Actuarial Report

(20th)

supplementing the Actuarial Report on the

Canada Pension Plan

As at 31 December 2000

Office of the Superintendent
of Financial Institutions

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8 April 2004

The Honourable Ralph Goodale, P.C., M.P.
Minister of Finance
House of Commons
Ottawa, Canada
K1A 0G5

Dear Minister:

In accordance with section 115(2) of the *Canada Pension Plan*, which provides that an actuarial report shall be prepared whenever a Bill is introduced in the House of Commons to amend the *Canada Pension Plan*, I am pleased to submit the 20th Actuarial Report on the Canada Pension Plan.

Yours sincerely,

Jean-Claude Ménard

Jean-Claude Ménard, F.S.A., F.C.I.A.
Chief Actuary

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Executive Summary

This is the 20th Actuarial Report since the inception of the Canada Pension Plan (CPP) in 1966. It has been prepared in compliance with subsection 115(2) of the *Canada Pension Plan*, which provides that,

> "… the Chief Actuary shall, whenever any Bill is introduced in or presented to the House of Commons to amend this Act in a manner that would in the opinion of the Chief Actuary materially affect any of the estimates contained in the most recent report under this section made by the Chief Actuary, prepare, using the same actuarial assumptions and basis as were used in that report, a report setting forth the extent to which such Bill would, if enacted by Parliament, materially affect any of the estimates contained in that report."

The most recent report made pursuant to section 115(2) was the 19th Actuarial Report, which was tabled in the House of Commons on 17 June 2002. Therefore, this 20th Actuarial Report has been prepared on the basis of the 19th Actuarial Report to show the effect of Part 4 of Bill C-30 on the long-term financial status of the CPP.

Part 4 of Bill C-30 amends the CPP to clarify the amount that each employer is required to contribute for a year as an employer's contribution to be the amount that must be remitted by the employer on the contributory salary and wages they pay the employee as set out in section 9(1) of the CPP legislation. Further, the amendments clarify that for the employer only amounts in excess of this required amount can be refunded to the employer with this provision deemed to come into force on 18 March 2003.

In addition, Part 4 of Bill C-30 amends the Plan to allow an employer who immediately succeeds another during a year after 2003 as a result of a change in business structure to take into account amounts relating to contributions for the employee by the predecessor employer in determining contributions to be made by the employee and the employer on the salary and wages paid by the successor employer to the employee. Equivalent treatment is extended to self-employed individuals who become or cease to be employees of a corporation they control.

Finally, Part 4 of Bill C-30 amends the Plan to allow for reinstatement of a CPP disability pension that has ceased to be payable because a person returns to work, in the situation where the person again becomes incapable of working within a period of two years after the date when payment of the pension ceased. It also provides for reinstatement of benefits to children of a person whose disability pension is reinstated. The change would be effective as of 1 January 2004.

Main Findings

If the Plan is not amended:

1. Contributions in 2004 would be $951 million lower than in the 19th Actuarial Report, reflecting a recent federal court of appeal decision broadening the interpretation of the legislative provision relating to employer contribution refunds. (Employers can apply for a refund for up to four years after the end of the year in which they claim they are due a refund.)

2. Annual CPP contributions would be 0.8% lower ($226 million in 2005) in the short-term and 0.6% lower by the end of the projection period.

3. Annual administrative costs would increase by 13.5%. This represents an increase of $54 million in total administrative expenses for the Plan in 2004.

4. By 2050, CPP assets would be a projected $1,377 billion, $201 billion lower than projected under the 19th Actuarial Report. As a result, the projected level of Plan assets in 2050 would cover 5.1 years of annual Plan expenditures, down from 5.9 years of annual Plan expenditures under the 19th Actuarial Report.

5. The steady-state contribution rate would increase to 9.9%, equal to the legislated contribution rate, up from the 9.8% estimated in the 19th Actuarial Report. Therefore, the CPP would have far less capacity to absorb future unforeseen economic or demographic shocks without recourse to an increase in the legislated contribution rate.

It is our opinion that not amending the Plan as per Part 4 of Bill C-30 would materially affect the financial status of the CPP as presented in the 19th Actuarial Report on the Canada Pension Plan as at 31 December 2000. As a result, the future financial sustainability of the Plan would be at risk.

