sole exception would be very high income individuals, whose new savings would no longer receive any tax-deferral treatment.

Policies in Other Jurisdictions

Social insurance schemes for retirement income of the scale and mandatory nature of the FSE-CPP are not unusual in other jurisdictions. For example, the public contributory pension plans in many European countries equal or exceed the FSE-CPP benefit rates, and total premium rates in the range of 30 to 55% are common (though these premiums typically finance a range of benefits in addition to retirement).[22] The current US Social Security program covers annual earnings up to US$106,800, and the total premium rate is 12.4% (15.3% including the medicare portion, and this additional 2.9% applies to all earnings without upper limit). Unlike the CPP, US Social Security retirement benefits are not a fixed proportion of the individual's average lifetime insured earnings; rather, the program uses a complex formula with a lower proportionate benefit for those with higher lifetime earnings. Still, the maximum retirement benefit in the United States is more than double the maximum CPP retirement benefit (the compensating factor in the Canadian retirement income system being the provision of a universal flat-rate OAS benefit). US Social Security is financed on a pay-as-you-go basis rather than pre-funded. Given the wide recognition that the US system will require much higher premium rates simply to maintain its solvency, benefit enhancement in the United States is very unlikely to occur.

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[21] Bernard Dussault, "Global Solution to the Canadian Pension Crisis: A Full-Scale Expansion of the Canada Pension Plan (CPP)" (Ottawa, March 2010), mimeo. For an earlier version of this proposal, see Federal Superannuates National Association, "November 1, 2007 Submission to the Ontario Expert Commission on Pensions"; available online at http://www.pensionreview.on.ca/english/submissions/FSNA.pdf.

[22] The fact that European public pension schemes are often pay-as-you-go or inadequately funded despite their very high premium rates makes the Canadian situation look even more favourable.

CRITERIA FOR A RETIREMENT INCOME SYSTEM

To meet the needs of the full spectrum of workers, a retirement income system should satisfy a number of key criteria. Foremost is what might be termed "coverage adequacy," which means that the system ensures that everyone's income in retirement will be adequate. This criterion is a combination of universal coverage (by one or more components of the retirement income system) and total benefits that ensure each retiree an income (from all sources) adequate to maintain their pre-retirement living standards. However, the retirement income system could afford more flexibility for above-average earners to choose how much they wish to save, since they would be assured of a comfortable retirement by conventional standards.

The next set of criteria relate to investment returns and various risks workers face in saving for their retirement. The gross returns that can be achieved on lifetime savings are important in reaching any given retirement income target with the minimum cost to living standards during the working years. For savings vehicles over which the individual has discretion about asset mix, specific holdings, and timing, the investor's skills and temperament are essential in achieving good returns without undue risk. The criteria, therefore, should consider not only average investor skills and temperament but also below-average investor attributes. Costs associated with investing and converting lifetime savings into retirement income — including trading, commission, management, and advisory fees in both the pre- and post-retirement periods and converting lifetime savings into a steady income flow via a pension or annuity — are also important in achieving universal adequacy. At retirement the individual faces "timing risk," which arises when equity and bond markets are adverse to converting savings into an annuity. For persons retiring during a recession, equity markets are depressed, the negative impact on lifetime savings of which is further exacerbated by the prevailing low interest rates that boost the cost of purchasing annuities. In the post-retirement period, the individual who chooses not to annuitize (hinging on the savings vehicle) faces longevity risk, and all retirees face inflation risk over the balance of their life if their pension or annuity is not indexed or their ongoing investments cannot hedge effectively for inflation.

Two other criteria affect the security of various savings vehicles for retirement income in ways other than the risk inherent in the investments. One is the security of the funds themselves or the commitment to finance defined benefits. This risk arises only for workplace defined benefit plans that are underfunded and where the employer faces some chance of insolvency before the plan is restored to full funding. All private savings vehicles, including workplace defined contribution plans, are inherently free of this risk by virtue of legal and trust arrangements. All public plans are also free of this risk, even if they are not fully funded, by virtue of their ability to tap future contributors or taxpayers to cover any financial shortfalls that might arise. The other factor potentially affecting the security of a savings vehicle is the risk to durability of the plan's commitments to pay benefits through administrative, financial, or political pressures that alter the commitment itself. This issue arises only with respect to defined benefit plans (whether private or public), however, because they alone embody commitments to pay out specific benefits in retirement.

The final criteria relate to labour market, demography, and life cycle issues. Some savings vehicles might distort individuals' decisions about how much to work, when to retire, and moving to another employer; other things being equal, neutrality in all of these decisions is deemed most desirable. Similarly, some savings vehicles might embody gender differentials in their treatment of retirees, such as offering women lower monthly payments per dollar of savings to reflect their longer expected longevity than men; in this case, gender neutrality is deemed most equitable.[23] Savings vehicles can also differ with respect to their constraints on

individuals' flexibility in several respects: the amount and timing of savings, the amount and timing of drawing down savings to finance retirement, and investment decisions such as equities versus fixed income assets, the specific assets to hold, the portion of savings to invest in home ownership versus financial assets, and the timing of switches across asset classes. Given differences in individuals' needs and preferences, greater flexibility in all of these choices is deemed desirable, other things being equal.

AN EVALUATION OF SAVINGS VEHICLES

Using the criteria described in the previous section, I next evaluate several generic types of savings vehicles: workplace defined benefit plans (RPPs), workplace defined contribution plans (RPPs and Deferred Profit Sharing Plans), individual savings (RRSPs, Tax Free Savings Accounts, non-tax-sheltered assets, and home equity), voluntary public defined contribution plans, mandatory public defined contribution plans, voluntary public defined benefit plans, and mandatory public defined benefit plans (the existing CPP and a Big CPP). Table 2 summarizes the rating of each savings vehicle for each criterion using a scale of H ("high") for the best rating, M ("medium") for an intermediate rating or where the rating varies hinging on the plan's precise structure or options, and L ("low").[24] In the following summaries, I describe key findings for each savings vehicle but do not cover all of the findings shown in the table.[25]

TABLE 2: Savings Vehicles Evaluated by Performance Criteria

Performance Criterion	Workplace		Individual Savings (Defined Contribution)	Public			
				Defined Contribution		Defined Benefit	
	Defined Benefit	Defined Contribution		Voluntary	Mandatory	Voluntary	Mandatory
Coverage adequacy	M	L	L	L	M	L	H
Investment returns	H	M	L	M	H	H	H
Investor skills/ temperament	H	M	L	M	M	H	H
Investment costs	H	M	L	M	H	H	H
Inflation risk	M	L	L	M	M	H	H
Longevity risk	H	M	L	M	M	H	H
Timing risk	H	M	M	M	M	H	H
Security of funding	M	H	H	H	H	H	H
Plan durability	M	H	H	H	H	L	H
Work/retirement incentives	L	H	H	H	H	H	H
Portability/mobility	L	M	H	H	H	H	H
Gender neutrality	H	L	L	M	H	M	H
Individual flexibility	L	M	H	H	L	H	L
Program Examples	RPPs	RPPs, Deferred Profit Sharing	RRSPs, Tax Free Savings Accounts, non-sheltered, home equity	Canada Supplementary Pension Plan			CPP Big CPP

H = high rating (for items such as investment costs, skills, and various risks, H means low cost, skills, and risks).
M = medium rating or variable depending on plan structure and options.
L = low rating.

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[23] I choose the term "gender neutrality," rather than "gender equity," since alternative views might deem gender a valid and "equitable" basis for differentiating annuity payments. The essential point is that private annuity markets do differentiate by gender (unless restricted by legislation), whereas mandatory schemes such as public pension programs need not differentiate because they avoid adverse selection.

[24] Note that, in Table 2, I do not discuss or include group RRSPs, which share some attributes of workplace defined contribution plans and individual savings. Another policy approach not included here is mandatory workplace plans (either defined benefit or defined contribution), which I discuss later in the analysis.

[25] For a related table showing how the various types of risks are allocated between participants and employers for workplace defined benefit and workplace defined contribution pension plans, see James Pierlot, "A Pension in Every Pot: Better Pensions for More Canadians," *C.D. Howe Institute Commentary* 275 (Toronto: C.D. Howe Institute, 2008), p. 17.

