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Commentary

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Canada Pension Plan

Putting Some Gold in the Golden Years:

Fixing the Canada Pension Plan

by

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The Canada Pension Plan (CPP) is a pay-as-you-go pension system — a Ponzi scheme in which the benefits of each cohort of participants are paid from subsequent cohorts' contributions. Like similar plans around the world, the CPP is in trouble. When, as now, interest rates are higher than growth in wages, participation can only be made more attractive than saving outside the plan by continual benefit enrichment, financed by ever heavier future payroll taxes. The CPP is approaching the limits of such a strategy: it has an unfunded liability of $570 billion, a cash crunch looms, and payroll taxes three times today's levels are projected for younger workers before they retire.

Reforms to alleviate the CPP's most pressing problems are urgently needed. Higher near-term contribution rates and changes to CPP investment practices would reduce the future tax burden. And CPP benefit costs could be reined in by hiving off the disability program, raising the eligibility age for normal retirement benefits to 70 over time, and scaling back benefits accruing in the future to 60 percent of today's level.

A reformed CPP would, however, still be vulnerable to the political temptations that have produced today's crisis. Canadians should therefore contemplate winding it up in favor of an expanded private pension system, which could include mandatory Registered Retirement Savings Plan contributions. A suitable package of rate hikes and benefit restraint in 1998 would, if the CPP were terminated ten years later, allow all entitlements then owing to be financed through a payroll tax initially set around 4½ percent; additional retirement income would be provided from enhanced private plans.

Main Findings of the Commentary

Canada's government-run income replacement pension system, made up of the Canada and Quebec Pension Plans (CPP/QPP), is run on a pay-as-you-go basis. With only minimal prefunding in the CPP Account, the CPP is a Ponzi scheme in which the benefits of each cohort of participants are paid from subsequent cohorts' contributions. Pay-as-you-go plans have serious economic and political flaws:

- In a normal environment where returns on saving exceed growth in the payroll tax base, workers do better saving outside the plan unless benefits are continually enriched and each subsequent cohort is taxed more heavily — a strategy ultimately doomed since tax burdens cannot rise indefinitely.
- Each cohort is tempted to enrich itself at the expense of future cohorts. This flaw was evident in the huge pensions paid in return for meager contributions in the plan's early days, and has shown itself in regular plan enrichments since.

These flaws have pushed the CPP, like similar plans elsewhere, toward crisis:

- Over the next ten years, expenditures will so far outpace expected revenues as to exhaust the CPP Account, requiring accelerated contribution rate hikes.
- Higher contributions, however, will not rein in the plan's obligations, which now exceed the funds in the CPP Account by some $570 billion, and are larger and faster-growing than the federal government's debt.
- In 30 years' time, meeting those obligations will require contribution rates almost triple today's levels — a burden that future workers will not have voted for and will seek to avoid.

Meeting this challenge requires three near-term steps:

- Those responsible — the federal government, in particular — must forthrightly acknowledge that the CPP is in trouble.
- Contribution rates must rise to a sustainable level, sparing future workers even larger hikes, and the management of the CPP Account should be reformed to provide better investment returns.
- Future expenditures must be reduced by raising the retirement age to, say, age 70 over 20 years, or scaling back benefits to, say, 60 percent of current levels, or both, and hiving off the disability portion of the CPP as a separate program.

These changes would alleviate the CPP's economic flaws. Addressing the political flaws ultimately responsible for the government-run plan's crisis, however, would require winding it up, and replacing it with an expanded system of private saving.

If a 1998 package based on the above near-term reforms were followed by termination of the CPP in 2008, all then-accrued obligations could be met through a CPP-style payroll tax initially set around 4½ percent — a burden that would leave room for an expanded private system that could include mandatory minimum Registered Retirement Savings Plan contributions.

The economic profile of the 25 years following the Second World War and the Korean War was remarkable in several respects. Rapid labor force growth and impressive productivity gains yielded unprecedented rates of economic growth — 5 percent annually, on average, from 1954 to 1979. Equally remarkable, especially against this backdrop of burgeoning growth, was the low level of real interest rates — some 2 percent on average over the same period. This pattern, though more pronounced in Canada, was evident throughout the world's more developed countries.

The greater light shed by economic historians on growth rates and interest rates in past centuries and experience accumulated since 1979 have brought a sharp appreciation of the distinctive nature of the previous quarter-century (Figure 1).[1] A situation where annual growth in population and productivity and, therefore, in the potential tax base consistently outpaces a lender's annual return (or a borrower's cost of servicing debt) by three percentage points over a long period now looks distinctly abnormal. Since 1980, this margin has been reversed, with interest rates *exceeding* growth rates by nearly three percentage points.[2] Again, while more pronounced in Canada than elsewhere, the return of a configuration similar to longer-term experience has occurred throughout the developed world.

The Policy Legacy of the Postwar World

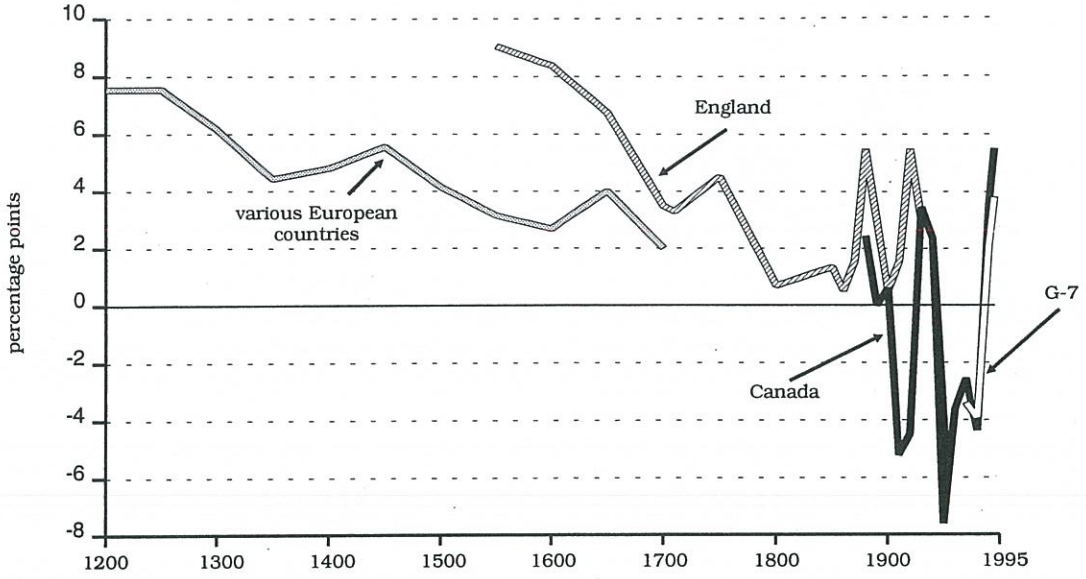
Even as it receded into the past, however, the quarter-century before 1979 left a major fiscal legacy. In Canada, as elsewhere, it appeared to allow sizable government commitments to social policy expenditures which, predicated on continued rapid growth of the tax base, did not contemplate regular review if revenues were not up to the task. Even if higher tax rates did prove necessary, the associated costs for the economy generally appeared small in an environment where rapid growth, seemingly driven by exogenous technological progress, was the rule.[3] And if commitments exceeded associated revenues, resulting in either a build-up of funded debt or an implicit (unfunded) liability, the burden on future taxpayers generally appeared easily manageable when the tax base was growing faster than debt would compound.

The adoption of these commitments by all the developed democracies, with the higher taxes and growing public debts that resulted, probably helped bring to a close the extraordinary period of growth rates higher than interest rates.[4] Certainly, one of the crucial underpinnings of that period — an assumption that government debt was virtually risk free — has been undermined by the experience of the 1980s and early 1990s. In any event, the return to more normal circumstances prompted, albeit with a lag, a re-evaluation of the pre-1979 approach. The story of fiscal policy in the 1980s and 1990s, in Canada and elsewhere, is largely one of gradual adaptation to a world in which rapid growth does not appear automatic, in which the potential damage of high taxes has become a salient issue, and in which interest rates higher than growth rates favor savers and punish borrowers.[5]

The Next Big Challenge: The CPP and QPP

In one area, however — the Canada and Quebec Pension Plans (CPP and QPP) — the redesign has yet to begin. A key underpinning of the income replacement portion of Canada's system of elderly benefits was the notion that preventing a dramatic fall in income after retirement was more appropriately attempted by tapping into the earnings of future workers than by requiring each generation to save for its own "golden years." As a result, rather than being prefunded so that future payments are covered by assets within the plans, the CPP and QPP maintain minimal funds — equal, in the case of the CPP Account, only to two years' worth of payouts. Instead of prefunding, the plans have made promises to each cohort of recipients which can only be honored by taxing successive cohorts of contributors increasingly heavily.

Figure 1: ***Interest Rates minus Nominal Economic Growth Rates in Historical Perspective, 1200–1995***



Notes: Nominal growth rates are not adjusted for inflation. The data are 50-year averages ending on the date indicated before 1850, and 10-year averages thereafter. "Various European countries" uses minimum interest rates from Italy, the Spanish Netherlands, and the Dutch Republic.

Sources: See note 1.

