



Office of the Superintendent of
Financial Institutions Canada

Bureau du surintendant des
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Office of the Chief Actuary

Bureau de l'actuaire en chef



ACTUARIAL REPORT (REVISED)

on the Pension Plan for the

CANADIAN FORCES

Regular Force
as at 31 March 2008

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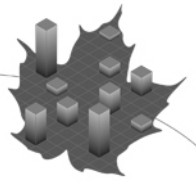
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Cat. No. IN3-16/8-2008-1E-PDF

ISBN 978-1-100-15390-2



16 April 2010

The Honourable Stockwell Day, P.C., M.P.
President of Treasury Board
Ottawa, Canada
K1A 0R5

Dear Minister:

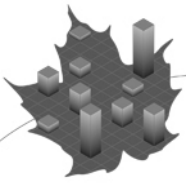
Pursuant to section 6 of the *Public Pensions Reporting Act*, I respectfully submit a revised Actuarial Report on the Pension Plan for the Canadian Forces – Regular Force as at 31 March 2008. This plan is defined by Parts I, III and IV of the *Canadian Forces Superannuation Act*, the *Pension Benefits Division Act* and the Canadian Forces-related benefits provided under the *Special Retirement Arrangements Act*.

As a result of discrepancies in the membership data found by the Office of the Auditor General (OAG) after the initial report had been tabled in Parliament, and in accordance with our commitment to transparency and full disclosure, this revised report is intended to replace the report that was tabled in Parliament on 19 November 2009 by your predecessor, the Honourable Vic Toews, P.C., M.P.

The membership data provided by the Department of National Defence serves as the foundation for our actuarial report. It was discovered by the OAG that, for some members, the number of years of service used to evaluate the Government pension obligation had been underreported. The financial impact is an increase of \$400 million in liability, which represents 0.8% of the Government's total liabilities under the Regular Force pension plan. However, the funding status and the financing of the Regular Force pension plan remain unaffected as at 31 March 2008.

Yours sincerely,

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



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Pension Plan for the **CANADIAN FORCES – REGULAR FORCE**
as at 31 March 2008

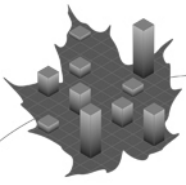
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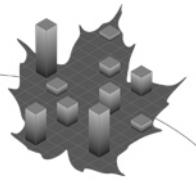
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I. Executive Summary

This actuarial report on the pension plan for the Canadian Forces - Regular Forces (CF 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 *Canadian Forces Superannuation Act* (CFSA), 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 Canadian Forces Superannuation Account, the Canadian Forces Pension Fund and Retirement Compensation Arrangements Account 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, the Superannuation account and the RCA No. 1 account 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) coordination factor of 0.7% in the pension benefit formula is reduced gradually until it reaches 0.625% in calendar year 2012;
- The latest modifications to the CFSA added Part I.1 to the Act which effectively created the Reserve Forces pension plan. The actuarial review of the Reserve Forces pension plan is not included in the current report and is the subject of a separate



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report. At the same time, Part I of the Act was also modified to allow full time members of the Reserve to be considered Regular Force members for purposes of Part I of the Act. As at 31 March 2008, a total of 3,062 Reserve Force members are participants to the Regular Force pension plan.

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 year¹ basis are shown in Section II.

1) CFSA – 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 \$44,197 million and the actuarial liability for service prior² to 1 April 2000 is \$42,626 million. The actuarial value of the assets is less than 110% of the corresponding actuarial liability; it is 104% of the actuarial liability. The surplus of the actuarial value of assets over the actuarial liabilities is \$1,571 million.

¹ 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.

² 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) CFSA – Service since 1 April 2000 (Pension Fund)

a) Current Service Cost¹

The CFSA total normal cost, borne jointly by the contributors and the government, is \$984 million for calendar year 2010. The estimated members' contributions are \$275 million and the estimated government contributions are \$709 million for calendar year 2010. The Pension Fund administrative expenses are \$4 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 payroll² 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.

CFSA Current Service Cost on a Calendar Year Basis

Calendar Year	Current Service Cost			Ratio of Government to Contributors Current Service Cost
	As a percentage of pensionable payroll			
	Contributors	Government	Total	
2010	6.27	16.14	22.40	2.58
2011	6.46	15.72	22.18	2.43
2012	6.67	15.24	21.91	2.29

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 \$8,027 million and the actuarial liability is \$7,906 million, resulting in an actuarial excess of \$121 million.

c) Non-permitted actuarial surplus

If there exists in the opinion of the President of the Treasury Board a non-permitted actuarial surplus³ 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.

¹ Also called normal cost.

² Pensionable payroll means the aggregate of pensionable earnings of all contributors with less than 35 years of service.

³ 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:

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

(b) is the greater of (i) and (ii) where:

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

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

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

(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 \$346 million and the actuarial liability is \$332 million resulting in an actuarial excess of \$14 million.

The total current service cost, borne jointly by the contributors and the government, is 1.42% of pensionable payroll for calendar year 2010 and is estimated to be 1.49% and 1.55% 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

<u>Calendar Year</u>	<u>Contributors (\$ millions)</u>	<u>Government (\$ millions)</u>	<u>Total (\$ millions)</u>	<u>Ratio of Government to Contributors Current Service Cost</u>
2010	3	59	62	19.7
2011	4	63	67	15.8
2012	4	67	71	16.8



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. CFSA – Financial Position

Beginning on 1 April 2000, employer and member contributions to the CFSA pension plan are no longer credited to the Canadian Forces Superannuation Account. Rather, they are now credited to the Canadian Forces 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 CFSA financing arrangements as at 31 March 2008. The results of the previous valuation are also shown for comparison purposes.

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

	31 March 2008	31 March 2005
Actuarial Value of Assets		
Recorded balance in Superannuation Account	44,153	41,351
Present value of prior service contributions	44	58
Total assets	44,197	41,409
Actuarial Excess (Assets minus Liability)	1,571	2,988
	42,626	38,420
Actuarial Liability for Service Prior to 1 April 2000		
Active contributors	10,026	10,814
Retirement pensioners	29,456	24,778
Disability pensioners	374	382
Surviving dependents	2,616	2,271
Administrative expenses	154	175
Total Actuarial Liability for Service Prior to 1 April 2000	42,626	38,420



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

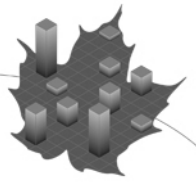
	31 March 2008	31 March 2005
Actuarial Value of Assets		
Market value of assets	7,890	4,050
Actuarial smoothing adjustment	29	(201)
Present value of prior service contributions	108	125
Total assets	8,027	3,974
Actuarial Liability for Service Since 1 April 2000		
Active contributors	6,220	3,751
Retirement pensioners	1,671	523
Disability pensioners	5	3
Surviving dependents	10	4
Total Actuarial Liability for Service Since 1 April 2000	7,906	4,280
Actuarial Surplus/(Deficit)	121	(306)

B. CFSA - 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 CFSA Financial position
(\$ millions)

	Superannuation Account Actuarial Excess	Pension Fund Actuarial Surplus
As at 31 March 2005	2,988	(306)
Unrecognized investment gains (losses) as at 31 March 2005	-	201
Change in data submission and corrections of population data	(181)	18
Expected interest on revised initial financial position	689	(18)
Pension benefit formula	(390)	(104)
Net experience gains and losses	(447)	445
Revision of actuarial assumptions	(1,067)	(105)
Change in the present value of administrative expenses	27	-
Change in the present value of prior service contributions	(7)	7
Reserve Force members participating to Part I of the CFSA	(41)	(46)
Unrecognized investment losses (gains) as at 31 March 2008	-	29
As at 31 March 2008	1,571	121

**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 \$201 million less than their market value.

2) Change in the submission and correction of population data

The format of the valuation data provided by the Department of National Defence was changed for this valuation which required a greater understanding on the part of the Office of the Superintendent of Financial Institutions (OSFI) in its correction and validation process. OSFI also received an additional set of valuation data covering of former members of the Regular Force in receipt of a pension benefit from Public Works Government Service Canada (PWGSC). We have considered for the first time that the information provided by PWGSC to be more accurate than the DND information. The net impact of the data correction and the changes in the processing of the valuation data received from both DND and PWGSC has resulted in an increase of \$181 million in the Superannuation Account actuarial liabilities and a decrease of \$18 million in the Pension Fund actuarial liabilities.