Workplace Defined Benefit Plans. These rate at best M on the key criterion of coverage adequacy, because they cover only a small and declining proportion of the private-sector workforce.[26] They perform well on most of the criteria related to investment returns and costs (for large plans), longevity and timing risks, and gender neutrality. Their rating on inflation risks hinges on the extent of assured benefit indexation provided by a particular plan. These plans rate M for their funding security and plan durability, based on the potential risks arising from underfunding and financial solvency of the sponsor. Workplace defined benefit plans rate L, however, on several criteria: work/retirement incentives, portability/mobility, and individual flexibility.[27] For workers who have "maxed out" their pension benefit entitlement, a strong incentive to retire arises. For those plans with a benefit structure based on years of work times 2% times annual earnings in the final or highest-earning years, a strong incentive to stick with the same employer arises, which induces immobility within the labour force.[28]

Workplace Defined Contribution Plans. Overall, these plans rate worse than workplace defined benefit plans, mainly because their benefit structure cannot guarantee an adequate level of retirement income. Issues of investment returns and investor skills and temperament might arise, unlike in defined benefit schemes, to the extent that plan participants are provided options on the form of their plan investments. Large workplace defined contribution plans can achieve the low investment costs of large workplace defined benefit plans, though these costs could rise if members have many investment options. Risks of inflation, longevity, and timing arise in that members have to deal with them through their investment or annuitization choices at retirement. Timing risk can be somewhat mitigated — as with individual savings and public defined contribution plans — through options to convert to a Life Income Fund or Registered Retirement Income Fund that allows phased withdrawals or annuitization. Also like individual savings and public defined contribution plans, workplace defined contribution plans rate H for funding security, plan durability, and work/retirement incentives since all these vehicles operate as individual accounts. Finally, workplace defined contribution plans rate M with respect to the criteria of portability/mobility and individual flexibility and L with respect to gender neutrality.

Individual Savings Vehicles. These vehicles — whether tax-favoured RRSPs and Tax Free Savings Accounts or non-sheltered financial investments or housing — rate even more poorly than workplace defined contribution plans in several important respects. They score L on coverage adequacy both because they rely on individual savings choices and because they offer no ensured levels of retirement income. The individual nature of investment activities produces an L rating with respect to investment returns, investor skills and temperament, investment costs, and risks related to inflation and longevity. Because the individual saver must purchase annuities in private markets, which reflect gender longevity differentials in pricing, gender neutrality is sacrificed. Offsetting these disadvantages, the individual nature of savings and accounts implies high funding security and plan durability as well as an H rating for work/retirement incentives, portability/mobility, and individual flexibility in almost all respects (amounts and timing of savings and withdrawals as well as forms of investment).

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[26] For an assessment of the decline in workplace defined benefit plans and the increasing use of workplace defined contribution plans and group RRSPs as employers seek to reduce their risks and liabilities, see Bob Baldwin, "The Shift from DB to DC Coverage: A Reflection on the Issues," *Canadian Public Policy* 34 (supplement, 2008): 29-37.

[27] Less common forms of workplace defined benefit plans (without any maximum pension and where the net present value of the individual's benefit entitlement can be transferred to another RPP or a locked-in RRSP) do not suffer these deficiencies.

[28] This outcome assumes that a worker's annual earnings rise over his or her career, so that moving to another employer with a similar defined benefit structure would yield a lower total benefit in retirement (the highest-earning years would enter the formula with a smaller number of work years).

Voluntary and Mandatory Public Defined Contribution Plans. Voluntary and mandatory forms of these plans can be considered jointly since they bear many similarities. They both rate M in terms of investor skills and temperament (assuming that the voluntary version offers few if any investment options) and risks relating to inflation (assuming similar indexation of benefits), longevity, and timing. They also similarly rate H in terms of funding security, plan durability, work/retirement incentives, and portability/mobility. Investment costs might be higher for voluntary than for mandatory plans on account of the former's smaller funding pool and possible investment options. Gender neutrality can be ensured in the benefits of a mandatory plan but not in a voluntary plan if the members have the option to shift their funds outside the plan. Not surprisingly, on the coverage adequacy criterion, the mandatory variant rates higher (at M) than the voluntary variant (at L), but this advantage is offset by the mandatory variant's L rating for flexibility versus an H rating for the voluntary variant.

Voluntary and Mandatory Public Defined Benefit Plans. Voluntary and mandatory forms of these plans have extensive similarities, with the main exception being coverage adequacy (where voluntary rates L and mandatory rates H) and the flipside of individual flexibility (where voluntary rates H and mandatory rates L). Adverse selection issues confer an L rating for the durability of a voluntary scheme, since the benefit provisions will have differential attractions based on individual characteristics.[29] In contrast, a mandatory scheme garners an H for durability since adverse selection cannot arise. Also because of potential adverse selection, the voluntary variant rates M for gender neutrality, while the mandatory variant rates H. On all of the other criteria relating to investment returns and costs, handling of various risks, funding security, work/retirement incentives, and portability/mobility, both variants of public defined benefit plans score a rating of H. One might think that the higher premiums required to finance an enlarged mandatory plan would have payroll tax-like disincentives for labour supply and/or demand. However, to the extent that workers value their enlarged future pension benefits, and to the extent that enlarged public benefits allow some workplace pension plans to contract, any such labour market distortions would be muted. Moreover, this kind of reform also would reduce the need for future revenues to finance GIS and other income-tested benefits for seniors, thus reducing future income tax rates and improving incentives for future workers. With an H score for all criteria except individual flexibility, the mandatory public defined benefit scheme — a Big CPP — performs by far the best of all savings vehicles.

FACTORS FAVOURING A MANDATORY PUBLIC PLAN

My preceding evaluation of alternative savings vehicles based on key performance criteria supported a mandatory savings approach (public or private). In this section, I examine several factors related to individual behaviour, incentives, and institutions. I consider the following factors: savings behaviour and myopia; individual investment behaviour; scale economies and costs of fund management; adverse selection and annuitization costs; the Samaritan's Dilemma;

[29] For a similar assessment, see Keith Ambachtsheer, "Pension Reform: How Canada Can Lead the World," *Benefactors Lecture 2009* (Toronto: C.D. Howe Institute, 2009).

and labour market incentives.[30] Findings in all of these areas reinforce my previous ranking of savings vehicles and further tilt the choice toward the defined benefit version of a mandatory public plan.

Savings Behaviour and Myopia

The standard model of rational economic behaviour portrays individuals as making decisions about how to allocate their lifetime resources over time. They are assumed to have full information about and understanding of financial markets and public policies, including taxes and pensions. Moreover, they are assumed to have foresight about many aspects of their future, including earnings levels and health, marital, and dependency status. Based on all of this information, individuals are assumed to make rational choices about consumption and saving in each period, with the goal of maximizing their perceived lifetime utility. This process yields a smoothed consumption pattern, with saving in the working years and dissaving when retired. However, the assumed information, understanding, and foresight are far beyond the capabilities of virtually all individuals. Moreover, economic analysis finds that, even with major simplifying assumptions, a significant proportion of people simply do not follow this rational model of behaviour. They save substantially less than the sums needed to maximize lifetime utility and are characterized as suffering from self-control problems or "myopia."[31] As a result, such individuals enter old age with fewer savings than they need to maintain anything approaching their accustomed living standards, and they experience regret over their failure to save adequately. An effective remedy for this myopia is forced savings over the lifetime via mandatory pension schemes.

Individual Investment Behaviour

Most individuals other than the professionally advised and wealthy make their investment decisions based on hunches about the course of equity and bond markets; in short, they engage in market timing in an attempt to secure better returns. These efforts usually work against the investor by the tendency to "buy high" (when enthusiasm reigns in markets) and to "sell low" (when gloom predominates). In addition to the higher investment costs individual investors face through high management expense rates on mutual funds and relatively high transaction costs on small retail orders, market timing incurs further penalty for many.

Graphic evidence of the size of this penalty emerges from a study of mutual fund inflows and outflows, which simulate the investment behaviour of the "average" investor in each asset class. Figures from the United States for the 20-year period ending December 31, 2009, show

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[30] For a discussion of some of these issues and additional references to the research literature, see Baker and Milligan, "Government and Retirement Incomes in Canada." For accessible, non-technical reviews of the economic analytics of pensions, see Nicholas Barr and Peter Diamond, "The Economics of Pensions," *Oxford Review of Economic Policy* 22 (1, 2006): 15-39; and David McCarthy, "The Rationale for Occupational Pensions," *Oxford Review of Economic Policy* 22 (1, 2006): 57-65.

[31] See Peter Diamond, "A Framework for Social Security Analysis," *Journal of Public Economics* 8 (3, 1977): 275-298.

that investors in equity mutual funds achieved an average annual return net of fees of just 3.17%, more than 5 percentage points less than the S&P 500's 8.20% for that period. The corresponding figure for fixed income mutual fund investors was a 1.02% annual return versus 7.01% for the benchmark Barclays Bond Index, an equally astonishing shortfall of 6 percentage points per year.[32] Precisely comparable figures are not available for Canadian individual investors, though they do display a similar pattern of sub-market performance.[33] This penalty also affects participants in workplace defined contribution plans who have investment options[34] as well as RRSP investors and non-tax-sheltered investors; the gainers are large institutional investors (including private and public defined benefit pension funds) and wealthier investors. None of these findings denies that a few smaller investors can — through some combination of skill, temperament, and luck — significantly outperform the market.

