



Office of the Superintendent  
of Financial Institutions Canada

Bureau du surintendant  
des institutions financières Canada

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K1A 0H2

**CANADIAN FORCES SUPERANNUATION ACCOUNT**

**ACTUARIAL REPORT**

**AS AT DECEMBER 31, 1983**

**Canada**

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## CANADIAN FORCES SUPERANNUATION ACT - PART I

### Report on the Actuarial Examination of the Canadian Forces Superannuation Account in the Consolidated Revenue Fund as at December 31, 1983

#### I. Introduction and Summary

We have completed an actuarial examination of the Account as at December 31, 1983, pursuant to Section 27 of the Canadian Forces Superannuation Act (CFSA), as it read before the coming into force of the Public Pensions Reporting Act (December 1, 1986). The last examination of this Account was made as of December 31, 1980. No amendments have been made since that time.

The normal actuarial cost, that is, the total contribution required from contributors and Government combined to provide all benefits in respect of current service, is estimated to be 20.428% of pay. Allowing for coordination with the Canada Pension Plan, the effective rate of contribution to the Account from contributors as at December 31, 1983, was equivalent to 5.116% of pay. As a result, it is estimated that Government credits are required at a rate equal to 2.99 times the contributions from contributors; however, after 1986 this rate will increase as the Canada Pension Plan contribution rate increases and the resulting effective rate of contribution to the Account from contributors decreases.

The normal actuarial cost makes allowance for general salary increases at the rate of 5% of pay per annum. Pursuant to subsection 26(2) of the Act, additional liabilities arising out of general increases in pay in excess of this rate are estimated to require Special Credits to the Account equal to 3.58 times the increase in the effective annual payroll in excess of 5% per annum for officers, and 2.55 times such amount for other ranks. Under the existing provisions of the Act, such credits would be set up as a deferred charge to be amortized in five equal annual instalments. These instalments, together with those in respect of existing deferred charges may be offset by interest earnings in excess of 6.5% per annum, pursuant to subsection 26(4) of the Act.

The estimated excess of assets over liabilities in the Canadian Forces Superannuation Account as at December 31, 1983 was \$2,134.9 million.

This report and the above figures make no provision for benefits and increases in benefits related to increases in the Consumer Price Index. Such benefits, payable to persons in receipt of annuities or annual allowances under various government superannuation and other acts, including the Canadian Forces Superannuation Act, are provided under the Supplementary Retirement Benefits Act and, pursuant to Part III of the Canadian Forces Superannuation Act, contributors are required to pay special contributions to the Supplementary Retirement Benefits Account. In accordance with the Public Pensions Reporting Act, future actuarial reports will be made only for the combined plan, i.e., including the relevant provisions of the Supplementary Retirement Benefits Act. For this report, as for the last two reports, cost estimates for the combined plan are provided in Appendix 1.

## II. Data and Membership Statistics

The data for this valuation were obtained from data tapes supplied by the Department of National Defence. The following tables derived from those tapes show pertinent statistics concerning contributors to the Account (members and former members of the regular force\*) and survivors eligible for allowances during the intervaluation period from December 31, 1980 to December 31, 1983.

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\* Regular force means the regular force of the Canadian Forces and includes  
(a) the forces known before the coming into force of Part I of the Canadian Forces Reorganization Act as the regular forces of the Canadian Forces, and  
(b) the forces known before the coming into force of Part II of the National Defence Act as the Royal 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.

A. Members of the Regular Force

Group	Contri- butors* 81-01-01	***New entrants 1981-1983	<u>Terminations from 1981 to 1983***</u>				Contri- butors 83-12-31	
			Type of Benefit	Type of Termination				
				Death	Disabled	Other**	Total	
<u>Males</u>								
Officers			Annuity	35	20	1,259	1,314	
			Lump Sum	<u>11</u>	<u>30</u>	<u>1,590</u>	<u>1,631</u>	
	14,953	3,449		46	50	2,849	2,945	15,457
Other Ranks			Annuity	139	318	5,126	5,583	
			Lump Sum	<u>145</u>	<u>373</u>	<u>9,062</u>	<u>9,580</u>	
	59,536	15,159		284	691	14,188	15,163	59,532
Total			Annuity	174	338	6,385	6,897	
			Lump Sum	<u>156</u>	<u>403</u>	<u>10,652</u>	<u>11,211</u>	
	74,489	18,608		330	741	17,037	18,108	74,989
<u>Females</u>								
Officers			Annuity	0	1	26	27	
			Lump Sum	<u>2</u>	<u>6</u>	<u>221</u>	<u>229</u>	
	854	545		2	7	247	256	1,143
Other Ranks			Annuity	1	3	32	36	
			Lump Sum	<u>10</u>	<u>39</u>	<u>1,558</u>	<u>1,607</u>	
	5,201	2,017		11	42	1,590	1,643	5,575
Total			Annuity	1	4	58	63	
			Lump Sum	<u>12</u>	<u>45</u>	<u>1,779</u>	<u>1,836</u>	
	6,055	2,562		13	49	1,837	1,899	6,718
<u>Grand Total</u>								
			Annuity	175	342	6,443	6,960	
			Lump Sum	<u>168</u>	<u>448</u>	<u>12,431</u>	<u>13,047</u>	
	80,544	21,170		343	790	18,874	20,007	81,707

\* In this column, contributors who had other rank status on January 1, 1981 and who attained officer status at some time during the 1981-83 period are shown as officers rather than other ranks.

\*\* Compulsory retirements because of age, promotion of economy or efficiency, misconduct, together with all retirements for other reasons

\*\*\* Excludes 3431 contributors entitled to a lump sum who were released from the Forces during their year of entry.

B. Persons Entitled to Annuities or Annual Allowances

Retired Contributors

<u>Group</u>	<u>Entitled 81-01-01</u>	<u>New Entitlements 1981 to 1983</u>	<u>Terminations 1981 to 1983</u>			<u>Entitled 83-12-31</u>
			<u>Deaths</u>	<u>Other*</u>	<u>Total</u>	
<u>Males</u>						
<u>Officers</u>						
Non-disabled	11,256	1,259	393	53	446	12,069
Disabled	<u>399</u>	<u>20</u>	<u>16</u>	<u>1</u>	<u>17</u>	<u>402</u>
	11,655	1,279	409	54	463	12,471
<u>Other Ranks</u>						
Non-disabled	37,802	5,126	1,422	196	1,618	41,310
Disabled	<u>6,249</u>	<u>318</u>	<u>321</u>	<u>26</u>	<u>347</u>	<u>6,220</u>
	44,051	5,444	1,743	222	1,965	47,530
<u>Total</u>						
Non-disabled	49,058	6,385	1,815	249	2,064	53,379
Disabled	<u>6,648</u>	<u>338</u>	<u>337</u>	<u>27</u>	<u>364</u>	<u>6,622</u>
	55,706	6,723	2,152	276	2,428	60,001
<u>Females</u>						
<u>Officers</u>						
Non-disabled	205	26	4	-	4	227
Disabled	<u>14</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>15</u>
	219	27	4	-	4	242
<u>Other Ranks</u>						
Non-disabled	95	32	3	-	3	124
Disabled	<u>13</u>	<u>3</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>15</u>
	108	35	4	-	4	139
<u>Total</u>						
Non-disabled	300	58	7	-	7	351
Disabled	<u>27</u>	<u>4</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>30</u>
	327	62	8	-	8	381
<u>Grand Total</u>						
Non-disabled	49,358	6,443	1,822	249	2,071	53,730
Disabled	<u>6,675</u>	<u>342</u>	<u>338</u>	<u>27</u>	<u>365</u>	<u>6,652</u>
	56,033	6,785	2,160	276	2,436	60,382

\* Re-enrollments in the regular force and transfers to other superannuation plans excluding, however, 134 re-enrollments which were treated as being entitled to annuities, because they were not included among the active records.

Surviving Spouses

Status of Contributor at Death	Entitled 81-01-01	New entitlements 1981 to 1983	Reinstatements 1981-1983	Terminations 1981 to 1983		Entitled 83-12-31
				Deaths	Remarriages	
<u>Males</u>						
Officers	1,695	402	1	30	5	2,063
Other Ranks	4,839	1,521	9	90	22	6,257
<u>Females</u>						
Officers	2	-	-	-	-	2
Other Ranks	<u>2</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4</u>
	6,548	1,925	10	120	27	8,326

Children and Students

	Entitled 81-01-01	New Entitlements 1981 to 1983	Terminations 1981 to 1983	Entitled 83-12-31
Children under 18	2,053	537	1,222	1,368
Students (18 to 25)	967	663	684	946

### III. Actuarial Assumptions

#### A. General Comments

As in the past, for purposes of analysis and valuation, contributors are divided into four groups, namely, male officers, male other ranks, female officers and female other ranks.

As for earlier examinations of the Account, the experience revealed significant differences between the four groups of contributors. While it was considered desirable to continue to treat each group separately for valuation purposes, in some cases, the assumptions used vary only by sex or by rank, as described later.

Before discussing the various assumptions under individual headings, the following general comments may be in order.

#### (1) Effect of explicit or implicit level of inflation determining the general level of economic assumptions

There are two aspects to the discussion under this heading:

- (a) The extent to which the required normal actuarial cost (current service contribution rate) is affected by the level of economic assumptions depends on the type of pension plan under consideration. For a pension plan of the career-average type, where the rate of interest is normally the sole economic assumption, a relatively higher level of interest produces a very substantially lower cost. For a final-average-pay plan, such as the Canadian Forces Superannuation Act, where the effect of a relatively high assumed rate of interest tends to be offset by the effect of an accompanying relatively high level of assumed salary increases, the effect is considerably smaller. Finally, for a fully indexed final-average salary plan, such as the CFSA if it were combined with the applicable provisions of the Supplementary Retirement Benefits Act, the level of assumed inflation tends to have a relatively minor effect on normal costs if the margins between the rate of inflation and the assumed rates of interest and general increases in salaries remain approximately the same.
- (b) It seems unavoidable that actuaries, by their very act of attempting to use "realistic" assumptions, influence expectations regarding future inflation and therefore actions taken by businesses, employees, etc. that affect it. Thus, it may well be that the realism, desirable as it may appear to economists, accountants and actuaries, needs to be moderated if there is to be any hope of maintaining a moderate long-term level of inflation.