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 \$2,807 million as at 31 March 2005 amounted to \$689 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 \$87 million as at 31 March 2005 amounted to \$18 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 \$390 million and the Fund actuarial liability by \$104 million.

5) Experience Gains and Losses

Since the previous valuation, experience gains and losses have decreased the Superannuation Account actuarial excess by \$447 million and have increased the Pension Fund actuarial surplus by \$445 million. The main items are described in the following table.



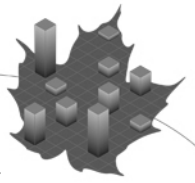
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Table 4 Net Experience Gains and Losses
(\$ millions)

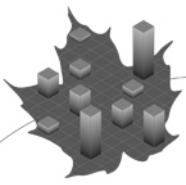
	Superannuation Account	Pension Fund
Demographic assumptions (i)		
Non-disabled pensioner deaths	(128)	0
Non-disabled pensioner terminations	79	4
Retirements	40	(97)
New members	(73)	(1)
Terminations with a return of contributions or a transfer value	37	(3)
Widow(er) deaths	15	0
Deaths with an annuity	6	2
Disabled pensioner deaths	(5)	0
Terminations with an annuity	4	1
Deaths with a return of contributions	0	2
Total	(30)	(126)
Investment earnings (ii)	11	484
Cost/contributions difference (iii)	24	104
Promotional and seniority increases (iv)	(210)	(29)
Amounts credited on basis of actuarial valuation (v)	0	45
Expected/actual disbursements (vi)	(90)	13
Economic salary increases (vii)	(53)	(18)
YMPE increases	(10)	(5)
Pension indexation (viii)	(31)	0
Miscellaneous	(58)	(23)
Experience Gains and Losses	(447)	445

- (i) The net impact of the demographic experience increased the Superannuation Account actuarial liabilities by \$30 million and increased the Fund actuarial liabilities by \$126 million.
- Less than anticipated deaths amongst healthy pensioners resulted in a decrease of \$128 million of the Superannuation Account actuarial excess.
 - Higher than expected new members as well as a different demographic profile for these new entrants resulted in a decrease of \$1 million of the Pension Fund actuarial liabilities. The release of the actuarial liabilities associated with the reenrolment of former members in receipt of a pension should produce a similar actuarial liability on the contributor side of the equation. The Superannuation Account actuarial liability decreased by \$79 million due to the release of the pensioner liabilities and was increased by \$73 million when these former members reenrolled.
 - Since the last valuation, the number of retirements was higher than anticipated. However, on the Superannuation Account side, the amounts of pension actually received by members were less than expected. Consequently, the Superannuation Account actuarial excess is increased by



\$40 million. For the Pension Fund a reduction of the actuarial surplus of \$97 million is observed resulting mainly from the frequent occurrence of members making prior service election at time of retirement.

- Lower than anticipated termination with a return of contributions or a transfer value resulted in an increase of \$37 million of the Superannuation Account actuarial excess.
 - Higher than expected deaths amongst surviving spouses increased the Superannuation Account actuarial excess by \$15 million.
- (ii) The rates of interest credited to the Account were marginally greater than the corresponding projected Account yields in the previous valuation; consequently the experience gain was \$11 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 \$484 million.
 - (iii) A decrease of \$104 million to the Pension Fund actuarial deficit resulted from the actual government contributions in plan year 2006, 2007 and 2008 being more than the government portion of the current service cost shown in the cost certificate of the previous report.
 - (iv) The experience of the last three years has shown that the promotional and seniority salary increases were higher than expected in the previous report. This resulted in an increase of \$210 million in the Account actuarial liabilities and a corresponding increase of \$29 million in the Fund actuarial liabilities.
 - (v) The Pension Fund actuarial liability was reduced by \$45 million which corresponds to the government special payments made during plan years 2007 and 2008 to start the amortization of the Pension Fund actuarial deficit reported in the Pension Fund balance sheet of the previous report.
 - (vi) An increase of \$13 million in the Fund actuarial surplus resulted mainly from lower than anticipated transfer value payments and returns of contributions to terminating members. The Superannuation Account actuarial excess was reduced by \$90 million due mainly to the recurring lump sum payments associated with marriage breakdown. Of all the Public Sector pension plans of the Canadian Government, the Canadian Forces pension plan is particularly impacted by the division of assets following a marriage breakdown.
 - (vii) Higher than expected economic salary increases for plan year 2007 and 2008 resulted in an increase of \$53 million in the Superannuation Account actuarial liabilities and a corresponding increase of \$18 million in the Pension Fund actuarial liabilities.
 - (viii) In the previous report, pension indexation was projected to be 2% as at 1 January 2007 and 2008. The actual indexation of pension was 2.3% as at 1 January 2007 and 1.8% as at 1 January 2008 which resulted in an increase of \$31 million in the Superannuation Account actuarial liabilities.



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6) Revision of Actuarial Assumptions

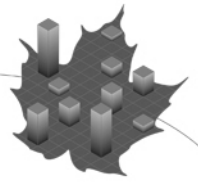
Actuarial assumptions were revised based on economic trends and demographic experience as described in Appendix 7. This revision has decreased the Superannuation Account actuarial excess by \$1,067 million and decreased the Pension Fund actuarial surplus by \$105 million. The impact of these revisions is described in the following table.

Table 5 Revision of Actuarial Assumptions
(\$ millions)

Assumption	Superannuation Account	Pension Fund
Investment earnings	(1,145)	(316)
Pension indexation	761	133
Mortality improvement factors	(356)	(51)
Survivors mortality rates	(290)	(16)
Economic salary increases	265	194
Age difference between spouses	(78)	(6)
Pensionable retirements	(47)	(42)
Pensioners mortality rates	(68)	(16)
Seniority and promotional salary increases	(54)	(11)
Proportion married at death	(35)	(7)
Disabled retirements 3B	(15)	(17)
Removal of the temporary reduced annuity option	13	34
Annuity reduction factors	(12)	(9)
YMPE / MPE increases	(11)	(7)
Withdrawals	7	12
Contributors mortality rates	(3)	(1)
Assumptions related to children and students	(3)	(1)
New interest rate on Commuted Value	3	21
Net impact of revision	(1,067)	(105)

The net impact of the revision of the assumptions is mainly attributable to the new mortality improvements factors, the lower survivor mortality rates 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%.

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

The Superannuation Account actuarial excess has increased by \$27 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. Following the analysis of total administrative expenses charged to both the Account and the Fund over the last ten years, the annual administrative expense assumption of 0.35% of total pensionable payroll was increased by 0.05% to 0.40%.

In addition, the analysis revealed that the allocation of total administrative expenses between the Account and the Fund was showing a faster allocation to the Fund than what was previously assumed. For plan year 2009, 80% of total administrative expenses are being charged to the Account and it is now expected that the proportion charged to the Account will reduce at the rate of 2.8% per year, an increase of 0.8% per year from our previous assumption of 2.0%.

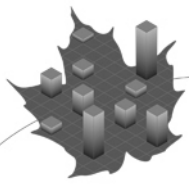
8) Reserve Force Member participating to Part I of the Act

The addition of Part I.1 to the CFSA officially sanctioned the coming into force of the Reserve Force pension plan as at 1 March 2007. This pension plan was created to provide a pension for members of the Reserve Force having irregular period of service. The Department of National Defence also recognized that full time members of the Reserve Force should not be treated differently than the member of the Regular Force for purposes of pension benefit entitlement. Part I of the Act was also modified to allow full time reservist access to the benefit provisions provided under Part I of the Act.