Scale Economies and Costs of Fund Management

The scale and nature of funds used to invest retirement savings have a sharp impact on the costs of management—including both administration and investment. Larger scale can significantly reduce these costs by spreading fixed costs and improving governance and administrative practices. By far the highest costs are incurred by individual investors who use mutual funds, whether through RRSPs or non-sheltered investments. In a comparative analysis of management costs for mutual funds in 20 countries that controlled for fund characteristics, Canada ranked dead last, with annual costs at nearly 2% of assets.[35] By contrast, large managed defined contribution pension plans can achieve costs as low as 0.5% and large defined benefit plans still lower at 0.25 to 0.45% (costs are higher for smaller pension plans),[36] while the CPP Investment Board's investment management costs were just 0.17% of assets for fiscal year 2008/09.[37] These findings suggest that any kind of large-scale operation of pension funds other than individual accounts promotes economy and that a large public scheme can be at least as cost-effective as a large privately operated fund.[38]

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[32] DALBAR Inc., *2010 QAIB: Quantitative Analysis of Investor Behavior* (Boston, 2010), p. 7.

[33] Canadian findings from an earlier period show that the average household using a discount broker underperformed the broad securities market by 3.7 percentage points annually (after accounting for commissions, bid-ask spreads, and risky stock choices) and that the average household turned over about 75% of its common stock portfolio annually; see Vijay Jog, "Investment Performance and Costs of Pension and Other Retirement Savings Funds in Canada: Implications on Wealth Accumulation and Retirement," paper prepared for the Research Working Group on Retirement Income Adequacy (Ottawa: Department of Finance, 2009); available online at http://www.fin.gc.ca/activty/pubs/pension/ref-bib/jog-eng.asp.

[34] Even with limited but efficient investment options given to employees under US workplace defined contribution plans, workers make inefficient portfolio choices that can reduce their retirement wealth by one-fifth relative to what would be achieved by efficiently diversified portfolio allocations; see Ning Tang et al., "The Efficiency of Sponsor and Participant Choices in 401(k) Plans," Working Paper 15317 (Cambridge, MA: National Bureau of Economic Research, September 2009).

[35] Ajay Khorana, Henri Servaes, and Peter Tufano, "Mutual Fund Fees around the World," *Review of Financial Studies* 22 (3, 2009): 1279-1310. Individual investors in Canada can use index funds and exchange traded funds to secure considerably lower management expense rates, but actively managed mutual funds are still the most popular holding on account of marketing factors and how financial advisors are compensated through loading and trailer fees.

[36] Jog, "Investment Performance."

[37] Canada Pension Plan Investment Board, *2009 Annual Report* (Toronto, 2009).

[38] Clearly, measurement issues might arise in comparing investment management costs across various types of funds, so that the cited figures should be taken as rough indications of relative magnitudes.

Adverse Selection and Annuitization Costs

To convert savings at retirement into a stream of income at a constant (or inflation-indexed) level ensured to last a lifetime, an individual must purchase an annuity. Otherwise the individual risks outliving their savings or, alternatively, sacrificing income to reduce the peril of doing so. However, private markets for annuities offered by insurance companies are beset by a problem known as "adverse selection." If the insurer cannot distinguish individuals with above- and below-average life expectancies, the annuities need to be priced uniformly for all buyers.[39] Purchasers often have better knowledge of their life expectancy, so that those who expect to live longer than average tend to buy annuities; this process, in turn, pushes up the price of annuities, thus discouraging purchases by those with shorter expected lives. As a result, many individuals choose rationally not to purchase annuities but to bear the risk of outliving their savings or leaving an unintended estate. One study estimates that adverse selection accounts for half of the excess price of an annuity over its "fair" value, which is the present value of the payments it guarantees.[40] Making annuitization mandatory over a large group of retirees through a workplace defined benefit pension could mitigate the adverse selection penalty, since individuals would not be able freely to select into or out of annuities, while a large mandatory public pension plan would virtually eliminate the problem.[41] If the CPP faced the higher adverse selection and administrative costs of private insurers, the plan would need to charge premium rates of 11.5 to 13.0% as against its current 9.9%.[42]

The Samaritan's Dilemma

The GIS is Canada's way of targeting public pensions to retirees with the lowest incomes and thereby alleviating poverty. However, the GIS's 50% effective tax rate on the income of beneficiaries poses disincentive effects, including discouraging savings during any prospective beneficiary's working life. This phenomenon of a public program that seeks to help people but actually worsening their dependency through disincentives is known as the Samaritan's Dilemma. The GIS invokes the Samaritan's Dilemma for the lowest lifetime earners, who can have a replacement rate approaching or exceeding 100% and thus have no incentive to save while working. More notably, the GIS can also invoke savings disincentives for individuals whose lifetime earnings tracked the full average wage (as measured by the CPP's YMPE). For example, in the second quarter of 2010, the maximum GIS benefit was $652.51 per month, or $7,830 per year; applying its 50% reduction rate to other income (aside from OAS), the GIS has a "break-even income" of twice that amount, or $15,660 per year. Individuals who have

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[39] Thus, annuities with unisex pricing also yield adverse selection in private markets, because women have a longer life expectancy than do men. Unconstrained private insurers will charge women more than men for equivalent life annuities; mandatory coverage in a public pension plan could eliminate this gender bias.

[40] Olivia S. Mitchell et al., "New Evidence on the Money's Worth of Individual Annuities," *American Economic Review* 89 (5, 1999): 1299-1318.

[41] Adverse selection could still occur even with mandatory annuitization, however, if the individual has a choice over the timing of the annuitization. In the United Kingdom, which has long required the annuitization of pension accounts by age 75, adverse selection alone is estimated to cost 90 basis points, or nearly 1% per year, in yield. See Mamta Murthi, J. Michael Orszag, and Peter R. Orszag, "Annuity Margins in the UK" (Cambridge, UK: Cambridge University, Clare Hall, 2000), mimeo.

[42] Steven James et al., "The Fair Value of a Public Defined-Benefit Pension Plan: The Case of the Canada Pension Plan" (Toronto: Canada Pension Plan Investment Board, 23 February 2010).

earned the full average income throughout their lives[43] and retire at age 65 in 2010 will receive the maximum CPP benefit of $934.17 per month, or $11,210 per year. Thus, lifetime average and above-average earners who have not saved significant amounts either through the workplace or individually will also be affected by the Samaritan's Dilemma.[44] If the CPP benefit rate were increased from its current 25% of average insured earnings to even as little as 35%, the Samaritan's Dilemma would be eliminated for this group.[45] Raising the CPP benefit rate further, to 50% or more of average insured earnings, would eliminate both the savings disincentives and the Samaritan's Dilemma for workers earning below the average. At the same time, this change would improve efficient savings behaviour and reduce burdens on future taxpayers (thereby improving efficient work incentives).

Labour Market Incentives

For many reasons relating to risk minimization, workers' limited investment skills and temperament, costs of investment and annuitization, and the primary goal of ensuring adequate incomes in retirement, defined benefit arrangements are much preferable to defined contribution benefits. However, defined benefit structures common in workplace pension plans have notable deficiencies with respect to important labour market incentives that are absent from the provisions of a mandatory public defined benefit scheme such as the CPP.[46] First, workplace pensions might have vesting conditions that bias a worker's decision to stay or seek a better position (a more efficient match) with another employer; with the CPP all contributions from both the employer and employee vest immediately without any restrictions. Second, as described in the earlier section evaluating workplace defined benefit plans, the common structure of pensions based on highest-earning years or final years' earnings can inhibit workers' mobility; it can also deter phased retirement and thereby induce earlier retirement. While the standard economic argument is that this form of deferred compensation facilitates efficient incentives within the firm, this immobility also inhibits efficiency-augmenting moves of workers to other firms or types of work where they would be more productive.[47] The defined

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[43] They could have earned incomes below average, or even zero, during the seven years of lowest earnings that can be "dropped out" from lifetime average earnings for calculating CPP benefit entitlement.

[44] That follows if their CPP benefits of $11,210 plus small amounts of income from other sources fall below the GIS break-even income of $15,660.

[45] The calculation is as follows: 35/25 x $11,210 = $15,694 as the new maximum CPP benefit (once the new system is fully mature), which exceeds the GIS break-even income of $15,660; and I assume that the parameters of all programs are kept constant in relative terms while the CPP expansion matures.

