

on the Pension Plan for the

## PUBLIC SERVICE OF CANADA

as at 31 March 2008



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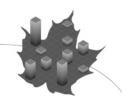
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Pension Plan for the  $\mbox{\bf PUBLIC SERVICE OF CANADA}$ 

as at 31 March 2008



23 September 2009

The Honourable Vic Toews, P.C., M.P. President of the Treasury Board Ottawa, Canada K1A 0R5

## Dear Minister:

Pursuant to section 6 of the *Public Pensions Reporting Act*, I am pleased to submit the report on the actuarial review as at 31 March 2008 of the Public Service pension plan. This plan is defined by Parts I, III and IV of the *Public Service Superannuation Act*, the *Pension Benefits Division Act* and the Public Service-related benefits provided under the *Special Retirement Arrangements Act*.

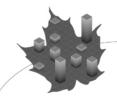
Yours sincerely,

Jean-Claude Ménard, F.S.A., F.C.I.A.

Chief Actuary

Office of the Chief Actuary

Jean-Claude Menard

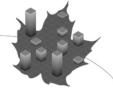


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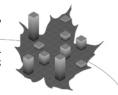
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#### Pension Plan for the **PUBLIC SERVICE OF CANADA**

as at 31 March 2008



## I. Executive Summary

This actuarial report on the pension plan for the Public Service of Canada (PS pension plan) was made pursuant to the *Public Pensions Reporting Act* (PPRA).

This actuarial valuation is as at 31 March 2008 and is in respect of pension benefits and contributions defined by Parts I, III, and IV of the *Public Service Superannuation Act* (PSSA), the *Pension Benefits Division Act* (PBDA) and by the *Special Retirement Arrangements Act*, which covers the Retirement Compensation Arrangement (RCA).

The previous actuarial report was made as at 31 March 2005. The date of the next periodic review is scheduled to occur no later than 31 March 2011

In the previous actuarial report, two new sections were added to examine the impact of alternative investment policies of the pension assets invested in capital markets and the impact of an alternative valuation approach. Only the section that discusses the impact of alternative investment policies on the pension assets invested in capital markets was kept for this valuation.

## A. Purpose of Actuarial Report

The purpose of this actuarial valuation is to determine the state of the Public Service Superannuation Account, Pension Fund and Retirement Compensation Arrangements Accounts as well as to assist the President of the Treasury Board in making informed decisions regarding the financing of the government's pension benefit obligation.

## **B.** Valuation Basis

This report is based on pension benefit provisions enacted by legislation, summarized in Appendices 1 and 2.

The financial data on which this valuation is based are composed of tangible assets (Pension Fund) which the government has earmarked for the payment of benefits for service since 1 April 2000, and accounts (Superannuation, RCA No. 1 and RCA No. 2 accounts) established to track its pension benefit obligations for service prior to 1 April 2000. These pension assets are summarized in Appendix 3. The membership data is summarized in Appendix 4.

The valuation was prepared using accepted actuarial practices, methods and assumptions which are summarized in Appendices 5 to 7.

This valuation takes into account plan amendments and new salary agreements since the last valuation, which are as follows:

- Beginning in calendar year 2008, the applicable Canada Pension Plan (CPP) or Quebec Pension Plan (QPP) coordination factor of 0.7% in the pension benefit formula is reduced gradually until it reaches 0.625% in calendar year 2012;
- A new compensation package has been approved for employees of Correctional Service Canada;
- The age limit to contribute to the Public Service Pension plan has been extended from age 69 to age 71.



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All actuarial assumptions used in this report are best-estimate assumptions. They are individually reasonable for the purposes of the valuation at the date of this report.

Actuarial assumptions used in the previous report were revised based on economic trends and demographic experience. A complete description of the assumptions is shown in Appendices 6 and 7. The changes to the economic assumptions are summarized as follows:

- the ultimate assumed level of inflation was revised from 2.5% to 2.4%;
- the short-term real rate of return on the Fund was lowered, from 4.3% to 4.0% for the first four years following valuation date;
- the assumed ultimate real rate of interest on the Account was revised from 2.85% to 2.80%;
- the ultimate real increase in average earnings was increased from 1.0% to 1.1%;

The Canadian Institute of Actuaries (CIA) has recently adopted a Revised Standards of Practice for Pension Commuted Values, effective 1 April 2009. The financial impact of the revised Standards is reflected in this valuation.

At the time of preparing this report, the global economy and financial markets were going through a difficult period. The significant deterioration and volatility of financial markets may result in a decline in the market value of the funds managed by the Public Sector Pension Investment Board (PSPIB). The impact of investment returns after the valuation date will be reflected in the next actuarial valuation which is set to occur no later than 31 March 2011.

## C. Main Findings

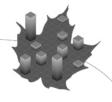
The proposed amounts to be credited to (or debited from) the Accounts and the Pension Fund are shown on a calendar year basis in this section beginning with calendar year 2010 which is the first calendar year that follows the expected tabling of this report. Valuation results on a plan year<sup>1</sup> basis are shown in Section II.

## 1) PSSA – Service prior to 1 April 2000 (Superannuation Account)

As at 31 March 2008, the actuarial value of assets in respect of the Superannuation Account is \$91,554 million and the actuarial liability for service prior<sup>2</sup> to 1 April 2000 is \$86,944 million. The actuarial value of the assets is less than 110% of the corresponding actuarial liability; it is 105% of the actuarial liability. The surplus of the actuarial value of assets over the actuarial liabilities is \$4,610 million.

Any reference to a given *plan year* in this report should be taken as the 12-month period ending 31 March of the given year.

The actuarial liability for service prior to 1 April 2000 refers to the actuarial liability for service accrued prior to that date except for service elections since 1 April 2000 that are deemed to be service accrued since that date.



## 2) PSSA – Service since 1 April 2000 (Pension Fund)

## a) Current Service Cost<sup>1</sup>

The PSSA total normal cost, borne jointly by the contributors and the government, is \$3,564 million for calendar year 2010. The estimated members' contributions are \$1,214 million and the estimated government contributions are \$2,350 million for calendar year 2010. The Pension Fund administrative expenses are \$22 million (included in the total current service cost) for calendar year 2010. The following table shows the projected current service cost expressed as a percentage of the expected pensionable payroll<sup>2</sup> for the three calendar years following the expected laying of this report. The ratio of government current service cost to the contributors current service cost is also shown.

**PSSA** Current Service Cost on a Calendar Year Basis

Calendar	Current Service Cost As a percentage of pensionable p		e payroll	Ratio of Government to Contributors Current
Year	Contributors	Government	Total	Service Cost
2010	6.40	12.40	18.80	1.94
2011	6.61	12.30	18.91	1.86
2012	6.82	12.08	18.90	1.77

## b) Financial position and amortization of actuarial surplus (deficit)

As at 31 March 2008, the actuarial value of the assets in respect of the Pension Fund is \$29,000 million and the actuarial liability is \$28,028 million, resulting in an actuarial excess of \$972 million.

#### c) Non-permitted actuarial surplus

If there exists in the opinion of the President of the Treasury Board a non-permitted actuarial surplus<sup>3</sup> in the Pension Fund, any future contributions to the Fund may be reduced in a manner determined by the President or the non-permitted actuarial surplus may be paid out of the Fund and into the Consolidated Revenue Fund. As at 31 March 2008, a non-permitted actuarial surplus does not exist.

Also called normal cost.

<sup>&</sup>lt;sup>2</sup> Pensionable payroll means the aggregate of pensionable earnings of all contributors with less than 35 years of service.

A non-permitted actuarial surplus exists when the amount by which the actuarial value of assets exceeds liabilities for service since 1 April 2000 is greater than the lesser of (a) and (b), where:

<sup>(</sup>a) is 20% of the amount of liabilities for service since 1 April 2000, and

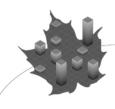
<sup>(</sup>b) is the greater of (i) and (ii) where:

<sup>(</sup>i) is twice the estimated amount, for the calendar year following the date of that report, of the total of

<sup>(</sup>A) the current service cost contributions that would be required of contributors, and

<sup>(</sup>B) the current service cost contributions that would be required of the government, and

<sup>(</sup>ii) is 10% of the amount of liabilities for service since 1 April 2000.



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## 3) RCA No. 1 Account

As at 31 March 2008, the total of the amounts available for benefits payable under the Account is \$1,273 million and the actuarial liability is \$1,114 million resulting in an actuarial excess of \$159 million.

The total current service cost, borne jointly by the contributors and the government, is 0.42% of pensionable payroll for calendar year 2010 and is estimated to be 0.42% and 0.43% of pensionable payroll respectively for the following two plan years. The following table shows the projected current service costs for the three calendar years following the expected laying of this report.

RCA No. 1 Current Service Cost on a Calendar Year Basis

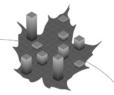
Calendar Year	Contributors (\$ millions)	Government (\$ millions)	Total (\$ millions)	Ratio of Government to Contributors Current Service Cost
2010	8	71	79	8.9
2011	8	76	84	9.5
2012	8	80	88	10.0

## 4) RCA No. 2 Account

As at 31 March 2008, the total of the amounts available for benefits payable under the Account is \$1,635 million and the actuarial liability is \$1,711 million resulting in an actuarial deficit of \$76 million.

#### Pension Plan for the PUBLIC SERVICE OF CANADA

as at 31 March 2008



## **II. Valuation Results**

This report is based on pension benefit provisions enacted by legislation, summarized in Appendices 1 and 2, and the financial and membership data, summarized in Appendices 3 and 4. The valuation was prepared using accepted actuarial practices, methods and assumptions summarized in Appendices 5 to 7. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent reports.

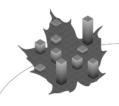
Projections of the assets and liabilities are shown in respect of the Superannuation Account in Appendix 8 and of the Pension Fund in Appendix 9.

## A. PSSA – Financial Position

Beginning on 1 April 2000, employer and employee contributions to the PSSA pension plan are no longer credited to the Public Service Superannuation Account. Rather, they are now credited to the Public Service Pension Fund, the net proceed of which is transferred to the PSPIB and invested in the financial markets. The valuation results of this section show the financial position for both PSSA financing arrangements as at 31 March 2008. The results of the previous valuation are also shown for comparison purposes.

**Table 1 Balance Sheet - Superannuation account** (\$ millions)

	31 March 2008	31 March 2005
Actuarial Value of Assets		
Recorded balance in Superannuation Account	91,279	84,501
Present value of prior service contributions	275	400
Total assets	91,554	84,901
Actuarial Excess (Assets minus Liability)	4,610	4,716
	86,944	80,186
Actuarial Liability for Service Prior to 1 April 2000		
Active contributors	34,132	35,810
Non-active contributors	322	162
Retirement pensioners	43,896	36,329
Termination with no option	172	183
Disability pensioners	2,106	1,817
Surviving dependents	5,488	4,984
Outstanding payments	28	41
Administrative expenses	666	860
Pension Modernization Cost	134	-
<b>Total Actuarial Liability for Service Prior to 1 April 2000</b>	86,944	80,186



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**Table 2 Balance Sheet - Pension Fund** (\$ millions)

	31 March 2008	31 March 2005
Actuarial Value of Assets		
Market value of assets	28,398	14,125
Actuarial smoothing adjustment	91	(700)
Present value of prior service contributions	511	549
Total assets	29,000	13,974
Actuarial Liability for Service Since to 1 April 2000		
Active contributors	23,600	12,958
Non-active contributors	144	45
Retirement pensioners	3,883	1,158
Termination with no option	67	70
Disability pensioners	192	80
Surviving dependents	71	33
Outstanding payments	20	24
Pension Modernization Cost	51	-
Total Actuarial Liability for Service Prior to 1 April 2000	28,028	14,367
Actuarial Surplus/(Deficit)	972	(393)

## **B.** PSSA - Reconciliation of the Changes in Financial Position

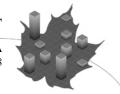
This section reconciles the changes in the financial position in respect of the Superannuation Account and the Pension Fund shown in this valuation using the main elements responsible for the changes. The items shown are explained afterward.

**Table 3** Reconciliation of PSSA Financial position (\$ millions)

	Superannuation Account Actuarial	Pension Fund Actuarial
9	Excess	Surplus
As at 31 March 2005	4,716	(393)
Unrecognized investment gains (losses) as at 31 March 2005	-	700
Change in data submission and corrections of population data	(120)	(629)
Expected interest on revised initial financial position	1,128	(66)
Pension benefit formula	(1,226)	(559)
Net experience gains and losses	586	1,679
Revision of actuarial assumptions	(598)	44
Change in the present value of administrative expenses	241	-
Pension Modernization Cost Recognition	(134)	(51)
Change in the present value of prior service contributions	17	155
Unrecognized investment losses (gains) as at 31 March 2008	-	91
As at 31 March 2008	4,610	972

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## 1) Unrecognized Investment Gains as at 31 March 2005

An actuarial asset valuation method that minimizes the impact of short-term fluctuations in the market value of assets was used in the previous valuation report, causing the actuarial value of the Pension Fund assets to be \$700 million less than their market value.

## 2) Change in the submission and correction of population data

The accrued liabilities reported in the previous valuation report as at 31 March 2005 used projected population data from the population actually reported as at 31 March 2004. The net effect of using the reported actual population data as at 31 March 2005 is an increase in the actuarial liabilities of \$120 million and \$629 million respectively in both the Superannuation Account and the Pension Fund

This is the results of different factors that push the liabilities in the same directions. Contributors' salaries were higher than those projected from the 2004 valuation data. Expected terminations and retirements were less than the experience of plan year 2005 which caused the average age of the contributor to increase by 0.3 year while the average service increase by 0.48 year.

## 3) Expected Interest on Initial Financial Position

After factoring the data correction item mentioned previously, the expected interest to 31 March 2008 on the Account actuarial excess of \$4,596 million as at 31 March 2005 amounted to \$1,128 million. After recognizing both the data corrections and the unrecognized investment gains items, the expected interest to 31 March 2008 on the Pension Fund actuarial deficit of \$322 million as at 31 March 2005 amounted to a negative \$66 million. These amounts of interest were based on the Account and Fund yields projected in the previous report for the three-year intervaluation period.

## 4) Pension Benefit Formula

Beginning with calendar year 2008, the applicable coordination factor of 0.7% at age 65 in the pension benefit formula is revised and reduced gradually until the ultimate coordination factor of 0.625% is attained by calendar year 2012. This improvement to the pension benefit provisions has increased the Account actuarial liability by \$1,226 million and the Fund actuarial liability by \$559 million.

## 5) Experience Gains and Losses

Since the previous valuation, experience gains and losses have increased the Superannuation Account actuarial excess by \$586 million and have increased the Pension Fund actuarial surplus by \$1,679 million. The main items are described in the following table.



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**Table 4** Net Experience Gains and Losses (\$ millions)

	Superannuation	Pension
	Account	Fund
Demographic assumptions (i)	(22.5)	(0)
Non-disabled pensioner deaths	(225)	(6)
Terminations with a return of contribution or a transfer value	(149)	(290)
Retirements	(100)	(50)
Widow(er) deaths	(98)	0
New entrants	(91)	(80)
Non-disabled pensioner terminations	84	37
Disabilities with an annuity	(19)	(4)
Deaths with an annuity	11	8
Deaths with a return of contributions	(7)	(5)
Disabled pensioner deaths	2	0
Terminations with an annuity	2	5
Total	(589)	(386)
Investment earnings (ii)	132	1,505
Promotional and seniority increases (iii)	702	408
Cost/contributions difference (iv)	(12)	393
Cost/contributions difference	0	82
YMPE increases	(52)	(31)
Economic salary increases	(26)	(23)
Outstanding payments	(28)	(20)
New funding age of 71	10	10
New plan provisions Correctional Service Canada	(6)	(5)
Amounts credited on basis of actuarial valuation	0	4
Pension indexation	(6)	0
Administrative expenses	(37)	0
Miscellaneous	497	(257)
Experience Gains and Losses	586	1,679

- (i) The net impact of the demographic experience increased the Account actuarial liabilities by \$589 million and the Fund actuarial liabilities by \$386 million. Lower expected deaths amongst healthy pensioner accounted for most of the impact on the Account actuarial liabilities. The Fund actuarial liabilities were impacted by lesser terminations than anticipated.
- (ii) The rates of interest credited to the Account were in aggregate greater than the corresponding projected Account yields in the previous valuation; consequently the experience gain was \$132 million. Except for plan year 2008, financial markets made significant gains in plan years 2006 and 2007. Over three years, the actual return was 12% more than expected and the Pension Fund gained \$1,505 million.

- (iii) Lower than expected promotional salary increases resulted in a decrease of \$702 million in the Account actuarial liabilities and a corresponding decrease of \$408 million in the Fund actuarial liabilities.
- (iv) An increase of \$393 million in the Fund actuarial surplus resulted from lower than anticipated transfer values payment to terminating employee.

## 6) Revision of Actuarial Assumptions

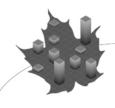
Actuarial assumptions were revised based on economic trends and demographic experience as described in Appendix 7. This revision has decreased the Superannuation Account actuarial excess by \$598 million and increased the Pension Fund actuarial surplus by \$44 million. The impact of these revisions is described in the following table.

**Table 5** Revision of Actuarial Assumptions (\$ millions)

Assumption	Superannuation Account	Pension Fund
Investment earnings	(2,254)	(1,136)
Pension indexation	1,413	429
Economic salary increases	1,089	924
Mortality improvement factors	(781)	(246)
Pensionable retirements	234	221
Age difference between spouses	(286)	(194)
Pensioners mortality rates	(164)	(30)
Seniority and promotional salary increases	108	(58)
Proportion married at death	99	26
YMPE / MPE increases	(59)	(51)
Survivors mortality rates	(59)	(7)
Withdrawals	(53)	(83)
Contributors mortality rates	10	7
New interest rate on Commuted Value	10	42
Proportion taking a deferred annuity	(2)	30
Number and duration of children coverage	99	163
Disabled retirements	(1)	9
Net impact of revision	(598)	44

The net impact of the revision of the assumptions is largely attributable to the new mortality improvements factors as well as the changes in economic assumptions. As described in Appendix 7, except for the assumed real rate of return on the Fund, all economic assumptions made in the previous valuation were revised, with the most important being as follows:

- ultimate level of inflation lowered from 2.5% to 2.4%;
- ultimate real increase in average earnings increased from 1.0% to 1.1%; and
- ultimate yield on the Account lowered from 5.35% to 5.2%.



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## 7) Change in the Present Value of Administrative Expenses

The Superannuation Account excess has increased by \$242 million due mainly to a change in the methodology used to allocate total ongoing annual administration expenses between the Superannuation Account and the Pension Fund. This valuation recognizes the methodology used by Public Works Government Service Canada (PWGSC) that allocates total administrative expenses between the Account and the Fund based on the total pensionable service accrued under each Account and Fund. Under this new allocation methodology, the administrative expenses are allocated to the Fund at a faster rate than in the previous report.