As at 31 March 2008, a total of 3,003 full time members of the Reserve Force are now considered Regular Force members for purpose of Part I of the Act. The net impact of introducing these full time members of the Reserve Force resulted in an increase of \$41 million of the Superannuation Account actuarial liabilities and an increase of \$46 million of the Pension Fund actuarial liabilities.

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 \$29 million more than their market value due to unrecognized investment losses.



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C. CFSA - 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	251
Government current service cost	690
Total current service cost	941
Expected pensionable payroll	4,211
Total current service cost as % of expected pensionable payroll	22.34%

Table 7 Reconciliation of CFSA Current Service Cost
(Percentage of pensionable payroll)

For plan year 2006	22.50
Expected current service cost change	(0.04)
Change in demographics	(0.18)
Improved CPP coordination factors	0.23
Changes in assumptions	
Withdrawals	(0.02)
Pensionable retirements	0.14
Annuity reduction factors	0.03
Removal of the temporary reduced annuity option	(0.16)
Disabled retirements 3B	0.07
Pensioners mortality rates	0.05
Survivors mortality rates	0.05
Mortality improvement factors	0.17
Seniority and promotional salary increases	(0.28)
Proportion married at death	0.02
Age difference between spouses	0.02
Assumptions related to children and students	0.0
Pension indexation	(0.38)
Economic salary increases	(0.62)
Investment earnings	0.94
YMPE / MPE increases	0.03
New interest rate on Commuted Value	(0.13)
Reservist Part I members	(0.11)
Administration cost allocation	0.02
For plan year 2009	22.34



2) Projection of Current Service Costs

The following CFSA 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%.

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 Year	Current Service Cost (\$ millions)			Current Service Cost as a Percentage of Pensionable Payroll			Portion Borne by the Government
	Members	Government	Total	Members	Government	Total	
2009	251	690	941	5.95	16.39	22.34	73%
2010	265	704	969	6.13	16.26	22.39	73%
2011	279	711	989	6.31	16.10	22.41	72%
2012	295	707	1,003	6.51	15.59	22.11	71%
2013	313	705	1,018	6.72	15.12	21.84	69%
2018	374	803	1,177	6.82	14.65	21.47	68%
2023	441	962	1,403	6.79	14.82	21.61	69%

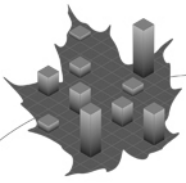
The decrease in the portion of the current cost borne by the government from plan year 2009 to 2013 mainly reflects increased plan contributions by contributors and the partial transition of economic assumptions from their select to ultimate values.

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	\$3,368,482
2010	\$3,948,276
2011	\$4,521,310
2012	\$5,152,800

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)

Plan Year	Superannuation Account		Pension Fund	
	Member	Government	Member	Government
2009	2.5	2.5	3.9	10.7
2010	2.4	2.4	4.1	10.8
2011	2.3	2.3	4.3	10.9

D. CFSA - Sensitivity to Variations in Key Assumptions

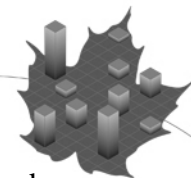
The following table measures the effect on the plan year 2009 current service cost, the liabilities for service prior to 1 April 2000 and for service since that date, if key economic assumptions are varied by one percentage point per annum from plan year 2009 onward.

Table 10 Sensitivity of Valuation Results

Assumption(s) Varied	Current Service Cost (%)		Actuarial Liability (\$ millions)			
	2009	Effect	Service prior to April 2000		Service since April 2000	
			Effect	Effect	Effect	Effect
None (i.e. current basis)	22.34	None	42,626	None	7,906	None
Investment yield						
- if 1% higher	17.69	(4.65)	37,338	(5,288)	6,517	(1,389)
- if 1% lower	28.81	6.47	49,348	6,722	9,776	1,870
Inflation						
- if 1% higher	25.90	3.56	48,127	5,501	9,048	1,142
- if 1% lower	19.59	(2.75)	38,180	(4,446)	7,013	(893)
Salary, YMPE and MPE						
- if 1% higher	24.08	1.74	42,983	357	8,283	377
- if 1% lower	20.76	(1.58)	42,294	(332)	7,563	(343)
All economic assumptions						
- if 1% higher	21.78	(0.56)	41,986	(640)	7,691	(215)
- if 1% lower	22.94	0.60	40,956	(1,670)	8,137	231

The foregoing estimates indicate the degree to which the CFSA 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



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)	12,011	11,866	145
Investment return			
- if 2% higher annually for next 3	12,264	11,866	398
- if 2% lower annually for next 3 years	11,765	11,866	(101)
- if minus 20% for plan year 2009	9,779	11,866	(2,087)

E. RCA No. 1 - Valuation Results

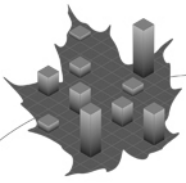
The normal costs, assets and liabilities presented in this section were computed using the assets, data, methodology and assumptions described in Appendix 7.

1) Balance Sheets

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

	31 March 2008	31 March 2005
Assets		
RCA No.1 Account	183	95
Refundable tax	163	75
Actuarial Excess (Assets minus Liability)	<u>14</u>	<u>1</u>
	332	169
Actuarial Liability		
Pensionable excess earnings		
• Active contributors	242	107
• Pensioners	46	20
Survivor Allowance		
• Active contributors	13	24
• Pensioners	31	17
Total Actuarial Liability	332	169

The sum of the assets in respect of the RCA No. 1 Account and the refundable tax is \$346 million; it exceeds the actuarial liability of \$332 million by 4.2% as at 31 March 2008. As at 31 March 2005, the sum of the assets was at par with the actuarial liability. This change in the RCA No. 1 financial position is due to the change in the methodology used to estimate the actuarial liability of the active member survivor allowance. The previous report methodology estimated the survivor benefit on the pension amount to be received by the member prior to age 65. In the current valuation, the methodology estimates the survivor benefit on the pension benefit to be received by the member at age 65.



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2) RCA No. 1 Current Service Cost

The projected current service cost, borne jointly by the members and the government, of 0.85% for plan year 2009 calculated in the previous valuation has increased by 0.43% to 1.28% of pensionable payroll in this valuation.

The RCA No. 1 current service cost for plan year 2009 is estimated to increase to 1.36% and 1.44% 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 13 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	51.4	56.1	60.5
Survivor Allowance	<u>2.5</u>	<u>2.8</u>	<u>3.2</u>
Total	<u>53.9</u>	<u>58.9</u>	<u>63.7</u>
Member contributions	2.7	2.9	3.3
Government current service cost	51.2	56.0	60.4
Current service cost as % of total pensionable payroll	1.28%	1.36%	1.44%

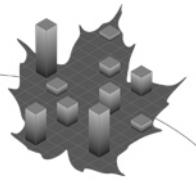
The substantial increase in the current service cost from the previous report is due to the increase in the number of regular members having a salary above the MPE as well as the sharp increase in the salary for members considered specialists. In the previous report the total pensionable payroll in excess of the MPE projected for plan year 2009 was \$16 million. The comparable payroll reported in the current valuation is \$28 million, a 75% increase.