[46] For a theoretical economic analysis of the labour market incentives of alternative defined benefit structures, with predictions relating to worker tenure and turnover, work effort, retirement, and employer investment in worker skills, see Edward P. Lazear, "Incentive Effects of Pensions," in *Pensions, Labor, and Individual Choice*, edited by David Wise (Chicago: University of Chicago Press, 1985). Doubt is cast on parts of Lazear's analysis, however, in a critique by Roger Gordon, "Comment," in idem. For a more recent applied analysis of the labour market incentives of defined benefit structures, see Alan L. Gustman, Thomas L. Steinmeier, and Nahid Tabatabai, *Pensions in the Health and Retirement Study* (Cambridge, MA: Harvard University Press, 2010). For a study that finds that RPP members retire earlier on average than non-members, see Yuri Ostrovsky and Grant Schellenberg, "Pension Coverage, Retirement Status, and Earnings Replacement Rates among a Cohort of Canadian Seniors," Analytical Studies Research Branch Research Paper 321, cat. 11F0019M-321 (Ottawa: Statistics Canada, 2009).

[47] For the classic statement of this phenomenon, see the economic argument for allowing mandatory retirement, based on the asserted role of deferred compensation by Edward P. Lazear, "Why Is There Mandatory Retirement?" *Journal of Political Economy* 87 (6, 1979): 1261-1282; I rebut that argument in Jonathan R. Kesselman, "Challenging the Economic Assumptions of Mandatory Retirement," in *Time's Up: Mandatory Retirement in Canada*, edited by C.T. (Terry) Gillin, David MacGregor, and Thomas R. Klassen (Toronto: James Lorimer and Canadian Association of University Teachers, 2005).

benefit structure of the CPP, however, creates no such worker immobility or retirement biases because all contributions to the plan and associated credits count equally toward future benefit entitlements. Third, ceilings on benefits under workplace defined benefit schemes (so-called "maxing out" on benefits) can induce inefficient early retirement decisions by workers who would get no higher monthly pension by working longer but would receive a pension for a shorter period prior to death. With the CPP's actuarial adjustment of benefits for early (down to age 60) and late (up to age 70) retirement decisions, no such inducements toward early retirement arise.

DESIGN ISSUES OF A BIG CPP

If reform of the retirement income system were to involve a major expansion of CPP retirement benefits, several key issues would arise in the design of such a Big CPP. First, how much expansion would be desirable, with respect to both the level of covered earnings and the percentage of average insured earnings paid in benefits? Second, to what extent should a Big CPP offer choices for opting out of the expanded benefits by workers with adequate workplace pension coverage or by any other individuals? Third, how should a Big CPP deal with issues of allocating risk among retirees and various cohorts of workers for varying investment returns and inflation? Fourth, how quickly should the higher premiums and the higher benefits of a Big CPP be phased in? My discussion of these design issues is not intended to be exhaustive or conclusive but rather to identify some of the major considerations.

How Much Expansion?

A key element in any Big CPP scheme would be to increase benefits as a percentage of an individual's lifetime average insured earnings. The choice of how much to raise CPP benefits would hinge on considerations covered earlier and summarized in Table 3. It would also hinge on views about paternalism versus allowing individuals to make their own choice and bear the consequences. For persons with relatively low average lifetime earnings, raising that percentage would decrease their reliance on GIS benefits, thus addressing the Samaritan's Dilemma. At the same time, a higher CPP benefit percentage would mean that lower earners would pay more for their total public pension benefits, thus reducing vertical redistribution of the overall fiscal system. A higher benefit percentage would also aggravate distortions of retirement age decisions for individuals who would receive the GIS. If the benefit percentage were pushed too high, this would constrain individuals who wished to undertake some of their lifetime savings in more accessible forms than increased payments under a Big CPP. Such discretionary savings would better serve individuals who wanted or needed funds earlier than provided by a defined benefit stream; they would also facilitate transfers to others through gifts or bequests. The welfare cost of choosing a benefit rate that is too high for some individuals would depend on how easily they could substitute by reducing other forms of savings. Conversely, the social cost of choosing too low a benefit percentage would be the continued existence of many individuals who live out their retirement years with inadequate income relative to what their lifetime resources could provide.

TABLE 3: Factors Affecting the Size of CPP Benefit Expansion

Limiting Factors	Enlarging Factors
Welfare costs of forced "over-saving" (especially on lifetime low earners)	Welfare and social costs of "under-saving"
Constraints on timing and amounts of savings	Extent of individual misinformation and savings myopia: low savings, begin savings too late in life
Constraints on forms of saving: home purchase, business equity, financial portfolio	Weaknesses of private saving vehicles (RRSPs and defined contribution plans): high cost, high risk, weak investor skills
Constraints on timing and amounts of dissaving: major purchases, emergency needs, bequests	High cost of annuitization in private markets: avoids adverse selection and gender biases
Displacement of existing savings vehicles: workplace pensions (RPPs), individual savings (RRSPs)	Low cost, high return, risk pooling of mandatory scheme
	Eliminates immobility and retirement biases of workplace defined benefit plans
	Avoid cost shifting to lifetime low savers, alleviate Samaritan's Dilemma
	Potential for fiscal savings, reduced taxes, improved efficiency via effects on GIS and OAS; offset part of increased GIS costs due to Tax Free Savings Accounts

The extent and structure of enlarged CPP benefits would also carry significant fiscal implications, both directly and operating through behavioural responses.[48] Higher CPP benefits are a form of forced saving that would reduce many retirees' dependence on GIS benefits. Since the GIS is financed out of general revenues, this would imply a lower tax burden on future taxpayers, which, given Canada's evolving demographics, would also improve intergenerational equity. Additional effects would arise through reduced private savings in RRSPs and RPPs induced by increased CPP premiums and benefits. The immediate impact of adopting a Big CPP scheme would be to increase premium collections much more than benefit disbursements. The net effect on current tax revenues likely would be negative, since CPP premium hikes would be only partially offset by reduced contributions to tax-deferred savings plans — particularly if employee CPP premiums were made tax deductible rather than creditable. Conversely, when the increased CPP benefits are disbursed in future years, aggregate income tax revenues would rise relative to the path they would have taken without an expansion of the CPP. Finally, the introduction of Tax Free Savings Accounts has been projected to increase future GIS dependence and costs very sharply.[49] Adopting a Big CPP scheme could serve to moderate the rise in GIS costs since higher CPP premiums would reduce current contributions to Tax Free Savings Accounts and higher future CPP benefits would bear the GIS clawback.

[48] Much of this discussion draws on Horner, "Assessing Options for Pension Reform," who also provides estimates of behavioural responses.

[49] Ibid.

Another key choice in expanding the CPP is whether and by how much to raise the YMPE. Big CPP proposals vary in their choices for this parameter from leaving the YMPE at its current $47,200 to doubling it to $94,400 to increasing it sharply to the income tax pensionable ceiling of $124,700. Some studies assessing the adequacy of Canada's total retirement income system identify middle- to above-middle lifetime earners as posing a significant gap in the adequacy of the system. As explained earlier, at the current level of YMPE, even an individual who retires with the maximum CPP benefit and limited other savings would become a GIS beneficiary, thus raising concerns about the Samaritan's Dilemma. Indeed, such a person who lives in a larger city would be barely above the poverty line. Raising both the YMPE and the percentage used for calculating CPP benefits would reduce the proportion of retirees dependent on the GIS (now about three out of eight). Again, the policy choice would be affected significantly by one's view of paternalism versus voluntarism. The current YMPE is probably too low; raising it by half would yield about $70,000, while some might see raising it to $124,700 as tilting too far in a paternalistic direction for individuals who can fend for themselves and are unlikely to impose a burden on the public treasury in old age.

The other parameter for determining CPP premiums and insurable earnings is the YBE. While much less important than the YMPE in determining benefit adequacy, the YBE would have an impact on lower earners that Big CPP proposals need to consider. The two opposing considerations are relief for lower earners (for whom a higher YBE would be relatively more valuable than for higher earners) versus the effect on requisite premium rates with a higher YBE. Note that, in the current formula for calculating CPP retirement benefits, the YBE does not accord any redistribution toward retirees who have had lower lifetime average earnings; earnings below the YBE are not considered in the benefit computation. Three of the cited four Big CPP proposals would leave the YBE unchanged at its nominally frozen $3,500 level; the FSE-CPP would even eliminate the YBE, exposing all earnings to premiums. Michael Wolfson's Big CPP "wedge" proposal,[50] however, would at least not increase premiums or benefits attributable to earnings below half the YMPE, thus sparing low earners any additional burden.[51] The choice of YBE might be affected by the issue of the interaction between CPP benefits and the GIS and how that is resolved.