#### 8) Pension Modernization Cost

Plan years 2007 and 2008 have recorded a significant increase in the administrative expenses. This is the result of three specific projects underway at PWGSC, the cost of which has been approved by the Treasury Board Secretariat. The "Data Correction" project scheduled to be terminated by plan year end 2009, the "Pension Modernization" and the "Centralization of Pension Services", both with an expected completion date of March 2012. It is our understanding that the cost associated with these three projects will be debited directly from the Superannuation Account and the Pension Fund. The net impact of the three projects is a reduction of \$134 million in the Account excess and of \$51 million from the Fund surplus.

## 9) Unrecognized Investment Losses

The same actuarial asset valuation method described in the 2005 valuation report, which role is to minimize the impact of short-term fluctuations in the market value of assets (see Appendix 6) was used for this valuation. For this valuation, the method caused the actuarial value of the Pension Fund assets to be \$91 million more than their market value due to unrecognized investment losses.

#### C. PSSA - Cost Certificate

## 1) Current Service Cost

The details of the current service cost for plan year 2009 and reconciliation with the 2006 current service cost are shown below.

Table 6 Current Service Cost for Plan Year 2009 (\$ millions)

Member required contributions	1,090
Government current service cost	2,231
Total current service cost	3,321
Expected pensionable payroll	17,989
Total current service cost as % of expected pensionable payroll	18.46%

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 Table 7
 Reconciliation of PSSA Current Service Cost

 (% percentage of pensionable payroll)

For plan year 2006	18.01
Expected current service cost change	0.17
Change in demographics	(0.01)
Improved CPP/QPP coordination factors	0.31
Changes in assumptions	
Investment earnings	0.78
Economic salary increases	(0.66)
Pension indexation	(0.27)
Mortality improvement factors	0.18
Pensionable retirements	(0.17)
Age difference between spouses	0.15
Withdrawals	0.14
Number and duration of children coverage	(0.13)
Seniority and promotional salary increases	0.09
New interest rate on Commuted Value	(0.05)
YMPE / MPE increases	0.04
Proportion taking a deferred annuity	(0.03)
Pensioners mortality rates	0.02
Proportion married at death	(0.02)
Disabled retirements	(0.01)
Contributors mortality rates	(0.01)
Allocation of administrative expenses	0.03
Change in RCA excess pensionable earnings methodology	(0.03)
Other items	(0.07)
For plan year 2009	18.46

## 2) Projection of Current Service Costs

The following PSSA current service costs are expressed in dollar amount as well as in percentage of the projected pensionable payroll for each given plan year. The current service cost is borne jointly by the members and the government. The member contribution rate on salary up to the Year's Maximum Pensionable Earnings (YMPE) of the Canada Pension Plan is 4.9% for calendar year 2008 and increases gradually to the ultimate rate of 6.4% first attained in calendar year 2013. The member contribution rate on salary above the YMPE is 8.4%.



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Current service costs are shown below on a plan year basis; member contributions and the government current service costs are also shown on a calendar year basis in the Executive Summary.

**Table 8** Projection of Current Service Cost

Plan	Plan Current Service Cost (\$ millions)				Current Service Cost as a % of Pensionable Payroll			
Year	Contributors	Government	Total	Contributors	Government	Total	Borne by the Government	
2009	1,089	2,231	3,321	6.06	12.40	18.46	67%	
2010	1,158	2,297	3,456	6.25	12.40	18.65	66%	
2011	1,232	2,367	3,599	6.45	12.40	18.85	66%	
2012	1,322	2,434	3,756	6.66	12.27	18.93	65%	
2013	1,429	2,499	3,928	6.87	12.02	18.89	64%	
2018	1,870	3,152	5,022	7.05	11.89	18.94	63%	
2023	2,372	4,054	6,426	7.07	12.08	19.15	63%	

The decrease in the portion of the current cost borne by the government from plan year 2009 to 2013 mainly reflects increased plan contributions by contributors and the partial transition of economic assumptions from their select to ultimate values.

## 3) Administrative Expenses

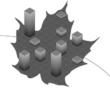
Based upon the assumptions described in section C of Appendix 6, the Fund administrative expenses are included in the total current service costs and are estimated to be as follows:

	Plan Year
2009	\$17,269,519
2010	\$19,862,366
2011	\$22,609,449
2012	\$25,717,386

The Account administrative expenses have been capitalized and are shown as a liability in the balance sheet.

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#### 4) Contributions for Prior Service Elections

Based upon the valuation data and the assumptions described in sections B and C of Appendix 6, member and government contributions for prior service elections were estimated as follows:

**Table 9** Estimated Contributions for Prior Service (\$ millions)

	Superannu	Superannuation Account		ion Fund
Plan Year	Member	Government	<u>Member</u>	Government
2009	28	27	75	128
2010	25	24	73	129
2011	23	22	73	124

## D. PSSA - Sensitivity to Variations in Key Assumptions

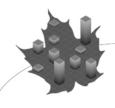
The following table measures the effect on the plan year 2009 current service cost, the liabilities for service prior to 1 April 2000 and for service since that date, if key economic assumptions are varied by one percentage point per annum from plan year 2009 onward.

Table 10 Sensitivity of Valuation Results

			Act	tuarial Liabil	ity (\$ millio	ity (\$ millions)		
_	Current Service Cost (%)			Service prior to April 2000		e since 2000		
Assumption(s) Varied	2009	<b>Effect</b>		<b>Effect</b>		<b>Effect</b>		
None (i.e. current basis)	18.46	None	86,944	None	28,028	None		
Investment yield								
- if 1% higher	14.78	(3.68)	76,490	(10,454)	23,118	(4,910)		
- if 1% lower	23.47	5.01	100,023	13,079	34,539	6,511		
Inflation								
- if 1% higher	20.89	2.43	96,794	9,850	31,568	3,540		
- if 1% lower	16.46	(1.99)	78,686	(8,258)	25,101	(2,927)		
Salary, YMPE and MPE								
- if 1% higher	20.37	1.91	88,602	1,658	30,166	2,138		
- if 1% lower	16.83	(1.63)	85,427	(1,517)	26,173	(1,855)		
All economic assumptions								
- if 1% higher	18.16	(0.30)	85,899	(1,045)	27,612	(416)		
- if 1% lower	18.77	0.31	88,019	1,075	28,457	429		

The foregoing estimates indicate the degree to which the PSSA valuation results depend on some of the key assumptions. The differences between the results above and those shown in the valuation can also serve as a basis for approximating the effect of other numerical variations in a key assumption to the extent that such effects are linear.

The following table shows the impact on the projected Pension Fund surplus as at 31 March 2011 (the expected date of the next actuarial review) if investment returns are different than assumed in this valuation. Projected actuarial surpluses are shown if



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annual investment returns are 2% higher or lower than the best estimate assumption and if the investment return in plan year 2009 is negative 20% before returning to the best estimate assumption of 6% per annum for the following two plan years.

Table 11 Sensitivity of Projected Pension Fund Surplus as at 31 March 2011 (\$ millions)

Assumption(s) Varied	Projected Actuarial Value of Assets	Projected Actuarial Value of Liability	Projected Actuarial Surplus
None (i.e. current basis)	44,070	42,716	1,354
Investment return			
- if 2% higher annually for next 3	44,985	42,716	2,269
- if 2% lower annually for next 3 years	43,175	42,716	459
- if minus 20% for plan year 2009	36,012	42,716	(6,704)

#### E. RCA - Valuation Results

The normal costs, assets and liabilities presented in this section were computed using the assets, data, methodology and assumptions described in Appendix 7.

## 1) Balance Sheets

**Table 12 RCA No. 1 - Balance Sheet** (\$ millions)

	31 March 2008	31 March 2005
Assets		
RCA No.1 Account	644	481
Refundable tax	629	450
Actuarial Excess (Assets minus Liability)	<u>159</u>	<u>309</u>
	1,114	622
Actuarial Liability		
Pensionable excess earnings		
<ul> <li>Active contributors</li> </ul>	517	331
• Pensioners	241	47
Survivor Allowance		
<ul> <li>Active contributors</li> </ul>	131	155
• Pensioners	205	65
Former deputy heads	20	23
<b>Total Actuarial Liability</b>	1,114	622

The sum of the assets in respect of the RCA No. 1 Account and the refundable tax is \$1,273 million; it exceeds the actuarial liability of \$1,114 million by 14.3% as at 31 March 2008. As at 31 March 2005, the sum of the assets exceeded the actuarial liability by 50%. This change in the RCA No. 1 financial position is due to an underreporting error in the pensionable excess earnings actuarial liabilities. The active contributor's pensionable excess earnings liabilities should have been reported at \$370 million while the pensioner's pensionable excess earnings liabilities should have been reported at \$133 million.

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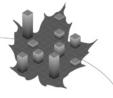


Table 13 RCA No. 2 - Balance Sheet (\$ millions)

	31 March 2008	31 March 2005
Assets		
RCA No.2 Account	819	834
Refundable tax	816	828
Actuarial Shortfall (Assets minus Liability)	(76)	(71)
Actuarial Liability	1,711	1,733

Since the last valuation as at 31 March 2005 the RCA No. 2 Account actuarial deficit of \$71 million has augmented by \$5 million to reach \$76 million as at 31 March 2008. If the \$76 million actuarial deficit would to be amortized over the maximum period of 15 years provided for in the PSSA, annual equal instalments of \$6.2 million would be required beginning on 31 March 2010, based upon half the yield projected on the Superannuation Account shown in Appendix 6.

#### 2) RCA No. 1 Current Service Cost

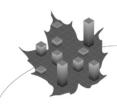
The projected current service cost, borne jointly by the contributors and the government, of 0.36% for plan year 2009 calculated in the previous valuation has increased by 0.04% to 0.40% of pensionable payroll in this valuation.

The RCA No. 1 current service cost for plan year 2009 is estimated to increase to 0.41% and 0.42% of pensionable payroll for plan years 2010 and 2011 respectively.

The following table shows the estimated RCA No. 1 current service cost for the next three plan years.

Table 14 RCA No. 1 - Current Service Costs (\$ millions)

		Plan Year	
	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total current service cost			
Pensionable excess earnings	57.0	60.2	63.8
Survivor Allowance	15.0	15.5	16.0
Former deputy heads	0.4	0.3	0.2
Total	72.4	76.0	80.0
Member contributions			
Pensionable excess earnings	8.6	7.7	7.5
Former deputy heads	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>
Total Member Contributions	8.7	7.8	7.6
Government current service cost	63.7	68.2	72.4
Current service cost as % of total pensionable payroll	0.40%	0.41%	0.42%



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## F. Summary of Estimated Government Costs

The following table summarizes the estimated total government costs on a plan year basis.

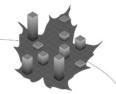
**Table 15 Estimated Government Cost** (\$ millions)

	Current Service Cost		Total Prior Service	Total Government	
Plan Year	PSSA	RCA No. 1	Contributions	Cost <sup>1</sup>	
2009	2,231	64	156	2,450	
2010	2,297	68	154	2,519	
2011	2,367	72	146	2,585	

<sup>&</sup>lt;sup>1</sup> Does not include the annual special payment of \$6.2 million to the RCA No. 2 effective plan year 2010.

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## **III. Actuarial Opinion**

In our opinion, considering that this report was prepared pursuant to the *Public Pensions Reporting Act*,

- the valuation input data on which the valuation is based are sufficient and reliable for the purposes of the valuation;
- the assumptions that have been used are, individually and in aggregate, appropriate for the purposes of determining the financial status as at 31 March 2008 of the Superannuation Account, Pension Fund and Retirement Compensation Arrangements Accounts (No.1 and No. 2) of the Public Service of Canada, and assisting the President of the Treasury Board in making informed decisions regarding the financing of the government's pension benefit obligation;
- the methodology employed is appropriate for the purposes of determining the financial status as at 31 March 2008 of the Superannuation Account, Pension Fund and Retirement Compensation Arrangements Accounts (No.1 and No. 2) of the Public Service of Canada, and assisting the President of the Treasury Board in making informed decisions regarding the financing of the government's pension benefit obligation; and
- this report has been prepared, and our opinions given, in accordance with accepted actuarial practice.

In particular, this report was prepared in accordance with the Standards of Practice (General Standards and Practice – Specific Standards for Pension Plans) published by the Canadian Institute of Actuaries.

At the time of preparing this report, the global economy and financial markets were going through a difficult period. Should the deterioration of financial markets continue, the impact on the Pension Fund will be reflected in the next actuarial valuation which is set to occur no later than 31 March 2011. To the best of our knowledge, after inquiring with Public Works Government Services Canada and the Treasury Board of Canada Secretariat, there were no other subsequent events between the valuation date and the date of this report that would have a material impact on the results of this valuation.

The payment of accrued pension benefits being the responsibility of the government, the likelihood of the plan being wound-up and its obligation not being fulfilled is practically nonexistent; also the Act does not define the benefits payable upon wind-up. Therefore, a solvency valuation has not been performed.

Daniel Hébert, F.S.A., F.C.I.A. Senior Actuary

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

Jean-Claude Menard

Ottawa, Canada 23 September 2009

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## **Appendix 1 – Summary of Pension Benefit Provisions**

The government has been providing its employees with a pension plan since 1870. Pensions for members of the Public Service are provided primarily under the *Public Service Superannuation Act* (PSSA) as enacted in 1954 and modified thereafter. Benefits are also provided to public servants under the *Special Retirement Arrangements Act*. Benefits may be modified in accordance with the *Pension Benefits Division Act* if there is a breakdown of a spousal union.

## Changes since the last valuation

The previous valuation report was based on the pension benefit provisions as they stood as at 31 March 2005. Bill C-13, which received Royal Assent on 22 June 2006, amended the PSSA and improved the benefits payable by revising downward the coordination factor of 0.7%. Beginning with calendar year 2008, the applicable coordination factor is reduced gradually until the ultimate coordination factor of 0.625% is attained by calendar year 2012.

Employees of Correctional Service Canada (CSC) became entitled to new benefit entitlement provisions during the intervaluation period. Operational employees of CSC can now receive an immediate annuity or an annual allowance based on a minimum 20 years of service regardless of age. Non-operational employees of CSC, having a minimum of 10 years of "actual operational" service to their credit, are still subject to the same plan provisions that existed before the new provisions. An immediate or annual allowance is available from age 45 with a minimum of 20 years of service.

## **Summary of Pension Benefit Provisions**

Summarized in this Appendix are the pension benefits provided under the PSSA registered provisions which are in compliance with the *Income Tax Act*. The portion of the benefits in excess of the *Income Tax Act* limits for registered pension plans is provided under the retirement compensation arrangements described in Appendix 2.

The legislation shall prevail if there is a discrepancy between it and this summary.

## A. Membership

Subject to the exceptions mentioned in the next paragraph, membership in the plan is compulsory for all full-time and part-time employees working 12 or more hours per week (except those who were grandfathered as at 4 July 1994) in the Public Service. This includes all positions in any department or portion of:

- the executive government of Canada;
- the Senate and the House of Commons;
- the Library of Parliament; and

Public Works Governments Service Canada (PWGSC) has identified the operational employees of CSC as "actual operational" employees.

PWGSC has identified the non-operational employees of CSC, with at least 10 years of "actual operational" service to their credit, as "deemed operational" employees.

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• any board, commission or corporation listed in a Schedule to the Act, as well as those designated as contributors by the President of the Treasury Board either individually or as members of a class for persons engaged as seasonal employees and some others.

The main groups of persons employed in the Public Service to which the Act does not apply are:

- part-time employees working less than 12 hours per week;
- persons locally engaged outside Canada;
- employees of some Crown corporations, boards or commissions covered by their own pension plans; and
- seasonal employees, and some others, unless designated as contributors by the President of the Treasury Board.

Since the previous valuation no entities have left the plan.

#### **B.** Contributions

#### 1. Members

During the first 35 years of pensionable service, members contribute according to the rates shown in the following table. After 35 years of pensionable service, members contribute only 1% of pensionable earnings.

Calendar Year	2008	2009	2010	2011	2012	2013+
Contribution rates on earnings <b>up to</b> the maximum covered by the CPP/QPP	4.9%	5.2%	5.5%	5.8%	6.1%	6.4%
Contribution rates on any earnings <b>over</b> the maximum covered by the CPP/QPP	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%

In order to keep their rights to an early retirement benefit, "deemed operational" members of CSC contribute an additional 0.625% of total earnings during a calendar year in addition to the above contribution rates.

## 2. Government

## a) Current Service

The government determines its normal monthly contribution as that amount, which when combined with the required contributions by members in respect of current service, is sufficient to cover the cost, as estimated by the President of the Treasury Board, of all future benefits that have accrued in respect of pensionable service during that month and the Fund administrative expenses incurred during that month.

## b) Elected Prior Service

The government matches member contributions made to the Superannuation Account for prior service elections; however, it makes no contributions if the member is paying the double rate.

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Pension Plan for the PUBLIC SERVICE OF CANADA as at 31 March 2008

Government credits to the Pension Fund in respect of elected prior service are as described for current service; however, the government contributes only 75% of the member contribution if the member is paying the double rate.

## c) Excess Notional Assets and Actuarial Surplus

Bill C-78, which received Royal Assent on 14 September 1999, gives the government the authority to:

- debit the excess of assets over the actuarial liabilities from the Superannuation Account subject to limitations, and
- deal with any actuarial surplus, subject to limitations, in the Pension Fund as they occur, either by reducing employee and/or employer contributions or by making withdrawals.

## d) Actuarial Deficit

If an actuarial deficit is identified through a triennial statutory actuarial report, the Superannuation Account and/or the Pension Fund are to be credited with such annual amounts that in the opinion of the President of the Treasury Board will fully amortize the actuarial deficit over a period not exceeding 15 years.

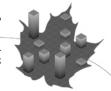
## C. Summary Description of Benefits

The objective of the PSSA pension plan is to provide an employment earnings-related lifetime retirement pension to eligible members. Benefits to members in case of disability and to the spouse and children in case of death are also provided.

Subject to coordination with the pensions paid by the Canada Pension Plan (CPP) or the Québec Pension Plan (QPP), the initial rate of retirement pension is equal to 2% of the highest average of annual pensionable earnings over any period of five consecutive years, multiplied by the number of years of pensionable service not exceeding 35. Once in pay, the pension is indexed annually with the Consumer Price Index. Such indexation also applies to deferred pensions during the deferral period.

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Detailed notes on the following overview are provided in the following section.