F. Summary of Estimated Government Costs

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

Table 14 Estimated Government Cost
(\$ millions)

Plan Year	Current Service Cost		Total Prior Service Contributions	Total Government Cost
	<u>CFSA</u>	<u>RCA No. 1</u>		
2009	690	51	13	754
2010	704	56	13	773
2011	711	60	13	784



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 of the Canadian Forces – Regular Member, 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 Account No.1 of the Canadian Forces – Regular Member, 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 the Department of National Defence 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

Ottawa, Canada
16 April 2010



Appendix 1 – Summary of Pension Benefit Provisions

Pensions for members of the Canadian Forces (the *regular force*) were first provided under the Militia Pension Act of 1901, when in 1950 it became the *Defence Services Pension Act* until the *Defence Services Pension Continuation Act* and the *Canadian Forces Superannuation Act* (CFSA) were enacted in 1959. Benefits are also provided to members of the Regular Force 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.

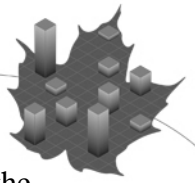
Changes since the last valuation

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 CFSA 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.

With the enactment of Bill C-78 on 14 September 1999, full time members of the Reserve Force are now covered under the amended Part I of the CFSA since 1 March 2007. To accommodate these full time reservists, Part I of the Act has been expanded to provide not only access to the current benefit provisions available to Regular Force member but also benefit entitlements similar to those found under the *Public Service Superannuation Act*. These new benefit provisions are also available to current Regular Force members.

One major aspect of the change to Part I is the introduction of the duality in qualifying for benefits as well as an extended definition of pensionable service. Members under Part I accumulate two types of service, “pensionable” and “qualifying”. The term “pensionable service” takes its usual form, that is, a period of service becomes pensionable to the extent that the member was eligible to contribute to the pension plan and that he/she made the required contributions. As such, service under the Canadian Forces, the Royal Canadian Mounted Police, the Public Service of Canada and the militaries of the Commonwealth of Nations may count toward pensionable service under Part I of the CFSA. The term “qualifying service” refers to period of paid service and/or enrolment periods with pay in the Canadian Forces. Even though very limited, certain types of service in the Canadian Forces are excluded. Regardless of event leading to a benefit entitlements (withdrawal, retirement, disability or death), the pensionable service is used to determine the amount of benefit to be received by a member.

The duality in qualifying for benefits depends on the types of service, “pensionable” versus “qualifying”. To qualify for the early retirement benefit (after 25 years of service under the new terms of service) the qualifying service is used. Entitlement to an annual allowance would require two years of pensionable service with a minimum age of 50. A full immediate annuity would be available at the age of 55 with a minimum of 30 years of pensionable service. The relationship between the “pensionable” and “qualifying” service is not always straightforward. Depending on the type service within the Public Sector pension plans as well as the possible election or non-election of prior service period, total years of “qualifying” service may be either greater, equal or less than the total years of “pensionable” service. The best available benefit will depend on each member employment career choices.



All other reservists are covered under the new Part I.1 of the CFSA which effectively created the new pension plan with benefits provisions suited to these members' type of engagement. The reservists covered under Part I.1 of the CFSA are not under review in this report and are subject to a separate actuarial report.

Duality in qualifying for benefits – Valuation Methodology

As at 31 March 2008, all Regular Force members (64,397) have cumulated as many years of pensionable service as years of qualifying service. With the exception of a few Reserve Force members (those members electing to buy back prior pensionable service), most of these members (3,062) have only accumulated a total of 13 months of pensionable service since they only became participant to Part I as at 1 March 2007. Under the current membership profile, opting for the qualifying service years as the valuation basis to determine future benefit entitlements provides the best estimate of the actuarial liability and normal cost. There would be an underreporting of the actuarial liability and current service cost for member with pensionable service in excess of qualifying service. The valuation data revealed some cases.

The financial results of this valuation are based on the use of the qualifying service years to the credit of each member as at 31 March 2008 to estimate future benefit entitlements and the number of years of pensionable service to determine the amounts of benefit available at the entitlement dates. Any differences between future projected benefits and actual benefits being paid will be the subject of a gains and losses analysis covering the intervaluation period of 1 April 2008 to 31 March 2011 and reported in the next actuarial valuation report scheduled as at 31 March 2011.

Summary of Pension Benefit Provisions

Summarized in this Appendix are the pension benefits provided under the CFSA 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.

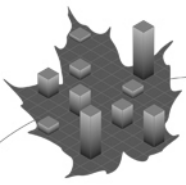
A. Membership

Membership in the plan is compulsory for all active members of the Canadian Forces. It includes the forces known before 1 February 1968 as the regular forces of the Canadian Forces and the forces known before 1 February 1968 as the Canadian Navy, the Canadian Army Active Force, the Permanent Active Militia, the Permanent Militia Corps, the permanent staff of the Militia, the Royal Canadian Air Force (Regular) and the permanent Active Air Force.

Members of the Reserve Force considered full time members became participants as at 1 March 2007.

A member of the Reserve Force is considered a participant,

- on March 1, 2007 if, on that date,
 - the member's total number of days of Canadian Forces service during any period of 60 months beginning on or after April 1, 1999 was no less than 1,674,



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- the member already was or became a member of the Canadian Forces during the first month of the period and remained a member of the Canadian Forces throughout the period without any interruption of more than 60 days,
- the member is not a person required to contribute to the Public Service Pension Fund or the Royal Canadian Mounted Police Pension Fund, and
- the member does not have any pensionable service to their credit under Part I of the Act;
- in any other case, on the first day of the month following a period of 60 months ending after March 1, 2007 if
 - the member's total number of days of Canadian Forces service during the period was no less than 1,674,
 - the member already was or became a member of the Canadian Forces during the first month of the period and remained a member of the Canadian Forces throughout the period without any interruption of more than 60 days, and
 - the member does not have any pensionable service to their credit under Part I of the Act.

The general rule is that once a Reserve Force member is deemed a Regular Force member for purpose of Part I of the CFSA, and that the member does not fail to receive pensionable earnings in any 12 consecutive months, the member remains a participant to Part I of the CFSA. There are exceptions to the general rule previously described but for the purpose of this report, these were considered not material.

B. Contributions

1. Members

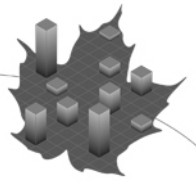
During the first 35 years of pensionable service, members contribute according to the rates shown in the following table. After 35 years of pensionable service, members contribute only 1% of pensionable earnings.

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

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.

Government credits to the Pension Fund in respect of elected prior service are as described for current service; however, the government contributes only 87% of the member contribution if the member is paying the double rate for plan year 2009. The government rate will decrease thereafter to reach the level of 55% by plan year 2014 and remain constant thereafter.

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 members and/or employer contributions or by making withdrawals.

d) Actuarial Deficit

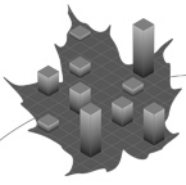
If an actuarial deficit is identified through a triennial statutory actuarial report, the Superannuation Account and/or the Pension Fund are to be credited with such annual amounts that in the opinion of the President of the Treasury Board will fully amortize the actuarial deficit over a period not exceeding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

C. Summary Description of Benefits

The objective of the CFSA 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), 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. The pension is indexed annually with the Consumer Price Index and the accumulated indexation may be payable at the earliest of age 55 as defined in Note 2 of section D below. Entitlement to benefits depends on either the qualifying service in the Canadian Forces or the pensionable service, as defined below in Notes 3 and 4 of section D below.

The new terms of service were effective in May 2005 for every new recruit. Current members serving under an indefinite period of service (IPS) are not affected by the change. Members currently serving under an IE20 may be offered the new IE25.