Mandatory versus Voluntary and Options

Another key issue in the design of a major expansion of the CPP is the extent to which participation in the enlarged benefits and premiums should be mandatory or voluntary. The existing CPP is mandatory and universal in its coverage of the entire workforce — all adult employees and the self-employed — for annual earnings between the YBE and the YMPE. It provides no choice for individuals or employers to opt out regardless of their preferences or circumstances. An expanded CPP, in contrast, would raise issues of mandatory versus voluntary coverage, issues that would become more salient the larger the benefit expansion. The principal kinds of alternatives include: 1) automatic enrollment of all workers, with the ability to opt out on an individual or employer basis; 2) mandatory coverage of all workers who lack an adequate workplace pension, with the ability of others to opt in; and 3) mandatory coverage of all workers with no provision for opting out. The CLC, Horner, and FSE-CPP proposals for a Big CPP embrace the fully mandatory approach (3), while the UPP proposal suggests a combination of approaches (1) and (2).

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[50] Wolfson, "On the Replacement of Canada's Retirement Income System."

[51] Setting the YBE above zero would not be necessary to insulate part-time teenage workers from the burden of CPP premiums, since contributions apply only after an individual attains age 18.

Any decision on the extent of mandatory versus voluntary coverage in a Big CPP is likely to rely as much on personal ideology and pragmatic politics as on objective analysis. Yet the *prima facie* presumption for a Big CPP should be mandatory coverage in the expanded benefits with no opting-out choice. This assertion follows from my earlier treatment of issues relating to individual myopia and undersaving; deficient individual investing skills and temperaments; relative costs of investing and annuitization in employer, individual, and public schemes; and public external costs of individual behaviour embodied in the Samaritan's Dilemma. And to the extent that a Big CPP would displace workplace pensions — even relatively generous defined benefit plans — incentives for working and labour mobility would be improved, as discussed earlier. Arguments for allowing opting out must succeed (or fail) on the basis of evidence and judgments concerning the need for flexibility to address variations in individual needs and preferences. Exactly which needs or preferences would allowing opting out serve, how widespread are they, and what would be the tradeoff in terms of compromising the objective of universal benefit adequacy? Additionally, the policy decision on opting out should not give undue consideration to short-run effects of compulsory coverage, since the full phase-in of increased benefits could be as long as 47 years, while higher premium rates would be phased in over five or more years.

Risk Allocation Issues

Important issues would also arise in the design of a Big CPP scheme in terms of allocating risk among all concerned parties.[52] For a fully funded Big CPP, these parties would constitute all covered individuals at the various stages of their working (contributing) and retired (beneficiary) lives; general taxpayers would not be part of the equation. The main risks pertain to real investment returns in both the pre- and post-retirement periods and inflation.[53] For a large, mostly mandatory public plan, the risk of varying rates of inflation for indexing of benefits could be hedged via the scheme's contribution base, since wages tend to keep pace with (or slightly exceed) inflation rates over the long run. The essential goal of a Big CPP would be much like that of the best workplace pensions: to provide an adequate and assured benefit in retirement, as close as feasible to a defined benefit. However, a public pension scheme differs from a private or employer scheme in that the risk relating to long-run average returns on investment cannot be shifted to a "third" party such as the employer. Rather, in a public scheme, that risk must fall on the insured individuals themselves at various points in their lifecycles.[54] The policy design issue is precisely how to allocate non-diversifiable risk across individuals, life periods, and cohorts.

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[52] One study finds that "well-structured intergenerational risk sharing can be welfare-enhancing…[and]…the expected welfare gain of the current entry cohort is not at the cost of the older and future cohorts"; see Jiajia Cui, Frank de Jong, and Eduard Ponds, "Intergenerational Risk Sharing within Funded Pension Schemes" (Tilburg University, Department of Economics, 2009), abstract; available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=989127.

[53] Longevity risk for all plan participants in the aggregate would be relatively small and would relate to departures of average longevity for various cohorts from projected figures. These departures would emerge slowly over time and could be accommodated, if necessary, by periodic changes in the structure of premiums or benefits.

[54] Timing risk for individuals could be spread across all participants in the plan, since different individuals would be retiring at various points in ongoing business cycles.

A wide range of risk-sharing approaches could be undertaken, with differing effects on plan participants at varying life stages and in different cohorts.[55] One method would work on the premium side by making periodic small adjustments in premium rates to reflect changing realized average investment returns that departed from the scheme's initial projected rate of return. This approach would yield *ex post* redistributions across various cohorts of workers, but so long as the initial and periodically revised rate-of-return estimates were unbiased based on relevant experience, they would not be unfair in the *ex ante* sense. This approach would allow a Big CPP investment fund to pursue higher-return, riskier portfolios than a private pension plan could prudently pursue; over the very long term, this strategy could provide pensions at the lowest cost relative to risk.

Other methods would operate on the benefits side by spreading some of the risk to current and/or future beneficiaries, so that benefits would share some attributes of defined contribution and defined benefit plans. Diverse variants of this method would be feasible, including a defined benefit based on a below-expected rate of return (a guaranteed but lower benefit, with the chance of realizing a higher benefit); a nominal defined benefit with inflation indexing of the benefit contingent on investment performance; a specified allocation of investment return risk to various cohorts; and phasing annuitization of the individual's contributions over many pre-retirement years. The scheme could also offer each participant some choice over how much risk to assume with respect to the level of his or her retirement benefits via a small set of well-defined options, such as full or partial annuitization over specified pre-retirement periods. Any scheme that provided options, however, would also need to provide educational outreach and a simple default.

Phase-in of Higher Premiums and Benefits

All four of the Big CPP schemes discussed are structured as fully funded social insurance without intentional interpersonal or intercohort redistribution. That is, each plan participant would receive a stream of pension payments closely approximating the value of his or her stream of lifetime contributions;[56] these values would need to reflect both investment returns and mortality expectations. Therefore, in concept, the scheme could phase in its higher premiums and benefits as quickly or slowly as desired. However, raising the benefit rate to 50% or more of average insured earnings over a few years would require dramatically, even unfeasibly, sharp hikes in premium rates. That approach would also require the application of different premium rates for workers of different ages, thus complicating the program's operation.[57] The more common proposal is to phase in the increased benefit percentage over a much longer period — as long as the 47 years between the CPP's charging of premiums at age 18 and the "normal" age 65 for an unreduced benefit claim. The program could undertake a somewhat faster phase-in of the higher benefits, but this would complicate its operation if intercohort redistributions were to be eschewed.

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[55] For a description of other "hybrid [defined benefit-defined contribution] pension arrangements" for risk sharing, see Horner, "Approaches to Strengthening Canada's Retirement Income System," pp. 440-442; for further discussion of such hybrid provisions, see also Pierlot, "A Pension in Every Pot."

[56] Intergroup redistributions would arise with respect to gender, in that a Big CPP benefit structure would be gender neutral despite differing average longevity for men and women; they would also arise with respect to individual differences in health status or other factors that affect life expectancy.

[57] For a discussion of related issues, see Roderick Molenaar, Roderick Munsters, and Eduard Ponds, "Towards Age-Differentiation in Funded Collective Pensions" (All Pensions Group, Tilburg University, and Netspar, 2008).

The higher premium rates needed to finance any Big CPP scheme could and most likely should be phased in much more quickly than the higher benefits. Many years of higher premiums and the associated investment returns would be needed to finance significant increases in benefit levels. Big CPP proposals that address this matter envisage a five- to ten-year period of raising the premium rates; for comparison, the large CPP premium hikes that began in 1997 were phased in over six years. Any choice of phase-in period for premiums could be accommodated on the program's benefit side by a balanced gradual increase in the percentage used for retirees who claim at the "normal" benefit age of 65 and possibly further refinements to the discounts and premiums for "early" and "late" claims. Given rigidities in labour markets and wages, a multiple-year period for phasing in premium rate hikes would also help to minimize any adverse effects on labour demand and employment levels.[58]

IMPLICATIONS FOR OTHER PROGRAMS

A major expansion of CPP retirement benefits along the lines of the Big CPP proposals would carry important implications for other components of Canada's retirement income system. In this section, I outline some of these implications for the OAS/GIS program, workplace pensions, income tax provisions for savings, and individual savings choices. In the discussion, I assume the implementation of a Big CPP program that would replace at least 50% of the retiree's average lifetime insured earnings. Note that the Canadian Labour Congress proposal estimates that a 50% replacement rate could be fully financed by a 3 percentage point increase in the premium rate for both employers and employees, or a total 6 percentage point hike relative to the existing 9.9% combined employer-employee premium rate.[59]

The OAS/GIS

The OAS/GIS program is among the federal government's costliest, at $34 billion in 2008; it is projected to increase at more than a 5% annual rate over the next several years as the baby-boom generation retires. Of this total, OAS accounted for $26 billion in 2008, with the remaining $8 billion for the income-tested GIS.[60] The program is financed out of general revenues and thus will impose an increasing tax burden on current and future generations of workers, who will be declining in size relative to the growing population of retirees. Implementation of a Big CPP would offer the opportunity — though not the necessity — of gradually reducing and ultimately phasing out the universal OAS benefit. To protect lower-income retirees, the GIS benefit would be increased in parallel with the OAS reductions.