Contributor's Type of Termination	Benefit
With less than two years of service <sup>1</sup>	Return of contributions
With two or more years of service <sup>1</sup> ; and	
*Disability	Immediate annuity
Death leaving no surviving spouse or eligible children	Minimum benefit
•Death leaving surviving spouse and/or eligible children	Survivor allowance(s)
•Leaving prior to age 45, except for death or disability	
- Actual operational service between 20 and 25 years	Actual operational service annual allowance <sup>2</sup>
- Actual operational service 25 years or more	Immediate annuity
- Otherwise	Deferred annuity or transfer value
Leaving at ages 45 to 49, except for death or disability, and	
- Deemed operational service 20 years or more	Deemed operational service annual allowance <sup>3</sup>
- Actual operational service between 20 and 25 years	Actual operational service annual allowance <sup>2</sup>
- Actual operational service 25 years or more	Immediate annuity
- Otherwise	Deferred annuity or transfer value
Leaving at age 50 or over, except for death or disability, and	
- Deemed operational service between 20 and 25 years	Deemed operational service annual allowance <sup>3</sup>
- Deemed operational service 25 years or more	Immediate annuity
- Actual operational service between 20 and 25 years	Actual operational service annual allowance <sup>2</sup>
- Actual operational service 25 years or more	Immediate annuity
<ul> <li>Otherwise, but age 60 or over, or age 55 or over and service 30 years or more</li> </ul>	Immediate annuity
- Otherwise	Deferred annuity or annual allowance
Deferred and Immediate Pensioner's Type of Termination	Benefit
•Disability before age 60 while entitled to a deferred annuity or an annual allowance	Immediate annuity
Death leaving no eligible survivor	Minimum benefit
Death leaving eligible survivor(s)	Survivor allowance(s)

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<sup>&</sup>lt;sup>1</sup> Thresholds are determined using total pensionable service, including operational service.

Based on actual operational service only. Additional non-operational and/or deemed operational service, if any, results in the applicable non-operational benefit and/or deemed operational benefit (see Note 10).

Based on deemed operational service only. Additional non-operational service, if any, results in the applicable non-operational benefit (see Note 9).



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## D. Explanatory Notes

## 1. Pensionable Earnings

*Pensionable earnings* mean the annual employment earnings (excluding overtime but including pensionable allowances such as bilingual bonuses) of a contributor.

*Pensionable payroll* means the aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

#### 2. Indexation

## a) Level of Indexation Adjustments

All immediate and deferred annuities (pensions and allowances) are adjusted every January to the extent warranted by the increase, as at 30 September of the previous year, in the 12-month average Consumer Price Index relative to the corresponding figure one year earlier. If the indicated adjustment is negative, annuities are not decreased for that year; however, it is carried-forward and the next positive adjustment is diminished accordingly.

## b) First Indexation Adjustment

Indexation adjustments accrue from the end of the month in which employment terminates. The first annual adjustment following termination of employment is prorated accordingly.

## c) Commencement of Indexation Payments

The indexation portion of a retirement, disability or survivor pension normally starts being paid when the pension is put into pay. However, regarding an operational service retirement pension, indexation payments start only when the pensioner is either

- at least 55 years old, provided the sum of age and pensionable service is at least 85; or
- at least 60 years old.

## 3. Pensionable Service, Actual Operational Service and Deemed Operational Service

*Pensionable service* of a contributor includes any period of service in the Public Service for which the contributor has been required to contribute or has elected to contribute, if eligible to do so, and such other types of service for which the contributor has elected to make the required special contributions to the Public Service Superannuation Account or Pension Fund. Pensionable service is limited to 35 years.

Actual operational service refers to CSC employees working in federal correctional facilities, parole offices, and community correctional centres. More specifically, operational service is defined as service by a person employed by CSC whose principal place of work is not: the national headquarters or a regional headquarters of CSC; the offices of the CSC Commissioner; or a regional CSC Staff College or any other institution that provides similar training to CSC employees.

## Pension Plan for the **PUBLIC SERVICE OF CANADA**

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Deemed operational service refers to CSC employees in operational service for one or more periods totalling at least 10 years, who then cease to be engaged in operational service but continue to be employed by CSC and elect to continue to accumulate operational service and contribute an additional 0.625% of earnings.

#### 4. Return of Contributions

*Return of contributions* means the payment of an amount equal to the accumulated current and prior service contributions paid or transferred by the contributor into the plan. Interest is credited quarterly on returned contributions in accordance with the investment return on the Pension Fund.

## 5. Immediate Annuity

Immediate annuity means an unreduced pension that becomes payable immediately upon a pensionable retirement or pensionable disability. The annual amount is equal to 2% of the highest average of annual pensionable earnings of the contributor over any period of five consecutive years, multiplied by the number of years of pensionable service not exceeding 35. For contributors with periods of part-time pensionable service, earnings used in the five-year average are based on a full 37.5-hour workweek but the resulting average is multiplied by the proportion of a full workweek averaged by the contributor over the entire period of pensionable service.

When a pensioner attains age 65 or becomes entitled to a disability pension from the CPP or the QPP, the annual pension amount is reduced by a percentage of the *indexed CPP annual pensionable earnings*<sup>2</sup> (or, if lesser, the indexed five-year<sup>1</sup> pensionable earnings average on which the immediate annuity is based), *multiplied by the years of CPP pensionable service*<sup>3</sup>. The applicable percentage (it was 0.7% before 1 January 2008) depends on the year the pensioner attains age 65 or becomes entitled to a disability pension. The following table shows the applicable percentage:

		C	alendar Yea	rs	
	2008 2009 2010 2011				
Coordination Percentage	0.685%	0.670%	0.655%	0.640%	0.625%

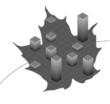
Annuities are payable at the end of month until the month in which the pensioner dies or until the disabled pensioner recovers from disability (the last payment would then be pro-rated). Upon the death of the pensioner, either a survivor allowance (Note 13) or a residual death benefit (Note 14) may be payable.

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<sup>&</sup>lt;sup>1</sup> If the number of years of pensionable service is less than five, then the averaging is over the entire period of pensionable service

Indexed CPP annual pensionable earnings means the average of the YMPE, as defined in the CPP, over the five calendar years leading up to and including the one in which pensionable service terminated, increased by indexation proportionate to that accrued in respect of the immediate annuity.

Years of CPP pensionable service mean the number of years of PSSA pensionable service after 1965 or after attaining age 18, whichever is later, but not exceeding 35.



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## 6. Deferred Annuity

Deferred annuity means an annuity that normally becomes payable to a former contributor who reaches age 60. The annual payment is determined as for an immediate annuity (Note 5) but is also adjusted to reflect the indexation (Note 2) from the date of termination to the commencement of benefit payments.

The deferred annuity becomes an immediate annuity during any period of disability beginning before age 60. If the disability ceases before age 60, the immediate annuity reverts to the original deferred annuity unless the pensioner elects an annual allowance (Notes 8, 9 and 10) that is the prescribed actuarial equivalent to the deferred annuity.

## 7. Transfer Value

Members who, at their date of termination of pensionable service, are under age 50 and are eligible for a deferred annuity may elect to transfer the commuted value of their benefits, determined in accordance with the regulations, to

- a locked-in Registered Retirement Savings Plan of the prescribed kind; or
- another pension plan registered under the *Income Tax Act*; or
- a financial institution for the purchase of a locked-in immediate or deferred annuity of the prescribed kind.

#### 8. Annual Allowance For Members

Annual allowance means an annuity payable immediately on retirement or upon attaining age 50, if later. The amount of the allowance is equal to the amount of the deferred annuity to which the member would otherwise be entitled, reduced by 5% for each year between 60 and the age when the allowance becomes payable. However, if the member is at least 50 years old at termination, and has at least 25 years of pensionable service<sup>1</sup>, then the difference is reduced (subject to the above as a maximum) to the greater of

- 55 minus the age, and
- 30 minus the number of years of pensionable service<sup>1</sup>.

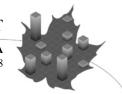
The Treasury Board can waive all or part of the reduction for members who are involuntarily retired at ages 55 and over with at least ten years of Public Service employment.

When a member in receipt of an annual allowance becomes disabled before reaching age 60, the annual allowance becomes an immediate annuity adjusted in accordance with regulations to take into account the amount of any annual allowance received prior to becoming disabled.

For privatized members who elected not to transfer their PSSA benefits to their new employer's pension plan, service (including any operational) with the new employer is included.

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## 9. Deemed Operational Service - Immediate Annuity and Annual Allowance

A deemed operational service immediate annuity differs from an immediate annuity (Note 5) only in that it is available as early as age 50 with 25 years of operational service.

A deemed operational service annual allowance differs from an annual allowance (Note 8) in two ways. Firstly it is available as early as age 45 with 20 years of operational service. Secondly the reduction factor is 5% multiplied by the greater of

- 50 minus the age, and
- 25 minus the years of operational service.

The foregoing operational service-related benefits are calculated in relation to both deemed and actual operational service only. Additional non-operational service results in the applicable non-operational benefit where any thresholds or reductions are based on total pensionable service, including operational service.

## 10. Actual Operational Service - Immediate Annuity and Annual Allowance

An actual operational service immediate annuity differs from an immediate annuity (Note 5 and Note 9) only in that it is available when the member has accrued 25 years of actual operational service.

An actual operational service annual allowance differs from other annual allowances (Note 8 and Note 9)) in two ways. Firstly it is available as soon as 20 years of actual operational service is accrued. Secondly the reduction factor is 5% multiplied by

• 25 minus the years of actual operational service.

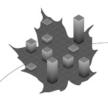
The foregoing operational service-related benefits are calculated in relation to actual operational service only. Additional non-operational service results in the applicable non-operational benefit where any thresholds or reductions are based on total pensionable service, including operational service. Also, additional deemed operational service results in the applicable deemed operational benefit where any thresholds or reductions are based on operational pensionable service.

## 11. Eligible Surviving Spouse

Eligible surviving spouse means the surviving spouse (includes a common-law or same-sex partner recognized under the plan) of a contributor or pensioner except if:

- the contributor or pensioner died within one year of commencement of the spousal union, unless the Treasury Board is satisfied that the health of the contributor or pensioner at the time of such commencement justified an expectation of surviving for at least one year; or
- the pensioner married after ceasing to be a contributor, unless after such marriage the pensioner either:
  - became a contributor again, or
  - made an optional survivor benefit election within 12 months following marriage to accept a reduced pension so that the new spouse would be eligible for a

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survivor benefit. This reduction is reversed if and when the new spouse predeceases the pensioner or the spousal union is terminated for reason other than death.

## 12. Eligible Surviving Children

Eligible surviving children includes all children of the contributor or pensioner who are under age 18, and any child of the contributor or pensioner who is age 18 or over but under 25, in full-time attendance at a school or university, having been in such attendance substantially without interruption since he or she reached age 18 or the contributor or pensioner died, whichever occurred later.

## 13. Annual Allowance for Eligible Survivor(s)

Annual allowance means, for the eligible surviving spouse and children of a contributor or pensioner, an annuity that becomes payable immediately upon the death of that individual. The amount of the allowance is determined with reference to a basic allowance that is equal to 1% of the highest average of annual pensionable earnings of the contributor over five consecutive years, multiplied by the number of years of pensionable service not exceeding 35.

The annual allowance for a spouse is equal to the basic allowance unless the spouse became eligible as a result of an optional survivor benefit election, in which case it is equal to the percentage of the basic allowance specified by the pensioner making the election.

The annual allowance for an eligible surviving child is equal to 20% of the basic allowance, subject to a reduction if there are more than four eligible surviving children in the same family. The allowance otherwise payable to an eligible surviving child is doubled if the child is an orphan.

Survivor annual allowances are not integrated with the CPP or the QPP and are payable in equal monthly instalments in arrears until the end of the month in which the survivor dies or otherwise loses eligibility. If applicable, a residual benefit (Note 14) is payable to the estate upon the death of the last survivor.

## 14. Minimum and Residual Death Benefits

If a contributor or a pensioner dies leaving no eligible survivor, the lump sum normally paid is the excess of five times the annual amount of the immediate annuity to which the contributor would have been entitled, or the pensioner was entitled, at the time of death, less any pension payments already received. Indexation adjustments are excluded from these calculations.

The same formula is used to determine the residual death benefit, which is the lump sum payable upon the death of an eligible survivor but also subtracting all amounts (excluding indexation adjustments) already paid to the survivor.

#### 15. Division of Pension with Former Spouse

In accordance with the *Pension Benefits Division Act*, upon the breakdown of a spousal union (including common-law), a lump sum can be debited by court order or by mutual consent from the accounts and/or the Fund, as the case may be, to the credit of the

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former spouse of a contributor or pensioner. The maximum transferable amount is half the value, calculated as at the transfer date, of the retirement pension accrued by the contributor or pensioner during the period of cohabitation. If the member's benefits are not vested, the maximum transferable amount corresponds to half the member's contributions made during the period subject to division, accumulated with interest at the rate applicable on a refund of contributions. The accrued benefits of the contributor or pensioner are then reduced accordingly.

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## **Appendix 2 – RCA Benefit Provisions**

This Appendix describes the Public Service pension benefits financed through retirement compensation arrangements (RCA No. 1 and RCA No. 2) rather than through the PSSA registered provisions. As described below, RCAs are pension plans not subject to the benefit limitations of registered pension plans because they are taxed on a current rather than on a deferred basis.

Effective 15 December 1994, RCA No. 1 was established pursuant to the *Special Retirement Arrangements Act* (SRAA) to provide for all pension benefits in excess of those that may, in accordance with the *Income Tax Act* restrictions on registered pension plans, be paid under the PSSA registered provisions.

Effective 1 April 1995, RCA No. 2 was established by the RCA regulations as a program for certain Public Service employees declared surplus before 1 April 1998 as part of the downsizing initiative. Participation was limited to individuals between ages 50 and 54 who met the conditions specified in the regulations. RCA No. 2 pays the difference between a pension unreduced for early retirement and the reduced pension payable in accordance with the PSSA. It is financed entirely by the government.

The following benefits have been provided under RCA No. 1 since 20 November 1997, unless otherwise indicated, to the extent that they are in excess of the ITA limit.

Benefit	PSSA Registered Provisions limit				
Survivor allowance for service from 1 January 1992 onward (see Note 13 of Appendix 1)	<ul> <li>Pre-retirement death</li> <li>Maximum spouse allowance is two-thirds of greater of A and B; and</li> <li>Maximum aggregate dependants' allowance is the greater of A and B, where         <ul> <li>A is the amount of member annuity earned to date of death, and</li> <li>B is the hypothetical amount of member annuity earned to age 65 where the average annual salary is limited to 1.5 times the average YMPE</li> </ul> </li> <li>Post-retirement death         <ul> <li>The amount of spouse allowance is limited in any year to a maximum of two-thirds the retirement benefit that would have been payable to the member in that year.</li> </ul> </li> </ul>				

## Pension Plan for the **PUBLIC SERVICE OF CANADA**as at 31 March 2008

Benefit	PSSA Registered Provisions limit			
Minimum lump sum death benefit (see Note 14 of Appendix 1)	Pre-retirement death The amount of pre-retirement death benefit if the member has no eligible dependants is limited to the greater of the member contributions with interest and the present value of the member's accrued benefits on the day prior to death.			
	Post-retirement death If the member has no eligible dependants at retirement, then the minimum death benefit is limited to the member contributions with interest.			
Continued benefit accrual for former deputy heads (provided since 15 December 1994 for service since then)	This entire benefit is outside the registered plan limit.  Deputy heads ceasing employment under age 60 may elect to be deemed full-time employees absent from the Public Service on leave without pay up to age 60.			
Elective service for service prior to 1 January 1990	The amount of lifetime retirement benefits for each such year of service is limited to two-thirds of the defined benefit limit (i.e. \$2,333.33 for calendar year 2008) for the year in which the lifetime retirement benefits commence to be paid.			
	For years subsequent to the commencement year of lifetime retirement benefits, this amount can be adjusted to reflect increases in the Consumer Price Index.			
Excess pensionable earnings (provided since 15 December 1994 for service since then)	The highest average of pensionable earnings is subject to a prescribed yearly maximum that varies by calendar year and the registered plan's benefit formula. The calendar year 2008 Maximum Pensionable Earnings was \$130,700.			



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## Appendix 3 – Assets and Rates of Return

#### A. Assets

The pension promise to Public Service employees enacted by legislation encompasses government assets, accounts and liabilities. The assets the government uses to finance the pension promise are composed of tangible assets (Pension Fund) which the government has earmarked for the payment of benefits, and accounts (Superannuation, RCA No. 1 and RCA No. 2 accounts) established to track its pension benefit obligations.

## 1. Public Service Superannuation Account

PSSA benefits earned up to 31 March 2000 are financed entirely through the Public Service Superannuation Account, which forms part of the Accounts of Canada.

The Account was credited with all PSSA contributions made by members and the government prior to 1 April 2000, as well as with prior service contributions for elections made prior to 1 April 2000 and leave without pay contributions for periods before 1 April 2000 but remitted after that date. It is charged with both the benefit payments made in respect of service earned under the Account and the allocated portion of the plan administrative expenses.

The Account is credited with interest earnings as though net cash flows were invested quarterly in 20-year Government of Canada bonds issued at prescribed interest rates and held to maturity. No formal debt instrument is issued to the Account by the government in recognition of the amounts therein. Interest earnings are credited every three months on the basis of the average yield for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces and RCMP pension plans.

**Table 16 Reconciliation of Balances in Superannuation Account** (\$ millions)

Plan Year	2006	2007	2008	2006-2008
Public Accounts opening balance	84,501	86,978	89,278	84,501
INCOME				
Interest earnings	6,458	6,422	6,376	19,256
Employer contributions	37	34	31	102
Member contributions	46	43	39	128
Transfers received	1	-	2	3
Actuarial liability adjustments	-	-	-	_
Subtotal	6,542	6,499	6,448	19,489
EXPENDITURES				
Annuities	3,833	3,996	4,184	12,013
Pension divisions	30	32	33	95
Return of contributions	-	-	-	_
Pension transfer value payments	46	61	57	164
Transfers to other pension plans	86	43	90	219
Minimum benefits	14	10	13	37
Administrative expenses	56	57	70	183
Subtotal	4,065	4,199	4,447	12,711
Public Accounts closing balance	86,978	89,278	91,279	91,279

#### Pension Plan for the PUBLIC SERVICE OF CANADA

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Since the last valuation, the Account balance has grown by \$7 billion (an 8.0% increase) to reach \$91 billion as at 31 March 2008.

#### 2. Public Service Pension Fund

Since 1 April 2000, PSSA contributions (except for prior service elections made prior to 1 April 2000) have been credited to the Public Service Pension Fund. The Fund is invested in the financial markets with a view to achieving maximum rates of return without undue risk.

