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Ottawa, Canada
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PUBLIC SERVICE SUPERANNUATION ACT - PART I

ACTUARIAL REPORT
ON THE
SUPERANNUATION ACCOUNT

AS AT DECEMBER 31, 1983

Canada

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Public Service Superannuation Act - Part I

Report on the Actuarial Examination of the 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 35 of the Public Service Superannuation Act (PSSA), as it read before the coming into force (December 1, 1986) of the Public Pensions Reporting Act. The last examination of this Account was made as at 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 12.23% of salary*. Allowing for coordination with the Canada/Quebec Pension Plan (C/QPP), the effective rate of contribution to the Account from contributors may be taken as equivalent to 5.24% of salary. As a result, it is estimated that Government credits are required at a rate equal to 1.33 times the contributions from contributors. However, after 1986 this rate will increase as the C/QPP contribution rate increases and the resulting effective rate of contributions to the Account from contributors decreases.

The above normal actuarial cost makes allowance for general salary increases at the rate of 5.0% of salary per annum. Pursuant to subsection 34(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 1.3 times the increase in the effective annual payroll in excess of 5.0%. 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 34(4) of the Act.

The estimated unfunded actuarial liability related to the Account as at December 31, 1983 was $2,158.6 million.

This report and the above figures make no provision for benefits and increases in benefits related to increases in the cost of living. Such benefits, payable to persons in receipt of annuities or annual allowances under various government superannuation and other acts, including the Public Service Superannuation Act, are provided under the Supplementary Retirement Benefits Act and, pursuant to Part III of the Public Service 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.

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* See footnote on page 12.

II. Data and Membership Statistics

The basic data required for the statutory actuarial examinations of the Account in respect of contributors or their survivors entitled to annuities or annual allowances are maintained on computer files by the Superannuation Branch of the Department of Supply and Services; data in respect of active contributors are maintained in a similar manner by the Pension and Insurance Products Group of the same department. Data concerning salaries of contributors as at December 31, 1983, and their total contributions paid to the same date were prepared by the various pay offices and merged with the basic records by matching Social Insurance Numbers.

The computer programming and processing of all the basic data was under the control of the Information Systems Directorate of the Department of Supply and Services. The same was true of most of the massive volume of calculations relating to contributors who were employed in the Public Service on December 31, 1983, or terminated employment in the preceding three years, for which statistics in summary form are shown in the following table.

Contributors Employed in the Public Service

			Terminations 1981-83					
			Less than 5 years of pensionable service	Five or more years of pensionable service				
	Contributors 81-01-01	Entrants 1981-83		Age(1)	Death	Disability(2)	Other(3)	Contributors 83-12-31
Males	192,736	45,991	20,280	12,747	1,691	1,147	6,631	196,231
Females	101,744	51,590	26,998	3,438	291	406	5,792	116,409
	294,480	97,581	47,278	16,185	1,982	1,553	12,423	312,640

(1) Contributors who retired with entitlement to an immediate annuity at age 60 or over, or at ages 55 to 59 with 30 or more years of pensionable service, or at earlier points in the case of air traffic controllers.

(2) Contributors who ceased to be employed at ages under 60 because of disability. (The benefit received was either an immediate annuity, a cash termination allowance, or a return of contributions, with annuities accounting for about 96% of the cases).

(3) Contributors who ceased to be employed at ages under 55, or ages 55 to 59 with less than 30 years of service for reasons other than death or disability, unless qualified for immediate annuities as air traffic controllers. (Subject to the restriction described in Note 10 in Appendix 2, the benefit was either a return of contributions, a deferred annuity or an annual allowance).

Pertinent statistics derived from tabulations relating to persons entitled to annuities or annual allowances some time during the 1981-83 period are shown in the following tables.