If the Plan is amended:

1. By 2050, annual CPP contributions would be $17 million higher than projected under the 19th CPP Actuarial Report.

2. By 2050, annual CPP benefit expenditures would be $304 million lower than projected under the 19th CPP Actuarial Report.

3. By 2050, Plan assets would be a projected $1,601 billion, or 6.0 years of annual Plan expenditures.

4. The steady-state contribution rate, which is the lowest rate sufficient to sustain the Plan without further increase, would be 9.8%, the same as estimated in the 19th Actuarial Report.

It is our opinion that Part 4 of Bill C-30 would not materially affect the financial status of the Plan as reported in the 19th Actuarial Report as at 31 December 2000. This report also confirms that the legislated contribution rate of 9.9% for 2004 and thereafter is sufficient to pay for future expenditures and to accumulate assets of $142 billion (4.2 years of annual expenditures) by 2010 and of $1,601 billion by 2050.

I. Introduction

This report has been prepared in compliance with subsection 115(2) of the *Canada Pension Plan* (CPP), which provides that:

> "… the Chief Actuary shall, whenever any Bill is introduced in or presented to the House of Commons to amend this Act in a manner that would in the opinion of the Chief Actuary materially affect any of the estimates contained in the most recent report under this section made by the Chief Actuary, prepare, using the same actuarial assumptions and basis as were used in that report, a report setting forth the extent to which such Bill would, if enacted by Parliament, materially affect any of the estimates contained in that report."

In accordance with subsection 114(4) of the *Canada Pension Plan*, the provisions of an amending Bill shall come into force:

> "…only on a day to be fixed by order of the Governor in Council, which order may not be made and shall not in any case have any force or effect unless the lieutenant governor in council of each of at least two thirds of the included provinces, having in the aggregate not less than two thirds of the population of all of the included provinces, has signified the consent of that province to the enactment."

II. Description of Part 4 of Bill C-30

In this report, when reference is made to Bill C-30, it refers specifically to Part 4 of Bill C-30, which amends the *Canada Pension Plan* to:

- clarify the amount that an employer must contribute for a year for a given employee;

- allow an employer who immediately succeeds another as a result of the formation or dissolution of a corporation, or the acquisition of all or part of a business, to take into account amounts relating to contributions for an employee of the predecessor employer in determining CPP contributions for the employee of the successor employer. Equivalent treatment is extended to self employed individuals who become or cease to be employees of a corporation controlled by them;

- allow for the reinstatement of a disability pension that has ceased to be payable because a person returns to work, in the situation where the person again becomes incapable of working within a period of two years after the date when payment of the pension ceased. It also provides for reinstatement of benefits to children of a person whose disability pension is reinstated.

Clarification of Rules for Employer Contributions

Under section 21 of the current CPP legislation, each employer must remit to the CPP a contribution equal to the amount that must be deducted at source on the contributory salary and wages paid to the employee by the employer. Under section 8(1), the amount that must be deducted at source by each employer for an employee in any given pay period as an employee contribution corresponds to the amount obtained by multiplying the employee contribution rate (4.95 per cent in 2004) by the excess of the contributory salary and wages paid to the employee during the remuneration period over the portion of the $3,500 Year's Basic Exemption (YBE) attributable to the remuneration period.

Section 8(2) defines for employees an overpayment of contributions. An overpayment occurs when the aggregate of all amounts deducted as required from the remuneration of an employee for a year, whether by one or more employers on account of an employee's contribution for the year under section 8(1) of the CPP legislation, or under the Quebec Pension Plan legislation, exceeds an amount equal to the product obtained when the employee contribution rate is multiplied by the lesser of:

- The employee's maximum contributory earnings for the year;
- The employee's contributory salary and wages for the year, plus the employee's contributory self-employed earnings for the year, less the employee's basic exemption for the year.

Section 38(1) of the legislation provides for the refunding to the employee of any overpayment as defined in section 8(2) where application is made in writing within four years after the end of the year in which the overpayment is made. Provision is made for this application to occur through the tax system. The refund of any overpayment also occurs through the tax system.