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

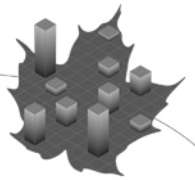
1. Benefit Entitlement on the basis of “Qualifying” Service

a) Active Members

Type of Termination	Qualifying Service in the Canadian Forces (Note 3)	Benefit
Retirement because of age (Note 7)	Less than 2 years	Return of contributions (Note 8)
	2 years or more	Immediate annuity (Note 10)
Retirement on completion of short engagement (an officer other than a subordinate officer who has not reached retirement age and is not serving on an intermediate engagement or for an indefinite period of service) (Note 5)	Less than 2 years	Return of contributions (Note 8)
	At least 2 but less than 25 years (less than 20 years – old terms of service)	At option of member (1) deferred annuity (Note 11); or (2) transfer value if under age 50 (Note 12)
	25 years or more (20 years or more – old terms of service)	See “Retirement for reasons other than those previously mentioned”
Retirement during an indefinite period of service after having completed an intermediate engagement and prior to reaching retirement age, for reasons other than disability or, to promote economy or efficiency	Any length	Immediate annuity to which member was entitled upon completion of intermediate engagement increased to such extent as prescribed by regulation ¹ (Note 13)
Retirement on completion of intermediate engagement (a member who has not reached retirement age and is not serving for an indefinite period of service) (Note 6)	25 years or more (20 years or more – old terms of service)	Immediate annuity (Note 10)
Compulsory retirement because of disability ²	Less than 2 years	Return of contributions (Note 8)
	At least 2 but less than 10 years	At option of member (1) deferred annuity (Note 11); or (2) transfer value if under age 50 (Note 12)
	10 years or more	Immediate annuity

¹ The CFSA limits the annuity to the immediate annuity to which the active member would be entitled if retiring because of age or disability, and the formula in the CFS Regulations (Note 14) always produces less than the maximum.

² Any condition rendering a member of the regular force mentally or physically unfit to perform his or her duties. A member is discharged under Q. R. & O. 15.01 Article 3B when he or she is unable to perform the duties of his or her own occupation. A member is discharged under Q.R. & O. 15.01 Article 3A when he or she is unable to perform any occupation.



Type of Termination	Qualifying Service in the Canadian Forces (Note 3)	Benefit
Compulsory retirement to promote economy or efficiency	Less than 2 years	Return of contributions
	More than 2 but less than 10 years	At option of member (1) deferred annuity (Note 11); or (2) transfer value if under age 50 (Note 12)
	At least 10 but less than 25 years (less than 20 years – old terms of service)	At option of member (1) return of contributions; or (2) deferred annuity; or (3) transfer value if under age 50 (Note 12) (4) with consent of the Minister of National Defence, an immediate reduced annuity (Note 14)
	25 years or more (20 years or more – old terms of service)	Immediate annuity (Note 10)
Retirement for reasons other than those previously mentioned	Less than 2 years	Return of contributions (Note 8)
	At least 2 but less than 25 years (less than 20 years – old terms of service)	At option of member (1) deferred annuity (Note 11); or (2) transfer value if under age 50 (Note 12)
	(At least 20 but less than 25 years – old terms of service)	Immediate reduced annuity
	25 years or more	Officer: - immediate reduced annuity (Note 14); Other than officer: - immediate annuity (Note 10)



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b) Benefits in Case of Death of an Active Member

Status at Death	Qualifying Service in the Canadian Forces (Note 3)	Benefit
Leaving no eligible spouse or children under 25 (Notes 15 and 16)	Less than 2 years	Return of contributions
	2 years or more	Five times the annual amount of retirement pension to which the member would have been entitled at the date of death
Leaving eligible spouse and/or children under 25	Less than 2 years	Return of contributions or an amount equal to one month's earnings of the deceased member for each year of credited pensionable service, whichever is the greater
	2 years or more	Annual allowance (Note 17)

c) Benefits in Case of Death of a Pensioner

Status at Death	Benefit
Leaving no eligible spouse or children under 25	Minimum death benefit (Note 18)
Leaving eligible spouse and/or children under 25	Annual allowance (Note 17)

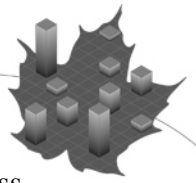
2. Benefit Entitlement on the basis of "Pensionable" Service

Member's Type of Termination	Benefit
With two or more years of pensionable service; and	
* Involuntary termination due to a work force reduction program and - With 20 years of service or more - Age 50 or over and service 10 years of service or more	Immediate annuity
* Leaving prior to age 50, except for death or disability	Deferred annuity or transfer value
* Leaving at age 50 or over, except for death or disability, and - Age 60 or over, or age 55 or over and service 30 years or more - Otherwise	Immediate annuity Deferred annuity or annual allowance

D. Explanatory Notes

1. Pensionable Earnings

Pensionable earnings means the salary at the annual rate prescribed by the regulations made pursuant to the *National Defence Act* together with the allowances representing medical-dental care costs prescribed by the Canadian Forces Superannuation Regulations to a member.



Pensionable payroll means the aggregate pensionable earnings of all members 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. If the indicated adjustment is negative, annuities are not decreased for that year; however, the next following 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 a retirement pension, the pensioner must be at least 55 years old provided also the sum of age and pensionable service is at least 85; otherwise the retirement pensioner must be at least 60 years old.

3. Qualifying Service in the Canadian Forces

For most purposes of the CFSA, qualifying service in the Canadian Forces means service for which a Regular or Reserve Force member is paid, and includes:

- days of service in the Regular Force for which pay was authorized, and authorized maternity and parental leaves;
- days of service in the Reserve Force for which pay was authorized, and authorized maternity and parental leaves:
 - days of training or duty of less than 6 hours = half-day
 - days of Class “A” service = 1.4 days
 - periods before 1 April 1999 (when duration of period is verifiable but not the number of days) = quarter time
 - during maternity and parental leaves, days of CF service are based on service in previous 12 months

4. Pensionable Service

Pensionable service includes any period of service in the regular force in respect of which an active member either (1) made contributions that remain in the Account or Fund or (2) elected to contribute. It also includes any period of prior service for which an active member was paid a return of contributions or lump sum payment under the CFSA that he or she did elect to repay on subsequent enrolment. It also includes prior



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service in the Public Service of Canada, the Royal Canadian Mounted Police and the militaries of the Commonwealth of Nations they elected to count as pensionable service.

5. Short Engagement

Short engagement means a continuous period of service as a commissioned officer in the regular force for a period not exceeding nine years.

6. Intermediate Engagement

Intermediate engagement means 20 years (IE20) of continuous service as a member of the regular force for members serving under an indefinite period of service (IPS) or serving under an IE20 and did not opt for the new intermediate engagement of 25 years of continuous service effective May 2005. All other regular members will have to complete the new IE25 in order to be eligible to an immediate unreduced annuity.

7. Retirement Because of Age

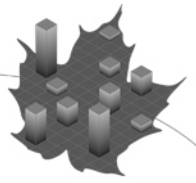
Retirement because of age means ceasing to be a member of the regular force at or after the prescribed retirement age for any reason other than disability or death. A retirement age of 55 applies for all members serving under the career programs adopted in 1975.

For those members enrolled prior to the introduction of the 1975 programs and not subject to their provisions, the previous rules for retirement age continue to apply. These rules, effective 1 February 1968, applicable to members who enrolled on or after that date, or to those serving on that date that elected to be subject to such rules, are shown in the table on the next page.

	<u>Pre-1975 Retirement Age</u>		
	<u>General Service</u>	<u>Specialist Service</u>	<u>Commissioned From Rank</u>
Brigadier-General and above	55	60	55
Colonel	55	58	55
Lieutenant-Colonel	51	55	50
Major	47	55	50
Captain and Lieutenant	45	50	50
Others Ranks above Corporal	50		
Corporal and below	44		

For those members serving on 1 February 1968 who did not elect to have these rules apply to them, the retirement age is as in the table above but varies slightly by rank and by branch of the Forces.

For those members to whom the above rules would normally apply, the regulations also prescribe, for purposes of compulsory retirement under certain conditions or voluntary retirement, that the retirement age will be deemed to have been reached only upon completion of the following periods of full-time paid qualifying service in any of Her Majesty's Forces, if the resulting date of retirement is earlier.