The Fund has been credited with all PSSA contributions since 1 April 2000, as well as with prior service contributions in respect of elections made since that date and leave without pay contributions for periods after that date. The Fund is also credited with the net investment earnings generated by the capital assets managed by the PSPIB. It is debited with both the benefit payments made in respect of service earned and prior service elections made since 1 April 2000 and the allocated portion of the plan administrative expenses

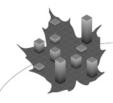
Table 17 Reconciliation of Balances in Pension Fund
(\$ millions)

(\$ millions)				
Plan Year	2006	2007	2008	2006-2008
Opening balance	14,125	20,138	25,549	14,125
INCOME				
Interest earnings	2,932	2,441	(199)	5,174
Employer contributions	2,277	2,187	2,311	6,775
Member contributions	937	1,020	1,101	3,058
Transfers received	42	47	45	134
Actuarial liability adjustments	4	-	-	4
Subtotal	6,192	5,695	3,258	15,145
EXPENDITURES				
Annuities	100	159	239	498
Pension divisions	3	5	7	15
Return of contributions	7	9	9	25
Pension transfer value payments	43	78	85	206
Transfers to other pension plans	12	17	45	74
Minimum benefits	3	3	5	11
Administrative expenses	11	13	19	43
Subtotal	179	284	409	872
Closing balance	20,138	25,549	28,398	28,398

Since the last valuation, the Fund balance has increased by \$14 billion (a 101% increase) to reach \$28 billion as at 31 March 2008.

#### 3. Public Service RCA No. 1 Account

The assets in respect of the RCA No. 1 account are composed of the recorded balance in the Retirement Compensation Arrangements Account, which forms part of the Accounts of Canada, and a refundable tax. Each calendar year, a cash transfer is made to the



Pension Plan for the PUBLIC SERVICE OF CANADA as at 31 March 2008

Canada Revenue Agency (CRA) such that in total roughly half the assets are held by the CRA as a refundable tax.

No formal debt instrument is issued to the Account by the government in recognition of the amounts therein. Interest earnings are credited every three months on the basis of the average yield for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces and RCMP pension plans.

**Table 18 Reconciliation of Balances in RCA No.1 Account** (\$ millions)

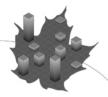
Plan Year	2006	2007	2008	2006-2008
Public Accounts opening balance	481.2	543.0	595.4	481.2
INCOME				
Interest earnings	40.3	42.9	45.1	128.3
Employer contributions	85.2	66.0	63.4	214.6
Member contributions	9.8	9.4	9.1	28.3
Transfers received	0.0	0.0	0.0	0.0
Actuarial liability adjustments	2.4	0.0	0.0	2.4
Subtotal	137.7	118.3	117.6	373.6
EXPENDITURES				
Annuities	5.7	7.4	9.1	22.2
Pension divisions	0.3	0.5	0.8	1.6
Return of contributions	0.0	0.1	0.0	0.1
Pension transfer value payments	0.0	0.0	0.5	0.5
Transfers to other pension plans	0.4	0.5	5.4	6.3
Minimum benefits	0.0	0.0	0.0	0.0
Transfer to Canada Post Corporation	0.0	1.4	0.0	1.4
Amount transfer to CRA	69.5	56.0	53.5	179.0
Subtotal	75.9	65.9	69.3	211.1
Public Accounts closing balance	543.0	595.4	643.7	643.7
Refundable tax	519.2	575.1	628.6	628.6

Since the last valuation, the Account balance has grown by \$163 million (a 33.8% increase) to reach \$644 million as at 31 March 2008 and the refundable tax has increased by \$179 million (a 39.9% increase) to reach \$629 million.

#### 4. Public Service RCA No. 2 Account

The assets are composed of the recorded balance in the Retirement Compensation Arrangements Account, which forms part of the Accounts of Canada, and a refundable tax. Each calendar year, a cash transfer is made to the CRA such that in total half of the assets are held by the CRA as a refundable tax.

No formal debt instrument is issued to the Account by the government in recognition of the amounts therein. Interest earnings are credited every three months on the basis of the average yield for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces and RCMP pension plan.



**Table 19 Reconciliation of Balances in RCA No.2 Account** (\$ millions)

(\psi \text{Infinitions})				
Plan Year	2006	2007	2008	2006-2008
Public Accounts opening balance	834.4	831.4	825.8	834.4
INCOME				
Interest earnings	62.7	60.3	57.9	180.9
Actuarial liability adjustments	10.3	9.5	9.5	29.3
Subtotal	73.0	69.8	67.4	210.2
EXPENDITURES				
Annuities	78.0	79.2	80.4	237.6
Amount transfer to CRA	(2.1)	(3.9)	(6.1)	(12.1)
Subtotal	75.9	75.3	74.3	225.5
Public Accounts closing balance	831.5	825.9	818.9	818.9
Refundable tax	825.6	821.7	815.6	815.6

Since the last valuation, the Account balance decreased by \$15.4 million (a 1.8% reduction) to \$819 million as at 31 March 2008 and the refundable tax has decreased by \$11.6 million (a 1.4% reduction) to \$816 million.

#### **B.** Rates of Interest (Return)

The rates of interest in respect of the Superannuation Account were calculated using the foregoing entries. The Account yields are based on book values since the notional bonds are deemed to be held to maturity. The results were computed using the dollar-weighted approach and assume that cash flows occur in the middle of the plan year (except for actuarial liability adjustments, which occur on 31 March).

The Fund yields are those from the PSPIB 2008 Annual Report.

Plan Year	Superannuation Account	Pension Fund
2006	7.8%	19.1%
2007	7.6%	11.7%
2008	7.3%	(0.4%)

#### C. Sources of Asset Data

The Superannuation Account, RCA No. 1 Account, RCA No. 2 Account and Pension Fund entries shown in Section A above were taken from the Public Accounts of Canada and the financial statements of the Public Sector Pension Investment Board.

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## Appendix 4 – Membership Data

### A. Sources of Membership Data

The valuation input data required in respect of contributors (both active and non-active), pensioners and survivors are extracted from master computer files maintained by the Superannuation Directorate of the Department of Public Works and Government Services Canada. The Compensation Systems Branch of that department is responsible for the extraction of the data.

The main valuation data file supplied by the Superannuation Directorate contained the historical status information on all members up to 31 March 2008.

## B. Validation of Membership Data

#### 1. Status-Related Tests

The following status tests were made on the main valuation data file:

- a consistency check that a status could be established for each record of a member. The status of a member may change over time but at a given point in time it can be only one of the following: contributor, outstanding termination, pensioner, deceased leaving an eligible survivor;
- a consistency check of the changes in status of a member during the intervaluation period; e.g.
  - if a contributor record indicated that the member retired, then a pensioner record should exist; and
  - if a contributor or pensioner record indicated that the member died leaving an eligible survivor, then a corresponding survivor record should exist;
- a reconciliation between the status of members as at 31 March 2008 from the current valuation data and the status of the members as at 31 March 2004 from the previous valuation data; and
- a comparison of valuation data as at 31 March 2008 with the membership shown in the Report on the Administration of the *Public Service Superannuation Act* for the fiscal year ending 31 March 2008.

#### 2. Benefit-Related Tests

Consistency tests were made to ensure that all proper information to value the member benefits based on individual statuses as at 31 March 2008 was included, by verifying that

#### a) For Active Members

- the pensionable service was reasonable in relation to the attained age;
- the salary was included and, if not, imputing a salary by updating a salary rate from a previous year with an average earnings increase or failing that, using the average salary rate for that sex; and



salaries included negotiated increases in effect and increasing the salary rates accordingly if this was not the case.

## b) For Pensioners and Survivors in Receipt of an Annuity

- the amount of the annuity, including indexation, was included; and
- the benefits were indexed up to 1 January 2008.

#### c) For Outstanding Terminations

• the lump sum payment was recognized

### d) For Adjustments to Status and Benefit Data

appropriate adjustments were made to the basic data, after consulting with the data providers, based on the omissions and discrepancies identified by the tests described herein and several additional tests.

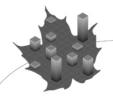
## C. Membership Data

The following tables show the detailed reconciliation of membership data since the last valuation. Detailed membership data upon which this valuation is based are shown in Appendix 11.

**Table 20 Reconciliation of Contributors** 

	Particij Accr			ipating ccruing	Non Participating Non Accruing		
	Male	Female	Male	Female	Male	Female	Total
As at 31 March 2004	123,554	144,830	2,151	665	409	597	272,206
Data corrections	(1,772)	(1,989)	(49)	(17)	(6)	(3)	(3,836)
New entrants	35,098	45,078	206	59	-	-	80,441
Rehired from cash-out	7,965	14,393	72	17	-	-	22,447
Rehired from pensioners	1,443	3,280	19	4	-	-	4,746
Net movement within	(4,157)	(2,997)	3,530	2,241	627	756	=
ROC or Transfer Value	(14,550)	(22,245)	(161)	(43)	(306)	(571)	(37,876)
Pensionable terminations							
Disability	(699)	(1,217)	(9)	(3)	-	(2)	(1,930)
Deferred annuity (DA)	(4,477)	(7,057)	(33)	(19)	(28)	(67)	(11,681)
Death (no survivors)	(191)	(181)	(4)	(2)	(1)	(4)	(383)
Death (with survivors)	(596)	(341)	(23)	(8)	(11)	(1)	(980)
Annuitant (IA/AA) <sup>1</sup>	(12,762)	(10,524)	(3,007)	(1,568)	(207)	<u>(119)</u>	(28,187)
Subtotal	(18,725)	(19,320)	(3,076)	(1,600)	(247)	(193)	(43,161)
As at 31 March 2008	128,856	161,030	2,692	1,326	477	586	294,967

IA refers to Immediate Annuity while AA means Annual Allowance.



Pension Plan for the **PUBLIC SERVICE OF CANADA** as at 31 March 2008

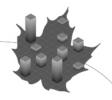
**Table 21 Reconciliation of Pensioners** 

		Deferred Annuity or			D: 132 A 3			TA / A A		
	L	Deferred A	.A	Disa	ability An	nuity	IA / AA			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
As at 31 March 2004	3,639	3,223	6,862	6,470	5,753	12,223	98,985	50,002	148,987	
Data corrections	1,570	2,159	3,729	386	313	699	(847)	(427)	(1,274)	
New entrant from										
Contributor	2,630	3,869	6,499	708	1,221	1,929	15,897	12,144	28,041	
Disabled annuitant	-	-	-	21	27	48	-	-	-	
Deferred annuitants										
Pensioner (IA/AA)	-	-	-	-	-	-	1,842	1,646	3,488	
Transfer status to										
Contributor	(345)	(825)	(1,170)	(1)	(2)	(3)	(103)	(114)	(217)	
Deferred annuitants	(21)	(27)	(48)	-	-	-	-	-	-	
Pensioner (IA/AA)	(1,836)	(1,642)	(3,478)	-	-	-	(3)	(2)	(5)	
Termination										
Cash Paid Out	(33)	(35)	(68)	(1)	-	(1)	(2)	(4)	(6)	
Death no survivors	(36)	(11)	(47)	(674)	(211)	(885)	(8,526)	(953)	(9,479)	
Death with survivors	(15)	(8)	(23)	(505)	(495)	(1,000)	(5,760)	(4,432)	(10,192)	
As at 31 March 2008	5,553	6,703	12,256	6,404	6,606	13,010	101,483	57,860	159,343	

**Table 22 Reconciliation of Deemed Pensioners** 

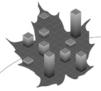
	Deferred Annuity or Deferred AA			Dis	ability An	nuity	IA / AA		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
As at 31 March 2004	1,449	1,931	3,375	-	2	2	319	247	571
Data corrections	(114)	(265)	(374)	-	-	-	(23)	(34)	(62)
New entrant from									
Contributor	1,928	3,292	5,220	-	1	1	109	95	204
Disabled annuitant	-	-	-	2	1	3	-	-	-
Deferred annuitants									
Pensioner (IA/AA)	-	-	-	-	-	-	149	117	266
Transfer status to									
Contributor	(979)	(2,266)	(3,245)	-	-	-	(35)	(78)	(113)
Deferred annuitants	(2)	(1)	(3)	-	-	-	-	-	-
Pensioner (IA/AA)	(149)	(117)	(266)	-	-	-	(1)	-	(1)
Termination									
Cash Paid Out									
Death no survivors	-	-	-	=.	-	-	(7)	-	(7)
Death with survivors	(1)	(1)	(2)	(1)	(1)	(2)	(6)	(5)	(11)
As at 31 March 2008	2,132	2,573	4,705	1	3	4	505	342	847

# Pension Plan for the **PUBLIC SERVICE OF CANADA**as at 31 March 2008



**Table 23 Reconciliation of Survivors** 

		Spouses		Children and Students			
	Widows	Widowers	Total	Children	Students	Total	
As at 31 March 2004	51,066	3,636	54,702	1,131	1,157	2,288	
Data corrections	266	70	336	(106)	(31)	(137)	
New survivors from contributors	590	321	911	433	247	680	
New survivors from Pensioners	9,241	1,176	10,417	82	96	178	
Spouse deaths	(9,697)	(695)	(10,392)	-	-	-	
Children attaining age 18 and							
Termination over coverage	-	-	-	(4)	-	(4)	
Eligible as student	-	-	-	(775)	775	-	
Students terminating				-	(1,498)	(1,498)	
As at 31 March 2008	51,466	4,508	55,974	761	746	1,507	



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## Appendix 5 - PSSA Valuation Methodology

#### A. A. Plan Assets

## 1. Superannuation Account

Assets in respect of the Superannuation Account consist essentially of the recorded balance of the Superannuation Account in the Accounts of Canada. These assets are shown at the book value of the underlying notional bond portfolio described in Appendix 3. For consistency, the liabilities are determined using the projected Account yields, shown in Appendix 6, that reflect the interest credited to the Superannuation Account.

The only other Account-related asset consists of the discounted value of future member contributions and government credits in respect of prior service elections. The discounted value of future member contributions was calculated using the projected Account yields. The government is assumed to match these future member contributions when paid at a single rate but it makes no contributions if the member is paying the double rate.

#### 2. Pension Fund

For valuation purposes, an adjusted market value method is used to determine the actuarial value of assets in respect of the Pension Fund. The method is unchanged from the previous valuation.

Under the adjusted market value method, the difference between the observed investment returns during a given plan year and the expected investment returns for that year based on the previous report assumptions, subject to a 10% corridor, is spread over five years. As a result, the actuarial value of assets is a five-year smoothed market value where the appreciation of investment gains or losses is recognized at the rate of 20% per year. The value produced by this method is related to the market value of the assets but is more stable than the market value.

The only other Fund-related asset consists of the discounted value of future member contributions and government credits in respect of prior service elections. The discounted value of future member contributions was calculated using the assumed yield on the Pension Fund. The government is assumed to contribute in the same proportion as for the PSSA current service cost when member contributions are paid at the single rate but it is assumed to contribute 75% of the member contributions when the member is paying the double rate.

The actuarial value of the assets, determined as at 31 March 2008, under the adjusted market value method is \$29,000 million and was determined as follows:



Table 24 Actuarial Value of Pension Fund Assets

(\$ IIIIIIOIIS)						
Plan Year	2004	2005	2006	2007	2008	
Actual net investment return (A)	1,741	944	2,933	2,442	(199)	
Expected investment return (B)	455	740	1,017	1,361	1,704	
Investment gains (losses) (A-B)	1,286	205	1,917	1,081	(1,903)	
Gains (losses) recognized immediately	-	-	63	-	-	
Investment gains (losses) to be amortized	1,286	205	1,854	1,081	(1,903)	
Unrecognized percentage	0%	20%	40%	60%	80%	
Unrecognized investment gains (losses)	-	41	742	649	(1,523)	
Market value as at 31 March 2008						28,398
Plus						
Present value of prior service contributions						511
Less						
Total unrecognized investment gains (losses)						(91)
Actuarial value as at 31 March 2008						29,000

#### **B.** Actuarial Cost Method

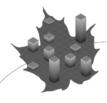
As benefits earned in respect of current service will not be payable for many years, the purpose of an actuarial cost method is to assign costs over the working lifetime of the members.

As in the previous valuations, the projected accrued benefit actuarial cost method (also known as the projected unit credit method) was used to determine the current service cost and actuarial liability. Consistent with this cost method; pensionable earnings are projected up to retirement using the assumed annual increases in average pensionable earnings (including seniority and promotional increases). The yearly maximum salary cap and other benefit limits under the *Income Tax Act* described in Appendix 2 were taken into account to determine the benefits payable under the PSSA and those payable under the RCA No. 1.

#### 1. Current Service Costs

Under the projected accrued benefit actuarial cost method, the current service cost, also called normal cost, computed in respect of a given year is the sum of the value, discounted in accordance with the actuarial assumptions for the Pension Fund, of all future payable benefits considered to accrue in respect of that year's service. The Pension Fund administrative expenses are deemed to be included in the total current service cost.

Under this method, the current service cost for an individual member will increase each year as the member approaches retirement. However, all other things being equal, the current service cost for the total population, expressed as a percentage of total pensionable payroll, can be expected to remain stable as long as the average age and service of the total population remains constant. The government current service cost is the total current service cost reduced by the members' contributions.



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### 2. Actuarial Liability

The actuarial liability with respect to contributors corresponds to the value, discounted in accordance with the actuarial assumptions, of all future payable benefits accrued as at the valuation date in respect of all previous service. For pensioners and survivors, the actuarial liability corresponds to the value, discounted in accordance with the actuarial assumptions, of future payable benefits.

#### 3. Actuarial Excess (Deficit)

It is very unlikely that the actual experience will conform exactly to the assumptions that underlie the actuarial estimates. Thus a balancing item must be calculated under this cost method to estimate the necessary adjustments. Adjustments may also be necessary if the terms of the pension benefits enacted by legislation are modified or if assumptions need to be updated.

The actuarial excess or deficit is the difference between the actuarial value of assets and the actuarial liability. A new actuarial deficit may be amortized over a period not exceeding 15 years through special payments and the disposition of any actuarial surplus is defined in the PSSA.

#### 4. Government Contributions

The recommended government contribution corresponds to the sum of:

- the government current service cost;
- the government contributions for prior service; and
- as applicable, special payments in respect of a deficit or as the case may be, actuarial surplus credits.

#### C. Projected Yields

The projected yields (shown in Appendix 6) assumed for computing the present value of accrued benefits to be credited from the Superannuation Account (i.e. the Account liability) are the projected annual yields on the combined book value of the Superannuation Accounts of the Public Service, Canadian Forces, and RCMP pension plans.

The projected Account yields were determined by an iterative process involving the following:

- the combined notional bond portfolio of the three Accounts as at the valuation date;
- the assumed future new money interest rates (also shown in Appendix 6);
- the expected future benefits payable in respect of all pension entitlements accrued up to 31 March 2000;
- the expected future contributions for prior service elections made up to 31 March 2000, and
- the expected future administrative expenses,

taking into account that each quarterly interest credit to an Account is calculated as if the principal at the beginning of a quarter remains unchanged during the quarter.

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The projected yields (shown in Appendix 6) assumed for computing the present value of the benefits accrued or accruing to be credited to the Pension Fund (i.e. the Fund liabilities and the current service cost) were developed on the basis that the Fund holds a diversified mix of assets.

#### D. Membership Data

For valuation purposes, individual data on each member were used.

The member data shown in Appendix 4 and 11 were provided as at 31 March 2008. This valuation is based on the member data as at the valuation date.

The information in respect of the contributions for elected prior service was provided as at 31 March 2008. Future member contributions in respect of elected prior took into account only the payment streams that were still in effect at 31 March 2008. Only payments due after 31 March 2008 were included.