Section 38(3) also provides for the refunding to an employee of any amount deducted in excess of the required amount as set out in 8(1). An amount in excess of that required may be deducted from the remuneration paid to an employee by their employer for a number of reasons. For instance, an employer may in error deduct contributions on the earnings of an individual under eighteen years of age or over the age of seventy. However, such earnings are not pensionable, and therefore do not require the employee, or the employer to pay contributions on them. Were contributions made by the employee on these earnings, the amounts would be refunded up to four years after the year in which the excess contribution occurred. Again, for employees, the application and refund process occurs through the tax system.

In the case of employers, the legislation contains no specific provision defining "overpayments" that is analogous to that which is defined for employees under section 8(2). However, section 38(3) provides for employers, a refund of any amount paid by the employer that is in excess of the amount required to be contributed, provided a written request is made within four years of the excess payment being made.

Recently, the interpretation of the legislative provisions relating to the refunding of the employer's contribution has been considerably broadened by the Federal Court of Appeal in *Agpro Services v. The Minister of National Revenue*. The decision held that an employer may be entitled to the same contribution refund as the one received by his employee, since the current wording of the CPP legislation suggests that employees and employers must pay a contribution to the CPP that is identical in amount.

Bill C-30 amends the CPP to clarify that the amount an employer must contribute for a year for a given employee is equal to the amount that must be remitted at source by that employer on the contributory salary and wages he pays to that employee. Further, the amendments clarify that there is no refund of any contribution required to be made as an employer's contribution, except where the amount of the remittance for this contribution was in excess of the required amount as per the new section 9(1). The amendment is deemed to come into force 18 March 2003. The amendments ensure the continuance of long-standing practice with respect to employer contributions, and refund eligibility. The Quebec Pension Plan operates the same way.

Employer Contributions in the Event of Changes in Business Structure

At present, when an employer is restructured, notably as a result of a winding-up and immediate reconstitution under a different legal structure, or the acquisition of a major portion of the employer's property or of a distinct part of the employer's business, employees are treated as if they had joined a new employer. As a result, employers are required to begin withholding CPP contributions on salary and wages they pay the employee and to make an employer's contribution as well. That is, the successor employer cannot take into account the contributory wages and salary paid by the predecessor employer to the employee in determining the amount to be deducted in respect of an employee's contribution on the remuneration paid by the successor employer, nor, for the remittance that is required to be made in respect of an employer's contribution on that remuneration by the successor. As a result, the sum of the amount the two employers are required to remit, can exceed the annual maximum employer's contribution in instances where the remuneration paid by the two employers to the employee exceeds the pensionable maximum for the year. While the employee has also had withheld at source an amount greater than the annual maximum employee's contribution for the year, the employee currently receives a refund at year-end.

The Plan would be amended to allow an employer who immediately succeeds another during a year after 2003 as a result of the formation or dissolution of a corporation or the acquisition of all or part of a business to take into account amounts relating to contributions for an employee of the predecessor employer in determining contributions for the employee of the successor employer.

The Plan is also amended to extend the equivalent treatment to self-employed individuals who become or cease to be employees of a corporation they control.

Reinstatement of CPP Disability Pensions

CPP disability beneficiaries have a severe and prolonged disability, which prevents them from working regularly at any job. The majority of beneficiaries will not return to work. Nevertheless, each year a small number of beneficiaries try, and succeed, in returning to regular employment. In these cases, the CPP disability pension ceases.

Some CPP disability beneficiaries who return to work face ongoing challenges. Many continue to have chronic health problems or disabilities. If their condition deteriorates to the extent that they must again cease working, they must re-apply for a CPP disability pension using a fast-track process. While shorter than the original process, these individuals still have to wait up to three months for a decision. A small number of clients may not re-qualify for benefits because they have not maintained a sufficiently high level of earnings in each year following the cessation of the disability pension.

Bill C-30 amends the Plan, effective 1 January 2004, to allow for reinstatement of a CPP disability pension that has ceased to be payable because a person has returned to work, in the situation where the person again becomes incapable of working because of the same, or related condition, within a period of two years after the date when payment of the pension ceased.

