
The Canada Pension Plan: Looking Back at the Recent Reforms

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Introduction

In 1998, after extensive consultation, the federal government and the provinces implemented a package of reforms to the Canada Pension Plan (CPP). Two particularly significant reforms were included.

First, there was a sharp increase in the combined employer-employee contribution rate, from 5.85 per cent in 1997 to the steady state rate of 9.9 per cent in the year 2003 and beyond. The steady-state contribution rate is the rate necessary to fully fund new benefits and to service the existing unfunded liability.

The sharp increase in contribution rates will result in a much larger reserve fund — estimated to rise to about five years' worth of benefits. In light of this fact, the second major reform was to establish an independent, trustee CPP Investment Board with a mandate to invest in marketable securities, including equities, in order to obtain a higher rate of return on the enlarged CPP reserve fund.

Importantly, the benefit reductions were relatively modest. The benefit reductions consist of:

- using a five-year rather than a three-year average of the year's maximum pensionable earnings (YMPE) to calculate retirement pensions (and the earnings-related portion of disability and survivors' benefits);
- freezing the maximum death benefit at \$2,500; and

- tightening eligibility conditions, as well as reducing payments for disability benefits.

The primary thrust of the reforms designed to improve the funded status of the CPP is thus to increase contributions. In fact, the schedule of steep increases in the employer-employee contribution rate is accompanied by the freezing of the year's basic exemption (YBE) at \$3,500. Due to inflation, the freeze on the YBE serves to expand the base of contributory earnings with the passage of time.

In this paper, I offer an economist's perspective on several aspects of the reform package. In particular, I address the following questions:

- With the benefit of hindsight, what were the economic arguments that proved successful in the political arena and ultimately led to the reform package?
- Is the steady-state contribution rate of 9.9 per cent likely to prove sufficient to finance the promised level of retirement (and disability) benefits?
- What are the prospects that the new investment strategy for the CPP fund will produce a higher real rate of return over the long run, as is assumed in the estimate of the steady-state contribution rate?
- What about "the path not taken"; that is, possible reforms to the CPP that were not undertaken, including those that have been considered in prior studies of the possible reform of Canada's public retirement income system?

The Economic Arguments Used to Achieve Reform

The economic argument used to "sell" the package of CPP reforms was one-dimensional: that of intergenerational equity.

The federal government emphasized the sharp increase in the pay-go contribution rate that would accompany the aging of the Canadian population. The implicit rate of return on required CPP contributions, by age cohort, was calculated and shown to be dramatically lower for new entrants (i.e., the younger generation) than, for example, those Canadians approaching the retirement age of 65 established by the CPP.

In *An Information Paper for Consultations on the Canadian Pension Plan*, released by the federal, provincial and territorial governments of Canada in February 1996, the importance of intergenerational equity to the consensus-building exercise is unmistakable. The *Information Paper* notes that:

If pay-as-you-go financing is left in place, future generations of Canadians will be paying 14.2 per cent of contributory earnings for their CPP benefits — much more than the 5.6 per cent that today's workers are paying. The advantage of pay-as-you-go financing would be that the increase to 14.2 per cent could be gradual — taking place over many years. However, it fails to deal with the fundamental challenge of whether it is either reasonable or fair to expect younger generations to pay such high contribution rates. (1996, p. 25)

Less quantitatively, but with more obvious political appeal, the *Information Paper* emphasizes that:

The basic challenge facing Canadians today is one of fairness and equity. If no changes are made to the CPP and the way it is financed, our children and grandchildren will be asked to pay two to three times more than we are paying for the same pensions from the CPP. For the past 30 years, we have not paid our way. Even today, we are not paying our way. Today's CPP pensioners have paid much less than their benefits are worth. In contrast, future generations will be asked to pay considerably more than their benefits are worth. (ibid., p. 4)

This concern with intergenerational equity is especially relevant, given the fact that the other pillars of the public retirement system in Canada — Old Age Security (OAS) and the Guaranteed Income Supplement (GIS) — are financed on a pay-go basis.¹

¹The security of public pensions is ultimately linked to the willingness of future generations to provide the pensions that are promised to today's workers. This willingness will depend on two considerations: first, the share of national income required to meet the pension obligations, which depends on the level of national income and on the ratio of pensioners to workers; and second, the perceived likelihood that the pension system will be perpetuated, so that future generations of Canadians will be supported in turn during their own retirement. In other words, the viability of today's pensions depends on both long-term economic considerations and future generations' acceptance of the pension "rules of the game" established by the current generation. If the perception is that the rules of the game have been singularly unfair to the now-working generation, it is reasonable to conjecture that promised benefits could be placed at risk.