The gap between the present-value cost of these promises — the total liability of the plans — and the small amount of funds held in the CPP and QPP Accounts is large and getting larger. The unfunded liability of the CPP alone stood around $570 billion at the end of 1995. The annual increase in the unfunded liability of the two plans together is larger than the federal deficit, a much more high-profile indicator of future tax burden (see Figure 2a), and

Figure 2: ***The Unfunded Liability of the Canada and Quebec Pension Plans, 1980–96***

a: Growth in unfunded liability compared with the federal deficit

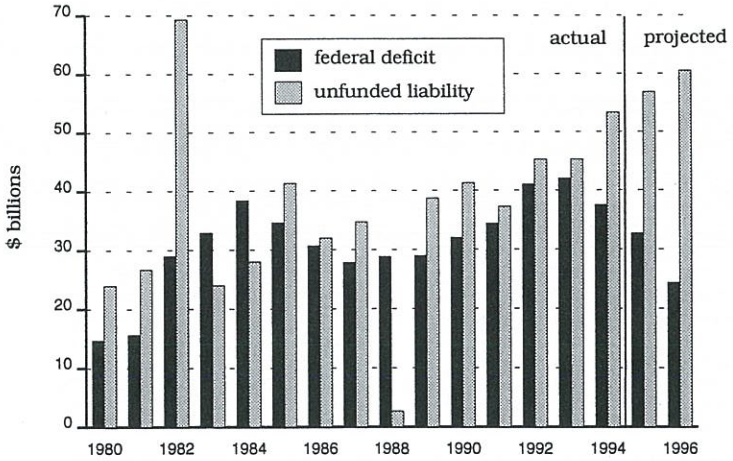
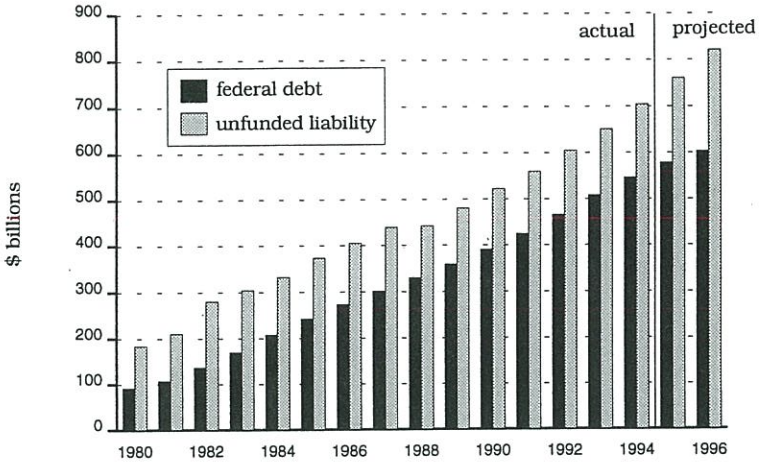
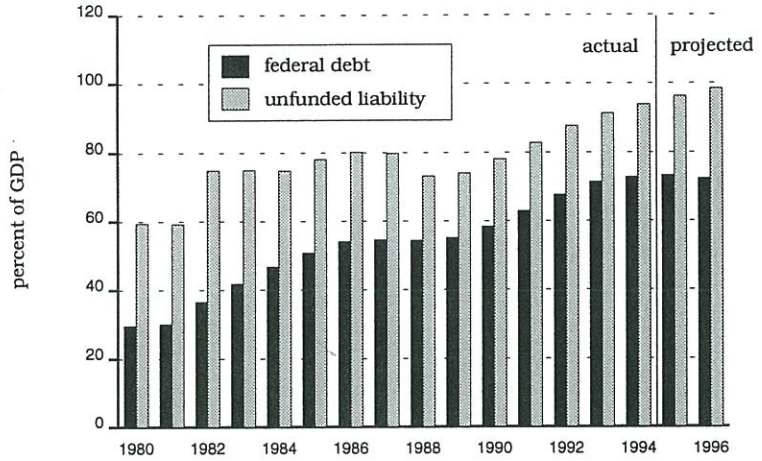


Figure 2 - continued

b: Growth in unfunded liability compared with federal net debt



c: Growth in unfunded liability compared with federal net debt as a percentage of GDP



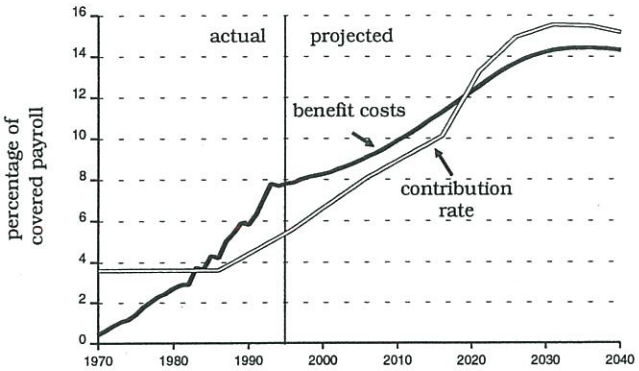
Note: The CPP/QPP unfunded liability represents the difference between the investment fund that would be needed, after allowing for future contributions at the "full-cost" rate (the rate at which participants entering the plan would cover the cost of their own benefits) to meet all currently accrued benefits of plan participants, and the funds actually held in the plan accounts. Such a calculation is very sensitive to assumptions about future interest rates and earnings growth. The unusually large increase in the unfunded liability in 1982 and the unusually small increase in 1988 were the respective results of a lower assumed ultimate interest rate (which raises the size of the notional required fund) and lower assumed earnings growth (which reduces it).

Sources: Paul Martin, *The Budget Plan* (Ottawa: Department of Finance, 1995); data from the Chief Actuary, and author's calculations. No actuarial valuations comparable to those for the CPP have been carried out for the QPP; based on its similar contribution rates, benefit structure, and funding ratio, its unfunded liability has been assumed to be equal to one-third of its CPP counterpart.

the total is considerably larger than the federal government's net debt (Figures 2b and 2c).[6]

To meet these obligations, the future burden of CPP contributions is set to rise steeply. Moreover, because contribution rates have been and are being held, not only below the "full-cost" rate (currently a little over 10½ percent) that would require new participants in the plan to cover the costs of their own benefits,[7] but below the "pay-as-you-go" rate (cur-

Figure 3: ***CPP/QPP Benefit Costs (Pay-As-You-Go Rate) and Contribution Rate, 1970–2040***



Source: Canada, Office of the Superintendent of Financial Institutions, *Canada Pension Plan: Fifteenth Actuarial Report as at 31 December 1993* (Ottawa, 1995), p. 6.

rently around 7.85 percent) that would cover benefits now being paid, the funds in the CPP Account are due to run out, according to the Chief Actuary's most recent projections, around 2015. As a consequence, the already sizable hike in contribution rates scheduled for the next 20 years is followed by an even more dramatic ballooning of the burden over the following 15 (Figure 3).

Overview of the Commentary

This *Commentary* argues that the willingness of future workers to bear this burden will erode rapidly as the balance between low contributions and rich benefits that faced past CPP participants tilts strongly the other way. Its core argument is that, in an environment where returns to saving exceed growth in labor income, income replacement programs like the CPP and QPP, whose generosity is geared to the past income of the contributor, ought to be prefunded. In this respect, they differ crucially from income support programs like the Old Age Security and Guaranteed Income Supplement (OAS/GIS) system and welfare, whose generosity is a moral and political judgment, geared in large part to the prosperity of the taxpaying population.

The paper then proposes a multistage overhaul of Canada's income replacement pension system that would put the CPP on a more fully funded basis in the short term, scale back its obligations to a more manageable level over a period of years and, at some point, wind the plan up, paying then-existing entitlements from a combination of funds accumulated in the plan and revenue from the federal budget, and meeting new retirement needs out of an expanded system of private saving. The observations and suggestions that follow apply almost without exception to the QPP as well, which has been run along essentially parallel lines to the CPP since its inception. It would be preferable, from the point of view of integration and portability of benefits, to reform the CPP and QPP together. Since the current Quebec government faces strong incentives not to cooperate in revamping the system, however, it may be necessary for the rest of Canada to proceed with a stand-alone reform of the CPP — a course that would be much preferable to allowing Canada's constitutional paralysis to spill over into the vital area of public pension reform.

National unity concerns aside, the proposals for higher funding, scaled back benefits, and ultimate winding up presented here will seem radical to many. Others, seeing the substantial costs involved in even a scaled-down or terminated program along these lines, will feel the proposals are not radical enough. At any rate, it seems safe to say that, as the full costs of pursuing the present system become more evident over the next decade, pressure to do away with the status quo will become overwhelming. If that is true, it would be wise to make an ambitious and early start, so that in ten or fifteen years' time — rather than starting from scratch — Canadians will already have an income replacement system that is on a sounder financial footing, makes more of a contribution to prosperity, and is less politically divisive than the CPP will be.

Where's the Gold? Anatomy of a Ponzi Game

When the Canada and Quebec Pension Plans were established in 1966, they were designed largely as pay-as-you-go plans that were phased in very quickly — full pensions became payable after only ten years. Like comparable schemes put in place in other developed countries around the same time, and like the already-existing OAS program, their design reflected an intent to transfer considerable purchasing power to older Canadians. In particular, the CPP was designed to provide extra income and wealth to the generation on the verge of retirement — a generation whose contributions to the plan fell far short of covering the full costs of the pensions it received.

This approach had the obvious political benefit of promising large transfers to a concentrated group of voters, while imposing initially small costs over a much broader group, many of whom were not yet of voting age or even born. Ponzi games — pyramid schemes in which income for early investors is provided, not by investment in real assets, but from the capital of later investors — are always profitable for their initiators. The pay-as-you-go structure was, however, also defensible for its diversion of part of the benefit of a rapidly growing economy with rapidly rising incomes to people much of whose working lives had coincided with depression and war, and whose opportunities to save for retirement were correspondingly less.

While politicians were no doubt pleased to defer as much of the cost of their promises as they could, the future earnings of workers were an apparently secure and fair foundation in an era of rapidly rising employment income and relatively low returns on investments in debt securities. Indeed, projections made in 1964 showed that the pay-as-you-go contribution rate needed to cover the projected benefits of the CPP in 2025, a half-century after full benefits commenced, would be only 5.1 percent of covered payroll.

Wherever one comes down on the spectrum from more cynical to more altruistic explanations, the effectiveness of pay-as-you-go plans in delivering their intended results is beyond question. Combined with enriched OAS transfers and the GIS (originally a low-income top-up for the elderly designed to supplement incomes before the CPP phase-in was complete), the CPP contributed to an increase in the incomes of older Canadians during the 1970s and 1980s that is one of the major achievements of modern social policy.

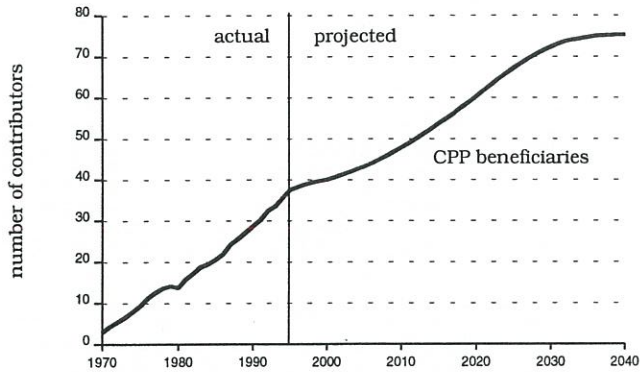
Key Assumptions — Going Wrong

The CPP's designers might more legitimately be faulted for their assumption that rapid population and productivity growth, on the one side, and low interest rates, on the other, would continue indefinitely. Pay-as-you-go financing generally makes sense for income support programs like OAS, whose generosity is aptly linked to current prosperity. Pay-as-you-go financing for income replacement programs that link contributions and most benefits to the participants' earnings, by contrast, only works when returns to saving are lower than economic growth rates — since only under those conditions will the new entrants needed to pay existing participants' benefits be drawn in. As Paul Samuelson put it in an often-quoted 1967 *Newsweek* article: "The beauty of social insurance is that it is actuarially unsound....A growing nation is the greatest Ponzi game ever contrived."[8]

For as long as interest rates were lower than economic growth rates, unchanging contribution rates would mean that the present value of each generation's pension entitlement would be greater than the present value of its contributions. But by the time the first recipients of full CPP pensions were receiving their money, this unusual era was drawing to a close.