(2) Effect of benefits beyond the terms of pension plans

In recent years for a growing number of plans, in some cases as a result of collective bargaining, employers have adopted the practice of (a) making periodic ad hoc adjustments to pensions in payment to compensate for some or all of the purchasing power lost through inflation, and (b) increasing the benefits accrued to active members of flat-benefit or career-average type pension plans in order to keep earned pensions in a reasonable relationship to current rates of pay. When there is no explicit commitment under the terms of the plan for similar adjustments in the future, they will not be included in the calculations of normal actuarial cost and actuarial liabilities.

It might be argued, especially when adjustments occur with regularity, that the employer has made a strong moral commitment to maintain pension values at a certain level and that from an accounting point of view the costs are understated. It would be possible, of course, for the employer to make advance provision for future adjustments without contributing additional funds to the plan by setting up a special contingent liability in his balance sheet and by including the additions to such contingent liability account with the normal actuarial cost of the pension fund for purposes of assessing the total normal actuarial cost. Such practice might make for more valid comparison of the potential value of pensions under different plans and more appropriate allocation of costs between different generations of shareholders, consumers and taxpayers. However, setting up a contingent liability in the employer's balance sheet might well be interpreted as converting a moral commitment into a promise, in which case the additional benefits should be considered part of the formal plan and funded in the same manner as basic benefits. For practical purposes, of course, this would eliminate the employer's option of updating benefits from time to time without any commitment regarding future adjustments.

B. Rate of Interest

For purposes of this valuation it was decided to continue the use of an assumed rate of interest of 6.5% which, as noted below, is expected to be exceeded by actual interest credits for a considerable period of time. In the long term, the rate is assumed to be composed of an inflation factor of 3.5% and a real rate of return of about 3%.\*

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\* more precisely (  $\frac{1.065}{1.035} - 1$  ) or 2.899%

The total rate at which interest is now credited changes every three months and is calculated as if the amounts not required for payment of benefits in each quarter pursuant to the CFSA and the Public Service and R.C.M.P. Superannuation Acts had been invested on a basis similar to the one used for the Canada Pension Plan, i.e., in 20-year bonds having a yield equivalent to the average yield on Government of Canada bonds with 20 or more years to maturity outstanding at that time.

For the quarter ending December 31, 1983 the total rate of interest credit was 2.5633% which is equivalent to 10.65% per annum. Subsequently, the total annual rate of interest credit rose to above 11% and seems likely to continue above 6.5% for some considerable period of time, even if allowance is made for current and anticipated inflation and interest rates at relatively moderate levels, given that rates of return on new notional investments reached an average of about 15% during 1981 and 1982 and have generally stayed well above 9% since that time.

C. Salary Increases

There are two main forces that tend to generate increases in rates of pay. First, a promotional force resulting from experience and training and increase in responsibility due to appointment to a higher rank; second, an economic force related, directly or indirectly, to such factors as inflation, general increases in productivity and labour market conditions. Increases in pay resulting from this second force are herein referred to as "general" increases.

A study of the rates of pay for each of the four classes of contributors from January 1, 1981 to December 31, 1983 indicated that salary scales (assumed increase patterns) related to length of service would be preferable to salary scales related to age which had been used in the past. Accordingly, new promotional salary scales were developed for male officers and male other ranks. Moreover, it appeared appropriate to use the scales applicable to male contributors also for female contributors.

With regard to general increases, the wide variations that have occurred in recent years as a result of varying economic and social pressures are indicative of the difficulty in predicting the level of future increases of this type. For purposes of this valuation, we have assumed a level rate of general increases in pay of 5%. This rate may be thought of as being composed of a 3.5% inflation factor and a 1.5%\* factor for real general increases related to productivity and labour market conditions.

Appendix 3 shows promotional salary scales and salary scales incorporating both promotional and general increases.

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\* more precisely  $\frac{1.050}{1.035} - 1$  or 1.449 %

D. Rates of retirement with return of contributions or cash termination allowance for reasons other than disability\*

New rates were developed from the 1981-83 experience which was substantially different from what was expected on the basis of the 1980 assumptions. The new rates are generally lower at the young ages (to age 25 for male officers, to age 35 for female officers and male other ranks and to age 33 for female other ranks). For older ages, generally, the new rates are increasingly higher. The rates are shown in Appendix 4.

E. Rates of retirement with entitlement to an annuity for reasons other than disability

A retirement age of 55 has been prescribed by regulations made under the National Defence Act for all members serving under the career programs adopted in 1975.

For those members enrolled prior to the introduction of the new programs who are not subject to their provisions, the previous retirement ages varying by rank as prescribed by the regulations continue to apply. These latter retirement ages, effective February 1, 1968, for contributors who enrolled on or after that date, or those serving on that date who elected to have such ages apply to them are shown below.

For those contributors serving on February 1, 1968, who did not elect to have these ages apply to them, the retirement ages are similar to those below but vary slightly by rank and by branch of the Forces.

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\* Generally called withdrawal rates

Officers

	<u>General Service</u>	<u>Specialist Service</u>	<u>Commissioned from Ranks</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

Other Ranks

Sergeant and above	50
Corporal and below	44

Notwithstanding the above prescribed ages for retirement, for purposes of compulsory retirement under certain conditions or voluntary retirement the regulations prescribe for those contributors that retirement age will be deemed to have been reached upon completion of the following periods of full-time paid service in any of Her Majesty's Forces, if the resulting date of retirement is earlier.

Years of Service

Officers

Colonel and above	30
Lieutenant-Colonel and below	28

Other Ranks

Sergeant and above	30
Corporal and below	25

As a result of the career program introduced in 1975 the retirement rates among males have continued to increase around age 40 for both officers and other ranks and at age 55 for officers and have generally decreased for other ages. New rates were developed reflecting the 1981-83 experience.

The data on female members continue to be too sparse to develop age-specific rates. However, the 1981-83 experience indicated that the new rates developed for the corresponding category of male contributors would be quite appropriate and much more so than the 1980 assumptions.

All rates are shown in Appendix 5.

F. Rates of Retirement with entitlement to an annuity, a cash termination allowance or a return of contributions because of disability

The disability rates experienced during the 1981-83 period were lower than expected for all categories of contributors. However, mainly because of the volume of the data, statistical significance could be attached to the difference in experience only in the case of male other ranks. Accordingly, new rates were developed for this group of contributors reflecting the 1981-83 experience, and the 1980 assumptions were retained for all other groups. The rates appear in Appendix 6.

G. Mortality of active contributors

The 1976-83 experience indicated generally lower mortality for males than assumed in the 1980 valuation except for officers below age 31 and for other ranks below age 23 and from age 33 to 40. New rates based on that experience were constructed. While the experience among females was not significant, it was decided to continue the use of the Life Table 1980-82, Canada (Female) as published by Statistics Canada, but with an age set-back of four years. All rates are shown in Appendix 7.

H. Mortality of contributors entitled to annuities who were retired for reasons other than disability

In contrast to preceding valuations, mortality of annuitants was studied separately for retired officers and other ranks, rates for the latter generally being found significantly higher than for the former. Accordingly, separate sets of rates were developed for these two groups of retired male contributors based on the 1976-83 period but providing a margin for future improvement in mortality.

The data for females continued to be sparse. However, it was thought that the 1983 GAM table with a two-year set-back in age would provide an adequate margin for future improvement.

All the rates appear in Appendix 8.

I. Mortality of contributors entitled to annuities who were retired because of disability

The 1981-83 experience among males indicated the use of somewhat lower mortality rates than assumed for the 1980 valuation in order to retain some margin for future improvement. The rates adopted were 100% and 140% of the Life Table 1980-82, Canada (Male) for former officers and other ranks, respectively. The same percentages applicable to the Life Table 1980-82, Canada (Female) were assumed for females.

Sample mortality rates used in the valuation are shown in Appendix 9.

J. Mortality and Remarriage of Widows

Although the 1981-83 experience was not extensive, it appeared that the mortality rates assumed for the 1980 valuation were no longer appropriate above age 65. The 1983 GAM Table with a two-year set-back below age 65, a four-year set-back above age 74 and a graded set-back for the intervening ages was adopted for the current valuation.

The remarriage rates used again were the select and ultimate remarriage rates derived from the 1940-57 experience of widows granted pensions under the Pension Act and previous government administrative orders from August 4, 1914 to December 31, 1957. Recent experience has indicated that the select rates of the table at early durations are somewhat lower than corresponding actual rates for widows entitled to allowances under the Canadian Forces Superannuation Act.

Sample mortality and remarriage rates are shown in Appendix 10.

K. Mortality and Remarriage of Widowers

The mortality rates used for the 1980 valuation were the same as the rates used in that valuation for male non-disabled pensioners. This approach could not be used for the current valuation because pensioners were divided by status at retirement. Although the 1981-83 experience was too scanty to provide any supporting evidence, it was decided to adopt the 1983 GAM Table.

The remarriage rates used for purpose of the Canada Pension Plan were used again.

Sample mortality and remarriage rates are shown in Appendix 10.

L. Children

Allowances to children are payable up to age 18 in all circumstances and from age 18 up to age 25 if the child is unmarried and attending a school or university. As the mortality rates for children are quite low, it was considered suitable to ignore mortality amongst these annuitants.

For purposes of valuing allowances in payment for students, the probabilities of students at various ages remaining eligible for allowance at the end of one year derived from the 1976-80 experience under the Act were used again. The probabilities are shown in Appendix 11.

M. Proportions of contributors (including annuitants) married at death and Average ages of spouses corresponding to ages of contributors at death

The 1981-83 experience for males indicated somewhat lower proportions married for ages at death above 40 and slightly higher proportions toward the younger ages than assumed in the 1980 valuation. For the current valuation new series of factors giving 50% credibility to the 1981-83 experience were developed.

With regard to the average ages of spouses, the experience indicated that the assumptions developed for the 1980 valuation remained appropriate.

In view of the lack of data on the proportions of female contributors and annuitants married at death and the average ages of widowers corresponding to ages of female contributors and annuitants at death, the assumptions used for the preceding valuation were retained.

The proportions and average ages used in the valuation are shown in Appendix 11.

#### IV. Actuarial Method

The actuarial method used is known as the Unit Credit or Accrued Benefit Method, the same as used for the last valuation. It contemplates normal costs (current service contributions) in any year sufficient to fund all future benefits in respect of service in that year. This method is the one included in the "Accounting Recommendations - April 1986" in respect of "Pension Costs and Obligations" issued by the Canadian Institute of Chartered Accountants.

The normal cost may be affected by changes in the underlying economic and demographic assumptions as well as by changes in the distribution of contributors by age and sex and relative salaries.

The actuarial liability is the actuarial present value of projected benefits in respect of service to the effective date of the valuation. It may be affected by net gains or losses from experience as well as by changes in assumptions.