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[58] The employer portion of payroll tax hikes ultimately would fall mostly on workers, via lower compensation, but this adjustment process might take several years. For a review of the theory and empirical evidence on employment effects of various types of payroll taxes, see Jonathan R. Kesselman, *General Payroll Taxes: Economics, Politics, and Design* (Toronto: Canadian Tax Foundation, 1997), pp. 55-83.

[59] While the CLC proposal would double the replacement rate, it would entail less than a doubling of the premium rate because roughly 4 percentage points of the current rate is needed to cover the "legacy" costs of the program attributable to underfinancing in the earlier years.

[60] Human Resources and Skills Development Canada, *The CPP & OAS Stats Book 2009* (Ottawa: HRSDC, 2009), p. 74. The total for fiscal year 2010/11 is $36.7 billion, rising to a projected $45.2 billion in 2014/15, an annual growth rate of 5.3%; see Department of Finance, *Budget 2010: Leading the Way on Jobs and Growth* (Ottawa, 4 March 2010). OAS/GIS benefits totalled 2.4% of Canada's gross domestic product in 2010 and are projected to grow to 3.2% in 2030 with benefits indexed to prices; they would grow to 4.4% if they were instead indexed to wages (Horner, "Savings Incentives and OAS/GIS Costs," p. 123).

Prospective benefits of the suggested OAS phase-out are multiple. First, the federal government would save the large funds consumed by the OAS, savings that would allow for a significant reduction in the rates of distorting taxes used to finance general revenues such as personal and business income taxes and the goods and services tax, yielding efficiency and growth gains for the economy. Second, the savings and work disincentives from the OAS clawback at upper incomes would be eliminated. By substituting a benefit-linked levy (the higher premiums needed to finance a Big CPP) for distorting general taxes, individual incentives of many kinds (including tax compliance) would improve. This financial shift — from pay-as-you-go OAS to pre-funded CPP benefits — would also improve intergenerational equity by better matching burdens to benefits for each cohort. Relative to these advantages, the associated disadvantages of an OAS phase-out would be limited: the GIS would apply to an expanded range of lower incomes, thus invoking savings and work disincentives for more individuals, but this impact need not be large.[61]

Workplace Pensions

Over a very long phase-in period, the institution of a Big CPP would gradually displace part of or all workplace pensions for workers within the increased earnings coverage. For workplace pensions that offer benefits fully integrated with CPP benefits, this adjustment would require redrafting the terms of pension agreements. Various pension changes would have to take place over multiple bargaining cycles, unless plan members wished to have higher total retirement income, including the enlarged CPP benefits. At the extreme, after Big CPP benefits were mostly phased in, some workplace pensions might be abandoned entirely, while others might shift from a defined benefit to a defined contribution structure to reflect the increased defined benefit-type benefits from a Big CPP. If a Big CPP allowed opting out for workplace pensions meeting specified thresholds, then more generous workplace schemes would need no adjustments. In fact, such a provision might encourage the implementation of new workplace pension plans and the enrichment of existing plans to meet the specified opt-out threshold.

While the diminution of some workplace pensions might be seen as a negative of a Big CPP, the proposal would also carry significant benefits. All employers would face a more level playing field in their pension provisions and costs. For current workplace plans offering adequate benefits, the employer would face no added costs as workplace pension benefits and associated costs were scaled back to reflect the increased CPP benefits and premiums. Additional net burdens would befall only those employers that had not already offered adequate, or any, workplace pensions.[62] For employers that either discontinued their workplace

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[61] Folding the single-person OAS benefit into the GIS maximum benefit and income testing the combined OAS/GIS figure at the current GIS clawback rate of 50% would raise the break-even income level by less than one-third. This increase could be offset by tighter targeting of the enlarged GIS benefit, such as raising the clawback rate to 60%, which Horner ("Savings Incentives and OAS/GIS Costs") shows to have only limited savings disincentives and, on balance, to save revenues. For analysis of the interactive work disincentive effects of the GIS clawback and CPP benefit adjustments for retirement age, see Kevin Milligan, "Making It Pay to Work: Improving the Work Incentives in Canada's Public Pension System," *C.D. Howe Institute Commentary* 218 (Toronto: C.D. Howe Institute, 2005).

[62] In fact, the costs of workplace pensions, whether paid nominally by employer or employee, likely fall fully on workers through lower cash compensation; similarly, evidence about the incidence of payroll taxes used to finance social insurance benefits indicates that employers' and employees' premiums are mostly borne by lower worker cash compensation (Kesselman, *General Payroll Taxes*, pp. 55-85).

pensions or shifted from defined benefit to defined contribution, significant financial, accounting, managerial, and regulatory savings would arise. Moreover, to the extent that a Big CPP reduced reliance on workplace defined benefit schemes that embody disincentives for worker mobility or for working beyond a specified period, further gains for workers and for economic efficiency should arise. Of course, these potential gains hinge on a Big CPP's embodying accurate actuarial discounts and premiums on benefits for "early" and "late" retirement, respectively, as does the current CPP scheme.

Tax Provisions for Savings

Some Big CPP proposals envisage changes to or abolition of the existing tax deductions for employers and individuals for savings in RPPs and RRSPs. Revenue foregone by the federal government in 2009 from these deductions was estimated at $20 billion, with additional sums lost to provincial coffers.[63] Even without changes to tax deductions, a Big CPP should reduce savings significantly through both workplace pensions and individual RRSPs to reflect the increased future CPP retirement benefits. As a consequence, a substantial proportion of the $20 billion of annual foregone revenues from tax deductions for savings should be eliminated. These revenue gains would augment any fiscal savings that might be sought from phasing out OAS benefits. A Big CPP scheme might also reduce the allowable deductions for RPP/RRSP contributions to reflect the higher savings via increased CPP premiums.[64] If the CPP's total employer-employee premium rate were increased by 6 percentage points, for example, allowable tax deductions for RPP/RRSP savings might be reduced from the current 18% of earnings to 12% over the relevant earnings range.

A concomitant tax reform with a Big CPP would be to make all CPP employee premiums — both the current 4.95% rate and the increased rate — tax deductible rather than credited at the bottom-bracket personal tax rate. The Horner plan for an expanded CPP proposes this reform. This approach reflects the fact that the CPP is a system of income averaging over the employee's lifetime; since benefits are fully taxable, associated premiums should be fully deductible. Tax deductibility of employee CPP premiums would restore the treatment allowed prior to the 1987 tax reforms,[65] and it would also mirror the fully tax-deductible RPP/RRSP contributions that expanded CPP benefits would in part displace. Employer CPP premiums have always been deductible rather than creditable at an arbitrary rate.

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[63] Department of Finance, *Tax Expenditures and Evaluations 2009* (Ottawa, 2009), p. 17. The breakdown of this total was $11.3 billion for RPPs and $8.5 billion for RRSPs. These figures are reduced from preceding years on account of depressed returns in fixed income and equity markets in 2009.

[64] Of course, this proposal would be complicated if a Big CPP offered an opt-out for superior workplace pension plans; this would require restricting the lower allowable percentage to RRSPs.

[65] For an analysis, see A. Pierre Cloutier and Bernard Fortin, "Converting Exemptions and Deductions into Credits: An Economic Assessment," in *The Economic Impacts of Tax Reform*, edited by Jack Mintz and John Whalley (Toronto: Canadian Tax Foundation, 1989).

Individual Savings

For many individuals, a fully mature large version of a Big CPP would fulfill most of their needs for retirement income apart from any savings via home equity. Hence, a Big CPP could eliminate most of the individual burdens incurred in time, effort, worry, risk, planning, and out-of-pocket expenses associated with saving, tax and financial planning, and investing. Higher earners above the earnings ceiling for coverage by a Big CPP would continue to engage in planning and investing activities, but they would be a relative minority of the public and more likely to possess the requisite knowledge and ability to bear associated costs. For individuals who were already saving adequately for their retirement prior to the phasing in of a Big CPP, the scheme would simply displace part of their workplace or individual savings. In fact, a Big CPP could reduce a typical individual's total saving needs for retirement because of its higher gross returns, lower investment and administrative costs, and forced saving at earlier ages (a dollar saved at age 30 is worth much more than a dollar saved at age 50 because of the compounding returns). Many begin to save seriously for their retirement relatively late in their working lives.