Persons Entitled to an Annuity or Annual Allowance

Former contributors

			Ceased to be entitled 1981-83			Entitled 1983-12-31		
	Entitled 81-01-01	Became entitled 1981-83	Died	Re-employed or recovered	Other*	In payment	Deferred	Total
Males								
Entitlements for reasons other than disability	58,542	14,438	7,357	11	67	62,615	2,930	65,545
Entitlements because of disability	6,442	1,197	1,052	3	-	6,584	-	6,584
Total	64,984	15,635	8,409	14	67	69,199	2,930	72,129
Females								
Entitlements for reasons other than disability	21,955	4,541	1,574	4	40	23,315	1,563	24,878
Entitlements because of disability	2,770	438	266	1	-	2,941	-	2,941
Total	24,725	4,979	1,840	5	40	26,256	1,563	27,819
Grand Total	89,709	20,614	10,249	19	107	95,455	4,493	99,948

* Includes contributors who ceased to be entitled to deferred annuities upon becoming disabled and entitled to immediate annuities and who are included in new entitlements because of disability and contributors who elected the capitalized value of small annuities.

Surviving Spouses

	Entitled 1981-01-01	Became entitled 1981-83	Ceased to be entitled 1981-83		Entitled 1983-12-31
			Died	Remarried	
Widows	31,065	7,107	3,594	284	34,294
Widowers	269	276	43	22	480

Children and Students

	Entitled 1981-01-01	Became entitled 1981-83	Ceased to be entitled 1981-83		Entitled 1983-12-31
			Attained age 18	Ceased to be eligible as a student	
Children	2,815	1,156	1,802	-	2,169
Students	1,519	1,741	-	1,559	1,701

III. Actuarial Assumptions

A. General Comments

The long term economic assumptions which were adopted for the preceding valuation and were supported by officers in the Department of Finance and the Treasury Board Secretariat were retained.

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

(1) Some considerations involved in selecting explicit or implicit levels of inflation and in determining the general level of economic assumptions

There are two aspects to the discussion under this heading.

(a) The extent to which the 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 Public Service Superannuation Act, where the effect of a relatively high assumed rate of interest tends to be partly 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 PSSA 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 differences between it and assumed interest rates 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 affecting 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) <u>Effect of benefits beyond the terms of pension plans</u>

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 such 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 (current service contributions) of the pension fund for purposes of assessing the total normal actuarial cost. Such practice might make for more valid comparison of the value of expected pensions under different plans and more equitable 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 commitment regarding future adjustments.

B. Rate of Interest

Until the quarter ending June 30, 1969, interest was credited to the Account on the last day of each quarter in the fiscal year at the rate of 1% of the balance to the credit of the Account on the last day of the preceding quarter, i.e. approximately 4% per annum.

The 1969 amendments to the Act made provision for crediting interest to the Account at the rate used in the preceding actuarial valuation and for the possibility of crediting interest in excess of that rate. However, interest credits in excess of the valuation rate may be applied against budgetary expenditure related to the amortization of actuarial deficiencies. 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 this Act and the Canadian Forces 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 twenty-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 the notional investments reached an average of about 15% during 1981 and 1982 and have generally stayed well above 9% since that time.

For purposes of this valuation it was decided to continue the use of an assumed rate of interest of 6.5% which, as noted above, 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 3.0%.*

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

C. Salary Increases

There are two main forces that tend to generate increases in salaries: first, a promotional force resulting from experience and training and increase in responsibility due to promotion; second, an economic force related, directly or indirectly, to such factors as inflation, general increases in productivity, collective bargaining and labour market conditions. Increases in salaries resulting from this second force are herein referred to as "general" increases.

Analysis of the data indicated that average promotional increases were somewhat higher than they had appeared in the preceding study above age 50 and were somewhat lower for some younger age ranges. Accordingly, new promotional salary scales were constructed for purposes of this report giving 75% credibility to the 1981-83 experience.

With regard to general increases, the wide variations that have occurred in recent years as a result of varying economic and social forces 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 salaries of 5.0%. This rate is assumed to be composed of a 3.5% inflation factor and a 1.5% factor* for real general increases related to productivity, labour market conditions and collective bargaining.

Appendix 3 shows the promotional salary scales.