The most fundamental change — slower growth of the labor-force-age population — had been foreseeable for quite some time. The number of births in Canada had turned down in the late 1950s and continued to fall through the early 1970s. Starting in 1967, the number of Canadians under the age of 15 began a

Figure 4: ***CPP Beneficiaries per 100 Contributors, 1970–2040***



Source: Data provided by the Chief Actuary.

20-year decline — a decline reflected, with a predictable lag, in much lower growth rates of the labor-force-age population during the 1980s. A second key demographic development that became evident during the 1980s was increased life expectancy. Along with the recent ramping-up in the number of disability beneficiaries discussed later, these developments raised the projected number of CPP beneficiaries supported by each 100 contributors to the plan, which appears likely to double over the working lifetimes of those now entering the labor force (Figure 4). By the time of the 15th Actuarial Report on the CPP, published in 1995, demographic changes had added over 2½ percentage points to the 2025 pay-as-you-go rate estimated 30 years earlier.

Although it was only gradually becoming evident, productivity growth had also kinked down to rates more typical of long-term history — a change generally dated around 1973. For a time, the economic stimulus provided by overly easy monetary policy, combined with slow adjustment of interest rates to its inflationary effects, postponed the recognition of a new, slower growth, higher interest rate era. By the early 1980s, however, it was looking less likely that earlier rapid growth rates would recur, a judgment reinforced during the following decade. By the time of the 15th Actuarial Report, slower real wage growth had added about 2.2 additional percentage points to the pay-as-you-go rate originally estimated for 2025. The Ponzi game was beginning to unravel.

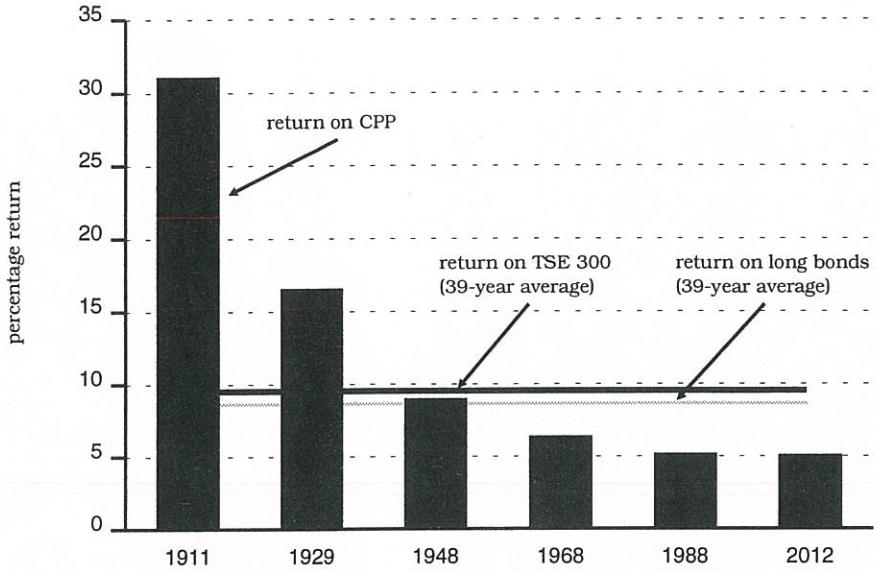
The Coming Collapse

Interest rates that are higher than economic growth rates make a pay-as-you-go plan problematic. A Ponzi game depends on each new participant's assurance that future participants will play — otherwise there will be no benefits. But, for a given contribution rate, returns on saving that exceed growth in the tax base mean that new contributors would prefer *not* to play, since they could do better in retirement by prefunding their own.[9] In that case, maintaining the Ponzi game requires that the attractiveness of the plan to successive participants be maintained by boosting entitlements — and, sooner or later, raising contributions — over time, thus keeping the present value of each generation's entitlements above the present value of its contributions.

Of course, if the margin of returns to saving over growth in the tax base remains positive forever, such a strategy will ultimately fail: the proportion of income taken by contributions cannot rise indefinitely. And in Canada's case, the abruptness of the decline in birth rates between the late 1950s and the mid-1970s makes an enrichment strategy look unsustainable over a shorter time horizon.[10] To sum up, then, the Ponzi game — dependent as it is on confidence that future entrants will be willing to pay the benefits of those already in — is on the verge of breaking down.

The size of the contributions now envisioned to pay the benefits promised by the CPP has already contributed to widespread skepticism about the plan's long-term viability. In a late-1995 *Maclean's*/CBC poll, over half of respondents judged that the CPP would have "somewhat" or "significantly" worse funding in five years' time, while more than one-quarter said they expected it to be "bankrupt." Doubts about the plan are particularly pronounced among the young: a widely cited October 1994

Figure 5: ***Return on CPP Participation by Year of Birth, Selected Years 1911–2012***



Sources: Canada, Office of the Superintendent of Financial Institutions, *Canada Pension Plan: Fifteenth Actuarial Report as at 31 December 1993* (Ottawa, 1995), p. 101; Scotia Capital Markets, Fixed Income Research.

Gallup poll found that, while 85 percent of those aged 65 and over were confident they would receive OAS and CPP/QPP benefits, less than half of those aged 50–64, less than one-third of those aged 40–49, and barely one-quarter of those under age 40 expressed the same confidence.[11]

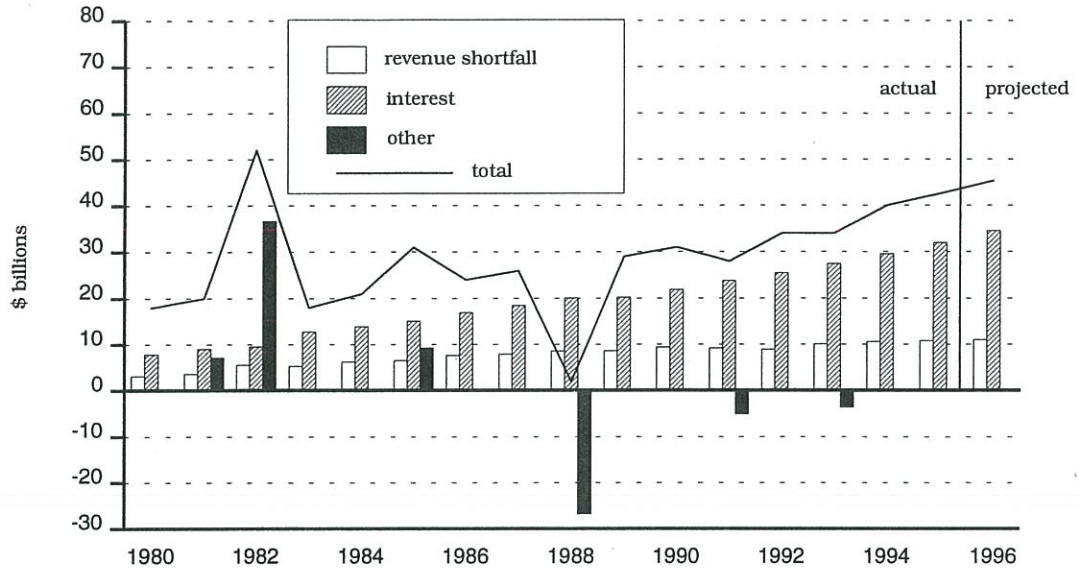
Moreover, even those in generations born after the mid-1970s who still have faith in their CPP benefits are unlikely to find CPP participation attractive relative to plausible alternative investments, as the promised return on their contributions converges with the economy's growth rate (Figure 5). In other words, the idea that payments to the CPP are "contributions" is increasingly inappropriate — they are becoming a straightforward tax. And as the burden of that tax grows, more and more workers will resist paying it, by avoidance and evasion, or by exerting political pressure to reform the system.

Ponzi Meets "Public Choice"

During the period since the CPP's inception, private pension plans, prodded by workers, actuaries, and regulators, have adapted more or less completely to the new economic and demographic environment. Defined-benefit plans have become more fully funded, building up investment reserves toward — and in some cases beyond — a level sufficient to provide for anticipated pensions. And money-purchase plans are a small but rapidly growing part of the private sector employment-related pension picture.

In the public sector, less effective accountability and the ability to coerce taxpayers into covering inadequately funded plans have resulted in slower adaptation to charged circumstances, as government managers have served their own interests in a way predicted by the "public choice" literature, and familiar from government pension schemes elsewhere in the world. At the provincial level, significant unfunded liabilities still exist in many civil service plans. More egregiously, the federal government's superannuation plan is still a completely pay-as-you-go system, with an unfunded liability in excess of $100 billion.[12] And the evolution of the CPP over the course of the 1980s and 1990s also shows how public sector

Figure 6: ***Sources of the Increase in the Unfunded Liability of the CPP, 1980–96***



Note: Calculations of the CPP's unfunded liability are sensitive to assumptions about future economic and demographic conditions and are affected by changes in the plan's provisions. All these influences, as well as changes in methodology, are summarized in the "other" category. As already noted, the unusually large fluctuations in this category in 1982 and 1988 were due to changes in assumptions about future interest rates and earnings growth rates, respectively.

Sources: Author's calculations, based on Canada, Office of the Superintendent of Financial Institutions, *Canada Pension Plan: Fifteenth Actuarial Report as at 31 December 1993* (Ottawa, 1995); and data from the Chief Actuary.

plans provide opportunities for particular groups — beneficiaries, administrators, and politicians — to obtain benefits for themselves at the expense of the broader population of current and future contributors.

In distinct contrast to the growing emphasis — at the level of rhetoric, at least — on controlling the growth of the public debt in Ottawa during the 1980s, the thrust of policy in regard to the CPP was to *increase* the growth rate of its unfunded liability. Three main elements contributed to this result.