Surprisingly, any discussion of the economic efficiency issues, which have concerned professional economists at least since 1974, when Feldstein wrote his now classic paper on the possible impact on private savings of pay-go public pension programs (Feldstein, 1974), have been virtually absent from the recent public debate.

In the standard life-cycle model of consumption, the existence of a pay-as-you-go public pension plan will depress personal savings and thus reduce the stock of domestic capital. The reasoning is straightforward. With the promise of public pension income during retirement, households have less need to save from their disposable income, in order to provide for their consumption needs during retirement.

There are two important caveats to these predictions of the standard life-cycle model. First, under a pay-as-you-go public pension plan, households may reduce their consumption and increase their savings (and ultimately their bequests) in order to offset the higher “tax burden” their children face. To the extent that the behaviour of households conforms to the Ricardian equivalence model popularized by Barro (1974), the existence of a pay-as-you-go public pension plan will not depress personal savings, and the decision to increase the degree of funding of such a plan will not lead to an increase in personal savings.

Second, Canada is a small, open economy, and international capital flows are likely to limit the extent to which a higher domestic savings rate translates into an increase in the stock of domestic capital. In the extreme case of perfect capital mobility, there would be an increase in the ownership by residents of Canada of an unchanged domestic capital stock, as well as an increase in the ownership of foreign assets by residents of Canada. However, as noted in a recent contribution by Gordon and Bovenberg (1996), empirical studies confirm that there is a high correlation between domestic savings and investment — that is, that international capital is not perfectly mobile. There is, not surprisingly, disagreement among economists as to the magnitude of any reduction in private savings that accompanies the existence of a pay-go public pension program. Perhaps this disagreement explains the complete absence of attention to this issue in the *Information Paper*.²

²In prior studies of the role of the Canada/Quebec Pension Plan, the issue of its impact on savings and capital formation is accorded serious attention. For example, the Task Force on Retirement Income (Canada, 1979, p. 242) writes: “One objection often registered against enlarging the C/QPP is that it would affect adversely the level of saving in the economy and would reduce the amount of capital available to the private sector, retarding future economic growth. The validity of this argument was considered in Chapter IV. It was indicated there that both the empirical and theoretical bases for this objection are at least

Nonetheless, it seems likely that the scheduled increase in CPP contribution rates will yield an increase in personal savings and in the domestic capital stock. An increase in CPP contributions, with no change or reduction in retirement benefits, will reduce the wealth of households. This will lead to a reduction in consumption, and thus to an increase in personal savings (public plus private).

Both Ricardian equivalence and open economy considerations, however, make it difficult to offer a precise estimate of the extent to which higher CPP contribution rates will translate into higher savings and ultimately into a higher stock of real capital.³

Professional economists have also studied the efficiency implications of the link between the payroll taxes used to finance public pension programs and the perceived benefits of such programs to individual taxpayers.

The economic rationale for using payroll taxes to finance social security benefits depends on a close association between an individual's contributions and his or her benefits. Assume, for example, that an individual's contribution to a public pension plan pays for the pension benefit that the individual earns during the period. Assume, as well, that the individual is content to save this (or a larger) amount towards retirement. Then there should be no distorting impact on the individual's labour supply. The individual's contribution to the public pension plan is just the "price" of the pension benefit to which he or she becomes entitled during the period.