Most individuals likely would continue to undertake some savings outside of a Big CPP — for example, many want to own their home, and home equity is a major component of personal savings. The higher premiums required by a Big CPP would partially constrain the pursuit of home ownership by families early in their working lives, but this reduced demand for housing would also curtail upward pressure on housing prices. A Big CPP also might induce a better balance between home equity and financial assets in total savings, including individuals' accrual of financial assets held by the CPP investment authority. Unlike financial assets, wealth in the form of housing is hard to access for financing retirement income needs (apart from the rent saved by virtue of ownership). Moreover, savings via a Big CPP would be more diversified, less risky, and less idiosyncratic than the financial investments of many individuals. Some savings outside of CPP entitlements also would continue because it offers greater flexibility in accessing funds for diverse and unexpected needs.

A BIG CPP VERSUS OTHER PENSION REFORMS

Proposals for a Big CPP, in several variants, join the field with many other proposals for reforming the Canadian retirement income system. To what extent are these various alternatives either substitutes for or complements to a Big CPP scheme? Here I briefly survey the range of other proposals for reforms to workplace pensions, public pensions, and tax provisions for individual saving. I additionally examine a reform that is not being seriously considered in the current Canadian discourse but one that is worth reviewing as an alternative to a Big CPP — namely, mandatory employer-sponsored pensions. Proposed workplace defined benefit pension reforms are found to be mostly complementary with a Big CPP, though none supplants the multifarious reasons that support a move toward a Big CPP. Voluntary supplemental defined contribution proposals — which could be implemented as either private or public schemes — vie with Big CPP proposals but perform relatively poorly in important respects. Mandatory workplace pensions are an alternative to a Big CPP but would have several comparative deficiencies. Proposed reforms to tax provisions for savings would be ineffective in inducing needed additional savings at the individual level except possibly for very high earners.

Workplace Defined Benefit Pension Reforms

Recent years have seen numerous proposals for reforming the tax and regulatory environment for workplace pensions, with a particular interest in supporting defined benefit schemes and arresting their decline.[66] These proposals include: 1) allowing plan sponsors to create larger surpluses in their plans with tax-deductible contributions; 2) clarifying the legal ownership of plan surpluses, now often contested by plan members, so that plan sponsors have more incentive to fully fund their plans; 3) legislative changes to provide workers/pensioners with greater credit priority when sponsors with underfunded plans enter bankruptcy or restructuring proceedings; 4) changes in solvency valuations to avoid volatile changes in funding requirements resulting from mark-to-market valuations; and 5) following Ontario's lead, instituting insurance for pension plans.[67] All these proposals offer the promise of improved security for workplace defined benefit plans and, in some cases, greater fairness and reduced burdens for their sponsors. However, all of them together would fail to restore workplace defined benefit schemes to their scale of a generation ago; more likely, the ongoing decline of such schemes will continue unabated. As Keith Ambachtsheer notes, "It is also not clear how a more conducive tax and regulatory environment by itself would generate the significant increases in coverage and savings rates that appear to be needed."[68] While some of the proposed changes offer promise, they would not in any way undermine the arguments that support the expansion of mandatory public defined benefit schemes such as a Big CPP. Because a Big CPP would offer superior security of benefits and better labour market incentives, it dominates reforms that would enhance defined benefit pension arrangements.

Voluntary Supplemental Defined Contribution Proposals

Several proposals for voluntary supplemental pension schemes of the defined contribution variety have emerged recently and include both private sector and publicly operated schemes.[69] Among these proposals is a multi-sponsor pension plan, which would be privately operated by multiple employers with a pooled pension saving arrangement; regulatory and tax provisions that currently hinder such schemes would need to be altered.[70] Another proposal is a Canada Supplementary Pension Plan.[71] Also in this category are variants of voluntary supplemental

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[66] Among many sources for these proposals, see Laidler and Robson, "Ill-Defined Benefits"; and Canadian Institute of Actuaries, *Retooling Canada's Ailing Pension System Now, For the Future: Canada's Actuaries Advocate Change* (Ottawa, 2009).

[67] Laidler and Robson ("Ill-Defined Benefits") critique Ontario's pension insurance scheme for inducing greater risk taking by pension plan sponsors; a voluntary insurance scheme would suffer from adverse selection.

[68] Ambachtsheer, "Pension Reform," p. 15.

[69] For a detailed assessment of and comparison between voluntary supplemental defined contribution proposals (in particular, the Canada Supplementary Pension Plan) and Big CPP variants, see Steering Committee of Provincial/Territorial Ministers on Pension Coverage and Retirement Income Adequacy, "Options for Increasing Pension Coverage among Private Sector Workers in Canada" (Victoria, BC: Ministry of Finance, January 2010). For detailed assessments of proposals for government-facilitated voluntary pensions, see Bob Baldwin, "Pension Reform Alternatives: An Assessment" (paper prepared for the Institute for Research on Public Policy pension reform conference, Toronto, 4-5 May 2010); and Norma L. Nielson, "Should Government Facilitate Voluntary Pension Plans?" *SPP Briefing Papers* 3:1 (University of Calgary, School of Public Policy, July 2010).

[70] See Pierlot, "A Pension in Every Pot."

[71] See Keith Ambachtsheer, "The Canada Supplementary Pension Plan (CSPP): Towards an Adequate, Affordable Pension for *All* Canadians," *C.D. Howe Institute Commentary* 265 (Toronto: C.D. Howe Institute, 2008).

defined contribution schemes being examined by Alberta, British Columbia, Ontario, and Nova Scotia;[72] these would be publicly operated plans based on provincial or regional coverage. Common to all of these proposals is that participation would be voluntary, with the choice at the level of the employer and/or individual employee. Some variants would include automatic enrollment of workers with inadequate workplace pensions, but even those would permit individuals to opt out. These schemes would reap the benefits of large scale, professional management, associated low costs, and lesser need for investment skill and finesse by the individual (hinging on the extent of investment options for each account holder). However, because participation in these schemes would be voluntary, the benefits would have to be of defined contribution form on account of likely adverse selection. With both voluntary participation and defined contribution benefits, these schemes would fall short of the benefit coverage and adequacy ensured by Big CPP proposals.[73]

Mandatory Workplace Pensions

One major policy alternative would be a mandate for all employers to provide pension coverage for their employees, as distinct from merely encouraging workplace plans or having automatic enrollment with opting-out provisions. Mandatory workplace pensions have been instituted in other countries, notably Australia, where experience suggests several deficiencies relative to the mandatory public pension approach. In Australia, the government requires that each employer contribute 9% (to increase to 12% by 2019) of each worker's earnings to a pension plan. These plans are commonly at the industry level and include accounts with financial institutions. They have been described, however, as typically sub-scale, entailing higher operating costs than larger or public schemes; they also suffer from deficient participant investing temperament and skills, which depress returns, and from the complexity of multiple accounts. Moreover, 87% of these Australian "superannuation" plans are in a defined contribution format, since most employers wish to avoid the financial risks entailed in backing defined benefit pensions.[74] More generally, the employer pension mandate policy would need to deal with possible exemptions for part-time workers and issues of minimum standards for an eligible pension plan along with allowable variations. In short, an employer mandate would rank inferior to a Big CPP on the basis of higher costs, higher risks for participants, greater complexity, and its bias toward defined contribution formats.[75]

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[72] For a brief description and sources, see Steering Committee of Provincial/Territorial Ministers, "Options for Increasing Pension Coverage."

[73] Ambachtsheer ("Pension Reform," pp. 11-12) describes "four nudges" or default options that he asserts would raise the rate of participation and savings adequacy, but these likely would fall well short of universal coverage and benefit adequacy on account of the steep premium hikes that participants would face. One study finds that automatic enrollment (with opting out) can increase participation in voluntary schemes; see Brigitte C. Madrian and Dennis F. Shea, "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior," *Quarterly Journal of Economics* 116 (4, 2001): 1149-1187.

[74] Leo de Bever, "View Point: Return from Oz," *Benefits Canada* (August 2008), p. 70.

[75] A similar critique of the employer mandate is provided by the Task Force on Income Retirement Policy (*The Retirement Income System in Canada*, vol. 1, pp. 212-220). It additionally notes the prerequisite of consensus among all the federal and provincial governments.

Reforms to Tax Provisions for Savings

Workplace pensions and individual savings rely on provisions that permit tax deferral for limited amounts of contributions to RPPs and RRSPs. However, some reform proposals critique the allowable tax deductions as inadequate. Three principal concerns have been raised. First, the 18% of earnings limit does not permit sufficient lifetime saving to achieve the 70% replacement rate for some individuals who use workplace defined contribution or RRSP vehicles, particularly at upper-middle earnings.[76] Second, the 18% of earnings limit for defined contribution and RRSP savings is far less than the equivalent percentage allowed for workplace defined benefit plans, on account of the use of a faulty "factor of nine" formula.[77] Third, the annual dollar ceilings for defined contribution RPP and RRSP savings ($22,450 and $22,000, respectively, in 2010) are unduly constraining for upper earners.[78] To address these concerns, one proposal suggests raising the deductible contribution limit to 34% of earned income and the annual ceiling to $42,000.[79] In contrast, the FSE-CPP proposal would fully eliminate the existing tax deductibility provisions.