First, decisions were made prior to the changes in contribution schedules in 1987 and 1992 to keep contributions low — consistent with a long-term target for the CPP Account of two years' payout, but well below the rates that would have been needed for full pay-as-you-go financing (as was shown in Figure 3), let alone the full-cost rates that would have been needed to fund the benefits of each successive group of plan entrants. Since 1987, the difference between the contributions actually charged and those that would have been collected at the full-cost rate has added almost $90 billion to the CPP's unfunded liability, one-third of its total increase over that period (see Figure 6).[13]

Second, despite the growing evidence of its long-term unsoundness, the plan's benefits have been repeatedly enriched. On top of various changes made during the 1970s that had added another 1.7 percentage points to the pay-as-you-go rate originally projected for 2025, the decade from 1982 to 1991 saw further changes to provisions regarding disability, flexible retirement age, and survivors' and children's benefits that added a further percentage point. Regardless of the merits of the changes themselves, the cost of these promises was, as just noted, pushed off to the future, with contribution rates at the time

Table 1: ***CPP Pay-As-You-Go Rates for 2025: The 1964 and 1995 Chief Actuary's Reports Reconciled***

1964 Report	5.11%
Changes due to:	
Demographic assumptions	2.56
Economic assumptions	2.17
Plan provisions	2.65
Disability assumptions	1.52
Methodological changes	−0.52
Total changes	*8.38*
1995 Report	13.49

Source: Bernard Dussault, "Summary Presentation of the 15th Annual CPP Actuarial Report" (presented at a Fraser Institute conference on "Replacing the Canada Pension Plan," Toronto, November 15, 1995).

being held down. Relative to the 1964 projections, plan enrichments have now added 2.65 percentage points to the projected 2025 pay-as-you-go rate — the biggest single factor behind the increase from its originally forecast level of 5.1 percent to the 13.5 percent projected in the 15th Actuarial Report (see Table 1).

Finally, the CPP has recently experienced a dramatic rise in disability benefits. Opinion will vary as to the justifications for some of this rise: it is in part a result of liberalized rules governing application for and adjudication of benefits, and in part a result of the elevation of a broader range of complaints to "disability" status. Other aspects are less easy to justify: disability benefits show a clear tendency to balloon during economic slumps — though not, unfortunately, to drop during expansions — suggesting that disability pensions are serving as a kind of long-term unemployment insurance; moreover, a portion of disability benefits appears to be paid to recipients who are not actually entitled, as a result of lax administration.[14] As shown in Table 1, higher-than-expected disability benefits have also made a major contribution — over 1½ percentage points — to the increase in the pay-as-you-go rate now projected for 2025 relative to what was expected 30 years ago.

Fool's Gold: A Future with an Unreformed CPP

Many of the dangers of the CPP's current trajectory are familiar from other discussions sparked by the growth of public debt in Canada over the past decade. The growing cost of the CPP is pushing up taxes and threatening to crowd out other elements of government budgets in years to come. And because the CPP does nothing to promote growth of the wealth from which future incomes, including those of CPP recipients, will come, it is creating overlapping claims on Canada's future resources that threaten to poison the future political environment.

Pressure from the CPP on Government Budgets

The taxation problem is perhaps most straightforward. Payroll taxes in Canada have risen substantially over the past 30 years: from less than 2 percent of labor income in the early 1960s, before the inception of the CPP and QPP, to around 5 percent in the early 1970s, to some 6 percent in the early 1980s, and to more than 10 percent in the early 1990s.[15] Over the next 30 years, other things being equal, projected increases in CPP premiums alone will raise that load by about two-thirds. Levied on today's covered payroll, the premiums anticipated in 2025 would raise almost $33 billion. In today's terms, that increase would be equivalent to hiking all federal personal income taxes by one-third, or more than doubling the goods and services tax.

Marginal burdens, as well as total burdens, associated with higher CPP contributions are also a concern. Already, Canadian workers pay high marginal tax rates at quite low income levels, thanks to income and consumption taxes, as well as the steep implicit marginal tax rates imposed by withdrawal of various social benefits. Even quite modest es-

timates of the responsiveness of work effort to after-tax earnings yield quite large estimates of the negative effects of such high overall implicit tax rates,[16] while their impact on the choice of lower-income workers as to whether to work in the above-ground or the underground economy is part of the everyday experience of large numbers of Canadians.[17]

Of course, it is far from certain that other things will remain equal as CPP premiums rise. Pre-emption of payroll tax room by the CPP will add to the pressure to reduce other payroll taxes and quasi-taxes, such as workers' compensation premiums, unemployment insurance (UI) premiums, and provincial health plan premiums. Whatever the merits of these and other programs funded directly or indirectly from payroll tax revenue, the simple fact is that the growing expense of the CPP will squeeze them. It is hard to imagine, for example, maintaining major worker training and adjustment programs funded from payroll taxes in an environment where the CPP is levied at a 15 percent rate. To the extent that these pressures are felt across government budgets more generally, they will squeeze other programs as well. Given the massive additional demands that will be placed on government budgets in future as other payments to the elderly grow and an older population dramatically increases demand for health care, the resulting cuts may well come in areas, such as infrastructure and education, that will exacerbate the tilt of fiscal policy against the young.

The current and potential interaction of the CPP with the budgetary policies of other government bodies does not end with taxes and spending. The requirement for the funds in the CPP Account to be lent to the participating provinces at concessional interest rates means that the meager funds the plan maintains have, if anything, encouraged provincial government deficit financing during past periods when CPP funds were large relative to provincial financing requirements. As the cost of the CPP grows, moreover, its pressure on the payroll and income tax bases will lessen the willingness and ability of governments to raise other revenues. To the extent that this lower revenue is not matched by reduced spending, the gap will be filled by additional borrowing, adding to the debt-related fiscal pressures that have been such a prominent and problematic feature of the Canadian economic scene for the past 15 years.

The Poisonous Politics of the CPP

An additional worry, and one that looms large over the extended time periods that are relevant in thinking about the CPP, is the extent to which the plan is giving rise to incompatible claims on the nation's future wealth. The central motivation for a compulsory income replacement retirement system is to boost the consumption of goods and services by retired people beyond what would otherwise be possible. Higher consumption for the retired means less consumption by everyone else — not a pleasant prospect when the ratio of retired to nonretired is rising rapidly and when income per nonretired person is growing very slowly or not at all. In this light, the CPP's pay-as-you-go structure — with the modest fund that is maintained invested only in government debt — looks unwise, because the plan is contributing nothing to the future wealth from which incomes to support the consumption of both the retired and the nonretired alike will be drawn.

A sense of the scale of the overlapping claims on future wealth that the CPP is creating can be gained by imagining how different Canada's current situation might be if the $413 billion of obligations that have accrued to CPP beneficiaries since the end of 1980 had been matched by an accumulation of net new wealth — that is, claims on new domestic capital or on foreigners — in a funded plan. (Accumulating additional wealth at such a rate would have required the net national saving rate to average about 11½ percent of gross domestic product [GDP] from 1981 to 1994. Though very different from the 6 percent figure actually recorded, a saving rate of that size is

nothing remarkable: the net national saving rate during the quarter-century prior to 1981 was almost exactly 11½ percent.) A $413 billion accumulation would have raised Canada's net stock of such assets at year-end 1994 by more than one-quarter — over $56,000 per family of four — an amount sufficient to erase Canada's year-end 1994 foreign debt of $339 billion, while leaving enough over to boost the stock of residential housing by 10 percent.

Looking forward, the assumptions underlying the last actuarial report on the CPP suggest that its unfunded liability will grow by about $240 billion from the end of 1994 to the end of 1999. In other words, the increase in the investment fund that would be needed over those five years, after allowing for expected contributions and an assumed return on investment of 6 percent annually, to pay the new benefits that will accrue by 1999 will be an amount equal to one-third of Canada's entire existing stock of residential housing! Since no such stock of assets will be created, however, these obligations will need to be met from future payroll taxes. In effect, that $240 billion amounts to an appropriation of the human capital of future CPP participants — an appropriation for which those participants are neither economically nor psychologically prepared.

This unpreparedness raises concerns about the CPP's impact on Canada's political or civic capital as well. The process of winding down some of the state's overcommitments over the past decade has not been a happy one — the extent to which various groups have come to perceive themselves as having property rights in unsustainable government benefits has been a sobering experience in a country where myths of self-reliance still persist. Despite overwhelming evidence, the lesson that government transfers, like other government obligations, are far from risk free is not one that is willingly learned.[18] Nowhere is this more true than in connection with elderly benefits, where the risks of adverse *ad hoc* changes have up to now been borne principally by taxpayers, rather than by recipients.

As time passes, the politics of the CPP will get more unpleasant. The generation now entering the labor force as full-time career workers is the last one for which the CPP's projected returns are remotely attractive. Only the decision to hold contribution rates well below even the pay-as-you-go rate has delayed recognition of how unattractive it is becoming even to that minority of new workers who expect to receive benefits. As contribution rates rise, more and more younger workers will want out.

A powerful coalition dedicated to coercing the young into the plan exists and may grow. As the Canadian Institute of Actuaries has pointed out, differing patterns of voter turnout by age suggest that the proportion of voters over the age of 50 will rise from fewer than two in five now to more than one in two in 2030, while the proportion over the age of 65 will rise from around one in six to two in seven over the same period.[19] Particularly in view of the slow growth of labor income among younger and lower-income workers (most of whom are, after all, the children and grandchildren of older voters), however, it seems highly unlikely that this coalition will prevail.[20] Ultimately, the tension will prove intolerable and the CPP will break down.

From a political point of view, this prospect yields two key lessons. First and more specific, delaying adjustments will ensure that battles over reform take place in an ugly environment: a large bloc of voters already in retirement or too close to it to adjust to reduced benefits will try to lever larger payments out of an unwilling population of workers, many of whom — if present trends in levels and dispersion of income continue — will be earning less than their elders. Second and more general, the broken link between contributions and benefits that is central to the design of pay-as-you-go plans provides an incentive to each cohort to enrich its own benefits, knowing that the burden will fall on others — a threat amply born out in Canada's own experience and one that points to the desirability of a major shift in the plan's design in the future.

The Global Context

Defenders of the CPP often point out that Canada's situation is similar to, and in some respects better than, that of many other developed countries. It is true that most have serious public pension problems — similar Ponzi-style plans, granting large pensions to workers whose contributions fell far short of what would have been required to fund them, are very common and are running into similar problems.[21] Indeed, the World Bank has cited the pension plans of the developed countries generally as an example that less-developed countries should seek to avoid.[22]

Taking comfort in others' misfortunes, however, is the wrong response. The only realm in which comparisons of this kind are critically important is the military — a field that Canada has largely vacated. The other realm in which such comparisons make some sense is in the competition for human and nonhuman capital, and here the encouragement that Canadians can take from the poor prospects of other Group-of-Seven (G-7) countries is mitigated by the fact that Canada's chief rival in that competition, the United States, faces the least worrisome prospects in that group.

On closer reflection, the existence of similar problems in other countries heightens the urgency of doing something about it at home, since it increases the probability that the current premium of returns to saving over economic growth rates will continue into the future. On the growth front, the same dangers Canada faces — that public pension pressures will force taxes up, push government spending on other things such as human and physical investments down, and reduce output by encouraging early retirement and driving workers out of the measured economy — will operate around the world, producing a more difficult environment for Canadian growth. And on the interest rate front, if pension problems elsewhere drive up fiscal deficits and otherwise harm national saving, the ambient cost of funds around the world will be under continued upward pressure. It is difficult to see, moreover, how a more acrimonious political environment in other countries as a result of squabbles over public pensions will do anything to increase growth or lower interest rates. In summary, a look around the world reinforces the impression that Canada should abandon a system predicated on a 1960s configuration of growth and interest rates, and adopt one designed to perform better in the environment of the 1990s.