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## Appendix 6 – PSSA Actuarial Assumptions

The payment of accrued pension benefits is the responsibility of the government, therefore the likelihood of the plan being wound-up and its obligation not being fulfilled is practically nonexistent, consequently all the assumptions used in this report are best-estimate assumptions, i.e. they reflect our best judgement of the future long-term experience of the plan.

#### A. Economic Assumptions

#### 1. Key Economic Assumptions

## a) Level of Inflation

Price increases, as measured by changes in the Consumer Price Index, tend to fluctuate from year to year. Based on the renewed commitment of the Bank of Canada and the Government to keep inflation between 1% and 3% until 2011, a rate of price increase of 2.0% has been assumed for plan years 2009 to 2011. Recognizing past experience, the rate of price increase is assumed to increase from 2.0% for plan year 2012 to 2.4% for 2016. The ultimate rate of 2.4% is 0.1% lower than the assumed rate from the previous valuation.

#### b) Real<sup>1</sup> Increases in Average Earnings

Salary increases consist of a combination of inflation, productivity growth (i.e. real increase in average employment earnings in excess of inflation) and seniority and promotional increase. Seniority and promotion is strongly service-based and is therefore considered to be a demographic assumption rather than an economic assumption.

The assumed ultimate productivity rate of 1.1% per annum is 0.1% higher than the assumed ultimate rate from the previous valuation. One of the key elements underlying the productivity rate assumption is the expected labour shortage due to the aging of the Canadian population and the retirement of the baby boom generation between 2010 and 2030. A growing labour shortage, especially after 2010, is assumed to force higher real wage growth. Labour force growth will weaken as the working age population expands at a slower pace. Real increases in average earnings are assumed to rise gradually from 0.8% in plan year 2011 to reach the ultimate 1.1% per annum in 2013.

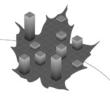
## c) Real Rate of Return on Long-Term Government of Canada Bonds

Recognizing recent experience, the real rate of return on long-term Government of Canada bonds was assumed to be 2.4% for plan years 2009 to 2012. The rate then increases by 0.1% in each of the next four years and reaches its ultimate rate of 2.8% per annum in 2016. The long-term Government of Canada return is based on historical returns and in the previous valuation, its ultimate rate was 2.85%.

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Note that all of the real rates of return presented in this report are actually real-return differentials, i.e., the difference between the effective annual rate of return on investments and the rate of increase in prices. This differs from the technical definition of the real rate of return, which, in the case of the ultimate Fund assumption, would be 4.2% (derived from 1.067/1.024) rather than 4.3%.



#### d) Real Rate of Return on Fund

For PSPIB assets, it is assumed that the ultimate real rate of return on investments will be 4.3%, net of investment expenses (the ultimate level of inflation being 2.4%). The ultimate real rate of return is unchanged from the previous valuation. The real rate of return on PSPIB assets takes into account the assumed asset mix of investments as well as the assumed real rate of return for all categories of PSPIB assets. Based on this assumed asset mix, the real rate of return is 4.0% for the next four years, and increases gradually to reach the ultimate 4.3% per annum in plan year 2014.

For the period ending December 2007, the following table was prepared based on the Canadian Institute of Actuaries Report on Canadian Economic Statistics 1924-2007.

Period of Years Ending 2007	15	25	50
Level of Inflation	1.88%	2.77%	4.12%
Real Increases in Average Earnings	0.12%	0.16%	0.97%
Real Return on Long-Term Canada Bonds <sup>1</sup>	6.93%	7.39%	3.11%
Average Real Return on Diversified Portfolios	7.52%	7.40%	$4.71\%^{2}$

#### 2. Derived Economic Assumptions

Table 25 Economic Assumptions<sup>3</sup>
(As a percentage)

	Infl	ation	Е	<b>Employment Earning Increases</b>				Interest		
Plan Year	CPI Increase	Pension Indexing <sup>4</sup>	IAAWE	YMPE <sup>4</sup>	Average Pensionable Earnings <sup>5</sup>	Maximum Pensionable Earnings <sup>4,6</sup>	New Money Rate	Yield Projected on Account	Yield Projected on Fund	
2009	2.0	2.5	3.0	3.1	1.5	4.8	4.4	7.1	6.0	
2010	2.0	2.0	2.7	2.6	1.5	2.6	4.4	6.8	6.0	
2011	2.0	2.0	2.9	2.8	1.5	2.8	4.4	6.6	6.0	
2012	2.0	2.0	3.1	3.0	3.0	3.0	4.4	6.1	6.0	
2013	2.1	2.0	3.2	3.2	3.2	3.2	4.7	5.9	6.3	
2014	2.2	2.1	3.4	3.3	3.3	3.3	5.0	5.7	6.5	
2015	2.3	2.2	3.5	3.5	3.4	3.5	5.1	5.5	6.6	
2016	2.4	2.3	3.6	3.6	3.5	3.6	5.2	5.3	6.7	
2017	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.2	6.7	
2018	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.1	6.7	
2023	2.4	2.4	3.6	3.6	3.5	3.6	5.2	4.9	6.7	
2028	2.4	2.4	3.6	3.6	3.5	3.6	5.2	4.9	6.7	
2033	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.2	6.7	
2038+	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.2	6.7	

Real returns were calculated after the level of inflation is removed geometrically before 1992.

This average is over the last 48 years.

Bold figures denote actual experience.

Assumed to be effective as at 1 January.

Assumed to occur throughout the plan year. Exclusive of seniority and promotional increases.

<sup>6</sup> Calendar year 2008 Maximum Pensionable Earnings is \$130,700



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#### a) Projected Yields on Superannuation Account

These yields are required for the computation of present values of benefits to determine the liability for service prior to 1 April 2000. The methodology used to determine the projected yields on the Account is described in Appendix 5. This is the same methodology as was used in previous valuations.

## b) Projected Yields on Pension Fund

These yields are derived from the assumed future level of inflation and the real return on the Fund which were both changed for this valuation. These yields are required for the computation of the present value of benefits to determine the current service cost and liability for service since 1 April 2000. The assumed yield of 6.0% per annum for plan year 2009 is assumed to increase gradually to the ultimate level of 6.7% per annum by plan year 2016. The assumed yield is net of investment expenses debited to the Pension Fund.

## c) Increase in the Year's Maximum Pensionable Earnings (YMPE)

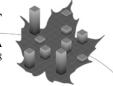
The YMPE is required in the valuation process because the plan is coordinated with the Canada Pension Plan and the Québec Pension Plan. The assumed increase in the YMPE for a given year is derived, in accordance with the *Canada Pension Plan*, to correspond to the increase in the assumed Industrial Aggregate of Average Weekly Earnings (IAAWE) over successive 12-month periods ending on 30 June. The IAAWE is deemed to include a component for seniority and promotional increases; consequently the ultimate increase in the YMPE is assumed to be 0.1% higher (beginning with plan year 2015) than the corresponding increase in average pensionable earnings. The YMPE increase was 0.2% higher than the corresponding increase in average pensionable earnings in the previous valuation.

#### d) Maximum Pensionable Earnings (MPE)

Because the plan is coordinated with the Canada Pension Plan and the Québec Pension Plan, the tax-related maximum pensionable earnings were derived from both the maximum annual pension accrual under a registered defined benefit plan and the YMPE. The maximum annual pension accrual of \$2,333.33 for calendar year 2008 will increase to \$2,444.44 for 2009, in accordance with the 2005 Federal Budget; thereafter, the maximum annual pension accrual is assumed to increase in accordance with the assumed increase in the IAAWE which is 0.1% lower than in the previous valuation.

As described in Note 5 of Appendix 1, the coordination factor of 0.7% effective for plan years before 2008 will decrease by 0.015%/year to an ultimate coordination factor of 0.625% by plan year 2012. The *Public Service Superannuation Regulations* specifies that the ultimate coordination factor of 0.625% is to be used for the determination of the maximum pensionable earnings. The MPE is \$130,700 for calendar year 2008.

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#### e) Increase in Pension Indexing Factor

The year's pension indexing factor is required in the valuation process by virtue of its role in maintaining the purchasing power of pensions. It was derived by applying the indexation formula described in Appendix 1, which relates to the assumed Consumer Price Index increases over successive 12-month periods ending on 30 September.

#### f) Transfer Value Real Interest Rate

The Canadian Institute of Actuaries has recently adopted the Revised Standards of Practice for Pension Commuted Values, effective 1 April 2009. The financial impact of the Revised Standards has been reflected in this valuation. The real interest rates to be used for the computation of commuted values as at a particular date are as follows:

First 10 years:  $r_7 + 0.90\%$ 

After 10 years:  $r_L + 0.5 \times (r_L - r_7) + 0.90\%$ 

Where  $r_7 = r_L x (i_7/i_L)$ 

r<sub>L</sub> is the long-term real-return Government of Canada bond yield, annualized

i<sub>L</sub> is the long-term Government of Canada benchmark bond yield, annualized and

i<sub>7</sub> is the 7-year Government of Canada benchmark bond yield<sup>1</sup>, annualized

The obtained rates of interest are rounded to the next multiple of 0.10%.

For example, for plan year 2010, the real rates of interest are 3.0% for the first 10 years and 3.4% thereafter. These rates were derived from the assumed 2010 CPI increase and the assumed 2010 long-term Government of Canada benchmark bond yield which corresponds to the new money rate in this valuation.

#### **B.** Demographic Assumptions

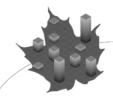
Given the size of the population subject to the PSSA, the plan's own experience, except where otherwise noted, was deemed to be the best model to determine the demographic assumptions. Assumptions from the previous valuation were updated to reflect past experience to the extent it was deemed credible.

#### 1. Seniority and Promotional Salary Increases

Seniority means length of service within a classification and promotion means moving to a higher paid classification.

The experience of the last four years has been for promotional and seniority increases to trend downwards and stabilized from the elevated experience reported in the previous two valuation reports. This downward trend and stabilization was anticipated and incorporated into the previous report by grading an initial select assumption down to a lower ultimate assumption for plan years 2010+.

It was deemed to be equal to 90% of the long-term Government of Canada benchmark bond yield.



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It is assumed that seniority and promotional increases have stabilized to a higher level that previously anticipated, hence, no select period was used for this report. Full credibility was given to the experience from 1 April 2004 to 31 March 2008. For males with 10-26 years of service the assumption is 11% to 19% higher than the previous ultimate rate. For females in the same service range, the assumption was on average 6% higher than the previous ultimate rate. For males and females with 0 to 2 years of completed service the assumption was between 8% and 16% less than the previous ultimate rate.

Table 26 Sample of Assumed Seniority and Promotional Salary Increases
(Percentage of annual earnings)

(Percentage of anni	uai earnings)	
Completed Years of Pensionable Service	Male	Female
0	5.0	5.3
1	4.5	4.8
2	4.1	4.1
3	3.7	3.6
4	3.4	3.3
5	3.1	3.0
6	2.9	2.7
7	2.7	2.5
8	2.5	2.4
9	2.3	2.2
10	2.2	2.1
15	1.6	1.7
20	1.3	1.5
25	1.1	1.3
30	0.8	1.1

#### 2. New Contributors

It was assumed that the distribution of new participants by age and sex would be the same as that of participants with less than one year of service at the valuation date. The assumed rates for each plan year are unchanged from the previous report.

**Table 27 Assumed Annual Increases in Number of Contributors** 

Plan Year	Percentage
2009-2016	0.9
2017-2021	0.8
2022+	0.5

The initial salary of new members in a given age-sex cell in plan year 2009 is assumed to be the same as the corresponding experience in plan year 2008 with an economic

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salary increase for plan year 2009. Initial salary is assumed to increase in future years in accordance with the assumption for average earnings increases.

#### 3. Pensionable Retirement

The assumed rates of pensionable retirement were revised to reflect the intervaluation experience. The rates assumed for the main group of contributors were reduced by an average of 10-15% for selective age and service groups.

The pensionable retirement rates for operational service group were also changed to give partial credibility to the intervaluation experience. Although assumed rates decreased by as much as 50% for certain age and service combinations and increased by over 300% for other age and service combinations, the overall financial impact is marginal.

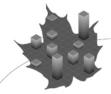
The introduction of the different operational group, 'actual' versus 'deemed' came into effect in May 2005. To simplify the approach, the analysis of the pensionable retirement assumption was based on the actual operational service group. As at the valuation date, actual operational service members totalled 9,986 with only 123 deemed operational members. Consequently, a unique set of pensionable retirement rates will be applied for all operational members.

The following tables provide sample rates of pensionable retirement.

**Table 28 Sample of Assumed Rates of Retirement - Main Group** (Per 1,000 individuals)

Male							
		(	Completed Y	ears of Pensi	onable Servi	ce	
Age	1	2	10	20	29	30	35
50	31	46	13	9	12	14	-
55	78	93	33	15	227	206	410
60	112	122	145	167	245	255	349
65	260	265	287	305	321	327	383
70	198	211	280	305	354	364	339
Female							
		(	Completed Y	ears of Pensi	onable Servi	ce	
Age	1	2	10	20	29	30	35
50	41	56	15	12	16	18	-
55	91	92	33	42	276	232	360
60	89	98	139	224	269	274	316
65	198	218	305	318	333	344	327
70	265	265	265	265	265	265	250

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**Table 29 Sample of Assumed Rates of Retirement - Operational Service Group** (Per 1,000 individuals)

	,							
	Completed Years of Pensionable Service							
Age	1	2	10	19	20	30	35	
34-47	-	-	-	3	3	72	-	
48	-	-	-	14	3	67	-	
50	55	42	24	13	16	123	-	
55	156	112	82	45	45	218	550	
60	262	264	268	278	280	354	450	
65	400	400	400	450	450	500	480	

### 4. Disability Retirement

The disability incidence rate assumptions were revised to reflect the intervaluation experience. The assumed disability incidence rates for males (females) were on average 14% (13%) lower than in the previous valuation. The downward revisions were largest for males (females) with ages in the range of 30-37 (25-33).

It is assumed that 75% of future new disability pensioners will receive a C/QPP disability pension at the onset of disability. This is unchanged from the previous valuation.

**Table 30 Sample of Assumed Rates of Pensionable Disability** (Per 1.000 individuals)

	( ,	/	
-	Age	Male	Female
	25	0.2	0.1
	35	0.2	0.6
	45	1.2	2.2
	55	3.9	5.7
	58	5.9	8.7

#### 5. Withdrawal

Withdrawal means ceasing to be employed for reasons other than death or retirement with an immediate annuity or an annual allowance. The withdrawal assumptions were revised downwards to reflect the intervaluation experience. For the main group the rates are on average 23% lower than the previous valuation. For the operational service group the rates are on average 27% lower.

Approximately two-thirds of the terminating contributors with more than two years of service are assumed to elect a transfer value rather than a deferred annuity.

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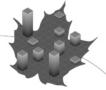


Table 31 Sample of Assumed Withdrawal Rates

(Per 1,000 individuals)

Completed Years of	Main	Group	Operational	
Pensionable Service	Male	Female	Service Group	
0	189	207	55	
1	94	94	40	
5	31	29	18	
10	18	18	14	
15	11	12	11	
20	9	10	10	

### 6. Mortality

The mortality rate assumptions were created by giving partial credibility to projected mortality rates from the previous report and partial credibility to the intervaluation experience.

For contributors and retirement pensioners the new base year mortality rates are lower at most ages. In particular, at ages 30-40 the assumed mortality rates declined by an average of 29% for males and 10% for females. For ages 65-75 the assumed mortality rates declined by an average of 12% for males and 5% for females.

The assumed mortality rate for disability pensioners was lowered at almost all ages. Between the ages of 30 and 80 the assumed mortality rates were lowered by an average of 9% for males and 5% for females.

The assumed mortality rates for spouse survivors were also revised based on intervaluation experience. Rates were revised significantly upwards or downwards at specific ages, but overall the average change was around 0%.

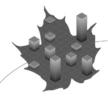
Table 32 Sample of Assumed Rates of Mortality

For Plan Year 2009 (Per 1.000 individuals)

	Contributors and Retirement Pensioners		Disability	Disability Pensioners		Surviving Spouses	
Age	Male	Female	Male	Female	Male	Female	
30	0.5	0.3	7.9	6.9	1.3	0.4	
40	0.9	0.5	13.6	7.7	2.8	0.9	
50	2.1	1.4	17.4	9.0	4.2	2.4	
60	6.5	4.3	23.4	13.7	9.2	5.2	
70	20.5	12.7	46.6	27.0	25.6	14.5	
80	63.1	40.8	99.1	66.6	68.2	40.6	
90	168.3	126.7	213.0	176.3	174.5	126.0	
100	351.2	315.2	476.0	441.7	353.6	317.0	
110	500.0	500.0	500.0	500.0	500.0	500.0	

As shown in the 23<sup>rd</sup> Actuarial Report on the Canada Pension Plan, life expectancy in Canada has been increasing constantly since 1966 for both males and females. This

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trend is also observed in the PSSA plan population as supported by analysis of past mortality experience. Mortality rates are reduced in the future in accordance with the same mortality improvement assumption used in the 23<sup>rd</sup> Actuarial Report on the Canada Pension Plan. For both males and females, the improvement factors are higher than those used in the previous valuation except at advanced ages.

The ultimate rates of improvement for years 2029 and thereafter were established by analysing the trend by age and sex of the Canadian experience over the last 30 years. The rate of improvement for plan year 2009 is assumed to be equal to those experienced on average over the last 15 years (1989 to 2004). After 2009, the rates are assumed to reduce gradually to their ultimate level by year 2029.

A sample of assumed longevity improvement factors is shown in the following table.

Table 33 Sample of Assumed Longevity Improvement Factors (applicable at the end of the plan year)

	(applicable at the old of the plan year)						
	Initial and Ultimate Plan Year Mortality Reductions (						
	N	[ale	Fe	emale			
Age	2009	2029+	2009	2029+			
30	3.25	0.70	1.85	0.70			
40	2.05	0.70	1.25	0.70			
50	1.86	0.70	1.46	0.70			
60	2.24	0.70	1.34	0.70			
70	2.35	0.70	1.25	0.70			
80	1.70	0.70	1.10	0.70			
90	0.60	0.40	0.35	0.40			
100	0.00	0.40	0.00	0.40			
110+	0.00	0.00	0.00	0.00			

### 7. Family Composition

The assumptions regarding spouse survivors were revised based on the intervaluation experience. The assumptions regarding the probability of leaving, upon death, a spouse eligible for a survivor pension were not materially changed. The assumed age of the spouse survivor was changed by one year at selected ages. The effect of the update was to lower the age of both widows and widowers relative to the deceased member.