Bill C-30 also amends the Plan by providing for reinstatement of a disabled contributor's child's benefit to the children of a person whose disability pension is reinstated. The change would be effective 1 January 2004.

III. Financial Status (If Plan is Not Amended)

As required by the *Canada Pension Plan*, the same actuarial assumptions and methods as per the 19th CPP Actuarial Report are used to obtain the financial estimates under the hypothesis that the Plan is not amended in accordance with Bill C-30. Namely, employers are assumed to be eligible to receive the same refund that employees receive in respect of employee overpayments (within the meaning of subsection 8(2) of the CPP legislation) due to the prorating of the YBE over the year.

A. Assumptions

Based on CCRA data, it is estimated that 44% of employee CPP refunds are due to the prorating of the YBE ($3,500 for 2004) over the year by the number of pay periods in the year. The dollar value of these YBE-related refunds represents 0.8% of total annual CPP contributions. The remainder of the refunds to employees relate to situations of multiple employment, where annual earnings from all employments are in excess of the pensionable maximum ($40,500 in 2004) and thus give rise to an overpayment of employee's contribution for the year, or situations of deductions that are in excess or required amounts, i.e. deductions are made on salary and wages that are not pensionable, or, on which contributions do not have to be made under the Act.

If the Plan is not amended and employers (as a group) become entitled to the same amount of YBE-related refunds as are employees, then it is assumed that total annual contributions would be 0.8% lower in the short term than projected in the 19th Actuarial Report. This percentage would gradually decline to 0.6% by the end of the projection period, as the YBE is fixed at $3,500 and therefore becomes a smaller proportion of total average annual earnings resulting in fewer individuals having annual earnings less than the YBE in the future.

B. Results

Table 1 presents the financial status of the Plan if it is not amended and employers apply and have access to refunds in respect of the YBE on the same basis as *Agpro*. The financial status of the Plan would be impacted in the following manner:

1. The total loss of contributions in 2004 would be $951 million. The significant loss of contributions in 2004 reflects the fact that employers can apply for a refund for up to four years after the end of the year in which they claim they are due a refund.

2. Annual CPP contributions would be lower by 0.8% ($226 million in 2005) in the short-term and 0.6% lower by the end of the projection period.

3. On the basis of CCRA estimates, annual administrative costs would increase by 13.5%. This represents an increase of $54 million in total administrative expenses for the Plan in 2004.

4. By 2050, CPP assets would be a projected $1,377 billion, $201 billion lower than projected in the 19th Actuarial Report. As a result, the projected level of Plan assets in 2050 would be 5.1 years of annual Plan expenditures, down from 5.9 years of annual Plan expenditures under the 19th Actuarial Report.

5. The reduction in Plan assets is projected to more than offset the gains projected from Bill C-3, which came into force on 1 April 2004, and will accelerate the transfer of all CPP assets to the CPP Investment Board. In the case of Bill C-3, actuarial projections presented in the 19th Actuarial Report showed an increase in Plan assets of $72 billion by 2050. Not amending the Plan along the lines proposed in Bill C-30, namely, clarifying the amounts that employers are required to contribute for the year with respect to an employee as well as the provisions governing the refunding of amounts remitted as an employer's contribution that are in excess of amounts required would reduce Plan assets by more than twice the amount of the projected increase in Plan assets expected under Bill C-3.

6. The steady-state contribution rate would increase to 9.9% (9.851% unrounded), equal to the legislated contribution rate, from 9.8% (9.762% unrounded) in the 19th Actuarial Report. The CPP would thus have far less capacity to absorb future unforeseen economic or demographic shocks without recourse to an increase in the legislated rate.

Table 1 presents contributions, administrative expenses and assets under the 19th Actuarial Report and the non-amended Plan. Note that contributions are unaffected by Bill C-3 and therefore are the same in the 19th and 18th Actuarial Reports. Table 2 presents the asset/expenditure ratios of the 19th Actuarial Report and the non-amended Plan.