V. Rates of Contribution and Required Credits to the Account

Using the assumptions and actuarial cost method described in Sections III and IV, respectively, and the distribution of active contributors as at December 31, 1983 summarized in Appendix 12, the normal actuarial cost, i.e., the total rate required from contributors and the Government combined to fund future benefits in respect of current service was calculated to be 20.428% of pay.

After making allowance for integration with contributions payable to the Canada Pension Plan, contributions from contributors to the Account were calculated to be equal to approximately 5.116% of pay, leaving a required Government credit of 15.312% of pay or an amount equal to 2.99 times the contributions from contributors.

The valuation assumptions include provision for 5.0% annual increases in the general level of pay. Under normal pension funding practices, liabilities arising out of increases in pay in excess of the assumed rate would be taken care of, along with other deficiencies after allowing for any gains, following receipt of periodic actuarial reports. The Canadian Forces Superannuation Act, however, provides for special credits to the Account following authorization of general pay increases.

Accordingly, it has been estimated that special credits to the Account in respect of such pay increases should be made equal to 3.58 times the amount of increase in the effective annual payroll in excess of 5% per annum for officers, and 2.55 times such amount for other ranks. Under the existing provisions of the Act, such credits would be set up as a deferred charge to be amortized in five equal annual instalments. These instalments, together with instalments in respect of any actuarial deficiency reported as a result of statutory actuarial examinations, may be offset by interest earnings in excess of 6.5% per annum.

The normal actuarial cost of 20.428% of pay indicated above is higher than the corresponding figure in the preceding report by about 3.2% of pay. This is accounted for by the following changes

	<u>Increase(Decrease)</u> (% of pay)
Age-service-salary distribution of contributors	(0.2)
Salary scales	2.4
Pensioner mortality	0.2
Retirement with return of contributions	0.4
Other assumptions (net)	(0.2)
Programming improvement	<u>0.6</u>
	3.2



VI. Valuation Balance Sheet and Gain and Loss Analysis

The results of the valuation as at December 31, 1983, is shown in the following balance sheet.

<u>Assets</u>		(millions)
Balance on Account (Par Value)*		\$12,033.0
Credits from Government outstanding at December 31, 1983		
1) Contributions	\$61.7	
2) Interest	<u>39.7</u>	101.4
Outstanding contributions from contributors		10.9
Actuarial present value of future contri- butions from members and former members of the regular force for prior service plus future credits from Government (assumed equal to 1.8 times the amount from contributors)		<u>34.1</u>
Total Assets		\$12,179.4

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\* The value of the Account as at December 31, 1983, determined by discounting the notional investments at the assumed valuation interest rate of 6.5% was \$16,439.1 million. The difference between this value and the par value shown in the balance sheet together with the contingency reserve may be regarded as a provision for part of the estimated unfunded actuarial liability related to the indexing of superannuation benefits pursuant to the Supplementary Retirement Benefits Act (see Appendix 1).

Liabilities

		(millions)
Actuarial present value of prospective benefits to and in respect of members of the regular force		\$5,846.2
Actuarial present value of future benefits to persons entitled to an annuity or annual allowance		
Retired contributors	\$4,014.8	
Spouses	179.6	
Children	<u>3.9</u>	4,198.3
Amounts due to former contributors or to the beneficiaries or estates of contributors		<u>0.0</u>
Total Liabilities		\$10,044.5
Contingency Reserve*		<u>2,134.9</u>
		\$12,179.4

The foregoing balance sheet indicates an excess of assets over liabilities of about \$2,135 million, as at December 31, 1983. This represents an increase of \$178 million over the value shown in the preceding report. The major gains and losses which account for this increase are shown in the following table.

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\* The contingency reserve is affected by deferred charges totalling \$467.3 million, which were in the process of amortization but are included in the balance of the Account.

Actuarial Gains and Losses  
(in millions of dollars)

	<u>Gain</u>	<u>Loss</u>	<u>Net Gain (Loss)</u>
Normal actuarial gains and losses			
- Interest on contingency reserve	407		
- Interest earned on liabilities	101		
- Salary increases	9		
- Retirement with return of contributions		57	
- Survivor benefits	12		
- Pensioner mortality	8		
- Disability	5		
- Data correction	45		
- Miscellaneous (net)	<u>8</u>		
	595	<u>57</u>	538
Changes in actuarial assumptions and methods			
- Salary scales		200	
- Mortality		177	
- Retirement with return of contributions		18	
- Proportion married at death	33		
- Normal retirement	26		
- Other assumptions (net)	38		
- Programming improvements	<u>97</u>	<u>62</u>	
		457	(360)
Total net gain			178

VII. Actuarial Opinion and Acknowledgements

In closing, we wish to acknowledge the co-operation of the various sections of the Department of National Defence which supplied us with the data on contributors and annuitants.

The work on this valuation was carried out under the direction of Pierre Treuil, F.C.I.A. by Bryan Osborne, F.C.I.A., assisted by Pierre Perron, A.S.A.

In my opinion, for the purposes of this actuarial report

- (a) the data on which this report is based are sufficient and reliable,
- (b) the assumptions that have been used are adequate and appropriate,
- (c) the methods that have been employed are consistent with sound actuarial principles.

This report has been prepared and this opinion has been given in accordance with generally accepted actuarial principles and the recommendations of the Canadian Institute of Actuaries, but for an actuarial assessment of the complete pension plan for the regular force of the Canadian Forces, including provisions of the Supplementary Retirement Benefits Act, reference must be made to Appendix 1.

Respectfully submitted,



Walter Riese, F.S.A., F.C.I.A.  
Chief Actuary

Ottawa, Canada

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APPENDIX 1

STATUS OF PENSION PLAN FOR THE CANADIAN FORCES INCLUDING  
RELEVANT PROVISIONS OF THE SUPPLEMENTARY RETIREMENT BENEFITS ACT

(A) Terms and current operations of SRBA

In 1970, the Supplementary Retirement Benefits Act (SRBA) was passed to provide supplementary benefits, related to increases in the Consumer Price Index, for persons in receipt of pensions payable out of the Consolidated Revenue Fund. This Act applies to former contributors to the Canadian Forces Superannuation Account and their surviving spouses and children who are entitled to annuities or annual allowances.

The supplementary benefit is calculated by multiplying the amount of the annuity or annual allowance to which the person is entitled from the Canadian Forces Superannuation Account by the ratio of the Benefit Index for the year of payment to the Benefit Index for the year in which the person to whom or in respect of whose service the pension is payable ceased to be a member of the forces, and subtracting the amount of the annuity or annual allowance. The Benefit Index for the years prior to 1971 is shown in a Schedule in the Act. The Benefit Index for any year after 1970 is equal to the Benefit Index for the preceding year multiplied by the average of the Consumer Price Index for Canada for the twelve-month period ending on September 30 of that preceding year and divided by the corresponding average for a period one year earlier. Prior to 1973, the increase in the Benefit Index was limited to a maximum of 2% in any year. An amendment to the Supplementary Retirement Benefits Act in 1973 removed that limit and provided that the increase payable in January 1974 would take into account increases in the Consumer Price Index above the 2% ceiling since 1970. In January 1983, an amendment made as part of a general economic restraints program limited the increase for 1983 and 1984 to 6.5% and 5.5% respectively. Since 1983 the increase in the Benefit Index is prorated in respect of annuitants who have been in receipt of benefits for less than the full preceding calendar year (i.e. for contributors who retired or in respect of contributors who died during the preceding year).

Under the terms of the original Act of 1970, the supplementary benefits were payable to all former contributors in receipt of annuities or annual allowances who had attained the age of 60, or, if less than that age, were unfit to perform duties as a member of the regular force by reason of any mental or physical disability, and to all spouses and children in receipt of annual allowances. The amendments effective January 1, 1973 provided for the payment of benefits to former contributors aged 55 to 59 and in receipt of annuities or annual allowances in cases where the total of years of service plus age equals or exceeds 85 years.

The Canadian Forces Superannuation Act was amended in 1970, by the addition of Part III, to require that contributors pay 0.5% of their pay to the Supplementary Retirement Benefits Account in addition to their contributions to the Superannuation Account. A further amendment in 1973 increased this contribution rate from 0.5% to 1.0%, commencing January 1, 1977. Such contributions are payable until the member retires. The Government makes credits to the Account equal to the contributions of the members.

Interest is also credited to the Supplementary Retirement Benefits Account at the end of each quarter. The amount of the interest is calculated monthly on the minimum balance at a rate of interest representative of the yield on outstanding Government of Canada bonds having a term to maturity of five years, less 0.125%.

Prior to January 1, 1974, the Supplementary Retirement Benefits Act provided that all supplementary benefits would be charged to the Account. Since that date, benefits paid in respect of a former contributor are charged to the Account only until their accumulated total equals the aggregate of all amounts credited to that Account in respect of that person, including interest. Supplementary benefits paid in excess of that aggregate are then charged directly to the Consolidated Revenue Fund. The Act also provides for a return of contributions paid by a member to the Supplementary Retirement Benefits Account, to the extent that such contributions exceed any benefit that has been or may be paid to or in respect of the member from that Account.

The Supplementary Retirement Benefits Act applies to active members and former members of the Canadian Forces who are entitled to benefits under the Defence Services Pension Continuation Act as well as to those entitled to benefits under the Canadian Forces Superannuation Act. Contributions paid by both groups of members and other credits to the Account, and supplementary benefits paid to former members and their surviving spouses and children receiving basic benefits under either Act, and other charges to the Account during the fiscal years 1983-84, 1984-85 and 1985-86 are shown on the next page.

Canadian Forces Supplementary Retirement Benefits

	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>
	\$	\$	\$
<u>Credits to Account</u>			
Contributions from members	21,182,091	22,447,713	23,718,728
Government credits	21,046,679	22,516,828	23,662,640
Interest	38,166,405	53,210,417	54,392,983
Transfers in	3,756	5,950	6,528
<u>Charges to Account</u>			
Supplementary Benefits	3,710,037	4,354,160	5,809,354
Refunds on withdrawal	1,362,905	2,051,505	2,653,809
Transfers out	155,242	59,982	108,426
<u>Account balance (year end)</u>	399,205,248	490,920,510	584,129,801
<u>Benefits charged to Consolidated Revenue Fund</u>	192,753,644	220,894,602	247,230,640

If the partially funded system of financing supplementary retirement benefits as it existed on December 31, 1983, were to be continued, a substantial balance would be accumulated in the Supplementary Retirement Benefits Account. However, on the basis of the assumptions used for purposes of Section V of this report on the Canadian Forces Superannuation Account and, for consistency with other assumptions, an assumed rate of increase in the Consumer Price Index of 3.5% per annum, it has been estimated that some of the supplementary benefits - even in respect of current service - would likely remain a direct charge on the Consolidated Revenue Fund in the long run, unless the total of contributions and credits to the Supplementary Retirement Benefits Account were increased from 2.0% to about 9.4% of pay.