D. Rates of termination for all reasons with less than five years of pensionable service

Subject to certain minor exceptions, a return of contributions is the only benefit applicable in respect of a contributor who dies or otherwise ceases to be employed in the Public Service before he has to his credit five years of pensionable service. Thus, for valuation purposes, the rates of termination required for each of the first five years of pensionable service are the rates at which contributors cease to be employed for any reason. These are referred to herein as "short-term rates of termination for all reasons".

The experience during the 1981-83 period indicated that termination rates for both male and female contributors were generally lower than those assumed for the preceding valuation. It was considered desirable therefore to use a revised set of termination rates which gave 75% credibility to the 1981-83 experience and were more in line with rates that had been used prior to the 1980 valuation. The rates used in this valuation are shown in Appendix 4.

* More precisely $\left(\frac{1.050}{1.035} - 1\right)$ or 1.449%

E. Rates of termination for reasons other than age, age and service, disability or death after five or more years of pensionable service and
Proportions of terminating contributors electing to take a <u>deferred annuity or annual allowance</u>

The termination rates experienced during the 1981-83 period were found to be lower for both male and female contributors than those assumed for the preceding valuation. Revised rates giving 75% credibility to the 1981-83 experience were used and are shown in Appendix 5.

As described in the "Summary of Benefits" in Appendix 2, contributors who terminate service for reasons other than age, age and service, disability or death and have five or more years of pensionable service have the option of electing a return of contributions, a deferred annuity to commence at age 60, or an annual allowance to commence immediately if the contributor's age is 50 or over, or at age 50 if the contributor's age is under 50. Contributors terminating after age 45 with at least 10 years of pensionable service must elect a deferred annuity or an annual allowance in respect of service after September 30, 1967.

The study of the 1981-83 experience revealed that factors developed for earlier valuations overestimated the proportions electing a deferred annuity or annual allowance. A new set of proportions for males and females combined was developed on the basis of the 1981-83 experience but including a slight margin. It should be noted that above age 44 with respect to service after September 1967 these factors are applicable only in the case of terminations with five to ten years of service. The proportions are shown in Appendix 5.

The amount of an annual allowance is determined by the application of arbitrary* factors based on the age and length of service to the amount of the deferred annuity to which a terminating contributor is entitled. As in the preceding valuation, annual allowances were assumed to be actuarially equivalent to deferred annuities.

F. <u>Rates of retirement because of age or age and service</u>

In this report, the expression "retirement because of age" applies to contributors entitled to an immediate annuity because of attainment of age 60 and completion of at least five years of pensionable service. In general the expression "retirement because of age and service" applies to retirements with entitlement to an immediate annuity at ages 55 to 59 with at least 30 years of pensionable service**.

In contrast to previous reports, which noted a marked trend toward higher rates of retirement at ages below 65, the 1981-83 experience indicated a reversal period in this trend. Accordingly, retirement rates slightly lower than used for the 1980 valuation were developed for the current valuation. They are shown in Appendix 6.

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* See Note 8 in Appendix 2.

** See Note 3 in Appendix 2.

As for earlier valuations, the age-retirement rates do not progress smoothly from age to age. There is a distinct increase about age 60 (the earliest age at which an unreduced immediate annuity is available for "retirements because of age"), there is no change in the assumptions that 96.5% of contributors attaining age 65 will retire during the following year and that all active contributors who attain age 70 will cease to be employed during the following year.

G. Rates of retirement because of disability

The experience during 1981-83 showed a continuation of the trend toward lower rates of retirement because of disability which was first observed in the preceding valuation. New rates based on the most recent experience but containing a safety margin were adopted for this valuation and are shown in Appendix 7.

In the preceding valuation it was assumed that 50% of contributors retiring in the future on account of disability will have their basic annuities reduced as a result of their eligibility for CPP/QPP disability benefits and that the other 50% of such annuitants would have their basic annuities reduced at age 65 when the normal CPP/QPP retirement pensions become payable. This assumption was retained, since the data indicated that it provided a reasonable safety margin.