The fallacy with raising the allowable percentage for contributions to tax-deferred plans is that very little additional saving would in fact result. The great majority of individuals currently contribute far less than their allowable limit, considering that they can carry forward unused contribution room from previous years. Total unused contribution room summed to a massive $540 billion in 2008.[80] Indeed, very few individuals except higher earners who are constrained by the dollar limit (rather than the percentage limit) actually save enough to be affected.[81] Hence, for the great majority of the working population, raising the allowable percentage would do nothing to induce greater savings. Raising the dollar ceiling on contributions would relieve current constraints on high earners, but that would raise very different policy questions. The primary arguments for raising the dollar limits hinge on the prospective efficiency, equity, and simplicity gains from shifting the personal tax system further toward a consumption base.[82] Of course, much of the additional contributions would simply consist of shifting assets from taxable form to tax-deferred form.

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[76] See Dodge, Laurin, and Busby, "The Piggy Bank Index"; and William B.P. Robson, "Cutting through Pension Complexity: Easy Steps Forward for the 2010 Federal Budget," *Backgrounder* 126 (Toronto: C.D. Howe Institute, 2010).

[77] See Pierlot, "A Pension in Every Pot"; and Robson, "Cutting through Pension Complexity."

[78] See Robson, "Cutting through Pension Complexity."

[79] Ibid.

[80] Statistics Canada, CANSIM database, table 111-0040.

[81] A substantial proportion of the unused contribution room is explained by lower earners who have insufficient resources to save or for whom tax-deferred saving is not advantageous and by middle earners who do not save enough to use their full contribution limits, including carry-forward room.

[82] See Jonathan R. Kesselman, "Tax Free Savings Accounts in a Consumption-Based Personal Tax," *Canadian Tax Journal* 57 (3, 2009): 533-562; available online at http://www.ctf.ca/PDF/2009ctj/09ctj3-kesselman.pdf.

CONCLUDING THOUGHTS ON A BIG CPP

My analysis and review of alternative proposals for reforming the retirement income system strongly support some form of Big CPP. Mandatory and universal coverage with higher benefit rates than the current CPP are essential to ensure benefit adequacy for all Canadians. The principal cost of pursuing a Big CPP would be the reduction in individual flexibility and choices concerning savings amounts, timing, and modes. The larger the increase in benefits under a Big CPP and the fewer the choices for opting out of the scheme, the greater would be the loss of this flexibility. However, while individual choice is attractive in principle, in practice a significant proportion of Canadian workers are making poor choices in both savings and investment decisions that do not serve their own longer-term best interests. The burgeoning discipline of "behavioural economics" is rapidly displacing the traditional theory of the individual as an omniscient, rational decision maker; lifetime savings and investing decisions are a perfect example of this shift. Moreover, phenomena such as adverse selection and the Samaritan's Dilemma suggest that mandatory coverage in a relatively rigid public pension scheme can actually yield more economically efficient and cost-effective outcomes than can unconstrained individuals in private markets.

While a sizeable and growing portion of retirees has inadequate income from all sources to sustain their accustomed living standards, the majority nevertheless enters retirement with adequate resources. Would expanding CPP benefits, therefore, not force many people to over-save? In fact, except for individuals with the lowest lifetime earnings, this outcome is unlikely to be common.[83] Over an extended period of transition to the enlarged CPP benefits, adjustments would arise through reduced workplace pensions (employers would have to pay increased CPP premiums), reduced individual tax-sheltered savings (increased employee CPP contributions also would enjoy tax-deferred status), and reduced non-tax-sheltered savings. As detailed earlier, the additional CPP benefits would be superior to their displaced counterparts in workplace pensions and individual savings. The superiority stems from greater security and diversification, lower investment costs, lower annuitization costs, improved work and mobility incentives, and better inflation indexation. Moreover, the enlarged savings via the CPP would not require individual expertise or resources to manage the associated investments. Thus, even for individuals who currently save enough, some additional forced saving via expansion of the CPP would be beneficial so long as their other savings could adapt and they did not lose too much valued flexibility regarding the timing and forms of saving and dissaving.

If one accepts the evidence supporting a move toward some form of Big CPP, important questions of policy design still remain. First, exactly how large should the benefit increases be in terms of the percentage of insured earnings and the insured earnings ceiling, while allowing some flexibility for varying individual circumstances? Second, exactly how, and how quickly, should the benefit increases be phased in? Third, should opting-out choices be permitted, particularly for individuals with adequate workplace pension coverage, or should a Big CPP be

[83] Concerns about forcing over-saving on lifetime low earners could be addressed by a CPP expansion along the lines of the "wedge" scheme of Wolfson ("On the Replacement of Canada's Retirement Income System"). Alternatively, saving by lower earners could be increased by having them cover a larger portion of their own retirement income support, since GIS claws back half of their incremental CPP benefits.

allowed gradually to displace those pensions?[84] Fourth, what pressures might arise to divert Big CPP funds in favour of particular groups, and what if any provisions would be needed to ensure the scheme's long-run equity and durability? Since 1997 CPP legislation has required that any additional benefits be fully funded by additional contributions. And the CPP's current governance structure has proven immune to capture by particular groups — given its removal from direct politics and joint stewardship by the federal and provincial governments. While putting more of the country's retirement income system in one basket might concern some observers, the institutional constraints and experience to date provide some comfort.

The CPP was established in 1966 with a deliberate low replacement rate based on the expectation that workplace pensions and personal savings would grow to supplement the OAS/GIS to provide an adequate overall replacement rate for all Canadians.[85] That outcome has not occurred, and trends in workplace pensions as well as individual savings do not bode well for many future retirees. Moreover, even workers who save adequately and invest well bear costs and risks that are significantly higher than those a Big CPP could offer. Many of the original CPP's deficiencies were recognized as early as 1979, when the Task Force on Retirement Income Policy examined a Big CPP proposal and concluded that "a powerful case can be made for expanding the C/QPP."[86] More than 30 years later, public officials are finally acknowledging the case for expansion. In June 2010, the federal and provincial finance ministers agreed to work toward expanding CPP benefits along with requisite premium increases. Federal finance minister Jim Flaherty stated, "We agreed to consider a modest, phased-in, and fully funded enhancement to defined benefits under the Canada Pension Plan."[87] While essential details and final agreement have not yet been reached, further deliberations should focus on the proper scale for benefit expansion. This kind of reform opportunity arises at best once in a generation, and full maturation of expanded CPP benefits would take two generations. Accordingly, the greatest policy risk is that the promised "modest enhancement" will be overly cautious and constrained. Will the forthcoming CPP reforms be sufficiently "big" to meet the needs of Canada's growing senior population?

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[84] My earlier discussion supports no allowance for opting outs, based on the superior properties offered by public indexed defined benefits as well as greater operational simplicity.

[85] Monica Townson, "What Can We Do about Pensions?" *Policy Brief* (Ottawa: Canadian Centre for Policy Alternatives, 2009), p. 4.

[86] Task Force on Income Retirement Policy, *The Retirement Income System in Canada*, vol. 1, p. 243. For an instructive review and analysis of the origins of the CPP, and business opposition to the proposal, see Kristina Babich and Daniel Béland, "Policy Change and the Politics of Ideas: The Emergence of the Canada/Quebec Pension Plans," *Canadian Review of Sociology* 46 (3, 2009): 253-271. For a description of the "Great Pension Debate" of the late 1970s and early 1980s and the defeat of proposals to expand the CPP (largely through opposition by the business community and Ontario's Progressive Conservative government), see Daniel Béland and John Myles, "Stasis Amidst Change: Canadian Pension Reform in an Age of Retrenchment," in *Ageing and Pension Reform Around the World: Evidence from Eleven Countries*, edited by Guiliano Bonoli and Toshimitsu Shinkawa (Cheltenham, UK: Edward Elgar, 2005), p. 257.

[87] "Flaherty, provinces reach CPP consensus," *CBC News*, 14 June 2010; available online at www.cbc.ca/canada/prince-edward-island/story/2010/06/14/pei-flaherty-pension-584.html. Note that Alberta finance minister Ted Morton expressed opposition to CPP expansion, citing its financial burden on younger workers (presumably thinking of his province). Yet a fairly structured reform would not penalize younger workers; in fact, over the longer run it would yield them the greatest benefits.

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