	<u>Years of Service</u>
Colonel and above	30
Officers below Colonel	28
Other Ranks above Corporal	30
Corporal and below	25

8. 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 member into the Account and/or into the Fund. Interest is credited at the quarterly Fund rate each quarter on the accumulated contributions with interest as at the end of the previous quarter.

9. Cash Termination Allowance

Cash termination allowance means the payment of an amount equal to one month's employment earnings at the rate authorized to be paid to the active member at date of termination multiplied by the number of years of pensionable service to the credit of the active member minus the total reduction in employee contributions to the CFS Account by virtue of the integration of the plan with the CPP.

10. Immediate Annuity

Immediate annuity means an unreduced pension that becomes payable immediately upon a pensionable retirement or a pensionable disability. The annual amount is equal to 2% of the highest average of annual pensionable earnings (calculated without reference to the yearly maximum described in Note 1) of the active member over any period of five¹ consecutive years, multiplied by the number of years of pensionable service not exceeding 35. However, if such highest five-year earnings average exceeds the yearly maximum prescribed for the calendar year in which service is terminated, then the annual amount is reduced by 2% of such excess, multiplied by the number of years of pensionable service after April 1995.

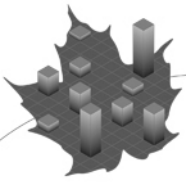
When a pensioner attains age 65 or becomes entitled to a disability pension from the CPP, the annual amount of pension is reduced by 0.7% of the indexed CPP annual pensionable earnings² (or, if lesser, the indexed five-year average earnings on which the immediate annuity is based), multiplied by the years of CPP pensionable service³.

Annuities are payable in equal monthly instalments in arrears until the end of the month in which the pensioner dies or when the disability pensioner recovers from disability. Upon the death of the pensioner, either a survivor allowance (Note 17) or a minimum death benefit (Note 18) may be payable.

¹ If the number of years of pensionable service is less than five, then the average is over the entire period of pensionable service.

² Indexed CPP annual pensionable earnings means the average of the YMPE, as defined in the CPP, over the last five years of pensionable service, increased by indexation proportionate to that accrued in respect of the immediate annuity.

³ Years of CPP pensionable service, means the number of years of pensionable service after 1965 or after attaining age 18, whichever is later, but not exceeding 35.



11. Deferred Annuity

Deferred annuity means an annuity that normally becomes payable to a retirement pensioner when he/she reaches age 60. The annual payment is determined like that of an immediate annuity (see Note 10 above) but is adjusted to reflect the indexation (see page 31) from date of termination to the commencement of annuity payments.

When a member entitled to a deferred annuity becomes disabled before reaching age 60, the member ceases to be entitled to that deferred annuity and becomes entitled to an immediate annuity.

When a member, being entitled while still under age 60 to an immediate annuity in respect of a disability, recovers from that disability, the disability annuity payments are terminated and the member becomes entitled to a deferred annuity.

12. Transfer Value

Active members who, at their date of termination of pensionable service, are under age 50 and who 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.

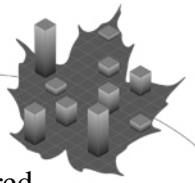
13. Annuity Payable upon Retirement During an Indefinite Period of Service

For an active member who has not reached retirement age and ceases to be a member of the regular force while on an indefinite period of service after completing an intermediate engagement for any reason other than disability, or to promote economy or efficiency, Canadian Forces Superannuation Regulations prescribe an annuity that is equal to the greater of:

- (a) an immediate annuity based on the pensionable service to the date of completion of the intermediate engagement only and the highest five-year earnings average at date of retirement, and
- (b) an immediate annuity based upon the total pensionable service to the date of retirement and the highest five-year employment earnings average at that date reduced by 5% of such amount of annuity for each full year by which:
 - in the case of an officer, the age at the date of retirement is less than the retirement age applicable to the member's rank; or
 - in the case of a member other than an officer, the age at the date of retirement is less than the retirement age applicable to the member's rank or the period of service in the regular force is less than 25 years, whichever is the lesser.

14. Reduced Immediate Annuity

Reduced immediate annuity means an immediate annuity for which the annual amount of the annuity as determined in Note 10 is reduced as stated below.



With the consent of the Minister of National Defence, an active member who is required to terminate to promote economy or efficiency and has between 10 and 20 years of service in the regular force may choose an immediate annuity reduced, until attainment of age 65 but not thereafter, by 5% for each full year not exceeding six by which:

- i) the period of service in the regular force is less than 20 years; or
- ii) the age of the active member at the time of retirement is less than the retirement age applicable to the member's rank,

whichever is the lesser.

An active member who, not having reached retirement age, ceases to be a member of the regular force for any reason other than disability, or to promote economy or efficiency, or while on an indefinite period of service is entitled

- (a) as an officer having served in the regular force for 20 years or more, to an immediate annuity reduced by 5% for each full year by which his or her age at the time of retirement is less than the retirement age applicable to his or her rank, or
- (b) as other than an officer having served in the regular force for 20 years or more but less than 25 years, to an immediate annuity reduced by 5% for each full year by which:

- the period of service in the regular force is less than 25 years, or
- the age at the time of retirement is less than the retirement age applicable to the member's rank,

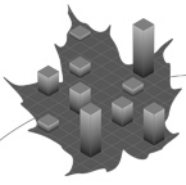
whichever is the lesser.

When a pensioner in receipt of an immediate reduced annuity becomes disabled before reaching age 60, the pensioner ceases to be entitled to that immediate reduced annuity and becomes entitled to an immediate annuity adjusted in accordance with regulations to take into account the amount of any immediate reduced annuity which the pensioner may have received prior to becoming disabled.

15. Eligible Surviving Spouse

Eligible surviving spouse means the surviving spouse of an active member or pensioner except if:

- (a) the active member or pensioner died within one year of marriage unless the Minister of National Defence is satisfied that the member's health at the time of the marriage justified an expectation of surviving for at least one year; or
- (b) the pensioner married at age 60 or over, unless after such marriage the pensioner either:
 - became a member again (in such cases, common-law unions are accepted), 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 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; or

- (c) the pensioner is a female who retired before 20 December 1975 and did not make an optional survivor benefit election within the one-year period ending 6 May 1995.

16. Eligible Surviving Children

Eligible surviving children includes all children of the active member or pensioner who are under age 18, and any child of the active member 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 active member or pensioner died, whichever occurred later.

17. Annual Allowance for Eligible Survivors

Annual allowance means, for the eligible surviving spouse and children of an active member 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 equal to 1% of the highest average of annual pensionable earnings of the active member over five consecutive years, multiplied by the number of years of pensionable service not exceeding 35. If such highest five-year earnings average exceeds the yearly maximum prescribed for the calendar year in which service is terminated, then the annual amount is reduced by 2% of such excess, multiplied by the number of years of pensionable service after April 1995.

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 annuity otherwise payable to an eligible surviving child is doubled if the child is an orphan.

Annual allowances are not integrated with the CPP 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 18) is payable to the estate upon the death of the last survivor.

18. Minimum Death Benefit

If upon the death of an active member there is no person to whom an allowance provided under the terms of the CFSA may be paid, or if the persons to whom such allowances may be paid die or cease to be entitled thereto and no other amount may be paid to them, there is paid to the estate of the active member or to the named beneficiary under CFSA Part II, if any exist:

- (a) if the active member was not a member of the regular force upon or after 20 December 1975, any amount by which the amount of return of contributions

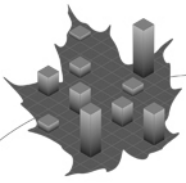


exceeds the aggregate of all amounts paid to those persons and to the active member;

- (b) if the active member was a member of the regular force upon or after 20 December 1975, an amount similar to the above except that the return of contributions is taken as at least equal to five times the basic annuity to which the active member was or would have been entitled at the time of his or her death; or
- (c) if the active member was retired and entitled to an immediate annuity from which a deduction had been made as a result of integration with the CPP, the amount payable in (a) or (b) above cannot be less than the amount by which the cash termination allowance (see Note 9 above) exceeds the aggregate of all amounts already paid to those persons and to the active member.