H. Mortality of contributors employed in the Public Service with five or more years of pensionable service

The number of actual deaths of contributors during the 1981-83 period was generally greater than that expected on the basis used for purposes of the preceding valuation. However, it was deemed appropriate to retain those mortality rates for this valuation. The rates used are shown in Appendix 8.

I. Mortality of contributors entitled to an annuity or annual allowance for reasons other than disability

The experience of the 1981-83 period indicated that in the case of males the rates adopted for the preceding valuation no longer contained enough margin for expected improvement, and in the case of females the rates were clearly too high above age-group 75-79. It was considered appropriate to adopt the 1983 GAM Table for this valuation. The rates are shown in Appendix 9.

J. Mortality of contributors entitled to an annuity because of disability

The 1981-83 experience indicated that the rates used in the preceding valuation could be retained in the case of females. However, in the case of males, the rates used in the last valuation appeared to be too high for ages above age-group 55-59. Accordingly, a new set of rates for males was adopted for purposes of the current valuation.

The ultimate rates of mortality, applicable after the first two years following retirement, are shown in Appendix 10. Rates of mortality for the first and second years following retirement are assumed to be 250% and 150%, respectively, of the ultimate rates.

K. Surviving Spouses

The 1981-83 experience indicated that the mortality and remarriage rates for widows and widowers adopted for purposes of the preceding valuation could be retained for this valuation.

For widows, the remarriage rates are based on the following percentages of the 1962 Railroad Retirement Board (U.S.) rates: 50% in the first and second years of widowhood, 75% in the third, fourth and fifth year and thereafter, except at the very young ages, 85%. Rates of mortality were developed especially for the preceding valuation.

For widowers, the remarriage rates assumed were the same as those used for purposes of the Canada Pension Plan (Actuarial Report No. 10). The mortality rates are those for male lives in the Life Tables 1970-72, Canada, as published by Statistics Canada.

Sample remarriage and mortality rates are shown in Appendix 11.

L. Proportions of contributors married at death and Average ages of spouses corresponding to ages of contributors at death

The experience of the 1981-83 period indicated that the factors adopted for purposes of the preceding valuation could be retained. Values for quinquennial ages of contributors at death are shown in Appendix 12.

M. Children and Students

In the current as well as preceding valuations, mortality was ignored in determining the value of allowances payable to children and students, because such allowances are not payable after the 25th birthday and the effect of mortality at the relevant ages would have been negligible.

As payment of an allowance to a child between ages 18 and 25 is conditional on the child being in full-time attendance at school, probabilities of a child at any age continuing to be eligible during the next year of age are needed. The factors used in the three preceding valuations were calculated using data on the children who received allowances at any time after their eighteenth birthday during the 1968-72 period. These probabilities were retained; they are shown in Appendix 12.

N. Proportion of contributors with salaries below "Year's Maximum Pensionable Earnings" (YMPE, as defined in Canada Pension Plan) and Ratios of average salary to YMPE for contributors with salaries below YMPE

As described in Appendix 2, the basic annuity of a retired contributor reaching age 65 or becoming entitled to a disability pension under the Canada/Quebec Pension Plan (C/QPP) is reduced by reason of the co-ordination of the Public Service Superannuation Plan with the C/QPP.

In valuing the liability for future benefits and employer costs in respect of future service, the proportions of contributors by age with salaries below the YMPE and the ratios of the average salary of such contributors to the YMPE are required. As at January 1, 1984, the YMPE was $20,800. However, the YMPE was increased by 12.5% per annum until it reached the estimated Industrial Composite (annual average of wages and salaries). In view of this, it was deemed more appropriate to develop the required proportions as if the YMPE at the date of valuation had been $23,600 (the hypothetical value of the YMPE at the point of valuation assuming its ultimate relationship to average wages and salaries) and to use this value for the YMPE (increasing at the assumed rate of general increase in salaries of 5.0% p.a.) when determining the effect of the reduction in PSSA benefits (resulting from integration with C/QPP) on the liabilities and the employer's future service contributions.

The proportions and ratios used in this valuation are shown in Appendix 13. The proportions are somewhat different from those developed for the preceding valuation, but the effect of the difference is relatively small.