Going for Gold

The CPP's economic and political complexity precludes any "magic bullet" for reform at a stroke. What is needed is a multipart program that draws on familiar principles in fiscal policy and several ideas that have been put forward by other observers of the CPP's unhealthy condition.[23]

One useful way of breaking down the reform process is outlined in this final substantive section. The process would start with a forceful statement by governments that there is indeed a problem. Second, a long-overdue hike in premium rates would underline that statement and put the plan onto a better funded footing. Also needed are benefit reforms aimed at slowing the growth of the CPP's obligations. Although any or all of these changes, if energetic enough, could put the plan on a more sustainable track, a view that sees the CPP as inherently flawed and liable to similar problems in future suggests a final step: replacing the CPP with an expanded system of individually funded plans for those not covered by occupational plans.

The First Priority: Admit a Mistake

It is said that wisdom begins with admitting a mistake. Most official documents, however — such as the annual bulletins on the CPP from Human Resources Development Canada and statements mailed out to contributors — contain no hints of the stresses that meeting the plan's existing obligations (let alone those about to be incurred) will involve: indeed, the

fiction is actively promoted that CPP contributors are "earning" their benefits. Other documents — such as the periodic reports and communications strategies emitted by the CPP Advisory Board — are aggressively reassuring about the soundness and wisdom of the plan. The growing weight of data and analysis pointing the other way is mentioned only as deserving of energetic refutation.[24]

Ten years ago, the federal government acknowledged the serious state of its own budget, yet despite a decade of consistently aggressive public statements about the urgent need to fix it, the problem largely remains. Ten years of similarly half-hearted attempts to ease the pressure of the CPP would leave Canadians with another major unsolved problem; what is worse, the starting line for pension reform is much more distant than it was in 1984 for the budget. Not only do official pronouncements make no mention of the plan's sickness, but built-in delays and a cumbersome amending formula ensure that even energetic action will take time to bear fruit.[25]

It is time to admit that, although one of the principal objectives behind the CPP's design — big pension payouts after a short period — was met, other aspects of the plan have proved, with the passage of time, to be badly flawed. While a pay-as-you-go basis, with benefits implicitly adjustable to match changes in society's ability to pay, is appropriate for income support programs such as OAS and GIS, it is fundamentally unsuitable for an income replacement plan. Founding past workers' benefits on current workers' taxes has not, in fact, provided beneficiaries with the promised risk-free future, because the CPP's implicit liabilities are mounting far faster than the ability to pay them, and at some point those expected to foot the bill are going to balk.

The Second Priority: Pay More

Obviously, more than words are needed. Current inaction on the CPP's finances is adding appreciably to the ultimate cost of reform: as already mentioned, one-third of the growth in the plan's unfunded liability since 1987 reflects the gap between the full-cost rate required for each cohort to cover its own benefits and the low contribution rates actually charged. Moreover, public cynicism about the the CPP is likely to be reflected in the dismissal of official statements, however urgently worded, about the need for the public to change its expectations or about the good intentions of governments. The overwhelming majority of Canadians do not, despite their suspicions about the CPP, have a concrete appreciation of the plan's true state. In this light, the need to make immediate hikes to put the plan on a more stable footing takes on a virtuous aspect.

As should be clear from the discussion to this point, the contribution hikes needed to stabilize the CPP in the absence of other reforms are very large. For example, a program intended to move quickly to the full-cost rate at which new participants would cover their own benefits might involve raising premiums from the 1996 rate of 5.6 percent to the full-cost rate of around 10.56 percent in 1999 in three roughly equal steps (7.5 percent in 1997 and 9 percent in 1988), and then raising it in line with increases in the full-cost rate thereafter. Such a hike would send a strong signal to the population about how expensive the promises embedded in the plan are. It would also produce an immediate swelling of revenue into the plan. Rather than being exhausted by 2015, as under the Chief Actuary's projections, the CPP Account would rise by more than $270 billion over that period, and the proportion of the CPP's total liability that is funded would rise from today's 6 percent figure to about 14 percent.

However, because the full-cost rate only covers the benefits accruing to new plan members and leaves the existing unfunded liability uncovered, such a reform would still leave further hikes in contribution rates for the future. If the funds in the CPP Account were to earn returns in line with the 6 percent ultimate interest rate assumed in the Chief Actuary's calculations, rising benefit costs ulti-

mately would cause the accumulation in the Account to reverse, and its funds eventually would become exhausted unless rates were hiked again. To implement a once-and-for-all contribution hike that would guard the CPP Account against exhaustion through the next century would require an increase to around 12.3 percent in 1998, a level rate that could be maintained throughout the lifetimes of even the youngest Canadians.

Importantly, if a move to fuller funding is undertaken, the possibility that investment returns will be higher than the 6 percent rate used in the Chief Actuary's projections becomes an important potential bonus in the plan. If returns in the CPP Account average two percentage points higher — which is not at all out of line with recent experience — the move to the full-cost rate as calculated under the old assumptions would produce a $360 billion increase in the account by 2015, raising it to an amount approaching one-fifth of the CPP's total obligation at that time. Alternatively, the level rate that would be needed after 1988 to keep the CPP Account in the black through the next century could be considerably lower than in the above example — about 11 percent.

While desirable on economic grounds, the swelling of the CPP Account that would occur under these rate-hike scenarios raises familiar questions about stewardship. Some of the reservations about accumulating such a fund that were expressed around the time the CPP was established — most importantly, that capital markets could not absorb such huge amounts of saving — no longer look applicable in an era of much more sophisticated securities markets and foreign borrowing of $20 to $30 billion every year. Other reservations centering on the state's role as custodian of such funds, however, have been given more substance with the passage of time.

The political risks to which plan participants are subject as a result of potential mismanagement of large pools of capital are no less serious than those arising from *ad hoc* changes and the unaccountable administration of a huge tax base. Horror stories about government mismanagement of pension funds for the benefit of bureaucrats and other favored groups are a central theme of a recent World Bank report.[26] Closer to home, chronic concerns about the funds in the QPP were reinvigorated by statements by then-Quebec Premier Jacques Parizeau about Canadian dollar purchases made by the QPP's custodian, the Caisse de dépôt et placement du Québec, in the runup to the referendum on independence.[27]

Rather than requiring the additional funds to be lent to the provinces (whose appetite will, under any but the most irresponsible fiscal policy, be nowhere near big enough to absorb such surpluses), the funds should be steered into a more representative portfolio of assets — including foreign assets as large as good investment practice dictates. Reforms that put the Account's administration in the hands of a reasonably large number of suitable financial institutions operating under a transparent mandate would enhance the CPP's returns and dilute the dangers of political interference.[28]

Aside from possible transitional effects on demand in the economy and on the federal government's own budget,[29] raising contributions — even if less severely than in the above example — would encounter sharp hostility, not least from the large numbers of young contributors who believe that the CPP is already a burden that will yield no benefit. If the CPP premiums that younger Canadians sooner or later must face are to be reduced in a lasting way, further reforms on the benefits side are needed.

The Third Priority: Promise Less

The next priority, again familiar from other discussions of governments' budgetary problems, is to reduce the extravagance of the CPP's promises. Three broad categories of changes would reduce the CPP's obligations: wholesale removal of categories of benefits, raising the age at which participants become eligible, and scaling back benefits.

The first type of option — removing categories of benefits from the program — sounds radical, but, in fact, one component of the CPP seems a ready candidate for such treatment: its disability provisions. Aside from its explosive growth — from $0.8 billion to $2.9 billion from 1986 to 1994 alone — the disability component is distinguished by the prominence of flat-rate, as opposed to earnings-related, benefits (roughly half the total), its similarity in objectives and coverage to provincial workers' compensation and welfare programs, and its poor policing.[30] From a public choice point of view, the huge rise in disability payments is consistent with the slack administration one would expect as a result of the easy availability to the CPP's administrators of a vast pool of ready revenue.

In view of the desirability of ultimately transforming this part of the CPP into a program integrated with similar provincial programs, and for the sake of better accountability in the interim, it would be desirable to move immediately to a system that showed disability-related CPP premiums separately from the rest of the plan. At the full pay-as-you-go rate, the cost of covering the CPP's disability portion would at present amount to some 1.5 percent; current projections show it rising to 2.4 percent over the next 20–25 years.[31] Although more realistic standards for benefits and tougher policing would take time to lower the costs of the CPP's disability program in whatever form,[32] it is worth noting that the CPP's accrued liability would drop by about one-fifth without the disability program, while the level rates necessary to stabilize the plan over the next century would be around 10.3 percent under the 6 percent ultimate interest rate assumption used by the Chief Actuary, and 9 percent if long-term returns are two percentage points higher.[33]

When it comes to reducing the expense of existing programs by raising eligibility age or scaling back benefits, the major difficulty lies in striking a balance between a program that is strong enough to slow appreciably the accumulation of obligations and one that is mild enough not to subject those in retirement or close to it to drops in benefits larger than they can cope with by changing their saving behavior. Happily, however, in connection with both major avenues that have been proposed for reducing benefits — raising the eligibility age in increments over a prolonged period and scaling back all benefits accruing after a given date according to a given ratio — it is possible to avoid prohibitively disruptive changes.

Raising the age of eligibility for a retirement-related income replacement program makes eminent sense in view of the increases in life expectancy that have occurred since the plan's inception in 1966. Although current estimates are necessarily based on incomplete information, one set of calculations suggests that, if the eligibility age for the CPP had increased to keep pace with the increase in life expectancy at age 65 since then, it would now be over 68. Even a much more modest increase in life expectancy at age 65 in future could — if the benchmark set in 1966 seems reasonable — justify raising the age of retirement incrementally by three months per year starting in 1998 to yield an eligibility age of 70 by 2018.[34]

With the CPP's options for early and late retirement, such a program would present no insurmountable transitional obstacles, even if provincial cooperation in matching the changes in their own legislation were not forthcoming, since retirement at age 65 at a slightly reduced pension would still be an option.[35] Even if it resulted in no increase in the actual age of retirement — an unlikely prospect, but useful as a "worst-case" benchmark — an increase in eligibility age along these lines would immediately reduce the CPP's accrued liability by 7 percent, and would lower the pay-as-you-go rate faced by contributors in 2025 (now forecast at 13.5 percent) by 1.7 percentage points. If an immediate move toward a level rate sufficient to keep the CPP Account in the black through the next century were contemplated, the necessary rate would be around 11.1 percent (8.3 percent without the disability component) with interest rates at the

6 percent level of the Chief Actuary's projections, and about 10.1 percent (7.4 percent without the disability component) with investment returns two percentage points higher.