19. Division of Pension in Case of Spousal Union Breakdown

In accordance with the *Pension Benefits Division Act*, upon the breakdown of a spousal union (including common-law), a lump sum can be transferred by court order or by mutual consent from the plan assets to the credit of the former spouse of an active member or pensioner. As at the transfer date, the maximum transferable amount is half the value of the retirement pension accrued by the active or former member 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 benefits of the active member or pensioner are then reduced accordingly.



Appendix 2 – RCA Benefit Provisions

This Appendix describes the Canadian Forces - Regular Forces pension benefits financed through retirement compensation arrangements RCA No. 1 rather than through the CFSA 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 1 May 1995, 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 CFSA registered provisions.

The following benefits have been provided under RCA No. 1 to the extent that they are in excess of the ITA limit.

Benefit	CFSA Registered Provisions limit
<p>Survivor allowance for service from 1 January 1992 onward (see Note 13 of Appendix 1)</p>	<p><u>Pre-retirement death</u></p> <ul style="list-style-type: none"> • Maximum spouse allowance is two-thirds of greater of A and B; and • Maximum aggregate dependants' allowance is the greater of A and B, where <ul style="list-style-type: none"> A is the amount of member annuity earned to date of death, and 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 <p><u>Post-retirement death</u></p> <p>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.</p>
<p>Minimum lump sum death benefit (see Note 14 of Appendix 1)</p>	<p><u>Pre-retirement death</u></p> <p>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.</p> <p><u>Post-retirement death</u></p> <p>If the member has no eligible dependants at retirement, then the minimum death benefit is limited to the member contributions with interest.</p>
<p>Excess pensionable earnings (provided since 1 May 1995 for service since then)</p>	<p>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.</p>



Appendix 3 – Assets and Rates of Return

A. Assets

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

1. Canadian Forces Superannuation Account

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

The Account was credited with all CFSA 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 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 15 Reconciliation of Balances in Superannuation Account
(\$ millions)

Plan Year	2006	2007	2008	2006-2008
Public Accounts opening balance	41,351	42,363	43,287	41,351
INCOME				
Interest earnings	3,146	3,123	3,088	9,357
Employer contributions	4	6	2	12
Member contributions	4	4	4	12
Transfers received	4	3	3	10
Actuarial liability adjustments	-	-	-	-
<i>Subtotal</i>	<i>3,158</i>	<i>3,136</i>	<i>3,097</i>	<i>9,391</i>
EXPENDITURES				
Annuities	2,084	2,149	2,173	6,406
Pension divisions	46	47	40	133
Return of contributions	-	-	-	-
Pension transfer value payments	-	-	-	-
Transfers to other pension plans	1	-	6	7
Minimum benefits	4	3	1	8
Administrative expenses	11	12	10	33
<i>Subtotal</i>	<i>2,146</i>	<i>2,212</i>	<i>2,230</i>	<i>6,589</i>
Public Accounts closing balance	42,363	43,287	44,153	44,153



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Since the last valuation, the Account balance has grown by \$3 billion (a 6.6% increase) to reach \$44 billion as at 31 March 2008.

2. Canadian Forces Pension Fund

Since 1 April 2000, CFSA contributions (except for prior service elections made prior to 1 April 2000) have been credited to the 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 CFSA contributions since 1 April 2000, as well as with prior service contributions in respect of elections made since 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

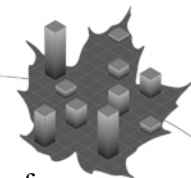
Table 16 Reconciliation of Balances in Pension Fund
(\$ millions)

Plan Year	2006	2007	2008	2006-2008
Opening balance	4,050	5,650	7,096	4,050
INCOME				
Interest earnings	829	675	(55)	1,449
Employer contributions	639	623	708	1,970
Member contributions	190	210	236	636
Transfers received	-	-	-	-
Actuarial liability adjustments	-	22	22	44
<i>Subtotal</i>	<i>1,658</i>	<i>1,530</i>	<i>911</i>	<i>4,099</i>
EXPENDITURES				
Annuities	41	61	89	191
Pension divisions	5	7	9	21
Return of contributions	-	-	-	-
Pension transfer value payments	-	-	-	-
Transfers to other pension plans	-	-	10	10
Minimum benefits	11	14	10	35
Administrative expenses	1	2	2	5
<i>Subtotal</i>	<i>58</i>	<i>84</i>	<i>120</i>	<i>262</i>
Closing balance	5,650	7,096	7,890	7,890

Since the last valuation, the Fund balance has increased by \$4 billion (a 93% increase) to reach \$8 billion as at 31 March 2008.

3. Canadian Forces 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 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 17 Reconciliation of Balances in RCA No.1 Account

(\$ millions)

Plan Year	2006	2007	2008	2006-2008
Public Accounts opening balance	94.9	129.7	149.6	94.9
INCOME				
Interest earnings	8.7	10.7	12.0	31.4
Employer contributions	42.4	39.1	48.8	130.3
Member contributions	2.4	2.4	2.3	7.1
Transfers received	0.0	0.0	0.0	0.0
Actuarial liability adjustments	11.4	0.0	0.0	11.4
<i>Subtotal</i>	<i>64.9</i>	<i>52.2</i>	<i>63.1</i>	<i>180.2</i>
EXPENDITURES				
Annuities	0.8	1.0	1.3	3.1
Pension divisions	0.0	0.2	0.1	0.3
Return of contributions	0.0	0.0	0.0	0.0
Pension transfer value payments	0.0	0.0	0.2	0.2
Transfers to other pension plans	0.0	0.0	0.0	0.0
Minimum benefits	0.0	0.0	0.0	0.0
Transfer to Canada Post Corporation	0.0	0.0	0.0	0.0
Amount transfer to CRA	29.3	31.2	27.8	.
<i>Subtotal</i>	<i>30.1</i>	<i>32.3</i>	<i>29.4</i>	<i>3.6</i>
Public Accounts closing balance	129.7	149.6	183.3	183.3
Refundable tax	104.4	135.6	163.4	163.4

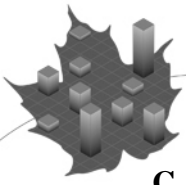
Since the last valuation, the Account balance has grown by \$88 million (a 92.8% increase) to reach \$183 million as at 31 March 2008 and the refundable tax has increased by \$88 million (a 117.0% increase) to reach \$163 million.

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%	11.6%
2008	7.3%	(0.4%)

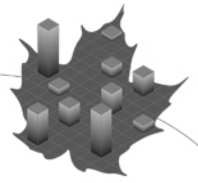


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C. Sources of Asset Data

The Canadian Forces Superannuation Account, the RCA No. 1 Account and the Canadian Forces 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.



Appendix 4 – Membership Data

A. Sources of Membership Data

The valuation input data required in respect of members, former members (pensioners) and survivors are provided by the Department of National Defence. Because DND does not administer the pension payments made to former members of the Canadian Forces - Regular Forces, the information received from DND on former members may not be as accurate since the information is not kept up to date. The former member information is kept internally at DND with the sole purpose of providing valuation data to OSFI. An additional set of valuation data on former members of the Canadian Forces - Regular Forces are extracted from master computer files maintained by the Superannuation Directorate of the Department of Public Works and Government Services Canada. This second set of valuation data on former member provides OSFI with the ability to cross verify the information provided by DND.

The main valuation data file supplied by the DND contained the historical status information on all members up to 31 March 2008. The valuation data file on former members of the Canadian Forces - Regular Forces provided by PWGSC covers the period of 1 April 2005 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 2005 from the previous valuation data.