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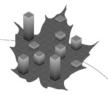


Table 34 Assumptions for Survivor Spouse Allowances<sup>1</sup>

	Male		Female		
Age	Probability of an Eligible Spouse at Death of Member	Spouse Age Difference	Probability of an Eligible Spouse at Death of Member	Spouse Age Difference	
30	0.43	(1)	0.57	1	
40	0.57	(2)	0.57	2	
50	0.72	(3)	0.57	2	
60	0.76	(4)	0.52	2	
70	0.74	(3)	0.39	1	
80	0.64	(4)	0.19	(1)	
90	0.40	(7)	0.04	(5)	
100	0.10	(10)	0.00	-	

The assumptions regarding the average number of eligible children were revised based on the intervaluation experience. Between the ages of 30 and 54 the average number children assumed to be eligible for a survivor allowance increased between 0% and 13% with the majority of the increase attributable to female members. For females under the age of 26 the assumed number of children was lowered by 20% to 50%. The assumption regarding the average age of eligible children was unchanged from the previous valuation. As in the previous valuation, to determine the value of pensions payable to eligible children, the rates of pension termination were assumed to be zero prior to age 17 and 16% per annum thereafter until expiry of the benefit on the 25<sup>th</sup> birthday.

The revision to family composition assumptions has a negligible impact on the valuation results.

Table 35 Assumptions for Survivor Children Allowances<sup>1</sup>

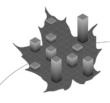
Age Last	Mal	le	Female		
Birthday at Death	Average Number of Children	Average Age of Children	Average Number of Children	Average Age of Children	
30	0.7	4	0.7	4	
40	1.0	11	0.8	14	
50	0.7	17	0.3	19	
60	0.1	19	0.0	-	
70	0.0	-	0.0	-	

#### C. Other Assumptions

#### 1. Pension Benefits Division/Optional Survivor Benefit/Leave Without Pay

The division of pension benefits has almost no effect on the valuation results because the liability is reduced, on average, by approximately the amount paid to the credit of

Survivor pensions are not payable if the deceased member has less than two years of pensionable service.



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the former spouse. Consequently, no future pension benefits divisions were assumed in estimating the current service cost and liability. However, past pension benefits divisions were fully reflected in the liability. Two other provisions, namely the optional survivor benefit and the suspension of membership while on leave without pay, were also treated like pension benefits divisions for the same reason.

#### 2. Minimum Post-Retirement Death Benefit

This valuation does not take into account the minimum death benefit described in Note 14 of Appendix 1 –D, with respect of deaths occurring after retirement. The resulting understatement of the accrued liability and current service cost is not material since the majority of the relatively few pensioners who die in the early years of retirement leave an eligible survivor.

#### 3. Administrative Expenses

It is assumed that administrative expenses will be 0.4% of pensionable payroll, which is 0.05% greater than in the previous report. The experience of the plan has shown that administrative expenses had reached the level of 0.4% of pensionable payroll during plan year 2002. This assumption was not changed in the previous report due to what was then believed to be a very short observation period, hence a low level of credibility.

Analysis of the administrative expenses over the years has shown an increase in the proportion of total administrative expenses being charged to the Fund. Consequently, the annual reduction of administrative expenses charged to the Account has been increased to 2.8% from 2%. In plan year 2009, the Account is assumed to be charged with 76% of the total expenses. Expenses expected to be debited to the Account in the future have been capitalized and are shown as a liability on the balance sheet, whereas the expenses to the Fund are shown on an annual basis as they occur.

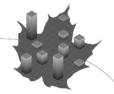
The last two plan years have seen a large increase in the amount of administrative expenses charged to both Account and Fund. This is due principally to two projects currently underway at Public Work Government Services Canada, that is the "Pension Modernization" and "Pension Services Centralization" projects. As these projects' costs are charged directly against both Account and Fund, this valuation will recognized the present value of the expected total administration expenses associated with the realization of these projects. The expected completion date of these projects is March 2012. A total of \$134 million and \$51 million is earmarked and charged against the Account and the Fund respectively.

#### 4. Financing of Elected Prior Service

The assumed future government credits in respect of prior service elections vary according to the rate paid by the contributor (i.e. single or double) and the vehicle (i.e. Account or Fund) into which the contributions are deposited. The government matches member contributions made to the Superannuation Account for prior service elections; however, it makes no contributions if the member is paying the double rate. Government credits to the Pension Fund in respect of elected prior service are as described for current service; however, the government contributes only 0.75 of the member contribution if the member is paying the double rate.

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#### 5. Outstanding Terminations

Amounts paid from 1 April 2008 onward for terminations that occurred prior to that date were estimated from actual payments made from 1 April 2008 onward using PWGSC historical information provided as at November 2008.

#### 6. Disability Incidence Rates for Pensioners Under Age 60

Both deferred pensioners and pensioners receiving an annual allowance while under age 60 were assumed to have a 0% disability rate. The resulting understatement of liability and current service cost is negligible.

## 7. Recovery Rates for Disability Pensioners

No recoveries are assumed for disability pensioners. The resulting overstatement of liability and current service cost is negligible.

#### 8. Sex of Surviving Spouses

Each eligible surviving spouse is assumed to be of the opposite sex.



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## Appendix 7 – RCA Valuation Methodology and Assumptions

#### A. Valuation of Assets

The assets comprise the recorded balance in the Retirement Compensation Arrangements (RCA No. 1 and RCA No. 2), Accounts, which forms part of the Accounts of Canada, and a refundable tax. Each calendar year a cash transfer is made to the Canada Revenue Agency (CRA) such that in total half of the assets are held by the CRA as a refundable tax.

Interest is credited every three months in accordance with the actual average yield on a book value for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces and Royal Canadian Mounted Police pension plans. The actuarial asset value is equal to the book value.

#### **B.** Valuation of Liabilities

Described in this Appendix are the liability valuation methodologies used and any differences in economic assumptions from those used in the PSSA valuation.

#### 1. Terminally Funded RCA Benefits

The following RCA benefits are being terminally funded (i.e. not prefunded but on an occurrence basis):

- Early Retirement Incentive (ERI) program
- pre-retirement survivor benefits
- minimum death benefit
- elective service.

Except for the now-closed ERI program, the above benefits are terminally funded because they are uncommon or of little financial significance. For example, the pre-retirement survivor benefit becomes payable only when the average salary is less than 1.4 times the YMPE. As well, the minimum death benefit is expected to occur only with deaths at younger ages where the probability of death is small.

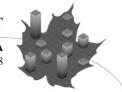
#### 2. RCA No. 1 Post-retirement Survivor Benefits

The limit on the amount of spousal annual allowance that can be provided under the PSSA decreases at the same time the member's pension reduces due to the C/QPP offset, usually at age 65.

This benefit was valued conservatively by assuming the plan limit is always reduced by the C/QPP offset. The liability overstatement is minor because the probability of the former contributor dying prior to age 65 is small. (This overstatement tends to be offset by the understatement of accrued liability caused by terminally funding the pre-retirement survivor benefit.) The projected accrued benefit cost method was used to estimate the liabilities and normal costs for this RCA No. 1 benefit.

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### 3. RCA No. 1 Continued Benefit Accrual for Former Deputy Heads

All former deputy heads that have accrued or are accruing benefits are included. For those accruing benefits, it was assumed that they would cease to do so when first eligible for an immediate annuity.

#### 4. RCA No. 1 Excess Pensionable Earnings

The projected accrued benefit cost method was used to estimate plan liabilities and normal costs for benefits in excess of the Maximum Pensionable Earnings (MPE).

In the previous valuation report, the methodology used to value the contributors with pensionable earnings in excess of the *Income Tax Act* limit consisted of the creation of a fast-trackers population that were expected to exceed the maximum pensionable earnings. The methodology also involved modifications to the termination and retirement assumptions as well as the removal of the seniority and promotional salary increases. In this valuation, tests have shown that the liability resulting from valuing benefit in excess of the MPE was marginally exceeding the liability produced by the fast-tracker population. Consequently, pension benefits in excess of the MPE are valued without any modifications to the actuarial assumptions described in Appendix 7 and without the use of a fast-tracker population.

#### 5. Administrative Expenses

To compute the liabilities and normal costs, no provision was made regarding the expenses incurred for the administration of both RCA No. 1 and RCA No. 2 Accounts. These expenses, which are not debited to the RCA No. 1 and RCA No. 2 Accounts, are borne entirely by the government and are commingled with all other government expenses.

#### C. Actuarial Assumptions

The valuation economic assumptions are those described in Appendix 6 were used without any modifications, except that the interest discount rate used to determine the present value of the RCA No. 1 and RCA No. 2 liabilities and RCA No. 1 current service cost is one-half of the yield projected on the combined Superannuation Accounts.

#### D. Valuation Data

The RCA No. 1 and RCA No. 2 pension benefits in payment were provided as at 31 March 2008. RCA No. 1 and RCA No. 2 benefits expected to be paid in respect of contributors and accrued spousal allowances of current retired members were all derived from the membership data described in Appendix 4 and shown in Appendix 11.



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## **Appendix 8 – Superannuation Account Projection**

Prior to 1 April 2000, the PSSA was entirely financed through the Public Service Superannuation Account. The Account is now debited only with benefit payments made in respect of service earned before that date and administrative expenses; and it is credited with prior service and leave without pay contributions related to elections made prior to 1 April 2000 and interest earnings.

The results of the following projection were computed using the assets described in Appendix 3, the data described in Appendices 4 and 11, the methodology described in Appendix 5 and the assumptions described in Appendix 6.

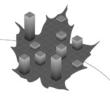
The projection shows the expected cash flows and balance of the Superannuation Account if all assumptions are realized. If the Account balance exceeds 110% of the liability, an actuarial excess reduction is triggered to bring the balance down to 110% and is reflected in this projection. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent valuation reports.

**Table 36 Superannuation Account Projection** (\$ millions)

Plan Year	Beginning Account Balance	Beginning Liability	Beginning Actuarial Excess	Actuarial Excess Reduction <sup>1</sup>	Net Payments <sup>2</sup>	Interest Earnings
2009	91,554	86,944	4,610	0	4,462	5,997
2010	93,089	88,442	4,648	0	4,652	5,842
2011	94,280	89,597	4,683	0	4,790	5,745
2012	95,235	90,519	4,716	0	4,904	5,364
2013	95,695	90,948	4,747	0	5,027	5,212
2014	95,880	91,103	4,776	0	5,151	5,042
2015	95,771	90,969	4,802	0	5,270	4,855
2016	95,356	90,532	4,824	0	5,386	4,654
2017	94,624	89,781	4,843	0	5,496	4,525
2018	93,652	88,797	4,856	0	5,597	4,387
2020	90,997	86,127	4,870	0	5,753	4,164
2025	81,289	76,409	4,881	0	5,921	3,527
2030	68,725	63,842	4,883	0	5,725	3,051
2040	40,647	37,130	3,517	245	4,398	1,818
2050	16,332	14,922	1,410	157	2,366	715

The actuarial excess reduction is calculated using the liabilities and Account balance at the end of the plan year.

Benefit payments plus administrative expenses minus prior service contributions.



## Appendix 9 – Pension Fund Projection

Starting 1 April 2000, the PSSA is financed through the Public Service Pension Fund. The Fund is credited with employer and employee contributions, investment earnings and with prior service contributions for elections since 1 April 2000. The Fund is debited with benefit payments made in respect of service earned since that date and administrative expenses.

The results of the following projection were computed using the data described in Appendices 4 and 11, the methodology described in Appendix 5 and the assumptions described in Appendix 6. The actuarial value of assets was \$29,000 million at the beginning of plan year 2009. As a large portion of the assets, earmarked for the payment of accrued pension benefits financed through the Pension Fund are invested in the volatile capital markets, the assets are set equal to the liability for projection purposes.

The projection shows the expected growth of the Pension Fund if all assumptions are realized. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent valuation reports.

Table 37 Pension Fund Projection

(\$ r	nillions)				
Plan				_	Investment
Year	Beginning Assets	Beginning Liability	Contributions <sup>1</sup>	Net Payments <sup>2</sup>	Earnings
2009	28,028	28,028	3,385	552	1,759
2010	32,620	32,620	3,514	654	2,036
2011	37,516	37,516	3,648	778	2,330
2012	42,716	42,716	3,794	923	2,641
2013	48,228	48,228	3,957	1,099	3,118
2014	54,204	54,204	4,140	1,297	3,604
2015	60,651	60,651	4,342	1,514	4,084
2016	67,563	67,563	4,553	1,754	4,608
2017	74,970	74,970	4,770	2,018	5,103
2018	82,825	82,825	5,001	2,306	5,629
2020	99,975	99,975	5,520	2,954	6,778
2025	152,091	152,091	6,952	5,114	10,270
2030	219,050	219,050	8,717	8,068	14,761
2040	401,109	401,109	13,009	18,282	26,912
2050	650,056	650,056	19,237	33,377	43,526

Total current service cost plus prior service contributions.

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<sup>&</sup>lt;sup>2</sup> Benefit payments minus administrative expenses associated with the "Pension Modernization Projects".



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## Appendix 10 – Investment Risk of a Diversified Portfolio

### A. Investment Assumption

## 1. Investment Strategy

Since 1 April 2000, tangible assets resulting from government and employee contributions are invested in capital markets through the PSPIB. The PSPIB invests funds according to its own investment policies, which take into account the needs of contributors and beneficiaries, as well as financial market constraints. The investments have been grouped into three broad categories: equity, fixed income securities and real return assets. Equities consist of Canadian, U.S. and foreign equities. Fixed income securities consist of bonds which are usually a mix of federal, provincial, corporate and real return bonds. Real return assets include such categories as real estate and infrastructure.

As at 31 March 2008, the PSPIB's asset mix consisted of 61% equity, 25% fixed income securities, including inflation-linked bonds, and 14% real return assets. The assumed asset mix for plan year 2009 consists of 58% equity, 25% fixed income securities and 17% real return assets. The short-term asset mix of the Plan is assumed to consist of 55% equity, 25% fixed income securities and 20% real return assets and will be maintained for plan years 2010 through 2012. The 55% equity component consists of 25% Canadian equity and 30% U.S. and foreign equity.

As the Plan matures and plan members age and as the government and plan members become more risk averse, it is assumed that the Plan will increase its fixed income securities component. For this reason, the long-term assumed asset mix is 50% equity, 30% fixed income and 20% real return assets. It is assumed that the 50% invested in equity is composed of 20% Canadian equity and 30% U.S. and foreign equity. The long-term asset mix is achieved in plan year 2014 and is preceded by a two-year transition from the short-term asset mix.

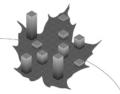
When deriving the future assumed PSPIB asset mix, consideration was given to the asset mix policies of other major Canadian pension plans and how they have evolved over the last five years. Table 38 shows the assumed asset mix at the end of the year throughout the projection period.

Table 38 Asset Mix (in percentage)

Plan Year	Fixed Income Securities	Canadian Equity	U.S. and Foreign Equity	Real Estate & Infrastructure
2009	25	28	30	17
2010	25	25	30	20
2011	25	25	30	20
2012	25	25	30	20
2013	27	23	30	20
2014+	30	20	30	20

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#### 2. Real rates of Return

Real rates of return are required for the projection of revenue arising from invested assets. They are assumed for each year in the projection period and for each of the main asset categories in which pension assets are invested. All of the real rates of return described in this subsection are net of PSPIB expenses, which include both operating expenses and external investment management fees. Over the last three plan years, expenses have been, on average, equal to about 0.35% of average net assets.

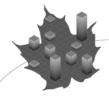
As discussed earlier, PSPIB assets are invested in three broad categories of investments: fixed income securities, equity and real return assets. In determining the annual real rates of return for each asset category, consideration was given to the current economic environment, its future outlook, as well as historical experience. The future outlook is based on the fact that real interest rates are currently lower than their long-term average values. It is expected that these rates will increase slightly in the short-term and return to a level closer to the long-term average. The projected real rates of return for different types of investments also reflect that projections are over a time horizon of more than 75 years and thus, should generally be consistent with the long-term averages of real rates of return.

#### a) Fixed Income Securities

Currently, the PSPIB has 25% of its investment portfolio invested in fixed income securities, including Canadian fixed income, world government bonds, world inflation-linked bonds and cash. Over time, it is assumed that the proportion invested in fixed income securities will slightly increase in order to attain more stability in investment income and decrease the portfolio's potential for loss. This may be achieved by implementing an investment strategy with lower risk. Thus it is assumed that by plan year 2014, 30% of the portfolio will be invested in fixed income securities. After 2030, net cash flows (contributions less expenditures) are expected to become negative and a portion of investment income will therefore be required to cover benefits. Changes to the assumed asset mix may be required in the future to further reduce pension risks and to take into account the maturity of the plan.

It is assumed that the PSPIB's fixed income portfolio consists of federal, provincial, corporate and inflation-linked bonds. Federal long-term bonds are used as a proxy for the risk-free rate. The new money rate is the nominal yield on long-term Government of Canada bonds and is set for each year in the projection period. The risk-free rate, or the real yield on federal bonds, is equal to the new money rate less the assumed rate of inflation and is used to determine yields on the other bond types. Federal long-term bonds are assumed to yield 2.4% real for the first four years of the projection and then increase by 0.2% in each of the next two years to reach 2.8% in 2014. The rate is then held constant in all subsequent plan years.

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The spread over the federal bond yield is assumed to be 40 basis points for provincial bonds and 100 basis points for corporate bonds. Inflation-linked bonds, on the other hand, yield less than long-term federal bonds since the real return is guaranteed and will not vary with inflation. Thus, the yield on real return bonds is assumed to be -40 basis points. The fixed investment portfolio has an assumed mix of 20% federal, 40% provincial, 30% corporate and 10% real return bonds. The real rate of return for the fixed income portfolio is calculated for each year using the proportion invested in each bond type and the bond yield. A long-term real rate of return of 3.2% is assumed for the fixed investment portfolio.

#### b) Equity

Most PSPIB assets are currently invested in equity, specifically in developed world equity. In the derivation of the real rates of return for these equity investments, consideration was given to the long-term real rates of return of the S&P/TSX, S&P 500 and MSCI World (excluding U.S.) stock indices.

The equity risk premium is assumed to be constant over the entire projection period at a rate of 2.3%. It is added to the risk-free rate and corresponds to a real return on equity of 4.7% for the first four years of the projection. The real return is then assumed to increase annually by 0.2% until the ultimate rate of 5.1% is reached in 2014. The rate is then held constant for the duration of the projection period.

In comparison, the 35-year historical average annual real rate of return of the S&P/TSX total return index ending 31 December 2008 is 4.7% compared to 6.0% for the S&P 500. When considering the 50-year period ending 31 December 2008, the historical average annual real return is 5.1% for the S&P/TSX and 5.5% for the S&P 500.

#### c) Real Return Assets

Real return assets such as real estate and infrastructure are considered to be a hybrid of debt and equity, usually in equal proportions. If these assets are considered to be an equal split between debt and equity, then the assumed risk premium should be 50% of that assumed for pure equity. Thus, an equity risk premium of 1.2% for real return assets is added to the risk-free rate. This corresponds to an assumed real return of 3.6% for the first four years of the projection period. The real return is then assumed to increase annually by 0.2% until the ultimate rate of 4.0% is reached in plan year 2014. The rate is then held constant for the duration of the projection. The ICREIM / IPD Canadian Annual Property Index earned an average annual real rate of return of 6.8% over the 36-year period ended 31 December 2008.