In contrast, consider the case of an individual who perceives there to be no benefit associated with the pension contribution. To this person, the contribution to the public pension plan is simply a tax on earned income. Like other such taxes, the pension contribution discourages work and thus adversely affects the long-run labour supply. For those with earnings less than the YMPE, contributions raise the marginal tax rate on income that is already subject to a high marginal rate, thus discouraging additional hours of work. For those with earnings above the YMPE, CPP contributions raise the average tax rate. This may also adversely affect the long-run labour supply by, for example, encouraging individuals to work in the underground economy.

open to serious question."

³To the extent that higher savings are used to acquire foreign assets (rather than to increase the domestic capital stock), consumption needs in retirement will be financed by imports — that is, by claims to goods and services produced in other countries.

Economic studies suggest that the ultimate burden of employer payroll taxes falls mostly on employees (i.e., these employer costs are shifted back to the worker, through lower cash wages or other benefits). If this is so, a close linkage between pension contributions and pension benefits will eliminate the disincentives to long-run labour supply associated with payroll taxes. This is an important consideration, as long as there is some long-run elasticity of labour supply with respect to the net-of-tax real wage.⁴

There is no reference to this line of reasoning in the *Information Paper*. However, to the extent that the higher contributions rates are seen by younger Canadians as enhancing the security of the CPP retirement benefits promised to them, this efficiency rationale could also have been invoked as part of the motivation for reform.⁵

The Steady-State Contribution Rate of 9.9 Per cent

To calculate the required contribution rate for the CPP, one must adopt assumptions regarding a broad set of economic and demographic factors. These include, but are not limited to: fertility, migration, mortality, disability, employment wage increases, price increases and the rate of return on investment.

The fact that the estimated steady-state contribution rate is slightly *less* than 10 per cent (i.e., 9.9 per cent) invites the question of whether the actuarial and economic assumptions used to calculate this rate are reasonable and appropriate, or have been adopted to produce a politically attractive result.

David Slater and his co-author Bill Robson have raised some important concerns regarding this possibility. After reviewing the *Canada Pension Plan: Seventeenth Actuarial Report as at 31 December 1997*, they conclude that:

As for the key question — whether public confidence in the CPP's promises will increase commensurately with its improved financial condition — the sustainability of the 9.9 per cent rate will probably be crucial in determining the answer.

⁴The prevailing view among economists is that the long-run elasticity of labour supply is small, but not zero.

⁵In Pesando (1997), I argue that this efficiency issue favours the partial privatization of the CPP.

Although the Seventeenth Report's bottom line indicates that the 9.9 per cent rate is more than enough, the details of its projections give rise to some cautions.

The balance of risks appears negative with respect to several key assumptions; those about disability benefit, immigration, earning growth, and inflation stand out as problematic. The reliability of these assumptions needs review in future reports. (Slater and Robson, 1999, p. 15)

As an economist, I find the assumption about the long-term inflation rate to be of particular interest and of instructive value.

The Chief Actuary, in the *Seventeenth Actuarial Report*, assumes that the long-term inflation rate will be 3 per cent. This figure is lower than the assumed inflation rate of 3.5 per cent adopted in the *Fifteenth* and *Sixteenth Actuarial Reports*.

The higher is the assumed inflation rate, the lower will be the estimate of the steady-state contribution rate. In the main, this is due to changes instituted on the benefit side of the CPP as part of the reform package. In particular, the calculation of the retirement benefit is now linked to a five-year, instead of a three-year, average of the YMPE. The death benefit is now fixed, in nominal terms, at \$2,500.

Further, the YBE is now frozen, in nominal terms, at \$3,500. As a result, the higher is the inflation rate, the lower is the real value of the initial earnings which are excluded from required CPP contributions.

Since 1991, the Bank of Canada — in agreement with the minister of finance — has committed monetary policy in Canada to the sole objective of achieving an inflation rate that lies between 1 and 3 per cent. Moreover, since 1993, the Bank of Canada has succeeded in achieving this objective.