However, in this connection it is well to note that cost estimates relating only to Supplementary Retirement Benefits (or only to the Canadian Forces Superannuation Act) are extremely sensitive to economic assumptions.

For purposes of this Appendix the pension plan for members of the regular force is deemed to include the related benefits payable under the SRBA and the related assets of the Supplementary Retirement Benefits Account. As noted in Section I, this is the basis on which future actuarial reports will be prepared.

(B) Normal Cost (CFSA plus SRBA)

Using the assumptions and actuarial method described in Sections III and IV of this report and an annual Consumer Price Index increase of 3.5%, the normal actuarial cost (i.e., the total required from the contributors and the Government combined to fund superannuation benefits in respect of current service, increasing in accordance with the Benefit Index) was calculated to be 29.847% of payroll.

After making allowance for coordination with contributions payable to the Canada Pension Plan, contributions from members of the forces, including 1% contributions to the Supplementary Retirement Benefits Account, are calculated to be equivalent to 6.116% of pay as at December 31, 1983. It follows that the cost to the Government in respect of the combined benefits is equivalent to 23.731% of pay, or 3.88 times the contributions received from members of the forces; however, after 1986 this rate will increase as the Canada Pension Plan contribution rate increases and the resulting effective rate of contributions to the Account from contributors decreases.

Total payments to the Account in any year could be more or less than determined by the normal cost rate, depending on the amortisation of actuarial gains and losses revealed by regular actuarial reviews.

The normal actuarial cost of 29.847% of pay is higher than the corresponding figure in Appendix 1(A) of the preceding report by about 4.76% of pay. This is accounted for as follows:

	<u>Increase(Decrease)</u> (% of pay)
Age-service-salary distribution of contributors	(0.45)
Promotional salary scales	3.63
Pensioner mortality	0.73
Retirement with return of contributions	0.68
Other changes in assumptions (net)	(0.42)
Improvements in programming	<u>0.59</u>
Net increase	4.76



(C) Valuation Balance Sheet (CFSA plus SRBA)

This balance sheet is based on the same assumptions as were used for purposes of calculating the required contributions and credits in (B) above. It differs from the balance sheet in Section VI of this report to the extent that (i) the assets include a share of the Supplementary Retirement Benefits Account and the present value of future Government credits related to instalment payments based on a factor of 3.88 times the amount from contributors, (ii) the value of prospective benefits to and in respect of active contributors includes provision for increases to annuities and allowances in payment at the rate of 3.5% per annum\*, and (iii) the value of prospective benefits to and in respect of former contributors includes the value of all supplementary benefits based on the Benefit Index for January 1984 and makes provision for continued increases at the rate of 3.5% per annum\*.

<u>Assets</u>	
	(millions)
Balance of Canadian Forces Superannuation Account and share of CFSA contributors in Supplementary Retirement Benefits Account	\$12,412.6
Outstanding credits from government	101.4
Outstanding contributions from contributors	10.9
Actuarial present value of future contributions from members and former members of the regular force for prior service plus future credits from Government (assumed equal to 3.88 times the amount from contributors)	<u>59.4</u>
Total assets	\$12,584.3
Unfunded actuarial liability**	<u>\$ 7,432.8</u> \$20,017.1
<u>Liabilities</u>	
Actuarial present value of prospective benefits to members of the regular force	\$ 8,654.4
Actuarial present value of future benefits to persons entitled to an annuity or annual allowance	11,362.7
Amounts due to former contributors or to the beneficiaries or estates of contributors	<u>0.0</u>
Total liabilities	\$20,017.1

\* Subject to any deferment, as provided by the SRBA.

\*\* See footnote on page 16

The foregoing balance sheet indicates an unfunded actuarial liability of about \$7,433 million as at December 31, 1983. This is about \$2,915 million greater than the corresponding value shown in Appendix 1(B) of the preceding report. The major gains and losses resulting in this increase are as follows:

Actuarial Gains and Losses  
(in millions of dollars)

	<u>Gain</u>	<u>Loss</u>	<u>Net Gain (Loss)</u>
Normal actuarial gains and losses			
- Interest on unfunded actuarial liability		940	
- Indexing		1115	
- Benefits less than assumed*	447		
- Salary increases		378	
- Deficiency in contributions		278	
- Normal interest gain	200		
- Retirement with return of contributions		83	
- Survivor benefits	28		
- Pensioner mortality	26		
- Disability	11		
- Data correction	124		
- Miscellaneous (net)		<u>14</u>	
	<u>836</u>	<u>2808</u>	(1972)
Changes in actuarial assumptions and methods			
- Mortality		816	
- Promotional salary scales		300	
- Retirement with return of contributions		34	
- Proportion married at death	125		
- Normal retirement	41		
- Other assumptions (net)	102		
- Programming improvements		<u>61</u>	
	<u>268</u>	<u>1211</u>	( 943)
Total net loss			<u>(2915)</u>

It will be noted that, as in the balance sheet in Section VI of this report, the value of the notional investment was taken at par. Discounted at the assumed interest rate, the value would have been higher by about \$4,406 million. Under present economic circumstances, this might be regarded as a somewhat generous contingency reserve for the effect of general increases in pay in excess of 5% p.a. and indexing of benefits in excess of 3.5% p.a.

\* Mainly due to portion of indexing (Supplementary Retirement Benefits) charged directly to Consolidated Revenue Fund.

(D) Valuation Balance Sheet (CFSA plus SRBA),  
using dynamic economic assumptions

This balance sheet is constructed using the assumptions and methods employed for purposes of (C) above, except that dynamic (streamed) economic assumptions were used. The purpose of these assumptions is to take account of the relatively high interest rates that are expected to continue for some time and at the same time to recognize in the short term increases in the Consumer Price Index and general salary levels slightly different from the long-term assumptions.

Under the present economic circumstances, there is a danger in this approach, in that it may eliminate any expected actuarial gain from investment earnings that could cushion the effect of future actuarial losses from salary increases and indexing in excess of the assumed rates. Accordingly, an explicit margin was introduced into the assumed rates of interest.

Assumptions for 1984, 1985 and 1986 and the rates of pay increases and indexing for 1987 are based on actual increases (see table on next page). The interest rate on new money varied between 12.3% and 14.6% in 1984, between 11.1% and 13.0% in 1985 and between 9.6% and 11.0% for 1986. For the following years, general pay increases and indexation are assumed to be in proportion to increases in average wages (Industrial Aggregate) and increases in the Consumer Price Index (12-month average ending in September over preceding year's average), respectively. The assumed increases in average salaries and the Consumer Price Index to 1992 are consistent with the projections developed for the White Paper entitled Tax Reform 1987. The projected fund yield is based on the closed group of contributors and beneficiaries under the Canadian Forces, Public Service and RCMP Superannuation Acts as at December 31, 1985 (projected from data as at December 31, 1983, 1983 and 1982 for the three plans, respectively).

Dynamic Economic Assumptions

<u>Year</u>	<u>Rates of Interest</u>			<u>Assumed Increases in CPI</u>	<u>General Pay Increases</u>		<u>Rate of Indexing</u>
	<u>New Money</u>	<u>Projected Fund Yield</u>	<u>Assumed Fund Yield</u>				
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>Other</u>	<u>%</u>
						<u>Officers</u>	<u>Ranks</u>
1984*	diverse	10.8	9.8	4.4	4.3	4.7	5.5
5*	"	11.2	10.2	4.0	3.6	3.6	4.6
6*	"	11.1	10.1	4.1	5.6	5.8	3.9
7*	9.6	11.1	10.1	3.9	3.3	3.3	4.1
8	8.8	11.1	10.1	3.8		3.0	4.0
9	8.2	11.0	10.0	3.0		4.0	3.8
1990	8.0	10.8	9.8	2.9		3.6	3.2
1	7.8	10.7	9.7	3.0		3.4	2.9
2	7.7	10.5	9.5	3.0		3.6	3.0
3	7.5	10.4	9.4	3.2		4.0	3.0
4	7.3	10.3	9.3	3.5		4.5	3.2
1995	7.0	10.1	9.1	3.5		5.0	3.4
6	6.8	9.9	8.9	3.5		5.0	3.5
7	6.5	9.7	8.7	3.5		5.0	3.5
8	6.3	9.5	8.5	3.5		5.0	3.5
9	6.0	9.3	8.3	3.5		5.0	3.5
2000	6.0	9.0	8.0	3.5		5.0	3.5
1	6.0	8.7	7.7	3.5		5.0	3.5
2	6.0	8.2	7.2	3.5		5.0	3.5
3	6.0	7.8	6.8	3.5		5.0	3.5
4	6.0	7.6	6.6	3.5		5.0	3.5
2005	6.0	7.2	6.2	3.5		5.0	3.5
6	6.0	6.9	6.0	3.5		5.0	3.5
7	6.0	6.7	6.0	3.5		5.0	3.5
8	6.0	6.6	6.0	3.5		5.0	3.5
9	6.0	6.5	6.0	3.5		5.0	3.5
2010	6.0	6.4	6.0	3.5		5.0	3.5
1	6.0	6.3	6.0	3.5		5.0	3.5
2	6.0	6.2	6.0	3.5		5.0	3.5
3	6.0	6.2	6.0	3.5		5.0	3.5
4	6.0	6.1	6.0	3.5		5.0	3.5
5	6.0	6.1	6.0	3.5		5.0	3.5
6+	6.0	6.0	6.0	3.5		5.0	3.5

\*See last paragraph of preceding page.

Balance Sheet based on Dynamic Economic Assumptions

<u>Assets</u>	(millions)
Balance of CSF Account and share of CFSA contributors in SRB	\$12,412.6
Outstanding credits from Government	101.4
Outstanding contributions from contributors	10.9
Actuarial present value of future contributions from members and former members of the regular force for prior service plus future credits from Government (assumed equal to 3.88 times the amount from contributors)	<u>48.6</u>
Total Assets	\$12,573.5
Unfunded actuarial liability	<u>\$ 1,031.5</u> \$13,605.0

<u>Liabilities</u>	
Actuarial present value of prospective benefits to and in respect of members of the regular force	\$ 5,259.6
Actuarial present value of future benefits to persons entitled to an annuity or annual allowance	8,345.4
Amounts due to former contributors or to the beneficiaries or estates of contributors	<u>0.0</u>
Total Liabilities	\$13,605.0

It should be noted that, as in the case of the balance sheet in the report and the one in (C) above, the unfunded actuarial liability does not include the unamortized portion of past deferred charges amounting to \$467.5 million as at December 31, 1983. This is significant in the case of the foregoing balance sheet, since there would be much less by way of interest credits in excess of the assumed rate available for purposes of amortizing these outstanding deferred charges.