Table 1: Financial Status (If Plan is not Amended)
($ Million)

	Contributions				Assets			
Year	**19th Report**	**If Plan is Not Amended**	**Change**	**Change in Admin. Expenses**	**19th Report**	**If Plan is Not Amended**	**Change**	**Relative Change in Assets**
2004	28,024	27,073	-951	54	72,810	71,760	-1,050	-1.4%
2005	29,247	29,021	-226	57	82,745	81,333	-1,412	-1.7%
2006	30,504	30,269	-235	58	93,341	91,530	-1,811	-1.9%
2007	31,825	31,581	-244	61	104,534	102,290	-2,244	-2.1%
2008	33,264	33,010	-254	64	116,393	113,673	-2,720	-2.3%
2009	34,752	34,488	-264	67	128,931	125,688	-3,243	-2.5%
2010	36,414	36,139	-275	69	142,253	138,435	-3,818	-2.7%
2015	46,463	46,122	-341	87	223,170	215,470	-7,700	-3.5%
2025	74,064	73,546	-518	134	449,134	425,966	-23,168	-5.2%
2050	226,764	225,279	-1,485	393	1,577,853	1,376,837	-201,016	-12.7%
2075	671,742	667,453	-4,289	1,146	5,344,429	4,001,702	-1,342,727	-25.1%

Table 2: Evolution of Asset/Expenditure Ratios (If Plan is not Amended)

Year	19th Report	If Plan is Not Amended
2004	2.94	2.89
2005	3.19	3.13
2006	3.43	3.36
2007	3.65	3.56
2008	3.85	3.75
2009	4.04	3.93
2010	4.21	4.09
2015	4.90	4.72
2025	5.38	5.09
2050	5.86	5.10
2075	6.58	4.92

C. Opinion

It is our opinion that not amending the Plan as per Part 4 of Bill C-30 would materially affect the financial status of the CPP as presented in the 19th Actuarial Report on the Canada Pension Plan as at 31 December 2000. As a result, the future financial sustainability of the Plan would be at risk.

IV. Financial Status (If Plan is Amended)

As required by the *Canada Pension Plan*, the same actuarial assumptions and methods as per the 19th CPP Actuarial Report were used to obtain the financial status of the Plan under Bill C-30.

A. Clarification of Rules for Employer Contributions

The amendments of Bill C-30 that clarify the rules for employer contributions have no impact on the financial status of the Plan as presented in the 19th CPP Actuarial Report. This is because the 19th Actuarial Report already accounts for the long-standing practice that the amount an employer must contribute for a year for a given employee is equal to the amount that must be remitted at source by that employer for the employee as an employer's contribution and that only amounts in excess of this required amount can be refunded to the employer as a remittance in excess of the amount required.

B. Employer Contributions in the Event of Changes in Business Structure

Assuming that mergers and acquisitions data obtained from Crosbie and Company (a specialty investment banking firm) can serve as a proxy for business restructuring activity in Canada, it can be estimated that over the period 1999-2003 there have been, on average, 350 business restructurings per year.

The average annual number of CPP contributors involved in business restructuring is not available. Therefore, it is estimated, based on data from Statistics Canada and the periodical Business*,* produced by the National Post on the largest corporations in Canada, that for each business restructuring there would be an average of 200 contributors involved. As a result, 70,000 contributors (350 businesses restructured times 200 contributors) are expected to be involved in business restructurings during any given year.

Only employees with more than one employer during a year and with annual earnings from all employers that are above the pensionable maximum ($40,500 in 2004) would be affected by a change in business structure. Records of earnings data suggest 33% of employees fall into this category. On this basis, it is assumed that 33% of the 70,000 individuals assumed to be involved in business restructurings, i.e., 23,100 individuals currently receive a refund of employee's contributions that stem from the business restructuring.

On this basis, and using CCRA data on CPP employee contribution refund, it is estimated that 4.2% of employee refunds due to earnings above the maximum are associated with a business restructuring. Under the amended Plan, employees and employers would no longer have to start contributions anew. The amount of foregone employer contributions would lower total annual CPP contributions by 0.04%. Bill C-30 would not affect total employee contributions to the Plan, as explained earlier.

Table 3 shows the financial status of the Plan with the amendments relating to business restructuring. Annual CPP contributions would be 0.04% lower in each year of the projection period, or $12 million lower in 2004. By 2050, Plan assets would be a projected $1,570 billion, or 5.8 years of annual Plan expenditures, compared to 5.9 years of annual Plan expenditures under the 19th Actuarial report.