Further, signals from the financial market indicate that market participants believe that the Bank of Canada will succeed in keeping the inflation rate below 3 per cent for the foreseeable future. At present (June 2001), the explicit real interest rate on the principal Real Return Bond of the Government of Canada (the 4.25s of 1 December 2021) is 3.6 per cent. In conjunction with the current interest rate of 5.9 per cent on conventional Government of Canada bonds with 30 years to maturity, the implicit "market" expectation of the long-term inflation rate is 2.22 per cent.⁶

In light of the above, the adoption by the Chief Actuary of a long-term inflation rate of 3 per cent seems problematic. As noted by Slater and Robson (1999), the use of the mid-point of the target range (i.e., 2 per cent) would increase the steady state contribution rate by 0.2 of a percentage point.

⁶Note that $(1.0590) \div (1.0360)$ less 1.0, times 100, is equal to 2.22 per cent.

The Projected Real Return on the CPP Investment Fund

In the *Seventeenth Actuarial Report as at 31 December 1997*, the real rate of return on new fund investments is assumed to equal 4 per cent. This figure, although the same as in the *Sixteenth Report*, is far above the assumed rate of 2.5 per cent in the *Fifteenth Report*.

Prior to the reform, CPP funds were invested primarily in 20-year, non-marketable securities of the provincial governments, at an interest rate that reflected the cost of funds to the federal government. After the reform, the newly established CPP Investment Board (a Crown corporation created by an Act of Parliament in December 1997) has a mandate to manage new CPP funds prudently with a view to achieving a maximum rate of return without undue risk of loss. The CPP Investment Board is currently authorized to invest in domestic equities, and it is to be allowed to actively invest (as opposed to replicating a broad market index) 50 per cent of its domestic equity portfolio.

The decision to permit the CPP Investment Board to invest in domestic equities is worthy of comment on several accounts.

First, the business community in Canada has historically opposed the move towards fuller funding for the CPP, in large part because of the possible “politicizing” of the investment decisions of the enlarged reserve fund. During the discussions that preceded the 1998 reforms, this concern was much attenuated. In sharp contrast, the potential for political interference with the investment decision of an enlarged reserve fund remains a focal point in discussions of a possible increase in the degree of funding for U.S. social security.

Second, investment in equities — especially in the United States — has produced very high realized returns for the past decade, except for the past year or so. The sharp run-up in stock prices, as reflected by price-earnings ratios that remain very high by historical standards, invites the concern that the CPP Investment Board may be directing a portion of funds into equities at a particularly inopportune time. Indeed, the CPP Investment Board, in its March 31, 1999 *Annual Report*, acknowledges this possibility:

Stock markets, most notably in the United States and Europe, have generally produced the strongest investment returns in the 20th century during the past few

years. While there is some risk that the Investment Board may be initiating its passive equity program towards the “top of the market”, history suggests that better returns can still be expected from equities over the long term compared with most other investment opportunities.

In light of the existence of the large portfolio of provincial and government bonds as well as the short-term operating reserve that are both administered by the federal government,⁷ the CPP Investment Board has been allocating 100 per cent of new investments to equities. In the first three-quarters of the current fiscal year, as a result of declines in equity markets in Canada and around the world, the CPP Investment Board incurred a net loss on its investments.

The returns to a diversified portfolio of equities will, of course, fluctuate from year to year and may on occasion be negative. The interesting question, from an economist’s perspective, is whether the high level of equity prices that currently exists has any implications for anticipated returns over the longer term. To address this question, it is useful to note several insights from the modern literature in financial economics.

First, the high historical rate of return on a diversified portfolio of equities relative to “safe” assets like Treasury bills has posed a puzzle for economists. Simply stated, the observed excess of the real rate of return on equities over the real rate of return on Treasury bills (about 5 per cent, which is the difference between a real rate of return on equities of 7 per cent and a real rate of return on Treasury bills of 2 per cent) appears to be too large to be explained by any reasonable degree of risk aversion of rational economic agents. Indeed, this historical evidence has become the source of what is now referred to as the “equity premium” puzzle (Mehra and Prescott, 1985).

It may be that the sharp run-up in equity prices (as reflected by historically high price-earnings ratios) is due to the “unwinding” of this puzzle. Investors may now be willing to hold equities at a much lower than historical anticipated rate of return; that is, at a much smaller premium relative to the rate of return offered by low-risk alternatives. If so, the implication is that the expected real rate of return on equities in the future is significantly less than the historical rate of return.