The balance sheet suggests that through the use of dynamic assumptions that appear appropriate in 1987, the total actuarial liabilities and, therefore, the notional unfunded actuarial liability as at December 31, 1983 may be reduced by about \$6.4 billion.

APPENDIX 2

Summary of basic plan  
(Canadian Forces Superannuation Act - Part I)

(The explanatory notes referred to in this Appendix are given in Section D.)

A. Coverage

Persons covered by the CFSA comprise

- (1) every member of the regular force\*, who
  - (a) was a contributor under Part V of the former Act immediately before March 1, 1960, the date on which the Act came into force,
  - (b) not having been a member of the regular force immediately before March 1, 1960, became a member on or subsequent to that date,
  - (c) having been a member of the regular force on March 1, 1960 thereafter ceased to be a member and subsequently was re-enrolled in the regular force,
  - (d) having been a member of the regular force but not a contributor under Part V of the former Act on March 1, 1960, elected to become a contributor under the Act within one year from that date or
  - (e) having been entitled to a pension under any of Part I to III of the former Act on March 1, 1960 elected to become a contributor under the Act within one year from that date;
- (2) former members of the regular force who are entitled to annuities payable out of the Account; and
- (3) spouses and children of deceased contributors who are entitled to annual allowances payable out of the Account.

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\* See footnote on page 2

B. Contributions and Credits to the Account

By Contributor

The rate of contribution for members of the regular force covered by the Act is 6.5% of pay (Note 1) reduced by the amount that the contributor is required to contribute under the Canada Pension Plan in respect of pay received as a member of the regular force. (For example, in 1986 the reduction was 1.8% of pay between \$2,500 and \$25,800 per annum.) Contributions for current service cease when a contributor has credit for 35 years of pensionable service.

A contributor may elect to contribute in respect of any period of prior pensionable service as described in Note 2 on page 34.

Subject to a few minor exceptions, if the member elects to contribute for a period of prior pensionable service within one year of becoming a contributor, the amount required to be contributed is equal to the total contributions that the member would have had to make during that period of prior pensionable service if the contributions had been computed

- 1) for any period of service described in (a) and (b) of Note 2, according to the rate of pay applicable to the contributor on the most recent occasion on which he or she became a contributor under the Act, and
- 2) for other service, according to the rate of pay authorized to be paid to the contributor during that period,

and at the rates of contribution applicable to the period. The rates which apply are for male members: 6.0% for service on or before March 31, 1969 and 6.5% for service after that date; and for female members: 6.0% for service on or before March 31, 1969, 5% for service from that date to January 31, 1976, and 6.5% for service since that date. Contributions for any period of prior pensionable service after December 31, 1965 are subject to adjustment for integration with the Canada Pension Plan. All contributions are increased by simple interest at the rate of 4% per annum from the middle of each fiscal year of prior service to the date of election.

If an election in respect of a period of prior pensionable service is not made within the prescribed time, a contributor may make an election at any later time while still a member of the regular force, subject to evidence of good health at date of election. However, the rate of pay used in determining the contributions for such prior service will be the rate of pay authorized to be paid to the contributor at the time the election is made.

Contributions in respect of prior service may be paid in a lump sum, or by monthly instalments, payable for life, or for a period ceasing upon death or completion of a fixed number of years whichever is earlier. Monthly instalments are computed on the basis of the Canadian Life Table No. 2 (1941) Males or Females, as the case may be, and interest at 4% per annum.

By Government

The Government makes credits to the Account as follows:

- (a) in each quarter such multiple of the total amount paid into the said Account during the preceding quarter by way of contributions in respect of current services and past services rendered by contributors as is specified by the Minister of Finance; (As of April 1, 1969, the amount was increased from  $1 \frac{2}{3}$  to 1.8 times the amount of contributions by contributors.)
- (b) in each fiscal year, an amount representing interest on the balance in the Account from time to time calculated at the interest rate assumed in the preceding actuarial valuation and at such "supplementary" rate as might be provided by regulations; (See Section IIIB for further details.)
- (c) following authorization of any pay increase applicable to at least one per cent of the members of the regular force, an amount representing, in the opinion of the Minister of Finance, the increase in the net liability for benefits resulting from that pay increase; (The amount so credited is charged to the Consolidated Revenue Fund in five equal annual instalments commencing in the fiscal year in which the pay increase was authorized. In accordance with the recommendation in the report on the 1980 actuarial valuation, the amount credited, expressed as a multiple of the amount of increase in the total annual payroll in excess of 5.0%, was 3.39 for officers and 2.53 for other ranks.)
- (d) following the laying before Parliament of any actuarial report an amount, as in the opinion of the Minister of Finance is required, in addition to the amount then to the credit of the said Account, to meet the cost of the benefits payable from the Account. (The amount so credited is charged to the Consolidated Revenue Fund in five equal annual instalments commencing in the fiscal year in which the report is laid before Parliament.)

The Minister of Finance may apply the supplementary interest described in (b) above to reduce the instalments described in (c) and (d) above.



C. Summary of Benefits

1. Contributors who are members of the regular force

<u>Type of Termination</u>	<u>Service in the regular force (Note 3)</u>	<u>Benefit</u>
Retirement because of age (Note 6)	3 years or less	Return of contributions (Note 7)
	More than 3 but less than 10 years	Return of contributions or cash termination allowance (Note 8), whichever is the greater
	10 years or more	Immediate annuity (Note 9)
Retirement on completion of short engagement (an officer contributor 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): see Notes 4 and 5	Less than 10 years	Return of contributions
	At least 10 but less than 20 years	At option of contributor (1) return of contributions or (2) deferred annuity (Note 11)
	20 years or more	See retirement for other reasons
Retirement on completion of intermediate engagement (a contributor who has not reached retirement age and is not serving for an indefinite period of service)	20 years or more (by definition in CFS Regulations)	Immediate annuity

<u>Type of Termination</u>	<u>Service in the regular force</u>	<u>Benefit</u>
Retirement during an indefinite period of service after having completed an intermediate engagement and prior to reaching retirement age, for reasons other than disability, economy or efficiency, or misconduct	Any length	Immediate annuity to which contributor was entitled upon completion of intermediate engagement increased to such extent as prescribed by regulation*
Compulsory retirement because of disability	Less than 10 years	Return of contributions or cash termination allowance, whichever is greater
	10 years or more	Immediate annuity
Compulsory retirement to promote economy or efficiency	3 years or less	Return of contributions
	More than 3 but less than 10 years	Return of contributions or cash termination allowance, whichever is greater
	At least 10 but less than 20 years	At option of contributor (1) return of contributions (2) deferred annuity, or (3) with consent of the Minister of National Defence an immediate reduced annuity (Note 12)
	20 years or more	Immediate annuity
Compulsory retirement because of misconduct, as defined in the Act	Less than 10 years	Return of contributions
	10 years or more	Return of contributions or, with the consent of Treasury Board, the whole or any part specified by Treasury Board of of the annuity to which the contributor would have been entitled at the time of his or her retirement if "retired for other reasons" (Note 13)

\* The Act limits the annuity to the immediate annuity to which the contributor would be entitled if retiring because of age or disability, and the formula in the Regulations (Note 10) always produces less than this maximum.

<u>Type of Termination</u>	<u>Service in the regular Force</u>	<u>Benefit</u>
Retirement for other reasons	Less than 10 years	Return of contributions
	At least 10 but less than 20 years	At option of contributor (1) return of contributions or (2) deferred annuity
	At least 20 but less than 25 years	Immediate reduced annuity
	25 years or more	Officer contributor - immediate reduced annuity  Other than Officer contributor - immediate annuity
Death leaving no spouse or eligible children under 25 (Note 14)	Less than 10 years	Return of contributions or cash terminations allowance, whichever is greater
	10 years or more	Five times the annuity to which the contributor would have been entitled at the date of death
Death leaving spouse and/or eligible children under age 25	Less than 5 years	Return of contributions or an amount equal to one month's pay of the deceased contributor for each year of credited pensionable service, whichever is the greater
	5 years or more	Annual allowances (Notes 14, 15 & 16)

2. Former Contributors who are receiving annuities or are entitled to deferred annuities (Note 11)

<u>Type of Termination</u>	<u>Benefit</u>
Death leaving no spouse or eligible children under age 25	Minimum benefit (Note 16)
Death leaving spouse and/or eligible children under age 25	Annual allowance

D. Explanatory Notes

Note 1: Pay

The term "pay", as it applies to a contributor under this plan and as it is used throughout this report, means pay at the rates 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.

Note 2: Pensionable Service

The amount of any annuity, cash termination allowance or annual allowance to which a contributor or the spouse or children of a contributor may become entitled under the Act depends upon the number of years of credited "pensionable service" at the date the contributor ceases to be a member of the regular force.

"Pensionable service" is described in detail in the Act. In general, pensionable service includes any period of service in the regular force for which a contributor has contributed or elected to contribute. It may also include, if the contributor elects to contribute therefor, periods of prior service

- (a) as a full-time, paid employee in the Public Service,
- (b) as a member of the Royal Canadian Mounted Police,
- (c) as a member
  - (i) on active service during time of war of the naval, army or air forces of Her Majesty raised by Canada,
  - (ii) of the Canadian Army Special Force established in 1950,
  - (iii) for three months or more of the Canadian Forces or of the naval, army or air forces of Her Majesty raised by Canada, other than the regular force, provided that such service was full-time and continuous,

- (iv) of the naval, army or air forces of Her Majesty other than those raised by Canada, provided that such service was full-time service during time of war or otherwise in the permanent forces, and

one-fourth of any period of prior service in the Canadian Forces or in the naval, army or air forces of Her Majesty raised by Canada, other than the regular force, during which the contributor was liable to be called out for periodic training or duty otherwise than during an emergency.

Note 3: Service in the regular force

The length of "service in the forces" together with circumstances of his or her termination of service govern the type of benefit payable to a contributor or to the surviving spouse or children.