Table 3: Financial Status (Amended for Business Restructuring)
($ Million)

	Contributions			Assets		
Year	**19th Report**	**Amended**	**Change**	**19th Report**	**Amended**	**Change**
2004	28,024	28,012	-12	72,810	72,798	-12
2005	29,247	29,236	-11	82,745	82,720	-25
2006	30,504	30,492	-12	93,341	93,302	-39
2007	31,825	31,812	-13	104,534	104,480	-54
2008	33,264	33,250	-14	116,393	116,321	-72
2009	34,752	34,738	-14	128,931	128,840	-91
2010	36,414	36,400	-14	142,253	142,141	-112
2015	46,463	46,444	-19	223,170	222,911	-259
2025	74,064	74,035	-29	449,134	448,272	-862
2050	226,764	226,673	-91	1,577,853	1,569,695	-8,158
2075	671,742	671,474	-268	5,344,429	5,288,274	-56,155

C. Reinstatement of CPP Disability Pensions

The reinstatement of CPP disability pension that has ceased to be payable because a person returns to work, in the situation where the person again becomes incapable of working due to the same or related condition, within a period of two years after the day when the payment of the pension ceased, is expected to decrease the number of disability beneficiaries as more beneficiaries will attempt a return to work. The reinstatement provision in Bill C-30 is assumed to generate a permanent increase of 25% in the annual disability recovery rates assumed in the 19th CPP Actuarial Report. This corresponds to approximately 500 additional disability terminations in 2004.

Based on current Plan provisions, it is estimated that 20% of those who attempt a return to work fail and eventually return to disability pension. This 20% failure rate is based on the actual experience of the 1997 return to work disability terminations. The failure rate was also confirmed by an analysis of the records of earnings of the total 1997 disability terminations, which showed that 16% of those who terminated had stopped working within two years.

This 20% failure rate (or return to benefit or recurrence of disability) is already recognized in the assumed disability incidence rates of the 19th CPP Actuarial Report, i.e., the incidence rates do recognize that some of the new annual disability incidences are really individuals returning to benefits.

The cost estimates assume that the failure rate of 20% applicable to the population who would attempt a return to work would increase to 25% as a result of the reinstatement provision because reverting to the disability pension would be made easier. For this reason, the assumed disability incidence rate is increased by 0.005 per thousand for the years 2004 and thereafter. This corresponds to an additional 60 new disability beneficiaries per year i.e., 5% of the current annual average of 1,200 terminations of CPP disability pension due to return to work.

The 25% failure rate is also assumed to apply to the additional terminations of CPP disability pension that are assumed to occur in response to the reinstatement provision as individuals feel more confident in trying work. As a result, the assumed disability incidence rate is further increased by 0.01 per thousand for the years 2005 and thereafter. This corresponds to an additional annual increase of 125 disability beneficiaries for the years 2005 and thereafter (25% of the assumed 500 additional disability terminations due to return to work).

Thus, as a result of the reinstatement provision, the disability incidence rate is assumed to increase by 0.005 per thousand in 2004 and by 0.015 per thousand for each year thereafter.

To estimate the potential amount of additional contributions that would be generated from the additional successful returns to work, it is assumed that individuals would earn 65% of the maximum pensionable earnings in any given year (e.g. $26,300 in 2004). This assumption is based on the records of earnings for terminated cases due to a return to work between 1997 and 1999.

Table 4 shows the financial status of the Plan if it were amended to allow for reinstatement of a disability pension (and reinstatement of benefits to children of a person whose disability pension is reinstated). By 2050, Plan assets are projected to be $1,610 billion or 6.0 years of annual Plan expenditures.