The principal alternative approach to reining in the growth of the CPP's liability is to reduce the formula governing benefits accruing in the future. For example, income-related benefits accruing after the trigger date could be calculated on a formula based on 15 percent rather than 25 percent of covered compensation, with flat-rate benefits scaled back accordingly.[36] This approach — ultimately scaling benefits back to 60 percent of current projected levels — is implicitly more in line with a view of the CPP that sees it as closer to an OAS/GIS-style income support program, making more acute the question of why one would maintain such a program in the first place. Be that as it may, this alternative would reduce the CPP's accrued liability by about one-tenth and would produce an even more dramatic reduction (2.6 percentage points) in the pay-as-you-go rate projected for 2025, with the reductions growing thereafter. The level rates associated with this option are around 9.2 percent (7.6 percent without the disability component) with interest rates at the 6 percent level of the Chief Actuary's projections, and about 8.8 percent (7.2 percent without the disability component) with interest rates two percentage points higher.

There is, of course, no reason to think only of one or the other type of change. A package involving both higher eligibility age and scaled back benefits is also a possibility. For example, a program implemented in 1998 that raised the eligibility age to 70 over 20 years as well as reducing benefits accruing after that date by 40 percent would reduce the CPP's accrued liability by about one-sixth (and would, unlike either measure in isolation, reduce its growth rate sufficiently to stabilize it relative to GDP). In terms of the level rates that would keep the CPP Account in the black though the next century, eliminating the need to schedule higher contribution rates for those not yet working or voting, the combined package would require a rate of 8.4 percent (6.3 percent without the disability component) in an ultimate 6 percent interest rate environment, and 8.1 percent (6 percent without disability) in an environment where returns are two percentage points higher. Table 2 summarizes the impact of these various benefit changes on the CPP's accrued liability relative to the 1996 figure calculated under the Chief Actuary's assumptions (panel A), and also shows the level contribution rates that would keep the CPP Account in the black through 2100 (panel B).

The Fourth Priority: Do It Yourself

Stabilization schemes along the above lines would reduce the CPP's tilt against future entrants, and would avoid the cash crunch envisioned for 2015 in the Chief Actuary's projections. But the ratio of future benefits to current contributions would still be less attractive to new participants than investments outside the plan. A case can be made, moreover, that the CPP's current benefits and contributions are not in a fundamental sense the source of its problems: that, in fact, they are predictable symptoms of a flawed approach to income replacement retirement programs, in which each cohort of participants faces an incentive to enrich itself at the expense of its successors.

Even under the scenarios just outlined, the CPP would still be a predominantly pay-as-you-go plan, prone to amassing obligations without any commensurate increase in wealth from which to meet them. Moreover, the political temptations evident in the persistence and, indeed, enrichment of a scheme well into a period in which its flaws were becoming obvious might be exacerbated by a refilling of the CPP Account and a scaling back of commitments. Further *ad hoc* redistributions at the expense of future taxpayers are a continual threat.

The most complete answer to this remaining problem is one in which Canada already has a substantial head start: phasing out the CPP in favor of a universal private system

Table 2: ***The Effects of Various CPP Benefit Changes on CPP Liability and Contribution Rates***

Benefit Change	Ultimate Interest Rate of 6 Percent		Ultimate Interest Rate of 8 Percent	
	Including Disability	Excluding Disability	Including Disability	Excluding Disability
	Reduction in CPP Liability (percent of estimated level at year-end 1996)			
No change	—	19	28	42
Retirement at age 70	7	31	33	49
60 percent benefit ratio	10	26	34	46
Retirement at age 70 and 60 percent benefit ratio	16	36	38	53
	Level Contribution Rates Needed to Keep the CPP Acount Positive through the Next Century (percent of covered payroll)			
No change	12.3	10.3	11.0	9.0
Retirement at age 70	11.1	8.3	10.1	7.4
60 percent benefit ratio	9.2	7.6	8.8	7.2
Retirement at age 70 and 60 percent benefit ratio	8.4	6.3	8.1	6.0

Notes: In panel A, the changes in the CPP's accrued liability are approximate, based on the present value of expenditures, discounted at the specified interest rate, over a 33-year time horizon. The lower value of the liability under the 8 percent interest rate assumption reflects the greater advantages of prefunding when interest rates are higher, advantages not to be had if the plan continues on a largely pay-as-you-go basis.

In panel B, the changes in the level rate contributions relative to the base case are not proportional to the changes in accrued liability. Under the level contribution rate scenario, packages with a quicker impact on spending (such as the 60 percent benefit ratio) require a smaller short-term build-up in the CPP Account.

Source: Author's calculations, based on projections from the Chief Actuary.

founded on individual money-purchase retirement accounts for all those not covered by occupational defined-benefit plans. Often known as the "Latin American solution," reflecting the spread of such plans in South America in the wake of Chile's highly successful transition in the early 1980s, strong versions of this plan involve a rapid wind-up of the old pay-as-you-go system, with its entitlements being converted into "recognition bonds" redeemable at retirement out of the national government's budget, and the establishment of a new mandatory system of well-funded individual retirement accounts.[37]

This type of transition involves a number of adjustments. One major challenge is to finance pensions owing to participants in the old system as they become payable. Meeting them out of the national government's budget is easier when, as in Chile in the early 1980s, that budget is in surplus, there is substantial extra revenue available from privatizations, and the purchasing power of existing pensions has been badly eroded by inflation. Since none of these situations now applies in Canada, it will be hard to avoid a situation where CPP-related taxes, albeit possibly at a much reduced level, will need to be collected over a lengthy period while the old pensions are paid off.

A second adjustment, one in which Canada's starting position is vastly better than that of other countries that have made this transition, is to establish a new set of individually controlled funded plans. Canada already has an extensive system of individual RRSPs and a growing system of employer-sponsored

group RRSPs, which are rapidly becoming the centerpiece of many Canadians' retirement plans.[38] Canada's competitive and sophisticated financial industry and well-established regulatory system render most of the regulatory concerns and high costs involved in setting these systems up in other countries much less important.[39]

Of the major advantages often cited in favor of pay-as-you-go plans — coverage of all workers, portability of benefits, distrust of government control of large pools of capital, protection against inflation, and low administrative costs — RRSPs achieve the first three in straightforward fashion. The fourth, inflation protection, can be achieved in at least two ways. It can be obtained directly by the purchase of real-return bonds for the plan (for the government to issue more of these bonds in order to expand potential holdings would be a useful ancillary move).[40] Or it can be obtained indirectly by buying foreign assets: loosening or eliminating current limits on foreign content — a desirable reform in any event — would free those worried about future inflation to buy assets that would be unaffected by a lower future value of the Canadian dollar. As to the last advantage of pay-as-you-go plans, low administrative costs, it is worth remembering that the CPP, in addition to earning returns below those of a market portfolio, is so far removed from accountability to plan participants or taxpayers generally as to be quite free from the pressures that act to keep administration costs down in most private sector plans.[41]

Whether some prudential regulatory issues not now prominent in connection with RRSPs become more so as the CPP is wound up depends on whether a mandatory minimum contribution level is set for workers who are not receiving a comparable provision through an employer-sponsored plan.[42] The core argument in favor of mandatory schemes is that many people are myopic, either underestimating their needs in old age or neglecting to put something aside until it is too late to make sufficient provision. On one level, the existence of the OAS/GIS system mitigates such concerns, since these income support programs protect low savers from destitution. On another level, however, the high taxback rates of the OAS/GIS system raise the danger that lower-income workers will not save, knowing that the proceeds will be subject to confiscatory tax rates when they retire. Choosing between mandatory and voluntary systems also implies different regulatory schemes. More intrusive regulation of portfolios and insurance is apt if workers have no choice about participating, whereas *caveat emptor* is a more apt attitude if participation is voluntary.

The complexity of this set of considerations makes it difficult to take a firm position on this issue. One response might be to require contributions only up to the level required to provide an income equal to that of the OAS/GIS system — although, if the taxback rates on these latter benefits are high, such a requirement effectively would amount to a confiscation of part or all of the relevant contributions since, after tax, the pension they pay will yield no benefit. Indeed, there may be no compelling reason for Ottawa to make decisions about mandatory contribution levels at all. Could not provincial governments, whose constitutional competence in this area is paramount, make such decisions as they see fit?[43]

Getting There

For the sake of concreteness, it is time to present one final scenario, one that combines elements of the reforms already discussed and shows what might happen if they were followed by a winding up of the plan, with no further accrual of benefits after a given date, but with full payment of all then-existing entitlements as they come due. While it may appear abrupt to some and insufficiently vigorous to others, it represents one route by which the CPP could be wound down without dramatically altering already accrued benefits, yet without requiring exorbitant taxes from those who will never become entitled to benefits.

A possible wind-up scenario might begin with a hike in contribution rates to 7½ percent

in 1997 — as in the example above — but then holding them at that level, in conjunction with the other reforms just prefigured:

- separation of the disability programs from the rest of the CPP;
- commencement of a phased increase in retirement age to 70 over a 20-year period starting in 1998; and
- a scaling back to 60 percent of all benefits accruing from 1998 forward.

These changes would put the CPP Account on an upward trajectory: if allowed to run to 2015, the Account would grow by some $250 billion over the period, rather than running out as currently projected. If interest rates converge to a level two percentage points higher than those currently projected, the additional funds in the Account by 2015 would be some $330 billion.

But the accumulation of funds in the Account takes on an additional importance in a scenario where the CPP is ultimately wound up. Suppose, for the sake of illustration, that in 2008, ten years after the first round of reforms, the door is shut on further benefit accruals, but all then-existing entitlements are paid as they come due.[44] The level contribution rates that would be needed, after allowing for amortization of the accumulated funds in the CPP Account over a period of time sufficiently long to ensure that no rate hikes are ever required, to cover accrued benefits under this scenario are shown in Figure 7 as a proportion of notional covered payroll. (Two contribution rates are given: one using the ultimate 6 percent interest rate used in the Chief Actuary's projections, the other using ultimate returns two percentage points higher.)