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 cover all future benefits in respect of service during 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. Contributions and Other 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 14, 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 12.23% of salary*.

After making allowance for integration with contributions payable to the Canada/Quebec Pension Plan, contributions from contributors to the Account were calculated to be equal to approximately 5.24% of salary. As a result, it is estimated that Government credits are required at a rate equal to 1.33 times the contributions from contributors. However, after 1986 this rate will increase as the C/QPP contribution rate increases and the resulting effective rate of contributions to the Account from contributors decreases.

The rates of government credits required, as stated above, are higher than determined for purposes of the preceding report by about 0.78% of salary. The difference is accounted for by changes in assumptions as follows:

	Increase (Decrease) (% of salary)
Termination (5 or more years of service)	.55
Pensioner mortality	.28
Age retirement	(.07)
Termination (less than 5 years of service)	.05
Disability	(.05)
Others	.02
	.78

The valuation assumptions include provision for 5% annual increases in the general level of salaries. In accordance with normal pension practice, the Public Service Superannuation Act provides for special credits to take care of any unfunded actuarial liabilities revealed by periodic actuarial valuations. In the case of the PSSA, however, these unfunded liabilities do not include increased liabilities resulting from general salary increases in excess of the assumed rates. Any increase in liabilities of that nature is taken care of by means of a special credit to the Account. The amount of this special credit is estimated as 1.3 times the excess, if any, of the total amount of the authorized increases in salaries in a year over 5% of the total annual salaries of contributors.

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* Unless otherwise indicated, percentages of salary where used in this report apply only to salaries before the completion of 35 years of pensionable service.

VI. Valuation Balance Sheet and Gain and Loss Analysis

The results of the valuation based on the assumptions and actuarial method described in Sections III and IV, respectively, are summarized and the financial status of the Account as at December 31, 1983, is shown in the following balance sheet.

Assets

		($ millions)
Balance of Account (Par value)*		17,670.7
Government matching credits outstanding December 31, 1983, in respect of contributions by contributors for the preceding nine months		293.3
Government credits outstanding December 31, 1983, in respect of past general increases in salaries		-----
Actuarial present value of future instalments of past service contributions and matching credits by the Government		
Employed contributors	189.6	
Retired contributors	61.5	251.1
Total assets		18,215.1
Unfunded actuarial liability**		2,158.6
		20,373.7

* 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 $24,872.8 million. The difference between this value and the par value used in the balance sheet may be considered a provision for part of the unfunded actuarial liability related to the indexing of superannuation benefits pursuant to the Supplementary Retirement Benefits Act (see Appendix 1).

** Deferred charges totalling $773.2 million that were in the process of amortization are included in the balance of the Account.

Liabilities

		($ millions)
Actuarial present value of prospective benefits to and in respect of employed contributors		14,368.7
Actuarial present value of benefits to persons entitled to an annuity or annual allowance		
Retired contributors on pension	5,334.4	
Deferred annuities	97.3	
Spouses	566.3	
Children and Students	7.0	6,005.0
Total actuarial liability		20,373.7

The foregoing balance sheet indicates an unfunded actuarial liability of about $2,159 million. This represents an increase of $1,727 million over the value shown in the preceding report. The major actuarial gains and losses which account for this increase are as follows:

Actuarial Gains and Losses
(in millions of dollars)

	Gain	Loss	Net Gain (Loss)
Operational gains and losses			
- General salary increases		326	
- Terminations		210	
- Retirements		147	
- Interest	30		
- Promotional salary increases	55		
- Data corrections		46	
- Programming changes		27	
- Contribution shortage		184	
- Miscellaneous (net)		16	
	85	956	(871)
Changes in actuarial assumptions and methods			
- Pensioner mortality		565	
- Termination (5 or more years of service)		391	
- Age retirement	85		
- Elections of deferred annuities	68		
- Salary scale		59	
- Disability retirement	36		
- Other assumptions and methods (net)		30	
	189	1045	(856)
Total net loss			(1727)

VII. Actuarial Opinion and Acknowledgements

In closing we wish to acknowledge the co-operation and able assistance of the Pension and Insurance Products Group, the Superannuation Branch and the Information Systems Directorate of Supply and Services Canada.