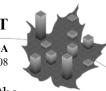


Table 39 summarizes the assumed real rates of return by asset type throughout the projection period.

Table 39 Real Rate of Return by Asset Type

(in percentage)

Plan Year	Fixed Income Securities	Canadian Equity	U.S. and Foreign Equity	Real Estate & Infrastructure
2009	2.8	4.7	4.7	3.6
2010	2.8	4.7	4.7	3.6
2011	2.8	4.7	4.7	3.6
2012	2.8	4.7	4.7	3.6
2013	3.0	4.9	4.9	3.8
2014+	3.2	5.1	5.1	4.0

#### B. Overall Rate of Return

The best-estimate rate of return on total assets was derived from the weighted average assumed rate of return on all types of assets, using the assumed asset mix proportions as weights. The resulting rates are shown in the following table.

Table 40 Rates of Return on Assets in Respect of the Pension Fund (in percentage)

(in percenting	<u> </u>	
Plan Year	Nominal	Real
2009	6.0	4.0
2010	6.0	4.0
2011	6.0	4.0
2012	6.0	4.0
2013	6.3	4.2
2014	6.5	4.3
2015	6.6	4.3
2016+	6.7	4.3

#### C. Investment Risk of a Diversified Portfolio

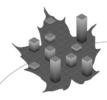
Having described in the previous sections the best-estimate investment portfolio for the Public Service pension plan, this section examines the financial impact of an alternative asset mix. In this appendix, assets refer solely to service since 1 April 2000 corresponding to the date when funds started to be transferred to the PSPIB for investments in capital markets.

## 1. Investing in Risky Assets

A major risk all pension plans face is funding risk – the risk that assets backing the liabilities are insufficient to meet pension obligations. If funding deficiencies or surpluses continue for an extended period of time, risk is transferred from one generation to another and may ultimately take the form of an increase or a decrease in the contribution rate.

The Public Service pension plan is inflation indexed, meaning that benefits increase in line with the CPI in order to maintain their purchasing power. From a risk point of

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view, the PSPIB's funds would be invested only in securities that exhibit high risk-free real returns in excess of the CPI. However, only the Government of Canada Long-Term Real Return Bond guarantees a risk-free inflation protected return. The yield on this bond is below the required real return on assets of 4.3% that is needed to sustain the legislated pension benefit provisions at the current contribution rate.

By investing solely in risk-free real return bonds, all financing risk could be eliminated with, however, an excessive cost and at the detriment of current and future contributors who would have to pay more unless benefits were decreased. If the PSPIB were to switch from the current portfolio of fixed and variable income securities to a portfolio that consisted only of long-term Government of Canada bonds, the current service cost associated with the current benefit provisions would have to increase substantially in order to maintain the current financing status or benefits would have to be reduced. Neither of these options is desirable.

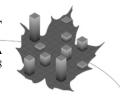
The current service cost can be reduced by investing in securities that offer a higher rate of return than risk-free real return bonds, but that also have a higher degree of risk or volatility. That is, funds can be invested in a mix of investments, such as equities and bonds, with the expected rate of return equal to the liabilities financing requirements. By investing in riskier assets, investors hope to realize the equity risk premium as their reward for taking on additional risk. An equity risk premium is the difference between the expected return on the risky asset (equity) and the expected return on a risk-free asset, such as the Government of Canada Long-Term Real Return Bond mentioned above.

The Government created the PSPIB to invest the proceeds resulting from pension contributions in excess of benefits and expenses with the purpose of maximizing investment returns without undue risk of loss. The current service cost is less than it would have been if the investment policy had been restricted to long-term government bonds. Diversifying the portfolio into a mix of fixed and variable income securities accomplishes this goal. Thus, the government undertakes some risks in order to increase the probability of achieving the long-term investment target of CPI + 4.3%.

Of course, these higher returns are expected but not guaranteed, creating the very real possibility that the market will not perform as expected and liabilities will grow at a faster rate than investments for an extended period of time. This is known as market risk. Since investing solely in risk-free real return bonds will not produce a return sufficient to maintain the plan at status quo, it is necessary to take some risk in order to increase the probability of earning a sufficient return. Even if investment returns materialize as expected, other assumptions may not, causing liabilities to grow at a faster rate than underlying assets. An example of this is if salaries increase at a higher rate than expected. The amount of risk that the plan sponsor is willing to take depends on many factors, including the current financing status and economic outlook, among other things. Thus, the investment policy must balance the sponsor's desire for a high real rate of return with its tolerance and capacity for taking risk.

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The following table shows the impact that various asset mixes would have on the current service cost and the financing ratio, as well as their relative volatility.

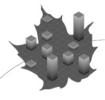
**Table 41 Investment Policy Impact on Liability Financing** 

		sets Mix		Ultimate		dard	Pension Assets Financing Ratio	Required Current Service Cost
	Fixed Income	Equity	Real Return	Real Rate of Return	1 year	3 years	as at 31 March 2008	to Maintain Full Funding
Portfolio #1	100%	0%	0%	2.8%	10.2%	5.9%	76%	26.21%
Portfolio #2	100%	0%	0%	3.2%	10.4%	6.0%	83%	23.77%
Portfolio #3	80%	15%	5%	3.5%	9.8%	5.6%	88%	22.14%
Portfolio #4	55%	35%	10%	4.0%	10.3%	5.9%	98%	19.73%
Best-Estimate Portfolio	30%	50%	20%	4.3%	11.3%	6.5%	103%	18.46%
Portfolio #5	15%	65%	20%	4.6%	12.9%	7.4%	109%	17.29%
Portfolio #6	0%	80%	20%	4.9%	14.4%	8.3%	116%	16.23%

Portfolio #1 is invested in long-term federal bonds assuming the ultimate assumption is reached in plan year 2014. This portfolio does not result in a feasible scenario due to its prohibitive cost; however, its volatility is low when compared to the other portfolios considered. Portfolio #2 is invested in a marketable bond portfolio consisting of federal, provincial, corporate and real return bonds. Although this portfolio produces a higher real rate of return compared to Portfolio #1, it is still not sufficient to ensure 100% pension assets financing while maintaining an acceptable current service cost. This is also a low risk, low return portfolio. Thus, a more risky portfolio is required in order to achieve an average annual real return of CPI + 4.3%.

The rest of the portfolios discussed are diversified portfolios that consist of equity, fixed income securities and real return assets, such as real estate and infrastructure. Portfolio #3 and Portfolio #4 are more diversified than the first two portfolios and are invested 15% and 35%, respectively, in equity. This diversification increases the real rate of return earned on these portfolios and reduces their volatility compared to the first two portfolios since the three broad asset categories are not perfectly correlated. However, despite an increased real return and lower risk, these portfolios are still not sufficient to maintain the current financing ratio. Thus, an increase in the current service cost would be required with both portfolios. Since the best-estimate real rate of return of 4.3% corresponds to the sponsor's current risk tolerance objective, it is necessary to invest in a slightly more risky portfolio in order to attain the desirable objective.

Portfolios #5 and #6 are considered more risky portfolios because they are highly invested in equity (65% and 80%, respectively) which has much more volatile returns than fixed income. Both portfolios are likely to result in higher than necessary returns, resulting in either an improvement to the financing ratio or a decrease to the current service cost. However, the volatility in these portfolios is quite high. By investing in a



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less risky portfolio, the plan's best-estimate real rate of return can still be achieved along with lower volatility.

The best-estimate portfolio is invested 30% in fixed income securities, 50% in equity and 20% in real return assets in the long-term. Such a portfolio produces an annual real return of 4.3% with a three-year standard deviation of 6.5%. By observing the volatility of each of the portfolios in Table 41, it can be concluded that a certain degree of risk must be undertaken in order to earn a sufficient return. Thus, an asset allocation such as the best-estimate portfolio shows that an average real return of 4.3% can be achieved with a moderate degree of risk. More risky portfolios, such as Portfolios #5 and #6, may produce a higher real return, on average, but with a higher degree of risk. Thus, investing in a more volatile portfolio is not necessary in order to achieve the required real return of 4.3%.

#### 2. Analysis of Extreme Outcomes for the Best-Estimate Portfolio

Having determined that the best-estimate portfolio is the most appropriate in terms of risk, this section focuses on the volatility present in that portfolio and the extreme outcomes that may result.

The best-estimate portfolio has an expected annual return of 4.3% real and a three-year standard deviation of 6.5%. The 90% confidence interval for real investment returns over three consecutive years is bounded by the range of -6.4% to 15.0%. That is, the probability of the three-year average real return being less than or equal to -6.4% is 5%, while the probability of the three-year average real return being greater than or equal to 15.0% is 5%. If the average real return earned by the PSPIB over the period 2009-2011 was -6.4%, the pension assets financing ratio would decrease from 103% to 86%, creating an actuarial deficit of \$5,885 million as at 31 March 2011. Conversely, if the average real return earned by the PSPIB over the period 2009-2011 was 15.0%, the financing ratio would increase from 103% to 121%, creating an actuarial surplus of \$8,832 million as at the same date.

The probability of this extreme scenario occurring varies depending on how the PSPIB assets are invested. For example, if the assets were invested according to Portfolio #5 rather than the best-estimate, the probability of earning an average three-year real return of -6.4% increases from 5% to 7%. Conversely, the probability of earning an average three-year real return of 15.0% also increases, from 5 to 8%. With a less risky portfolio, such as Portfolio #4, the probability of earning an average three-year real return of -6.4% decreases to 4%. However, the probability of earning an average three-year real return of 15.0% also decreases, from 5% to 3%. Thus, as portfolio risk increases, the probability of earning an extreme average return, either good or bad, also increases, while less risky portfolios will decrease the probability of earning an extreme average return.

#### 3. Impact on Assets in Respect of the Pension Fund of Investing in Riskier Assets

This section highlights in dollar value the cumulative impact of PSPIB active asset management decisions since 1 April 2000 compared to fictitious investments in risk-free bonds during the same period. The following table shows the impact of investment decisions on PSPIB assets. Specifically, the table shows in lines (A) to (D) the

#### Pension Plan for the **PUBLIC SERVICE OF CANADA**

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hypothetical value of the fund and of the investment earnings had the fund been invested entirely in long-term Government of Canada bonds throughout its life. Those figures are compared to the actual PSPIB results – lines (E) to (I) – to obtain the net value of the decision to invest in capital markets, in lines (J) and (K).

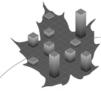
Even though investment earnings may not be positive each and every year, one can reasonably expect investment earnings above the risk-free rate to be positive in the long-term due to investment decisions, such as asset allocation in line (F) and active management in line (G). The cumulative net impact of investment decisions – line (K) in 2008 – is positive, meaning that since the inception of the Fund, it has been more profitable to invest a portion of the Fund in equities rather than investing solely in risk-free bonds.

Table 42 Cumulative Impact of Investment Decision on PSPIB Assets
As at 31 March 2008
(\$ millions)

		Pensi	on Fund	
Hypothetical Risk-Free Portfolio	2001-05	2006	2007	2008
(100% Government Long-Term Bonds)				
Fictitious Value of Assets, beginning of year (A)	-	13,765	17,503	21,295
Net Contributions Less Disbursements (B)	12,166	3,080	2,969	3,051
Return on Risk-Free Portfolio (C)	1,599	658	823	991
Fictitious Value of Assets, end of year $(D) = (A)+(B)+(C)$	13,765	17,503	21,295	25,337
Risky Assets Portfolio (PSPIB Actual Figures)				
Market Value of Assets, beginning of year (E)	-	14,125	20,138	25,549
Net Contributions Less Disbursements (B)	12,166	3,080	2,969	3,051
Return on Risky Assets Portfolio				
Selecting Fund's Actual Asset Allocation Policy (F)	1,829	2,711	2,135	224
Active management (over the benchmark) (G)	130	222	307	(426)
Total Return on Risky Assets Portfolio (H) = $(F)+(G)$	1,959	2,933	2,442	(202)
Market Value of Assets, end of year $(I) = (E)+(B)+(H)$	14,125	20,138	25,549	28,398
Net Impact of Investment Decisions				
Annual $(J) = (H)-(C)$	360	2,275	1,619	(1,193)
Cumulative $(K) = (I)-(D)$	360	2,635	4,254	3,061
<b>Investment Actuarial Gains and Losses</b>				
Expected Investment Earnings <sup>1</sup> (L)	1,820	1,017	1,361	1,704
Total Return on Risky Assets Portfolio (H)	1,959	2,933	2,442	(202)
Gains/Losses				
Annual $(M) = (H)-(L)$	139	1,916	1,081	(1,906)
Cumulative (N) = $(N)_{prior year} + (M)$	139	2,055	3,136	1,230

In 2008, the \$1,193 million is based on an expected nominal return of 6.3% (4.2% real plus 2.1% CPI).

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## Appendix 11 – Detailed Information on Membership Data

**Table 43 Male Contributors (Main Group)** 

Number and Average Annual Earnings<sup>1</sup> as at 31 March 2008

Age <sup>2</sup>	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	All Years of Service <sup>2</sup>
	2,823	25							2,848
<25	\$45,150	\$54,028							\$45,228
	7,350	1,787	2						9,139
25-29	\$53,723	\$62,927	\$68,101						\$55,526
	5,974	5,803	638	9					12,424
30-34	\$58,292	\$68,093	\$73,651	\$72,815					\$63,669
	4,754	5,429	2,605	944	18				13,750
35-39	\$60,940	\$70,310	\$76,357	\$73,975	\$73,810				\$68,472
		ĺ	, i	· ·	ĺ	104			· ·
40-44	4,286	4,238	2,478	4,487	1,243	104			16,836
	\$62,044	\$71,207	\$76,652	\$77,530	\$75,062	\$72,333			\$71,652
45-49	3,699	3,917	2,048	4,150	3,970	2,978	183		20,945
15 17	\$64,355	\$70,997	\$74,030	\$77,180	\$78,574	\$75,140	\$71,320		\$73,374
50.54	2,502	2,811	1,436	2,784	3,218	5,372	3,743	161	22,027
50-54	\$66,115	\$70,643	\$73,015	\$75,373	\$78,973	\$80,476	\$75,160	\$75,806	\$75,301
55.50	1,585	1,700	1,082	1,768	1,973	3,101	3,836	562	15,607
55-59	\$70,382	\$71,972	\$72,006	\$74,090	\$76,278	\$81,383	\$83,641	\$79,360	\$77,601
<b></b>	713	865	552	760	671	955	1,135	394	6,045
60-64	\$72,362	\$73,474	\$73,494	\$73,963	\$80,385	\$83,819	\$90,110	\$93,302	\$80,223
	174	207	134	147	134	180	251	147	1,374
>65	\$69,729	\$73,498	\$74,406	\$78,128	\$78,827	\$83,721	\$92,223	\$96,276	\$81,321
A 11 A	33,860	26,782	10,975	15,049	11,227	12,690	9,148	1,264	120,995
All Ages	\$59,213	\$69,831	\$74,796	\$76,230	\$78,000	\$79,676	\$80,962	\$85,220	\$70,899
	•	•		•					
						31 Marc	<u>h 2008</u>	31 Mar	rch 2004
				Ave	rage age <sup>2</sup> :	44	.7 years	4	44.7 years

	31 March 2008	31 March 2004
Average age <sup>2</sup> :	44.7 years	44.7 years
Average pensionable service <sup>2</sup> :	12.7 years	13.8 years
Annualized pensionable payroll <sup>3</sup> :	\$8,651,912,485	\$7,271,586,631
Total PBDA <sup>4</sup> indexed reduction to basic annuity:	\$13,739,112	\$8,249,364
Total PBDA <sup>4</sup> indexed reduction adjustment:	\$3,096,143	\$1,877,687

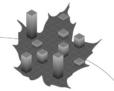
As defined in Note 1 of Appendix 2-D.

<sup>&</sup>lt;sup>2</sup> Expressed in completed years calculated at the beginning of the plan year.

The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

<sup>&</sup>lt;sup>4</sup> PBDA means the *Pension Benefits Division Act*.

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**Table 44 Female Contributors (Main Group)** 

Number and Average Annual Earnings<sup>1</sup> as at 31 March 2008

$Age^2$	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	All Years of Service <sup>2</sup>
-05	4,128	21							4,149
<25	\$44,364	\$52,676							\$44,406
25.20	10,332	2,447	3						12,782
25-29	\$52,503	\$60,290	\$52,110						\$53,994
30-34	8,005	7,670	758	10					16,443
30-34	\$55,132	\$64,355	\$66,274	\$63,903					\$59,953
25.20	5,983	6,681	3,053	1,737	52				17,506
35-39	\$55,130	\$65,217	\$70,881	\$66,172	\$66,180				\$62,855
40-44	5,339	5,580	3,004	5,513	2,063	287			21,786
40-44	\$54,215	\$63,065	\$68,088	\$69,915	\$65,871	\$65,529			\$63,620
45-49	4,593	5,125	2,854	4,696	4,478	4,486	576		26,808
43-49	\$53,745	\$60,396	\$63,765	\$68,211	\$69,820	\$65,018	\$65,284		\$63,437
50-54	2,997	3,834	2,257	3,626	3,230	4,832	4,670	302	25,748
30-34	\$53,958	\$59,708	\$61,924	\$64,532	\$68,917	\$69,624	\$65,681	\$67,536	\$64,104
55-59	1,566	2,059	1,465	2,459	2,152	2,463	2,060	433	14,657
33-39	\$54,808	\$57,904	\$59,258	\$62,063	\$64,189	\$66,875	\$72,189	\$66,643	\$63,102
60-64	523	733	507	896	694	643	439	144	4,579
00-04	\$51,387	\$57,359	\$59,611	\$58,948	\$62,393	\$62,553	\$70,051	\$68,801	\$60,306
>65	79	141	97	153	125	111	78	37	821
>03	\$48,236	\$53,646	\$56,683	\$55,082	\$58,204	\$60,520	\$58,008	\$61,576	\$56,147
All Ages	43,545	34,291	13,998	19,090	12,794	12,822	7,823	916	145,279
An Ages	\$53,079	\$62,324	\$65,410	\$66,485	\$67,477	\$66,959	\$67,534	\$67,072	\$61,570

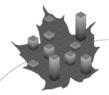
	31 March 2008	31 March 2004
Average age <sup>2</sup> :	43.4 years	42.9 years
Average pensionable service <sup>2</sup> :	11.6 years	12.0 years
Annualized pensionable payroll <sup>3</sup> :	\$9,251,343,562	\$6,864,606,484
Total PBDA <sup>4</sup> indexed reduction to basic annuity:	\$1,993,468	\$1,031,620
Total PBDA <sup>4</sup> indexed reduction adjustment:	\$568,613	\$304,536

As defined in Note 1 of Appendix 2-D.

Expressed in completed years calculated at the beginning of the plan year.

The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

PBDA means the Pension Benefits Division Act.