For most purposes, "service in the forces" means service in the regular force of the Canadian Forces or its predecessors excluding any service for which a contributor was paid a return of contributions or lump sum payment under this Act and for which he did not on subsequent enrolment elect to pay. However, for the purpose of computing the length of service in the regular force of a contributor who dies leaving an eligible spouse or children or who is compulsorily retired either because of disability or, in some circumstances, to promote economy or efficiency, certain types of elective service are prescribed by the Act as "service in the regular force" in addition to service in the regular force. Such "service in the regular force" consists of any periods of elective pensionable service described in items (a), (b) and (c)(i), (ii) and (iii) of Note 2 with the provision that the service described in item (c)(iii) must have been in a theatre of active operations.

When calculating the length of service for purposes of determining the benefits payable upon voluntary retirement of a contributor with ten or more years service in the regular force, any period of active service during time of war in the naval, army or air forces of Her Majesty raised by Canada is included.

Note 4: Short Engagement

As defined in the Act, short engagement means a fixed period of service of a member of the regular force as an officer, other than as a subordinate officer, of such duration shorter than an intermediate engagement as is prescribed by regulation. A period of nine years has been prescribed by regulation for a short engagement for commissioned officers.

Note 5: Intermediate Engagement

As defined in the Act, intermediate engagement means a fixed period of service of a member of the regular force of such duration as is prescribed by regulation. A period of service to complete 20 years of total continuous service plus any additional time necessary to reach age 40 has been prescribed as an intermediate engagement for all members.

Note 6: Retirement because of Age

In this report, 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, misconduct or death. The prescribed retirement ages are described in section III(E) of this report.

Note 7: Return of Contributions

Return of contributions means the payment of an amount equal to the total current and prior service contributions paid by the contributor into the Canadian Forces Superannuation Account or paid into any other superannuation account or pension fund and transferred to the Account plus interest on all amounts at the rate of 4% per annum to December 31st of the year immediately preceding the year the contributor ceased to be a member of the regular force. Interest is credited each December 31st (beginning in 1974) on the accumulated contributions with interest as at the prior December 31st.

Note 8: Cash Termination Allowance

Cash termination allowance means an amount equal to one month's pay at the rate authorized to be paid to the contributor at date of termination multiplied by the number of years of pensionable service to the credit of the contributor minus the total reduction in basic contributions as a result of integration of the Plan with the Canada Pension Plan.

Note 9: Immediate Annuity

Immediate annuity means an annuity that becomes payable immediately upon retirement. The annual amount of the annuity is equal to 2% of the contributor's average annual pay in respect of any selected six-year period of pensionable service multiplied by the number of years of pensionable service not exceeding 35. For a contributor who has reached age 65 or is entitled to a disability pension under the Canada Pension Plan, the amount of the annuity which is payable under the Act is reduced by 0.7% of the average annual pay used in determining the amount of the annuity, not exceeding the "Average Maximum Pensionable Earnings" multiplied by the number of years of pensionable service after 1965 or after attaining age 18, whichever is later, but not exceeding 35 years. "Average Maximum Pensionable Earnings" is the average of the Year's Maximum Pensionable Earnings, as defined in the Canada Pension Plan, during the contributor's last three years of service.

All annuities are normally payable in equal monthly instalments in arrears until the end of the month in which the contributor dies.

Note 10: Annuity Payable upon Retirement during  
an Indefinite Period of Service

The amount of annuity prescribed by regulation to which a contributor who, not having reached retirement age, 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, to promote economy or efficiency, or misconduct is entitled, is equal to the greater of an immediate annuity based on the pensionable service to the date of completion of the intermediate engagement only and the six-year average annual pay at date of retirement, and an immediate annuity based upon the total pensionable service to the date of retirement and the six-year average annual pay at that date reduced by 5% of such amount of annuity for each full year by which

- (A) in the case of an officer, the age at the date of retirement is less than the retirement age applicable to the contributor's rank, or
- (B) in the case of a contributor other than an officer, the age at the date of retirement is less than the retirement age applicable to the contributor's rank or the period of service in the forces is less than 25 years, whichever is the lesser.

Note 11: Deferred Annuity

Deferred annuity means an annuity that becomes payable upon attainment of age 60. The annual payment is determined on the same basis as for an immediate annuity.

If a former contributor under the age of 60 eligible for a deferred annuity under the Act becomes disabled and receives a pension under the terms of the Canada Pension Plan, the annuity is converted to an immediate annuity. If the contributor later ceases to be entitled to a disability pension and has not reached age 60, the immediate annuity reverts to a deferred annuity.

Note 12: Immediate Reduced Annuity

Immediate reduced annuity means an immediate annuity where the annual amount of the annuity as determined in Note 9 is reduced as stated below.

With the consent of the Minister of National Defence, a contributor who is compulsorily retired to promote economy or efficiency and has ten or more years but less than twenty 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

- (A) the period of service in the regular force is less than 20 years, or
- (B) the age of the contributor at the time of retirement is less than the retirement age applicable to the contributor's rank,

whichever is the lesser.

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

- (1) 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 age at the time of his retirement is less than the retirement age applicable to his rank, or
- (2) 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
  - (A) the period of service in the regular force is less than 25 years, or
  - (B) the age at the time of retirement is less than the retirement age applicable to the contributor's rank,

whichever is the lesser.

Note 13: Retirement because of Misconduct

In the case of compulsory retirement because of misconduct, the contributor is entitled to (a) a return of contributions, or (b) having served in the regular force for ten or more years, with the consent of the Treasury Board, the whole or any part specified by the Treasury Board of any annuity to which the contributor would have been entitled if the contributor had "retired for other reasons" (i.e. excluding disability, economy and efficiency, completion of short or intermediate engagement and misconduct) at the same date, except that in no case shall the capitalized value of any reduced benefit (based by Regulation on the Canadian Life Table No. 2 (1941) and an interest rate of 4%) be less than the return of contributions.

Note 14: Eligible Children

The expression "eligible children under 25" includes all children of the contributor under age 18, and any child of the contributor age 18 or over but under 25, unmarried and in full-time attendance at a school or university, having been in such attendance substantially without interruption since he or she reached age 18 or the contributor died, whichever occurred later.

Note 15: Annual Allowances

Annual allowances to the surviving spouse and children of a contributor means annuities that become payable immediately upon the death of the contributor. The amounts of the allowances are determined with reference to a basic allowance and are ordinarily payable in equal monthly instalments.



The basic allowance is equal to 1% of the average annual pay of the deceased contributor in respect of any selected six-year period of his pensionable service multiplied by the number of years of pensionable service not exceeding 35.

A surviving spouse is entitled to an annual allowance equal to the basic allowance except under the following circumstances:

- (a) If the age of the contributor exceeded that of the surviving spouse by 20 or more years, the allowance is reduced as prescribed by regulation.
- (b) If the contributor dies within one year after marriage, no allowance is payable to the surviving spouse if the Minister of National Defence is not satisfied that the contributor was at the time of that marriage in such a condition of health as to justify his or her having an expectation of surviving for at least one year thereafter.
- (c) If a surviving spouse remarries, the payment of any allowance is suspended but is resumed in the event of dissolution or annulment of that marriage or death of her or his spouse by that marriage. In lieu of any further claim to the payment of the allowance, an amount equal to the return of contributions less the total amount of benefit payments made to the contributor and to his or her surviving spouse and children may be paid to the surviving spouse at any time before the dissolution or annulment of that marriage or the death of her or his spouse by that marriage, if there is no child of the contributor entitled to an allowance.
- (d) If a member of the forces marries after age 60, his surviving spouse is not entitled to any annual allowance, unless after marriage the member became or continued to be a contributor.

The annual allowance for an eligible child is equal to 20% of the basic allowance or, if the contributor died leaving no spouse or the spouse is dead, to 40% of the basic allowance, provided that when the number of eligible children of a deceased contributor exceeds four the total amount of allowances to such children shall not exceed the amount that would be payable if there were only four. Allowances are not payable to children of a spouse who is not entitled to an allowance as the result of death of a contributor within one year of marriage under circumstances stated in paragraph (b) of this note. Except as provided by regulation, allowances are not payable to a child who was born, adopted or became a stepchild of a member of the regular force when the member was over 60 years of age, unless he or she became or continued to be a contributor after he was 60 years of age.

APPENDIX 3

<u>Service</u>	<u>Promotional Salary Scales</u>		<u>Salary scales incorporating both promotional and general increases</u>	
	<u>Officers</u>	<u>Other Ranks</u>	<u>Officers</u>	<u>Other Ranks</u>
0	.145	.233	.022	.035
1	.165	.288	.026	.045
2	.197	.354	.032	.058
3	.244	.430	.042	.074
4	.309	.503	.056	.091
5	.381	.558	.073	.106
6	.444	.593	.089	.119
7	.492	.615	.103	.129
8	.531	.631	.117	.139
9	.567	.644	.131	.149
10	.599	.655	.146	.159
11	.631	.665	.161	.170
12	.663	.676	.178	.181
13	.692	.688	.195	.193
14	.715	.701	.211	.207
15	.734	.714	.228	.221
16	.751	.728	.245	.237
17	.767	.742	.262	.254
18	.783	.758	.281	.272
19	.799	.774	.301	.292
20	.814	.790	.322	.313
21	.830	.806	.345	.335
22	.845	.823	.369	.359
23	.859	.839	.394	.384
24	.874	.856	.420	.412
25	.889	.872	.449	.440
26	.903	.888	.479	.471
27	.917	.903	.511	.503
28	.930	.918	.544	.537
29	.943	.934	.579	.573
30	.954	.948	.615	.611
31	.963	.961	.652	.650
32	.972	.972	.691	.691
33	.980	.982	.731	.733
34	.990	.991	.776	.776
35	1.000	1.000	.823	.823
36	1.000	1.000	.864	.864
37	1.000	1.000	.907	.907
38	1.000	1.000	.952	.952
39	1.000	1.000	1.000	1.000

APPENDIX 4

Rates of retirement assumed for contributors with entitlement  
to a return of contributions or cash termination allowance  
for reasons other than disability