Second, it may be that the sharp run-up in equity prices is due to a fad or bubble. (This argument seems particularly well-suited to the recent collapse in

⁷As at December 31, 2000, the market value of assets invested by the CPP Investment Board was \$6.4 billion. As at this same date, the CPP had total assets of \$41.6 billion, including \$29.8 billion (at cost) of provincial and federal government bonds.

share prices of “new economy” stocks, as evidenced by the dramatic decline in the Nasdaq index from its March 2000 high.) If so, the present level of stock prices is vulnerable to a significant correction for a different reason: the possibility of the bursting of this bubble.

Empirical evidence from the U.S. market suggests that, over mid-term to long-term investment horizons, the real rates of return on a diversified portfolio of stocks are negatively correlated over time (Cochrane, 1999). This evidence is consistent with either the “overreaction” of equity prices (i.e., to mis-pricing) or to simple mean reversion in equilibrium returns. Whichever explanation is entertained, the message is again clear. The very high rates of return observed over the past five to ten years do imply, in light of this negative serial correlation, that rates are more likely than not to be relatively low in the next five to ten years.

The Path not Taken

As noted, the 1998 reform package contained only a modest reduction in CPP retirement benefits. Nevertheless, the public debate in the period leading up to the reforms focused solely on whether, and to what extent, CPP benefits should be reduced.

The nature of this discussion contrasts sharply to the public debate only 20 years earlier. At this time, the Canadian Labour Congress, and others, were aggressively campaigning for a doubling of the target replacement rate for the CPP, from 25 per cent to 50 per cent of the Average Industrial Wage. In 1979, in its joint review of public and private sector pension arrangements, the Task Force on Retirement Income Policy observed:

The fourth and last option to be considered as a means of dealing with the multiplicity of problems surrounding the present employer-sponsored pension system is to replace a substantial portion of it with expanded benefits under the Canada/Quebec Pension Plans (C/QPP) ¼If the objective of such an enlargement of the C/QPP were to ensure that most of the elderly maintain pre-retirement living standards after retirement, this would entail an increase in the replacement income provided by the C/QPP from the present level of 25% of average adjusted lifetime earnings to between 40–45%, and an increase in the ceiling on maximum pensionable earnings covered by those plans from the average level of wages and salaries — the present statutory target — to 1.5 times that level. (Canada, 1979, Vol. 1, p. 242)

Further, the task force characterized this possible reform in very sympathetic terms: “Therefore, a powerful case can be made for expanding the C/QPP” (ibid., Vol. 1, p. 243).

Of the possible retrenchments in CPP benefits that were not pursued, raising the age of entitlement or the “normal” retirement age merits particular note.

The possibility of raising the normal age of retirement to beyond age 65 (as is being done with U.S. social security benefits) is raised in the 1996 *Information Paper*. Raising the normal age of retirement from age 65 to (say) 67, with advance notice of five to ten years, would significantly reduce the steady-state contribution rate for the CPP. Further, the combination of the aging of the Canadian population and the increasing longevity of older Canadians suggest the potential attractiveness of this initiative.⁸

In fact, there was no political interest in raising the normal retirement age under the CPP. In part, this is understandable, given the continuing trend towards earlier retirement among Canadian males.⁹ Of less persuasiveness, at least to professional economists, is the continued reliance of those who oppose this initiative on the “lump of labour fallacy”; that is, the claim that encouraging or requiring later retirement for older workers will mean fewer jobs for younger workers.

In the *Information Paper*, there is an attempt (although modest) to overcome this concern:

Today, there are concerns that delaying the age of eligibility for pensions would keep people in the workforce longer, making it harder for young people to find jobs. It is important to note that when the baby boomers start to retire, it is expected that there will be no shortage of jobs, so delayed retirement would not hurt young people. (Canada, Provinces and Territories, 1996, p. 36)

Finally, it merits note that the “partial privatization” of the CPP was never a part of the mainstream reform agenda. In a previous paper, I have

⁸In 1966, when the CPP was introduced, the remaining life expectancy of Canadians aged 65 was 15.3 years. By 1995, the remaining life expectancy of Canadians aged 65 had risen to 18.4 years. By the year 2015, this figure is anticipated to increase further, to 19.4 years.