The term "notional" is apt because, once CPP benefits cease to accrue, much of the plan's current structure, including the existing base on which contributions are levied, could be radically modified. If, to take the most likely scenario, the cost of benefits not covered by the CPP Account were to be paid out of the federal budget, any financing method — including selected taxes on retirement income and deficit financing — is possible. To give a sense of scale, since CPP contributory earnings are equal to a little more than half of taxable personal income, the cost of winding the plan down during the first three decades after 2008 could be covered by an additional flat personal income tax levied at a rate around 2½ percent.[45] Alternatively, if an environment of interest rates lower than growth rates re-emerges following a worldwide fiscal consolidation, or if it is judged appropriate once again to place a greater share of the burden associated with the CPP on future generations, some deficit financing from the federal budget — to the tune of 1½ percent of GDP — could be undertaken.[46]

If a payroll tax along current lines is resorted to, however, these projections indicate that the net cost of then-accrued entitlements, after allowing for amortization of the balance in the CPP Account, involves a rate around 4½ percent of covered payroll over the first three decades, after which it gradually trails away to zero as the last entitlements expire

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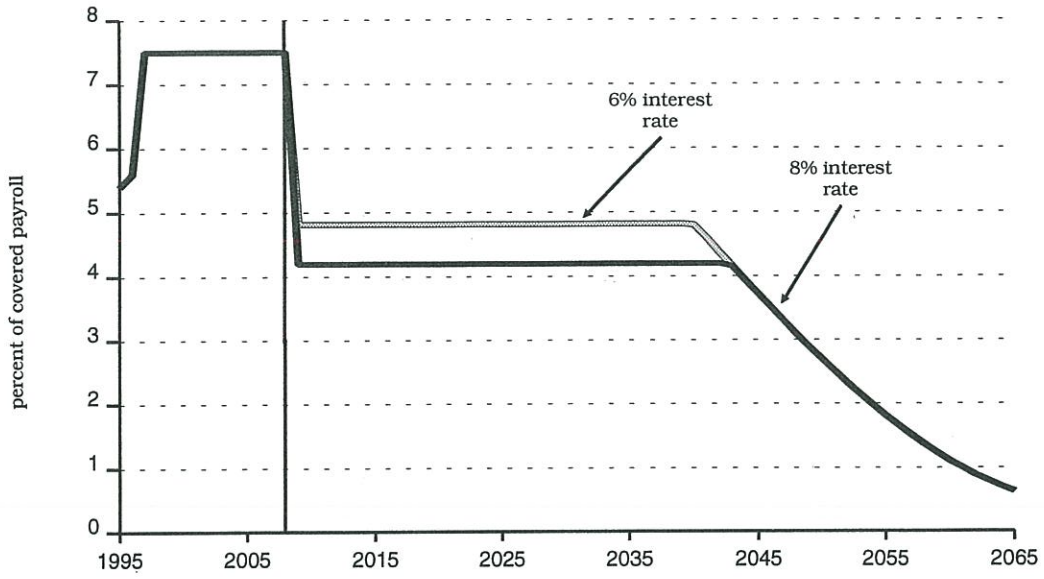
Figure 7: ***Modified CPP Contribution Rates, 1995–2065, Assuming a Wind-Up in 2008***



along with their recipients around the turn of the next century. At such rates, the cost to citizens (in terms of currently available income) of additional private saving, mandatory or otherwise, should be manageable.

Some Closing Thoughts

Just as the adjustments needed to get federal and provincial budgets into sound condition appeared radical in the political environment prevailing just a decade ago, so the changes needed to Canada's income replacement retirement system are jarring in an environment where the bulk of official commentary continues to insist that all is well. But changes along the lines just outlined are mild by comparison with those that will occur if the plan is allowed to run along current lines for another 10 or 15 years. By then, the growing strain of supporting burgeoning entitlements will cause the CPP's tax base to begin to crack as required recruits to the Ponzi game refuse to play. All is emphatically not well with the CPP. It is a plan predicated on a configuration of growth rates higher than rates of return to saving that is long gone and unlikely to return. Its liabilities are growing faster than the federal debt and, with the tax burden necessary to support projected future costs as yet only dimly perceived by most Canadians, the incentives facing the system's political masters are as likely to worsen the system as to improve it.

Reforming the CPP involves a number of elements that are similar in their basic character to aspects of other, more familiar fiscal reforms. The federal government, preferably with the cooperation of the provinces as provided for under the *Canada Pension Plan Act*, urgently needs to acknowledge the plan's defects, and, as a first step, to introduce at least a partial increase in current charges to reflect the plan's true long-term costs. Ottawa also needs to scale back benefits, including the complete removal of the most troublesome area, disability benefits, from the current administrative structure. And early groundwork should be laid for a switch from the current state-run system, which sets important political risks against the economic advantages of more complete funding, to a more secure system based on individual responsibility and control.

To return to a point made at the outset, a principal theme of public policy over the past 15 years, in Canada as elsewhere, has been an incremental abandonment of policy habits developed during the preceding quarter-century — an era when previously acknowledged limits to government's capacity seemed to have vanished. Often reluctantly, policymakers have addressed their overcommitments one by one, as various financial indicators began to signal approaching crisis. The federal debt explosion in the early 1980s was the first major signal, triggering a significant, though far from complete, attempt to come to grips with the costs of federal programs. The provincial debt explosion in the early 1990s was the next signal, and the story of the measures taken in response and their consequences for provincial programs and taxes is a central one of the current decade. Now, the dramatic deterioration in the outlook for the Canada Pension Plan looms as the biggest untouched fiscal problem. It is time to start fixing it.

Notes

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1 The sources for Figure 1 are: Sidney Homer and Richard Sylla, *A History of Interest Rates*, 3rd ed. (New Brunswick, NJ: Rutgers University Press, 1991); Raymond Goldsmith, *Premodern Financial Systems* (Cambridge: Cambridge University Press, 1987); E.H. Phelps Brown and S.V. Hopkins, "Seven Centuries of the Prices of Consumables, Compared with Builders' Wage Rates," *Economica* 23 (1956); data provided by Mark Mullins of Midland Walwyn Inc.; Phyllis Deane and W.A. Cole, *British Economic Growth, 1688–1959: Trends and Structure* (Cambridge: Cambridge University Press, 1967); E.P. Neufeld, *The Financial System of Canada* (Toronto: Macmillan, 1972); M.C. Urquhart, *Gross National Product, Canada, 1870–1926: The Derivation of the Estimates* (Kingston; Montreal: McGill-Queen's University Press, 1993); Statistics Canada, CANSIM on CD-ROM; *OECD Economic Outlook*, various issues; and International Monetary Fund, *International Financial Statistics* on CD-ROM.

The gaps shown in Figure 1 likely understate the true situation since the historical interest rates are minimum observations, while, in more recent times, the limited range of (fixed income) assets from which the low or negative real interest rates that prevailed before the 1980s have been calculated may understate the economy-wide cost of funds, which usually exceeded growth rates even in the 1970s (see Steven James et al., "The Economics of Canada Pension Plan Reforms," Department of Finance Working Paper 95-09 [Ottawa, November 1995], pp. 7–8).

2 Since 1980, real growth in gross domestic product has averaged 2.5 percent, while real interest rates have averaged 5.3 percent.

3 See William B.P. Robson and William M. Scarth, "Debating Deficit Reduction: Economic Perspectives and Policy Choices," in William B.P. Robson and William M. Scarth, eds., *Deficit Reduction: What Pain? What Gain*, Policy Study 23 (Toronto: C.D. Howe Institute, 1994), pp. 4–7.

4 For estimates of the impact of rising public sector debts in the major countries on world interest rates, see Robert Ford and Douglas Laxton, "World Public Debt and Real Interest Rates," IMF Working Paper 95/30 (Washington, DC: International Monetary Fund, 1995).

5 It is often useful to distinguish between nominal interest and growth rates on the one hand and real, or inflation-adjusted, interest and growth rates on the other. This distinction is important in situations where expected and actual inflation rates differ. Since most of this *Commentary* deals with long-term projections of the future, this distinction is less important: it is assumed that the gap between nominal interest rates and nominal growth rates is the same as that between real interest rates and real growth rates.

6 There are problems in comparing the federal debt, a liability composed principally of debt instruments paying market rates of interest, with the CPP and QPP unfunded liability, which is the gap between the amount that would need to be invested at an assumed rate of interest to meet *already* accrued benefits, and the amount actually on hand. For one thing, the rate at which federal debt bears interest is considerably higher than the assumed rate at which CPP and QPP liabilities are compounding. Evaluating the future tax burden of both types of liability using common assumptions about future economic growth and interest rates would reduce the size of CPP and QPP liabilities relative to the federal debt.

7 The "full-cost" rate referred to here is the rate at which members of a normal cohort of entrants to the plan would need to contribute throughout their active lifetimes in order to meet all costs attributable to them and their beneficiaries. It was 10½ percent in 1993 and, based on projected increases in life expectancy for each succeeding cohort, is increasing at a rate of about 0.01 of a percentage point per year. See Canada, Office of the Superintendent of Financial Institutions (OSFI), *Canada Pension Plan: Fifteenth Actuarial Report as at 31 December 1993* (Ottawa, 1995), pp. 99–100, for more discussion of this concept and its relation to the calculation of the CPP's unfunded liability.

8 Paul A. Samuelson, "Social Security," *Newsweek*, February 13, 1967, p. 88.

9 The Canadian Institute of Actuaries provides a neat summary of the difference that the returns-versus-growth configuration makes. In a "1960s" environment — a low (0.33) senior-to-worker dependency ratio and interest rates equal to the rate of wage growth — a pay-as-you-go plan providing an indexed retirement pension at 40 percent of final earnings will cost 11 percent of covered payroll, while a funded plan will cost 16.5 percent to deliver the same benefit. In a "1990s" environment — a higher (0.40) senior dependency ratio and interest rates three percentage points above the rate of wage growth — the indexed benefit at 40 percent of final earnings will cost 14.5 percent under the pay-as-you-go plan, but only 7.2 percent under its funded counterpart. See Canadian Institute of Actuaries, *Troubled Tomorrows — The Report of the Canadian Institute of Actuaries' Task Force on Retirement Savings* (Ottawa, 1995), p. 23.

10 Not that it is not being thought of! Bill C-299, introduced in Parliament in December 1994, proposed, among other things, boosting the maximum pension by

140 percent and lowering the age of retirement for most beneficiaries.

11 See *Maclean's*, "Taking the Pulse" December 25, 1995, p. 33; and Canadian Institute of Actuaries, *Troubled Tomorrows*, p. 18. Roughly three-quarters of respondents to a September 1995 poll commissioned by the Bank of Nova Scotia indicated doubt about the CPP's ability to provide them with retirement income, with more than four in five of those aged 30–49 having such doubts. See Bruce Cohen, "Canadians Losing Faith in Canada Pension Plan: Poll," *Financial Post*, October 6, 1995.

12 Canada, Receiver General for Canada, *Public Accounts of Canada 1995*, vol. 1, *Summary Report and Financial Statements* (Ottawa: Canada Communication Group — Publishing, 1995). pp. 1.8, 1.16.