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**Table 45 Male Contributors (Operational Group)**Number and Average Annual Earnings<sup>1</sup> as at 31 March 2008

$Age^2$	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	All Years of Service <sup>2</sup>
<25	91								91
<23	\$53,094								\$53,094
25-29	397	113							510
23-29	\$55,551	\$62,062							\$56,993
30-34	390	579	50						1,019
30-34	\$56,343	\$65,293	\$70,503						\$62,123
35-39	179	603	316						1,170
33-39	\$57,927	\$65,899	\$70,706	\$67,640					\$66,085
40-44	30	172	234	283	101				822
40-44	\$57,049	\$67,344	\$69,266	\$69,942	\$72,815	\$70,107			\$69,089
45-49	17	5	79	223	290	121	15		750
43-49	\$53,915	\$68,087	\$67,925	\$70,379	\$71,966	\$71,501	\$70,531		\$70,530
50-54	16	1	1	74	207	259	181		739
30-34	\$56,448	\$68,540	\$70,159	\$70,884	\$70,686	\$72,580	\$73,918		\$71,849
55-59	12			5	69	102	154		342
33-39	\$60,660			\$68,317	\$68,731	\$70,785	\$74,341		\$71,580
60-64	5		1	2	2	12	36		58
00-04	\$60,609		\$67,740	\$71,166	\$54,428	\$72,097	\$80,178		\$75,406
×65	3						5		8
>65	\$60,814						\$72,728		\$68,260
A 11 A ~~~	1,140	1,473	681	659	669	496	391		5,509
All Ages	\$56,116	\$65,544	\$69,869	\$69,935	\$71,312	\$71,926	\$74,516		\$66,565
						31 Marc	ch 2008	31 Ma	arch 2004

	31 March 2008	31 March 2004
Average age <sup>2</sup> :	40.6 years	40.9 years
Average pensionable service <sup>2</sup> :	13.1 years	14.2 years
Annualized pensionable payroll <sup>3</sup> :	\$367,489,402	\$302,260,228
Total PBDA <sup>4</sup> indexed reduction to basic annuity:	\$934,578	\$507,056
Total PBDA <sup>4</sup> indexed reduction adjustment:	\$255,178	\$135,570

As defined in Note 1 of Appendix 2-D.

<sup>&</sup>lt;sup>2</sup> Expressed in completed years calculated at the beginning of the plan year.

The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

<sup>&</sup>lt;sup>4</sup> PBDA means the *Pension Benefits Division Act*.

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\$50,848

\$15,038

\$15,753

\$4,805

as at 31 March 2008

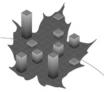


Table 46 Female Contributors (Operational Group)

Number and Average Annual Earnings<sup>1</sup> as at 31 March 2008

		_							
$Age^2$	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	All Years of Service <sup>2</sup>
-25	93	1							94
<25	\$51,325	\$56,812							\$51,384
25.20	411	93							504
25-29	\$56,434	\$60,969							\$57,271
20.24	356	422	70						848
30-34	\$56,899	\$65,787	\$68,571						\$62,286
25.20	131	328	313	60					832
35-39	\$59,723	\$66,916	\$70,234	\$63,813					\$66,808
40.44	30	127	177	211	67	3			615
40-44	\$52,468	\$65,386	\$68,341	\$67,918	\$67,922	\$53,520			\$66,693
45.40	12	4	58	150	197	83	10		514
45-49	\$51,878	\$55,367	\$65,481	\$67,908	\$73,454	\$69,186	\$56,047		\$69,263
50.54	8	2	5	81	105	86	50		337
50-54	\$50,162	\$45,282	\$70,511	\$62,025	\$73,054	\$72,330	\$62,705		\$67,937
55.50	5	2	1	4	36	34	19		101
55-59	\$55,267	\$60,620	\$71,959	\$68,341	\$65,424	\$71,287	\$76,429		\$69,050
60.64	5			1	2	7	5		20
60-64	\$68,427			\$71,959	\$44,010	\$71,334	\$72,918		\$68,302
> 65					1				1
>65					\$50,538				\$50,538
A 11 A	1,051	979	624	507	408	213	84		3,866
All Ages	\$56,388	\$65,551	\$69,073	\$66,499	\$71,533	\$70,641	\$65,624		\$64,666
-									
					2	31 Marc			arch 2004
					rage age <sup>2</sup> :		3 years		7.4 years
			•	pensionable			8 years		0.5 years
		-	Annualized	pensionable	e payroll <sup>3</sup> :	\$255,413,016		\$174,	,135,700

As defined in Note 1 of Appendix 2-D.

Total PBDA<sup>4</sup> indexed reduction to basic annuity:

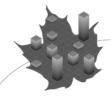
Total PBDA<sup>4</sup> indexed reduction adjustment:

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<sup>&</sup>lt;sup>2</sup> Expressed in completed years calculated at the beginning of the plan year.

The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

<sup>&</sup>lt;sup>4</sup> PBDA means the *Pension Benefits Division Act*.



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Table 47 Contributors on leave Without Pay and Non-active Contributors

Number and Average Annual Earnings<sup>1</sup> as at 31 March 2008

Age <sup>2</sup>	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	All Years of Service <sup>2</sup>
-25	269								273
<25	\$43,624								\$43,658
25.20	1,346								1,995
25-29	\$51,524								\$53,688
20.24	1,428			5					4,010
30-34	\$55,652			\$56,442					\$60,410
35-39	855			226	5				3,420
33-39	\$55,314			\$64,149	\$61,719				\$63,366
40-44	485			542	119	8			2,362
40-44	\$52,257			\$66,237	\$59,909	\$51,047			\$61,683
45-49	401			452	337	236	38		2,296
43-49	\$48,410			\$62,289	\$63,920	\$61,277	\$60,300		\$58,598
50.54	262			364	293	426	302	17	2,322
50-54	\$48,068			\$60,106	\$66,009	\$65,907	\$61,773	\$55,609	\$59,503
55.50	212			296	251	286	238	40	1,775
55-59	\$48,698			\$59,334	\$61,996	\$65,212	\$68,261	\$64,424	\$59,792
60-64	109			140	105	116	75	15	784
00-04	\$45,791			\$56,433	\$61,417	\$65,535	\$75,806	\$80,822	\$58,682
>65	32			8	4	3	4	1	81
>03	\$43,293			\$49,301	\$57,837	\$74,296	\$65,474	\$32,996	\$49,830
A 11 A ~~~	5,399			2,033	1,114	1,075	657	73	19,318
All Ages	\$52,214			\$62,258	\$63,340	\$64,578	\$65,662	\$65,310	\$59,662

	31 March 2008	31 March 2004
Average age <sup>2</sup> :	41.3 years	41.0 years
Average pensionable service <sup>2</sup> :	10.0 years	10.0 years
Annualized pensionable payroll <sup>3</sup> :	\$1,198,968,107	\$824,920,363
Total PBDA <sup>4</sup> indexed reduction to basic annuity:	\$603,043	\$339,714
Total PBDA <sup>4</sup> indexed reduction adjustment:	\$154,048	\$84,430

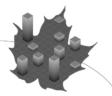
As defined in Note 1 of Appendix 2-D.

<sup>&</sup>lt;sup>2</sup> Expressed in completed years calculated at the beginning of the plan year.

The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

<sup>&</sup>lt;sup>4</sup> PBDA means the *Pension Benefits Division Act*.

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**Table 48 Male Retirement Pensioners** 

Number, Average Annual Pension<sup>1</sup> and Average Annual Allowance<sup>2</sup> as at 31 March 2008

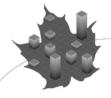
				RCA No. 1				RCA No. 2	
				Spouse Allowance	Maximum Earnings Limit on Service Since 1994			Early Retiremen Incentive	
Age <sup>3</sup>	Number (#)	Pension (\$)	Spouse Allowance (\$)	for Service Since 1992 (\$)	#	Pension (\$)	Spouse Allowance (\$)	#	Pension (\$)
<25	126	434	289	20	84	-	=	0	\$0
25-29	419	2,025	1,331	52	32	-	_	0	0
30-34	914	3,069	1,991	50	22	-	-	0	0
35-39	1,008	4,257	2,710	56	34	11	5	0	0
40-44	1,167	6,244	3,949	60	41	971	485	0	0
45-49	1,223	9,261	5,802	74	58	1,225	613	0	0
50-54	2,085	15,313	9,974	355	106	2,253	1,134	0	0
55-59	10,818	30,275	19,198	248	449	4,725	2,389	247	10,255
60-64	19,659	25,356	17,524	346	786	4,249	2,199	4,910	8,586
65-69	19,062	25,213	16,807	144	531	2,934	1,497	1,480	5,277
70-74	16,982	24,542	15,724	41	389	1,320	667	2	638
75-79	14,684	23,421	14,643	12	76	825	412	0	0
80-84	11,439	23,684	14,180	1	14	480	240	0	0
85-89	7,563	23,853	13,669	-	-	-	-	0	0
90-94	2,177	23,470	12,910	-	-	-	-	0	0
95-99	316	22,202	11,855	-	-	-	-	0	0
100-104	31	22,286	11,502	-	-	-	-	0	0
All Ages	109,673	24,035	15,410	129	2,622	3,033	1,551	6,639	7,908

	31 March 2008	31 March 2004
Average age last birthday	69.5 years	69.9 years
Average age last birthday at retirement	56.3 years	57.0 years
Total annual pensions payable from		
PS Superannuation Account	\$2,481 million	\$2,379 million
PS Pension Fund	\$155 million	\$27 million
RCA No. 1 Account	\$8 million	\$3 million
RCA No. 2 Account	\$53 million	\$50 million

Include deferred annuity to age 60, annual allowance adjustments, PBDA reductions and C/QPP offsets whether or not they are in effect at the valuation date.

The average amounts of spouse allowance are contingent on there being an eligible spouse.

Expressed in completed years calculated at the beginning of the plan year.



Pension Plan for the **PUBLIC SERVICE OF CANADA** as at 31 March 2008

**Table 49 Female Retirement Pensioners** 

Number, Average Annual Pension<sup>1</sup> and Average Annual Allowance<sup>2</sup> as at 31 March 2008

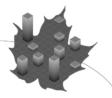
	rumoer, 71	rverage 7 minua	1 cholon une	nd Average Annual Allowance <sup>2</sup> as at 31 March 2 RCA No. 1					A No. 2	
				Spouse Allowance	Maximum Earnings Limit on Service Since 1994			Early Retirement Incentive		
Age <sup>3</sup>	Number (#)	Pension (\$)	Spouse Allowance (\$)	for Service Since 1992 (\$)	#	Pension (\$)	Spouse Allowance (\$)	#	Pension (\$)	
<25	169	347	231	19	130	-	-	0	\$0	
25-29	591	1,938	1,275	52	57	-	-	0	0	
30-34	1,118	2,846	1,850	63	74	-	-	0	0	
35-39	1,243	4,024	2,582	82	78	2	1	0	0	
40-44	1,388	5,944	3,820	93	100	218	109	0	0	
45-49	1,830	7,598	4,921	100	147	170	85	0	0	
50-54	2,759	11,506	7,715	555	155	927	464	0	0	
55-59	9,190	22,240	14,598	424	238	3,221	1,616	171	8,979	
60-64	12,353	15,493	11,457	460	182	4,513	2,262	3,109	7,312	
65-69	10,196	13,609	9,926	277	79	4,191	2,125	907	4,844	
70-74	8,429	12,605	9,022	98	114	270	135	2	940	
75-79	6,669	12,167	8,501	28	25	529	264	0	0	
80-84	5,851	12,234	8,194	4	4	-	-	0	0	
85-89	3,893	12,385	7,792	-	1	-	-	0	0	
90-94	1,559	12,037	7,078	-	-	-	-	0	0	
95-99	366	12,208	6,795	-	-	-	-	0	0	
100-104	40	9,487	5,064	-	-	-	-	0	0	
105-109	3	6,243	3,201	-	-	-	-	0	0	
All Ages	67,478	13,761	9,533	230	1,254	1,717	862	4,189	6,843	
				31 Mar	ch 2008		31 Ma	arch 200	4	
		Average age la	-	66.8 years			-	68.9 years		
	Average age last birthday at retirement			55.1 ye	55.1 years 56.4 y			ears		
		al pensions pa	-							
PS Superannuation Account								million		
	PS Pension Fund				\$105 million \$16 million					
	RCA No. 1 Account				ion \$1 million					
		RCA No.	2 Account	\$29 mill	ion \$27 million					

Include deferred annuity to age 60, annual allowance adjustments, PBDA reductions and C/QPP offsets whether or not they are in effect at the valuation date.

The average amounts of spouse allowance are contingent on there being an eligible spouse.

Expressed in completed years calculated at the beginning of the plan year.

Pension Plan for the PUBLIC SERVICE OF CANADA as at 31 March 2008



**Table 50 Male Disabled Pensioners** Number, Average Annual Pension<sup>1</sup> and Average Annual Allowance<sup>2</sup> as at 31 March 2008

				RCA No. 1					
		Pension ) (\$)	Spouse Allowance (\$)	Spouse _	Maximum Earnings Limit				
Age <sup>3</sup>	Number (#)			Allowance on Service Since 1992 (\$)	#	n Service Since 1 Pension (\$)	Spouse Allowance (\$)		
30-34	1	9,813	5,809	-	_	-	_		
35-39	9	5,036	3,372	218	_	-	_		
40-44	66	7,198	4,863	96	_	-	-		
45-49	207	11,222	7,406	98	1	387	194		
50-54	591	13,676	9,181	104	3	260	130		
55-59	1,071	15,659	10,426	72	1	370	185		
60-64	1,051	14,799	10,042	70	1	243	122		
65-69	967	14,414	9,906	47	-	-	-		
70-74	929	15,323	10,114	10	-	-	-		
75-79	720	13,269	8,785	-	-	-	-		
80-84	477	14,712	8,787	-	-	-	-		
85-89	264	14,763	8,329	-	-	-	-		
90-94	42	12,733	6,934	-	-	-	-		
95-99	9	16,604	8,525	-	-	-	-		
All Ages	6,405	14,456	9,539	46	6	297	148		
			31 March 2008		31 March	2004			
	Average age last birthday			66.2 years	65.0 years				
Average age last birthday at retirement			50.5 years	50.7 years					
	Total annual po	ensions pay	able from						
PS Superannuation Account			Account	\$88 million	\$106 million				
PS Pension Fund				\$5 million	\$1 million				
		RCA	Account	\$0 million	\$0 million				

Include deferred annuity to age 60, annual allowance adjustments, PBDA reductions and C/QPP offsets whether or not they are in effect at the valuation date.

The average amounts of spouse allowance are contingent on there being an eligible spouse.

Expressed in completed years calculated at the beginning of the plan year.



Pension Plan for the **PUBLIC SERVICE OF CANADA** as at 31 March 2008

**Table 51 Female Disabled Pensioners**Number, Average Annual Pension<sup>1</sup> and Average Annual Allowance<sup>2</sup> as at 31 March 2008

		Pension (\$)		RCA No. 1				
				Spouse	Maximum Earnings Limit			
				Allowance on	0	n Service Since 1		
$Age^3$	Number (#)		Spouse Allowance (\$)	Service Since 1992 (\$)	#	Pension (\$)	Spouse Allowance (\$)	
						(+)	(Ψ)	
30-34	6	4,491	3,012	144	-	=	-	
35-39	52	6,402	4,245	156	-	-	-	
40-44	182	8,341	5,522	142	-	-	-	
45-49	487	10,359	6,983	143	-	-	-	
50-54	1,001	12,233	8,244	123	-	-	-	
55-59	1,268	13,297	8,923	105	3	1,606	803	
60-64	1,018	11,134	7,656	108	3	1,030	515	
65-69	786	9,997	7,092	74	-	-	-	
70-74	693	9,265	6,503	16	-	-	-	
75-79	511	8,826	6,061	-	-	-	-	
80-84	313	10,101	6,269	-	-	-	-	
85-89	205	9,389	5,501	-	-	-	-	
90-94	77	10,210	5,789	-	-	-	-	
95-99	6	9,600	5,121	<del>-</del>	-		-	
All Ages	6,609	10,915	7,380	82	6	1,318	659	
				31 March 2008		31 March	2004	
Average age last birthday			birthday	62.6 years	61.9 years			
Average age last birthday at retirement			tirement	49.3 years	49.3 years			
	Total annual p	ensions paya	ble from					
PS Superannuation Account				\$65 million	\$71 million			
PS Pension Fund				\$7 million	\$2 million			
		RCA	Account	\$0 million	\$0 million			

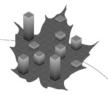
Include deferred annuity to age 60, annual allowance adjustments, PBDA reductions and C/QPP offsets whether or not they are in effect at the valuation date.

The average amounts of spouse allowance are contingent on there being an eligible spouse.

Expressed in completed years calculated at the beginning of the plan year.

Pension Plan for the PUBLIC SERVICE OF CANADA

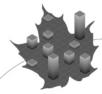
as at 31 March 2008



**Table 52 Surviving Spouses** Number and Average Annual Allowance as at 31 March 2008

RCA No. 1 Allowance on Maximum Earnings Limit Number Service Since 1992 on Service Since 1994 Allowance Allowance Allowance Age1 Widow Number Widower Number (\$) (\$) (\$) 25-29 2 819 2 1,719 0 0 30-34 4 19 12 0 5,826 1,775 0 35-39 21 47 4,298 31 0 0 2,851 40-44 63 152 5,771 86 3,056 0 0 45-49 136 453 7,483 223 2,663 0 0 50-54 285 964 9,185 360 2,009 0 0 55-59 0 0 400 1,715 10,882 558 1,076 3 60-64 503 2,578 11,790 762 605 9,055 65-69 521 3,711 11,846 734 396 3 1,069 70-74 5,409 11,494 0 634 457 286 75-79 0 0 663 8,626 11,295 252 234 0 0 80-84 635 11,620 11,195 57 223 85-89 452 10,864 212 0 0 10,207 11 90-94 161 4,415 10,383 1 415 0 0 95-99 19 1227 9,178 0 0 0 0 100-104 6 251 7,666 0 0 0 0 0 0 0 0 0 0 105-110 >110 0 18 5,318 0 0 0 0 4,508 51,466 11,001 3,547 917 6 5,062 All Ages 31 March 2008 31 March 2004 Male average age last 70.8 years 69.3 years Female average age last 78.5 years 76.8 years Total annual allowances payable from **PS** Superannuation Account \$611 million \$530 million PS Pension Fund \$4 million \$1 million RCA Account \$3 million \$0 million

Expressed in completed years calculated at the beginning of the plan year.



Pension Plan for the **PUBLIC SERVICE OF CANADA** as at 31 March 2008

## Appendix 12 – Acknowledgements

The Superannuation Directorate of the Department of Public Works and Government Services Canada provided the data on plan members.

The co-operation and able assistance received from the above-mentioned data provider deserve to be acknowledged.

The following individuals assisted in the preparation of this report:

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