<u>Age at Retirement</u>	<u>Males</u>		<u>Females</u>	
	<u>Officers</u>	<u>Other Ranks</u>	<u>Officers</u>	<u>Other Ranks</u>
17	.27688	.25077	.25000	.17400
18	.21518	.15687	.18900	.17400
19	.15774	.13297	.14500	.12900
20	.11301	.12593	.11500	.11300
21	.08320	.11265	.09500	.11000
22	.06344	.09120	.08400	.11000
23	.05146	.07644	.07900	.10500
24	.04728	.06637	.07800	.09500
25	.05380	.05779	.07900	.08400
26	.06403	.04917	.08000	.07800
27	.06687	.04116	.08100	.07200
28	.06005	.03894	.08200	.06400
29	.05005	.03407	.08200	.05800
30	.04097	.02831	.08100	.05200
31	.03417	.02584	.07700	.04300
32	.02948	.01988	.07200	.03400
33	.02539	.01888	.06700	.02800
34	.02146	.01508	.06400	.02500
35	.01804	.00917	.06200	.02000
36	.01474	.00755	.05800	.01600
37	.01232	.00493	.05100	.01200
38	.01152	.00326	.04000	.00700
39	.01152	.00326	.02800	.00100
40	.01092	.00326	.02400	.00000
41	.00995	.00326	.02100	.00000
42	.00916	.00326	.01800	.00000
43	.00898	.00326	.01600	.00000
44	.00946	.00326	.01300	.00000
45	.01038	.00326	.01000	.00000
46	.01135	.00326	.00800	.00000
47	.01219	.00326	.00600	.00000
48	.01271	.00326	.00400	.00000
49	.01275	.00326	.00200	.00000
50+	.01300	.00326	.00000	.00000

APPENDIX 5

Rates of retirement assumed for contributors with entitlement  
to an annuity for reasons other than disability

<u>Age at Retirement</u>	<u>Officers</u>	<u>Other Ranks</u>
27	.00000	.00000
28	.00010	.00000
29	.00020	.00010
30	.00030	.00010
31	.00040	.00020
32	.00050	.00040
33	.00059	.00080
34	.00079	.00150
35	.00083	.00251
36	.00150	.00494
37	.00384	.01905
38	.00810	.03488
39	.02400	.05236
40	.03757	.07500
41	.02947	.07877
42	.02540	.09459
43	.03280	.10543
44	.04942	.10690
45	.06626	.10228
46	.08497	.10178
47	.09768	.11331
48	.10286	.13163
49	.10575	.24329
50	.11298	.32304
51	.11823	.25123
52	.13400	.23277
53	.17833	.30446
54	.40860	.49209
55	.70650	.79706
56	.50918	.90000
57	.39450	.91000
58	.42401	.93000
59	.62599	.96000
60	1.00000	1.00000

APPENDIX 6

Rates of retirement assumed for contributors with entitlement to an annuity, a cash termination allowance or a return of contributions because of disability

<u>Age at Retirement</u>	<u>Males</u>		<u>Females</u>
	<u>Officers</u>	<u>Other Ranks</u>	<u>(Officers and Other Ranks)</u>
17	.00227	.00547	.00050
18	.00244	.00512	.00220
19	.00260	.00484	.00390
20	.00273	.00463	.00480
21	.00278	.00447	.00540
22	.00275	.00429	.00570
23	.00264	.00408	.00580
24	.00246	.00381	.00560
25	.00224	.00347	.00530
26	.00201	.00312	.00490
27	.00179	.00285	.00410
28	.00159	.00269	.00350
29	.00142	.00261	.00320
30	.00127	.00256	.00310
31	.00115	.00249	.00300
32	.00105	.00239	.00310
33	.00098	.00229	.00310
34	.00094	.00223	.00320
35	.00093	.00226	.00340
36	.00097	.00240	.00350
37	.00104	.00270	.00370
38	.00113	.00314	.00390
39	.00123	.00367	.00410
40	.00131	.00428	.00440
41	.00138	.00486	.00470
42	.00142	.00536	.00500
43	.00145	.00571	.00540
44	.00150	.00590	.00580
45	.00161	.00595	.00620
46	.00182	.00595	.00670
47	.00216	.00605	.00730
48	.00262	.00639	.00790
49	.00320	.00706	.00850
50	.00384	.00804	.00920
51	.00449	.00921	.01000
52	.00508	.01045	.01080
53	.00555	.01172	.01170
54	.00587	.01300	.01260
55	.00610	.01429	.01360
56	.00620	.01621	.01470
57	.00630	.01753	.01590
58	.00640	.01877	.01730
59	.00650	.01984	.01900

APPENDIX 7Rates of mortality assumed for active contributors

<u>Age</u>	<u>Males</u>		<u>Females</u>
	<u>Officers</u>	<u>Other Ranks</u>	<u>(Officers and Other Ranks)</u>
17	.00022	.00158	.00025
18	.00026	.00168	.00030
19	.00050	.00174	.00036
20	.00070	.00178	.00041
21	.00088	.00177	.00045
22	.00102	.00166	.00046
23	.00112	.00150	.00047
24	.00120	.00136	.00047
25	.00125	.00128	.00047
26	.00128	.00123	.00047
27	.00131	.00120	.00048
28	.00133	.00117	.00049
29	.00134	.00112	.00050
30	.00134	.00106	.00052
31	.00133	.00102	.00053
32	.00130	.00099	.00055
33	.00126	.00097	.00056
34	.00121	.00099	.00057
35	.00116	.00105	.00060
36	.00114	.00116	.00063
37	.00114	.00132	.00069
38	.00118	.00149	.00075
39	.00126	.00161	.00082
40	.00136	.00166	.00090
41	.00149	.00169	.00099
42	.00162	.00175	.00109
43	.00177	.00191	.00120
44	.00192	.00218	.00132
45	.00208	.00253	.00145
46	.00226	.00295	.00160
47	.00246	.00341	.00176
48	.00267	.00388	.00192
49	.00291	.00433	.00210
50	.00317	.00476	.00231
51	.00347	.00519	.00254
52	.00381	.00562	.00280
53	.00419	.00604	.00308
54	.00462	.00648	.00338
55	.00508	.00691	.00371
56	.00558	.00768	.00407
57	.00627	.00847	.00445
58	.00695	.00934	.00485
59	.00768	.01025	.00528

APPENDIX 8

Rates of mortality assumed for contributors retired  
for reasons other than disability

<u>Age</u>	<u>Males</u>		<u>Females</u>
	<u>Officers</u>	<u>Other Ranks</u>	<u>(Officers and Other Ranks)</u>
30	.000513	.000687	.000301
35	.000687	.000966	.000414
40	.000966	.001527	.000573
45	.001527	.002790	.000841
50	.002790	.004755	.001366
55	.004755	.007139	.002119
60	.007139	.011133	.003442
61	.007719	.012391	.003821
62	.008770	.013868	.004241
63	.010064	.015592	.004702
64	.011762	.017579	.005210
65	.012391	.019804	.005769
66	.013129	.022229	.006385
67	.013868	.024817	.007064
68	.014730	.027530	.007817
69	.015592	.030354	.008681
70	.017579	.033370	.009702
71	.019804	.035687	.010921
72	.022229	.038163	.012385
73	.024817	.040809	.014128
74	.027530	.043755	.016159
75	.030354	.046992	.018481
76	.033370	.050462	.021091
77	.036680	.054221	.023992
78	.040388	.058310	.027184
79	.044597	.062612	.030672
80	.049388	.067125	.034459
81	.054758	.072681	.038549
82	.060678	.078518	.042945
83	.067125	.084618	.047655
84	.074070	.090961	.052691
85	.081484	.097525	.058071
95	.178214	.203007	.149577
105	.341086	.393102	.395842

APPENDIX 9

Rates of mortality assumed for contributors  
retired because of disability

<u>Age</u>	<u>Males</u>		<u>Females</u>	
	<u>Officers</u>	<u>Other Ranks</u>	<u>Officers</u>	<u>Other Ranks</u>
25	.00148	.00207	.00050	.00070
30	.00132	.00185	.00057	.00080
35	.00153	.00214	.00082	.00115
40	.00223	.00312	.00132	.00185
45	.00372	.00521	.00210	.00294
50	.00628	.00879	.00338	.00473
55	.01026	.01436	.00528	.00739
60	.01628	.02279	.00804	.01126
65	.02556	.03578	.01256	.01758
70	.03907	.05470	.01983	.02776
75	.05930	.08302	.03208	.04491
80	.08941	.12517	.05401	.07561
85	.13203	.18484	.08999	.12599
90	.18975	.26565	.14351	.20091
95	.22234	.31128	.17246	.24144
100	.74112	1.00000	.72384	1.00000



APPENDIX 10

Rates of remarriage and mortality assumed for widows

Age at Becoming Widow	<u>Remarriage Rates</u>			Ultimate* (at Age Attained)	Age Attained	Mortality Rates	Age Attained	Mortality Rates
	<u>Year of Widowhood</u>							
	<u>1</u>	<u>3</u>	<u>5</u>					
25	.050	.148	.132	.061	30	.000301	65	.005657
30	.029	.086	.076	.040	35	.000414	70	.008508
35	.018	.048	.042	.025	40	.000573	75	.014128
40	.011	.027	.023	.014	45	.000841	80	.027184
45	.006	.015	.012	.008	50	.001366	85	.047655
50	.004	.008	.006	.004	55	.002119	90	.076570
55	.002	.004	.003	.002	60	.003442	95	.123076

Rates of remarriage and mortality assumed for widowers

Age at Becoming Widower	<u>Remarriage Rates</u>			Ultimate* (at Age Attained)	Age Attained	Mortality Rates	Age Attained	Mortality Rates
	<u>Year of Widowerhood</u>							
	<u>1</u>	<u>3</u>	<u>5</u>					
25	.071	.258	.258	.198	30	.000607	65	.015592
30	.065	.215	.198	.139	35	.000860	70	.027530
35	.047	.130	.116	.094	40	.001238	75	.044597
40	.031	.078	.069	.059	45	.002183	80	.074070
45	.019	.048	.040	.027	50	.003909	85	.114836
50	.013	.028	.022	.014	55	.006131	90	.166307
55	.008	.014	.011	.009	60	.009158	95	.234086

\* Rates are duration specific (select) for 14 years for widows and 5 years for widowers.