Table 4: Financial Status (Amended for Reinstatement)
($ Million)

	Contributions		Benefit Expenditures		Assets		
Year	**Amended**	**Change from 19th Report**	**Amended**	**Change from 19th Report**	**19th Report**	**Amended**	**Change from 19th Report**
2004	28,025	1	23,666	-6	72,810	72,817	7
2005	29,250	3	24,736	-11	82,745	82,767	22
2006	30,507	3	25,894	-15	93,341	93,383	42
2007	31,829	4	27,194	-21	104,534	104,606	72
2008	33,269	5	28,645	-25	116,393	116,500	107
2009	34,759	7	30,217	-30	128,931	129,083	152
2010	36,422	8	31,911	-34	142,253	142,459	206
2015	46,477	14	42,797	-59	223,170	223,818	648
2025	74,095	31	78,753	-112	449,134	451,998	2,864
2050	226,872	108	257,136	-304	1,577,853	1,609,523	31,670
2075	672,075	333	776,013	-833	5,344,429	5,567,515	223,086

In 2004, the reduction in total Plan benefit expenditures reflects the fact that there are fewer individuals receiving a CPP disability pension and a disabled contributor's child's benefit because the contributor has returned to work. For 2005 and thereafter, retirement benefit expenditures may be lower. Whether this is the case or not will depend in part on whether post-disability earnings are lower or higher than pre-disability earnings.

D. Results - All Amendments

Tables 5 and 6 show the financial status of the amended Plan. The financial status of the Plan would be impacted as follows:

1. By 2050, annual CPP contributions would be $17 million higher than projected under the 19th CPP Actuarial Report.

2. By 2050, annual CPP benefit expenditures would be $304 million lower than projected under the 19th CPP Actuarial Report.

3. By 2050, Plan assets are projected to be $1,601 billion, or 6.0 years of annual Plan expenditures.

4. The steady-state contribution rate would be 9.8% (9.750% unrounded), unchanged from the 19th Actuarial Report (9.762% unrounded).

Table 5: Financial Status (Amended Plan - All Amendments)
($ Million)

	Contributions			Benefit Expenditures			Assets		
Year	19th Report	Amended Plan	Change	19th Report	Amended Plan	Change	19th Report	Amended Plan	Change
2004	28,024	28,013	-11	23,672	23,666	-6	72,810	72,806	-4
2005	29,247	29,238	-9	24,747	24,736	-11	82,745	82,742	-3
2006	30,504	30,495	-9	25,909	25,894	-15	93,341	93,344	3
2007	31,825	31,817	-8	27,215	27,194	-21	104,534	104,551	17
2008	33,264	33,256	-8	28,670	28,645	-25	116,393	116,428	35
2009	34,752	34,745	-7	30,247	30,217	-30	128,931	128,992	61
2010	36,414	36,408	-6	31,945	31,911	-34	142,253	142,347	94
2015	46,463	46,459	-4	42,856	42,797	-59	223,170	223,560	390
2025	74,064	74,065	1	78,865	78,753	-112	449,134	451,135	2,001
2050	226,764	226,781	17	257,440	257,136	-304	1,577,853	1,601,362	23,509
2075	671,742	671,807	65	776,846	776,013	-833	5,344,429	5,511,341	166,912

Table 6: Evolution of Asset/Expenditure Ratios (Amended Plan - All Amendments)

Year	19th Report	If Plan is Not Amended	Amended Plan
2004	2.94	2.89	2.94
2005	3.19	3.13	3.20
2006	3.43	3.36	3.43
2007	3.65	3.56	3.65
2008	3.85	3.75	3.85
2009	4.04	3.93	4.04
2010	4.21	4.09	4.22
2015	4.90	4.72	4.91
2025	5.38	5.09	5.41
2050	5.86	5.10	5.95
2075	6.58	4.92	6.79

E. Opinion

It is our opinion that Part 4 of Bill C-30 would not materially affect the financial status of the Plan as reported in the 19th Actuarial Report as at 31 December 2000.

V. Sensitivity Scenario

Due to the limited amount of information available to formulate best-estimate assumptions with regards to the average annual number of CPP contributors involved in a business restructuring and to the additional number of people who return to work that would result from the introduction of the reinstatement provisions, an alternative scenario was developed to illustrate the sensitivity of the results to changes in underlying assumptions relating to these two assumptions.

- The sensitivity scenario assumes that the average number of contributors involved in a business restructuring would be twice the level assumed in the best-estimate scenario presented in Section IV, that is, 400 as opposed to 200.