13 The difference between actual collections and those that would have been collected at the full-cost rate is analogous to the federal government's "primary" — that is, excluding interest payments and receipts — budgetary balance. Aside from changes resulting from alterations to the plan and adjustments in assumptions, the rest of the annual increase in the CPP's unfunded liability is analogous to the interest compounding on past primary deficits.

14 In his 1992 report, the Auditor General noted that inadequate policing might be allowing $65 million annually in disability overpayments. If this amount has only kept pace with the overall increase since then — and the volume of the increase suggests that the potential for overpayment has increased — it would now be running in excess of $100 million annually. See Canada, Auditor General, *Report to the House of Commons 1992* (Ottawa: Supply and Services Canada), pp. 60–62; idem, *Report to the House of Commons 1993* (Ottawa: Supply and Services Canada), pp. 486–488; and Canada, Human Resources Development Canada, *Income Security Programs 1993–94: Report on the Old Age Security, Child Tax Benefit, Children's Special Allowances and Canada Pension Plan* (Ottawa: Supply and Services Canada, 1994), pp. 15, 22.

15 Calculated from data in G. Picot, Z. Lin, and C. Beach, "Recent Trends in Employer Payroll Taxes," *Canadian Economic Observer*, September 1995, p. 3.22.

16 In short, the distorting effects of any individual tax are likely to be greater the larger are the distorting effects of other taxes and programs. However, for an instance where a payroll tax — in this case, UI premiums — may offset the distorting effects of income taxes, see Bev Dahlby, "The Distortionary Effect of Rising Taxes," in Robson and Scarth, eds., *Deficit Reduction*, pp. 43–72.

17 Working in the underground economy is better than not working at all. Movement out of the formal economy is problematic, however, for many reasons, among them the greater tax burden on remaining taxpayers; lower productivity in the underground economy resulting from inferior access to key inputs, such as finance, materials, and business services; and deterioration in overall civic capital.

18 In its survey of retirement systems around the world, the World Bank failed to find a single one in which benefit schedules had remained stable through the lifetime of a single age cohort. See World Bank, *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth* (New York: Oxford University Press for the World Bank, 1994), p. 112.

19 Canadian Institute of Actuaries, *Troubled Tomorrows*, pp. 14–15.

20 On declining relative earnings of younger and lower-income workers, see G. Picot and J. Myles, "Social Transfers, Changing Family Structure and Low Income among Children," Research Papers Series 82 (Ottawa: Statistics Canada, Analytical Studies Branch, 1995); and R. Morissette, J. Myles, and G. Picot, "Earnings Polarization in Canada, 1696–1991," in K. Banting and C. Beach, eds., *Labour Market Polarization and Social Policy Reform* (Kingston, Ont.: Queen's University, School of Policy Studies, 1995).

21 For a useful analysis of the situation among the G-7 countries, see Paul Van den Noord and Richard Herd, "Pension Liabilities in the Seven Major Economies," OECD Economics Department Working Papers 142 (Paris: Organisation for Economic Co-operation and Development, 1993). With the partial exception of the United States, other G-7 countries will see large rises in the ratio of elderly to total population over the next half-century, and several (France and Italy, in particular) have implicit pension liabilities that are considerably larger than Canada's.

22 World Bank, *Avoiding the Old Age Crisis*, pp. 30, 34, 138–40.

23 See, for example, David Slater, "Reforming Canada's Retirement Income System," *Canadian Business Economics*, fall 1995.

24 See, for example, the account of the CPP communications strategy "intended to raise public awareness of the Plan's benefits and provisions, and increase public confidence in the CPP's long-term financial soundness" in Canada, Human Resources Development Canada, *Income Security Programs 1993–94*, p. 17.

25 Alteration of the circumstances in which changes to the CPP can be made would be a worthy element of a reform package. At present, major amendments to CPP benefits and contributions require the consent of at least two-thirds of the provinces containing at least two-thirds of the population (excluding the territories) and cannot take effect until the beginning of the third year in which notice of intention to introduce them was set before Parliament.

26 See World Bank, *Avoiding the Old Age Crisis*, especially p. 127.

27 Designed to prevent a sagging dollar from hurting the separatists' chances, those purchases, if successful, would have had a major negative effect on the value of the Caisse's portfolio if a separatist victory had been followed by a run on the dollar.

28 For a summary description of the mandate and structure of such institutions, see Keith Ambachtsheer, "Saving Canada's Social Security System: A Bold Proposal," *The Ambachtsheer Letter*, No. 15, April 12, 1995, p. 3.

29 For the sake of a more complete picture of the fiscal impact of higher contributions, it should be noted that moving to the full-cost rate, for example, would produce an appreciable (in excess of $600 million) dip in federal income tax revenue, with the provinces' experiencing a drop proportional to their respective tax rates, as a result of the larger credit for employee and self-employed CPP premiums. The hit would be somewhat larger if the CPP credit were changed to a deduction, which it ought to be, given the mandatory nature of the tax. (This inappropriate treatment is highlighted by the fact that the employer's contribution to the CPP is not included in income and is therefore treated as a deduction. The same logic — or illogic, if current practice is being referred to — applies to UI premiums.)

30 These last two characteristics are related. The explosion of CPP disability benefits appears to have been caused partly by efforts to move beneficiaries of provincial disability benefits onto the more generous CPP system. Perhaps revealingly, given the lack of comparable jurisdiction-shifting incentives in Quebec, the QPP has experienced no comparable increase in disability beneficiaries. See Canada, Human Resources Development Canada, "CPP Disability Incidence Study" (Ottawa, forthcoming).

31 OSFI, *Canada Pension Plan* , p. 9.

32 The problems of rising claims faced by most government disability plans point to the need for revamping them in a way that introduces more private sector disciplines and insurance principles. When it comes to older beneficiaries, however, the transitional problems are considerable, since private disability insurance for older workers can be enormously expensive.

33 The change in the accrued liability is not exact: it is based on the present value of CPP expenditures over a 33-year time horizon, discounted at 6 percent. The level rates cited are simply the minimum rates that, if maintained through 2100, would prevent the CPP Account from falling below zero at any time during that period (not necessarily beyond it).

34 Robert L. Brown ("Achieving Stability and Equity with Paygo Funding," *Policy Options*, September 1995, p. 21) shows retirement ages yielding equivalent postretirement life expectancy rising from 65 in 1966 to 68.36 in 1991 and to 70.28 by 2021.

35 Disruptions to defined benefit pension plans whose payouts are integrated with those of the CPP would be minimized for the same reason. For an overview of the integration of such plans with the CPP — which generally involves paying a reduced-rate pension on earnings up to the maximum covered by the CPP and a higher one after that — see Hubert Frenken, "Pension Plan Potpourri," *Perspectives on Labour and Income*, cat. 75-001 (Ottawa: Statistics Canada, summer 1995), p. 24.

36 W. Paul McCrossan, "Replacing the Canada Pension Plan: The Problems of Transition" (remarks at the Fraser Institute Conference, "Replacing the Canada Pension Plan," Toronto, November 15, 1995).

37 Contributions related to pensions are typically in the 8–10 percent range in these plans, with a further 3–4 percent related to disability and survivor's benefits. A good recent account of the Chilean experience can be found in Luis Larrain Arroyo, "Social Security Reform in Chile" (paper presented at the Fraser Institute conference, "Replacing the Canada Pension Plan," Toronto, November 15, 1995). For a summary of it and similar plans in Argentina, Colombia, and Peru, see World Bank, *Averting the Old Age Crisis*, especially pp. 206, 277.

38 Among respondents to an Investor's Group/Gallup poll reported in the *Financial Post* and *The Globe and Mail* July 18, 1995, the proportion saying they owned RRSPs rose from 48 percent in 1994 to 53 percent in 1995. Sixty-eight percent of respondents in 1995 said they expected to rely on income from an RRSP in retirement, up from 63 percent in 1994.

39 In Chile, administration costs were almost 15 percent of assets when the system was established in 1982; ten years later, they were down to 1.6 percent — comparable to the fees charged on a typical mutual fund in Canada. See World Bank, *Averting the Old Age Crisis*, p. 213.

40 Although the fact that the vast majority of money-purchase plans contain no real return bonds suggests that their owners may not *want* this form of protection, perhaps feeling that the high nominal returns available on regular bonds are sufficient.

41 Average administrative expenses per CPP participant (contributors and beneficiaries together) during the first half of the 1990s were one-quarter higher, after adjustment for inflation, than they had been 20 years earlier, despite the economies of scale that growing numbers of participants should have produced, as well as the advent of more powerful and inexpensive computing technology.

42 The treatment of participants in defined-benefit plans under a mandatory RRSP system raises questions that cannot be addressed fully in this paper. While integrating the two schemes is possible, there are some salient problems. For one, integration requires a good formula for judging the level of accrued benefit under a defined-benefit plan that is sufficient to satisfy the mandatory requirement. (On problems with the Pension Benefit Adjustment currently used for calculating RRSP limits for defined-benefit plan members, see Canadian Institute of Actuaries, *Troubled Tomorrows*, pp. 59–61.) For another, one might wish to make the vesting and portability provisions of the part of the defined-benefit plan corresponding to the mandatory requirement similar to those of RRSPs. Finally, one might wish to re-examine the major remaining unfunded pension plans in the public sector: should federal civil servants,

for example, be judged to have met their requirements on the basis of an accumulating unfunded liability to be paid by future taxpayers? A truly ambitious pension reform would wind these plans up in favor of less generous funded equivalents. Less ambitious changes might insist that at least the portion of the plan satisfying the mandatory requirement be funded from the date of the changeover.

43 Whether provincial regulation would result in important interjurisdictional spillovers depends in large part on the generosity and structure of the OAS/GIS system. If, to take the most problematic case, OAS/GIS benefits are substantial and are taxed back at high marginal rates, there are problems: provinces may impose no mandatory provision, knowing that myopic citizens will fall back on the federal budget for support in their old age; provinces that did impose a mandatory provision would, in effect, be subjecting the contributions yielding pensions in the taxback range to federal confiscation.

44 That is, workers who had been entitled to full CPP pensions by 2008 would, on retirement, receive pensions based on a contributory period that ended that year, adjusted for wage growth in the interim.

45 Depending on their generosity and structure at the time, higher OAS and GIS payments to those with reduced or no CPP benefits would add further costs to the federal budget. If the eligibility age for these programs were also raised, however, their net cost would still be substantially smaller.

46 One often overlooked argument in the debate over funded versus pay-as-you-go pension plans is that, if an environment of growth rates higher than interest rates were to reappear, adjustments to enrich the benefits or lower the effective burden of contributions could always be made out of the formal government budget — adjustments that are easier to undo if the environment switches again. In this important sense, the risks of mistakenly designing a pension plan for the current environment are less than those of mistakenly designing a plan for a pay-as-you-go environment.