APPENDIX 11

Proportions of contributors married at death and  
average ages of spouses corresponding to ages  
of contributors at death

Age of Contributor or Annuitant at Death (last Birthday)	<u>Males</u>		<u>Females</u>	
	<u>Proportions Married</u>	<u>Average Age of Widow</u>	<u>Proportions Married</u>	<u>Average Age of Widower</u>
25	.412	24	.430	27
30	.751	29	.600	32
35	.905	33	.630	37
40	.929	38	.630	42
45	.933	43	.620	47
50	.917	48	.570	52
55	.901	53	.470	57
60	.893	57	.360	62
65	.860	62	.310	67
70	.830	66	.260	72
75	.830	70	.210	77
80	.701	74	.160	82
85	.346	78	.010	87
90	.327	82	---	92
95	.316	86	---	97
100	.003	89	---	102

Proportions of students entitled to allowances  
remaining eligible for allowances  
at the end of the year

<u>Age</u>	<u>Proportion</u>
18	.50
19	.65
20	.80
21	.60
22	.50
23	.50
24	.30

APPENDIX 12A

Male Officers as at December 31, 1983

Number of Contributors  
and  
Average Current Pay and Allowances

Age/Serv.	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-44	0-44
15-19	686 8478								686 8478
20-24	2307 13586	364 23153							2671 14890
25-29	964 22213	1499 30978	288 33678						2751 28189
30-34	133 26594	487 36308	1145 37010	219 40407					1984 36514
35-39	49 33610	100 40643	363 40813	1533 41618	385 41895				2430 41340
40-44	11 36106	29 41645	38 42076	374 45483	1331 43596	524 44064			2307 43923
45-49	1 55236	9 37683	14 44573	66 44865	232 45655	828 44882	412 46770		1562 45456
50-54	4 43029	5 41023	9 51100	39 44406	40 46946	173 47074	545 46352	160 49541	975 46953
55-59	1 40164	1 40164	- -	3 45596	7 42674	8 46416	48 53206	21 53758	89 51348
60-70	- -	- -	- -	- -	- -	- -	- -	2 <u>69636</u>	2 <u>69636</u>
15-70	4156 15501	2494 31436	1857 37466	2234 42296	1995 43571	1533 44858	1005 46851	183 50244	15457 33568

Average Age: 33.9

Average Service: 13.9

APPENDIX 12B

Male Other Ranks as at December 31, 1983

Number of Contributors  
and  
Average Current Pay and Allowances

Age/Serv.	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	0-39
15-19	1248 13034								1248 13034
20-24	15392 16827	2286 23812							17678 17730
25-29	2977 19171	8805 24633	1382 25803						13164 23521
30-34	124 23048	1514 24880	4820 26200	1029 27109					7487 26006
35-39	17 26204	53 26224	854 26427	5727 27411	1286 28595				7937 27487
40-44	2 30252	4 25242	30 27343	730 27450	4622 28649	1126 29973			6514 28736
45-49	2 26190	3 28004	1 27324	47 27841	606 28703	2936 29925	492 31241		4087 29875
50-54	2 24708	- -	- -	5 30739	59 29289	460 29914	811 32467	30 34290	1367 31493
55-59	- -	- -	- -	- -	- -	10 31402	25 33757	15 34543	50 33522
60-70	- -	- -	- -	- -	- -	- -	- -	- -	- -
15-70	19764 16991	12665 24522	7087 26155	7538 27379	6573 28649	4532 29939	1328 32037	45 34375	59532 23621

Average Age: 30.8

Average Service: 11.4

APPENDIX 12C

Female Officers as at December 31, 1983

Number of Contributors  
and  
Average Current Pay and Allowances

Age/Serv.	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	0-39
15-19	92 8083								92 8083
20-24	305 13707	26 23382							331 14467
25-29	155 23959	98 31921	12 33630						265 27341
30-34	54 26503	108 35464	48 36985	2 35004					212 33522
35-39	18 26203	39 34977	58 39863	12 39638	1 43188				128 36458
40-44	1 35988	12 35437	14 39083	16 44297	8 44093	3 46020			54 40888
45-49	4 28275	2 31818	4 37971	8 40674	12 43089	7 42600	2 43092		39 39884
50-54	1 31632	- -	- -	2 40164	4 41097	7 44746	4 45519	- -	18 42869
55-59	- -	- -	- -	- -	1 40164	2 48462	1 40164	- -	4 44313
60-70	- -	- -	- -	- -	- -	- -	- -	- -	- -
15-70	630 17018	285 33050	136 38161	40 41503	26 42983	19 44548	7 44061	- -	1143 25602

Average Age: 28.8

Average Service: 6.3

APPENDIX 12D

Female Other Ranks as at December 31, 1983

Number of Contributors  
and  
Average Current Pay and Allowances

Age/Serv.	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	0-39
15-19	106 12514								106 12514
20-24	2282 17094	252 23770							2534 17758
25-29	569 19349	1335 24219	75 25316						1979 22861
30-34	26 20330	273 24732	304 25629	6 26708					609 25012
35-39	7 21710	15 25106	82 25594	134 26651	-	-			238 26044
40-44	- -	- -	6 25448	13 26761	50 27875	2 27060			71 27443
45-49	1 22884	- -	- -	1 27324	13 27628	15 27177	- -		30 27234
50-54	- -	- -	- -	- -	1 30276	3 26436	3 29336	- -	7 28227
55-59	- -	- -	- -	- -	- -	1 33504	- -	- -	1 33504
60-70	- -	- -	- -	- -	- -	- -	- -	- -	- -
15-70	2991 17402	1875 24241	467 25571	154 26667	64 27862	21 27361	3 29336	- -	5575 20806

Average Age: 25.7  
Average Service: 5.8

APPENDIX 13A

Retired Contributors as at December 31, 1983

Age	<u>Other than Disability Pension</u>			<u>Disability Pension</u>						
	<u>Number*</u>			<u>Annual Pension**</u>		<u>Number*</u>			<u>Annual Pension**</u>	
	<u>Male</u>	<u>Fem</u>	<u>Total</u>	<u>CFSA</u>	<u>SRBA</u>	<u>Male</u>	<u>Fem</u>	<u>Total</u>	<u>CFSA</u>	<u>SRBA</u>
			( <u>\$</u> )	( <u>\$</u> )				( <u>\$</u> )	( <u>\$</u> )	
29-31	14	2	16	58,365	5,997	1	0	1	2,604	168
32-34	51	0	51	187,821	47,517	11	0	11	23,628	9,528
35-37	87	5	92	406,291	113,656	61	2	63	130,992	80,544
38-40	372	3	375	2,314,142	365,167	128	1	129	287,028	226,428
41-43	1,666	18	1,684	11,681,857	2,524,302	237	0	237	513,876	516,852
44-46	3,254	21	3,275	22,290,945	7,373,272	368	1	369	935,256	1,003,632
47-49	5,097	22	5,119	34,302,572	15,703,051	541	2	543	1,371,504	1,652,916
50-52	6,794	35	6,829	48,188,502	25,510,999	835	1	836	2,203,200	2,861,124
53-55	6,755	36	6,791	46,690,416	32,171,313	927	5	932	2,359,332	3,425,028
56-58	6,495	43	6,538	41,026,865	37,310,007	799	2	801	2,078,364	3,332,880
59-61	6,762	26	6,788	36,231,162	49,684,271	773	3	776	1,926,384	3,541,524
62-64	6,624	34	6,658	30,820,194	50,946,861	683	3	686	1,748,436	3,384,612
65-67	4,358	45	4,403	17,033,135	32,020,799	366	0	366	883,944	1,836,636
68-70	3,029	40	3,069	10,661,168	21,565,590	143	2	145	368,916	789,468
71-73	1,499	18	1,517	4,689,469	10,173,437	55	1	56	112,500	264,744
74-76	698	7	705	1,896,919	4,413,392	11	0	11	15,912	42,744
77-79	299	3	302	661,500	1,635,300	4	0	4	5,160	14,088
80-82	143	0	143	253,409	636,413	5	0	5	8,568	22,008
83-85	35	0	35	74,922	191,830	1	0	1	828	2,460
86-88	17	0	17	26,772	69,144	0	0	0	0	0
89-91	3	0	3	10,776	29,028	0	0	0	0	0
	54,052	358	54,410	309,507,203	292,491,344	5,949	23	5,972	14,976,432	23,007,384

\* 673 males and 7 females who were medically discharged under QR&O Art. 15.01 Category 3(B), which are cases medically unfit to perform their duties and not employable in the forces, were included among "other than disability".

\*\* CFSA benefits deferred to age 60 as well as SRBA benefits deferred to the earlier of age 60 and the age when age plus service equal 85 are included in these amounts. Benefit amounts also reflect accrued indexation to January 1, 1984 and CPP offsets for ages greater than 64 or for disability pensions where applicable.

APPENDIX 13B

Surviving Spouses\* as at December 31, 1983

<u>Age</u>	<u>Number</u>	<u>Annual Allowance</u>	
		<u>CFSA</u> \$	<u>SRBA</u> \$
20-22	1	1,932	48
23-25	8	7,116	792
26-28	10	12,168	4,836
29-31	28	40,092	16,692
32-34	53	108,108	49,668
35-37	83	197,304	92,208
38-40	86	225,984	112,908
41-43	191	431,052	338,724
44-46	246	590,520	476,976
47-49	389	848,208	887,196
50-52	553	1,167,204	1,393,284
53-55	689	1,336,032	1,913,484
56-58	875	1,698,972	2,643,396
59-61	1,130	1,983,204	3,591,264
62-64	1,248	2,125,344	4,103,112
65-67	891	1,432,380	2,954,412
68-70	732	1,091,160	2,403,288
71-73	525	696,876	1,636,896
74-76	298	361,380	896,724
77-79	162	183,480	477,360
80-82	72	73,704	193,800
83-85	39	35,160	99,276
86-88	11	8,520	23,652
89-91	5	4,164	12,372
92-94	-	-	-
95-97	1	456	1,356
98-100	-	-	-
101-103	-	-	-
104-106	-	-	-
107-109	-	-	-
	<u>8,326</u>	<u>14,660,520</u>	<u>24,323,724</u>

\* six of the surviving spouses are widowers.



APPENDIX 13C

Surviving children and students eligible for allowances  
as at December 31, 1983

<u>Age</u>	<u>Number</u>	<u>Annual Allowance</u>	
		<u>CFSA</u>	<u>SRBA</u>
		\$	\$
0	1	420	12
1	6	2,880	228
2	6	3,696	960
3	9	4,260	1,812
4	13	7,632	2,148
5	18	10,008	4,368
6	23	12,348	4,572
7	29	16,440	8,916
8	37	18,624	8,604
9	32	16,092	7,140
10	55	25,332	15,024
11	71	35,508	25,200
12	98	45,828	33,624
13	116	54,048	38,952
14	146	70,476	60,888
15	191	89,856	81,072
16	222	108,540	93,456
17	295	132,768	134,904
18	340	146,928	171,636
19	226	97,302	122,580
20	157	60,282	80,617
21	110	38,931	58,441
22	66	22,722	34,829
23	32	10,657	17,612
24	<u>15</u>	<u>5,016</u>	<u>8,699</u>
	2,314	1,036,595	1,016,293