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



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a) For Active Members

- the pensionable and qualifying 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.

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 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.

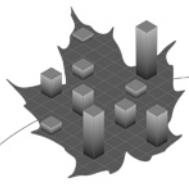
Table 18 Reconciliation of Contributors

	Male			Female			Total
	Officer	Other Rank	Total	Officer	Other Rank	Total	
As at 31 March 2005	12,200	41,638	53,838	2,079	5,686	7,765	61,603
Data corrections	228	(199)	29	20	8	28	57
New entrants	2,270	10,504	12,774	578	1,826	2,404	15,178
Rehired from cash-out	103	846	949	22	100	122	1,071
Rehired from pensioners	68	101	169	5	18	23	192
ROC or Transfer Value	(604)	(3,998)	(4,602)	(175)	(576)	(751)	(5,353)
Pensionable terminations							
Disability (3A)	(3)	(10)	(13)	-	-	-	(13)
Disability (3B)	(159)	(1,419)	(1,578)	(42)	(250)	(292)	(1,870)
Death	(32)	(152)	(184)	(4)	(8)	(12)	(196)
Other	<u>(1,432)</u>	<u>(4,228)</u>	<u>(5,660)</u>	<u>(130)</u>	<u>(440)</u>	<u>(570)</u>	<u>(6,230)</u>
Subtotal	(1,626)	(5,809)	(7,435)	(176)	(698)	(874)	(8,309)
New Reservists - CFSA Part I	645	1,206	1,851	234	918	1,152	3,003
As at 31 March 2008	13,284	44,289	57,573	2,587	7,282	9,869	67,442



Table 19 Reconciliation of Pensioners

	Male			Female			Total
	Officer	Other Rank	Total	Officer	Other Rank	Total	
Retirement Pensioners							
As at 31 March 2005	16,255	53,834	70,089	656	2,300	2,956	73,045
Data corrections	(123)	(452)	(575)	(14)	(33)	(47)	(622)
New entrants	1,435	4,229	5,664	127	439	566	6,230
Terminations							
Death	(1,127)	(3,381)	(4,508)	(23)	(29)	(52)	(4,560)
Other	(73)	(117)	(190)	(4)	(23)	(27)	(217)
Subtotal	(1,200)	(3,498)	(4,698)	(27)	(52)	(79)	(4,777)
As at 31 March 2008	16,367	54,113	70,480	742	2,654	3,396	73,876
Disability Pensioners (3A)							
As at 31 March 2005	207	2,758	2,965	16	75	91	3,056
Data corrections	(13)	(159)	(172)	-	(3)	(3)	(175)
New entrants	3	10	13	-	-	-	13
Terminations							
Death	(27)	(300)	(327)	-	(2)	(2)	(329)
Other	-	(1)	(1)	-	-	-	(1)
Subtotal	(27)	(301)	(328)	-	(2)	(2)	(330)
As at 31 March 2008	170	2,308	2,478	16	70	86	2,564
Disability Pensioners (3B)							
As at 31 March 2005	439	5,835	6,274	95	888	983	7,257
Data corrections	23	359	382	6	44	50	432
New entrants	160	1,418	1,578	42	250	292	1,870
Terminations							
Death	(15)	(185)	(200)	(1)	(4)	(5)	(205)
Other	(1)	(6)	(7)	(1)	(1)	(2)	(9)
Subtotal	(16)	(191)	(207)	(2)	(5)	(7)	(214)
As at 31 March 2008	606	7,421	8,027	141	1,177	1,318	9,345



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Table 20 Reconciliation of Survivors

	Spouses			Children and Students		
	Widows	Widowers	Total	Children	Students	Total
As at 31 March 2005	22,339	74	22,413	423	214	637
Data correctionss	(312)	(8)	(320)	21	290	311
New survivors from contributors	81	4	85	109	15	124
New survivors from Pensioners	3,064	18	3,082	74	19	93
Spouse deaths	(2,902)	(7)	(2,909)	-	-	-
Eligible as student	-	-	-	(217)	217	-
Students terminating	-	-	-	-	(229)	(229)
As at 31 March 2008	22,270	81	22,351	410	526	936



Appendix 5 – CFSA Valuation Methodology

A. Plan Assets

1. Canadian Forces 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. Canadian Forces 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 CFSA 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.



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The actuarial value of the assets, determined as at 31 March 2008, under the adjusted market value method is \$8,027 million and was determined as follows:

Table 21 Actuarial Value of Pension Fund Assets
(\$ millions)

Plan Year	2004	2005	2006	2007	2008
Actual net investment return (A)	517	271	830	676	(55)
Expected investment return (B)	134	213	288	380	473
Investment gains (losses) (A-B)	383	58	542	296	(528)
Gains (losses) recognized immediately	-	-	31	-	-
Investment gains (losses) to be amortized	383	58	511	296	(528)
Unrecognized percentage	0%	20%	40%	60%	80%
<i>Unrecognized investment gains (losses)</i>	-	12	204	178	(423)
Market value as at 31 March 2008					7,890
Plus					
Present value of prior service contributions					108
Less					
Total unrecognized investment gains (losses)					(29)
Actuarial value as at 31 March 2008					8,027

B. Actuarial Cost Method

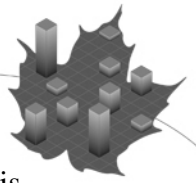
As benefits earned in respect of current service will not be payable for many years, the purpose of an actuarial cost method is to assign costs over the working lifetime of the members.

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 CFSA 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.

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 CFSA.

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 Canadian Forces 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



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- 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.

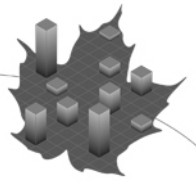
The projected yields (shown in Appendix 6) assumed for computing the present value of the benefits accrued or accruing to be credited to the Canadian Forces Pension Fund (i.e. the Fund liabilities and the current service cost) were developed on the basis that the Fund holds a diversified mix of assets.

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.



Appendix 6 – CFSA 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) Real¹ 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%.

¹ 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%.



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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 ¹	6.93%	7.39%	3.11%
Average Real Return on Diversified Portfolios	7.52%	7.40%	4.71% ²

2. Derived Economic Assumptions

Table 22 Economic Assumptions³
(As a percentage)

Plan Year	Inflation		Employment Earning Increases				Interest		
	CPI Increase	Pension Indexing ⁴	IAAWE	YMPE ⁴	Average Pensionable Earnings ⁵	Maximum Pensionable Earnings ^{4,6}	New Money Rate	Yield Projected on Account	Yield Projected on Fund
2009	2.0	2.5	3.0	3.1	2.0	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

¹ Real returns were calculated after the level of inflation is removed geometrically before 1992.

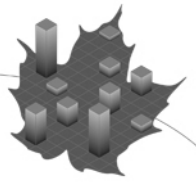
² This average is over the last 48 years.

³ Bold figures denote actual experience.

⁴ Assumed to be effective as at 1 January.

⁵ Assumed to be effective as at 1 April. Exclusive of seniority and promotional increases.

⁶ Calendar year 2008 Maximum Pensionable Earnings is \$130,700



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. 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, 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 *Canadian Forces 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.



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 $r_7 = r_L \times (i_7/i_L)$

r_L is the long-term real-return Government of Canada bond yield, annualized

i_L is the long-term Government of Canada benchmark bond yield, annualized and

i_7 is the 7-year Government of Canada benchmark bond yield¹, 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 CFSA, 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 seniority and promotional increase assumption was revised to reflect the intervaluation experience. The assumed rate decreased by an average of 21% for officers with 10 or fewer years of completed service and increased by an average of 12% for officers with 11 to 30 years of completed service. The assumed rate decreased by an average of 25% for other ranks with 10 or fewer years of completed service and

¹ It was deemed to be equal to 90% of the long-term Government of Canada benchmark bond yield.