- The sensitivity scenario assumes that annual disability recovery rates are increased by 10%, instead of the 25% best estimate assumed in Section IV, due to the introduction of the reinstatement provisions.

Based on the results presented in Tables 7 and 8, which show that Plan assets in 2050 would equal 5.9 years of annual Plan expenditures, the same as under the 19th CPP Actuarial Report, it is our opinion that amending the Plan as per Bill C-30 using the sensitivity scenario would not materially affect the financial status of the CPP as presented in the 19th Actuarial Report as at 31 December 2000.

Table 7: Financial Status (Amended Plan - Sensitivity Scenario)
($ Million)

	Contributions			Benefit Expenditures			Assets		
Year	19th Report	Amended Plan	Change	19th Report	Amended Plan	Change	19th Report	Amended Plan	Change
2004	28,024	28,001	-23	23,672	23,670	-2	72,810	72,789	-21
2005	29,247	29,225	-22	24,747	24,743	-4	82,745	82,703	-42
2006	30,504	30,481	-23	25,909	25,903	-6	93,341	93,279	-62
2007	31,825	31,801	-24	27,215	27,206	-9	104,534	104,453	-81
2008	33,264	33,239	-25	28,670	28,660	-10	116,393	116,292	-101
2009	34,752	34,727	-25	30,247	30,234	-13	128,931	128,810	-121
2010	36,414	36,389	-25	31,945	31,931	-14	142,253	142,112	-141
2015	46,463	46,432	-31	42,856	42,831	-25	223,170	222,926	-244
2025	74,064	74,019	-45	78,865	78,816	-49	449,134	448,640	-494
2050	226,764	226,630	-134	257,440	257,305	-135	1,577,853	1,575,304	-2,549
2075	671,742	671,351	-391	776,846	776,476	-370	5,344,429	5,329,425	-15,004

Table 8: Evolution of Asset/Expenditure Ratios (Amended Plan - Sensitivity Scenario)

Year	19th Report	Amended Plan
2004	2.94	2.94
2005	3.19	3.19
2006	3.43	3.43
2007	3.65	3.64
2008	3.85	3.85
2009	4.04	4.03
2010	4.21	4.21
2015	4.90	4.89
2025	5.38	5.38
2050	5.86	5.85
2075	6.58	6.57

VI. Conclusion

The actuarial projections of the financial status of the Canada Pension Plan presented in the 20th Actuarial Report are consistent with the trends revealed in the previous actuarial report.

The 20th CPP Actuarial Report reveals that if the Plan were not amended as per Bill C-30, total CPP assets would decline significantly, by approximately $4 billion in 2010 and by $201 billion in 2050. As a result, they would correspond to 5.1 years of annual Plan expenditures in 2050, which is lower than the projected 5.9 years under the 19th Actuarial Report. The steady-state contribution rate would increase to 9.9%, up from the 9.8% estimated in the 19th Actuarial Report.

This report reveals that if the Plan were amended as per Bill C-30, total CPP assets would increase by approximately $94 million in 2010 and by $24 billion in 2050. As a result, by 2050, they would cover 6.0 years of annual Plan expenditures. This would result in a steady-state contribution rate of 9.8%, the same rate as under the 19th Actuarial Report. The 20th Actuarial Report also confirms that if the Plan is amended, the legislated contribution rate of 9.9% for 2004 and thereafter would be sufficient to pay for future expenditures and to accumulate assets of $142 billion (4.2 years of annual Plan expenditures) by 2010.

It is our opinion that not amending the Plan as per Bill C-30 would materially affect its financial status, whereas amending the Plan as per Bill C-30 would not materially affect the financial status as presented, in each case, in the 19th Actuarial Report on the Canada Pension Plan as at 31 December 2000.

VII. Acknowledgements

The following people assisted in the preparation of this report:

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VIII. Actuarial Opinion

In our opinion, considering that this 20th Actuarial Report was prepared pursuant to the *Canada Pension Plan*:

- the methodology employed is appropriate and consistent with sound actuarial principles;
- the data on which this report is based are sufficient and reliable; and
- the assumptions used, are in aggregate, reasonable and appropriate.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice.

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Chief Actuary

Ottawa, Canada
8 April 2004