⁹The participation rates of males aged 55 to 64 and aged 65 and above have declined steadily for the past 25 years. Because of the dramatic increase in the participation rates of married females, one cannot simply inspect the participation rates for older females to determine if there is a corresponding trend for females.

reviewed the economic case for the partial privatization of future retirement benefits (Pesando, 1997).

In brief, the scheduled increase in contributions would be directed to a system of mandatory retirement savings accounts. This scheduled increase represents most of the cost of fully funding the retirement benefits currently provided by the CPP. The existing CPP contributions would finance the disability, death and survivors' benefits provided by the plan, and also service the unfunded liability.

Privatization would have several key advantages. Working Canadians would perceive the higher contributions as purchasing a pension benefit, not simply as a tax increase. This would reduce both the short- and long-term distortions otherwise associated with a payroll tax. Privatization could also serve as a catalyst to further reform, such as servicing the existing unfunded liability through general tax revenues rather than through a regressive payroll tax.

In May of this year, President George W. Bush — implementing a campaign promise — appointed a bipartisan commission to report back to him in the fall with specific plans for creating personal investment accounts within the U.S. social security system. Recently, Sweden allowed its citizens to invest a portion of their government pension contributions themselves, in mutual funds or other savings plans. Germany's government has recently proposed a similar idea.¹⁰

Concluding Comment

The “next wave” in the ongoing debate about reform of public pension programs, driven worldwide by demographics and the continuing concern with rising costs, is already in motion. Although discussion of further reform of the CPP has quieted down, at least for the near term, one can confidently predict that this issue will again surface on the political agenda.

¹⁰For a sample of the rapidly-expanding literature in this field, see, for example, James *et.al.* (1999); and Feldstein and Samwick (2000).

References

- Barro, R.J. (1974), "Are Government Bonds Net Wealth?" *Journal of Political Economy* 82, 1095-1118.
- Canada. Task Force on Retirement Income Policy (1979), *The Retirement Income System in Canada: Problems and Alternative Policies for Reform* (Ottawa: Supply and Services Canada).
- Canada, Provinces and Territories (1996), *An Information Paper for Consultations on the Canada Pension Plan* (Ottawa: Supply and Services Canada).
- Canada. Office of the Chief Actuary (1998), *Canada Pension Plan: Seventeenth Actuarial Report as at 31 December 1997* (Ottawa: Supply and Services Canada).
- Cochrane, J.H. (1999), "New Facts in Finance", NBER Working Paper No. 7169 (Cambridge, MA: National Bureau of Economic Research).
- Feldstein, M. (1974), "Social Security, Induced Retirement and Aggregate Capital Accumulation", *Journal of Political Economy* 82(5), 905-926.
- Feldstein, M. and A. Samwick (2000), "Allocating Payroll Tax Revenue to Personal Retirement Accounts to Maintain Social Security Benefits and the Payroll Tax Rate", NBER Working Paper No. 7767 (Cambridge, MA: National Bureau of Economic Research).
- Gordon, R.H. and A.L. Bovenberg (1996), "Why is Capital so Immobile Internationally? Possible Explanations and Implications for Capital Income Taxation", *American Economic Review* 86(5), 1057-1075.
- James, E. *et al.* (1999), "Mutual Funds and Institutional Investments: What is the Most Efficient Way to Set Up Individual Accounts in a Social Security System?" NBER Working Paper No. 7049 (Cambridge, MA: National Bureau of Economic Research).
- Mehra, R. and E.C. Prescott (1985), "The Equity Premium: A Puzzle", *Journal of Monetary Economics* (March), 145-161.
- Pesando, J.E. (1997), "From Tax Grab to Retirement Savings: Privatizing the CPP Premium Hike", *The Pension Papers* (Toronto: C.D. Howe Institute).
- Slater, D.W. and W.B.P. Robson (1999), "Building a Stronger Pillar: The Changing Shape of the Canada Pension Plan", *The Pension Papers* (Toronto: C.D. Howe Institute).