Different phases of the work on this valuation were carried out by Jean-Paul Raymond, A.S.A., Claude Lelièvre, A.S.A., Pierre Perron, A.S.A., and Vincent Cauchon under the supervision of A.C. Cushing, F.C.I.A. and the direction of Pierre Treuil, F.C.I.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 contributors to the Public Service Superannuation Account, including the 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

April 12, 1988

APPENDIX 1

Status of Pension Plan for the Public Service of Canada (contributors to the Public Service Superannuation Account) including relevant provisions of the Supplementary Retirement Benefits Act

(A) Provisions of SRBA and current operations

The Supplementary Retirement Benefits Act (SRBA) was enacted in 1970 to provide benefit adjustments related to increases in the cost of living for persons in receipt of pensions payable out of the Consolidated Revenue Fund. This Act applies to former contributors to the 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 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 employed, 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 average for a corresponding 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 cost of living 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 age 60 or, if less than that age, were disabled, and to all spouses and children in receipt of annual allowances. The amendments effective January 1, 1973 provided for the payment of benefits to all former contributors in receipt of annuities or annual allowances except in cases of dismissal for misconduct.

The Public Service Superannuation Act was amended in 1970, by the addition of Part III, to require that contributors pay 0.5% of their salary 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 contributor retires. The government makes credits to the Account equal to the contributions of the employees.

Interest is 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 5 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, supplementary retirement 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 the 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 contributor 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 that member from that Account.

Contributions and other credits to the Account, and supplementary benefits paid to former contributors and their surviving spouses and children receiving basic benefits under the Public Service Superannuation Act, and other charges to the Account during the fiscal years, 1984-85 and 1985-86 are shown below.

Public Service Supplementary Retirement Benefits

(in thousands of dollars)

	1984-85	1985-86
Credits to the SRB Account		
Contributions from employees	93,323	95,463
Government credits	93,653	95,698
Interest	192,774	199,233
Transfers in	113	265
	379,863	390,659
Charges to the SRB Account		
Supplementary benefits	19,684	20,200
Refunds on withdrawal	7,890	11,249
Transfers out	498	450
Others	384	411
	28,456	32,310
Balance in Account (end of year)	1,791,600	2,149,950
Benefits charged to the Consolidated Revenue Fund	421,400	452,837

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 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 always remain a direct charge on the Consolidated Revenue Fund, unless the total of normal contributions and credits to the Supplementary Retirement Benefits Account were increased from 2.0% (without the 35-year limit) to about 5.25% of salary.

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

For purposes of this Appendix the pension plan for the Public Service of Canada is deemed to include the related benefits payable under the Supplementary Retirement Benefits Act 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) <u>Normal Cost (PSSA plus SRBA)</u>

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 cost (i.e. the total required from the contributors and the Government combined to fund benefits in respect of current service) was calculated to be 17.48% of salary.

After making allowance for co-ordination with contributions payable to the Canada/Quebec Pension Plan, contributions from employees, including 1% contributions to the Supplementary Retirement Benefits Account, were calculated to be equivalent to 6.26% of salary as at December 31, 1983. It follows that the cost to the Government in respect of the combined benefits was equivalent to about 11.22% of salary, or 1.79 times the contributions received from employees. However, after 1986 this rate will increase as the C/QPP 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 17.48% of salary is higher than the corresponding figure in Appendix 1(a) of the preceding report by about 1.25% of salary. This is accounted for by the following changes:

	Increase (Decrease) (% of salary)
Programming	.05
Terminations (5 or more years of service)	.74
Pensioner mortality	.57
Age retirement	(.11)
Terminations (less than 5 years of service)	.09
Disability	(.08)
Others	(.01)
	1.25

(C) Valuation Balance Sheet (PSSA 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 1.79 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 accordance with the assumed increases of 3.5% p.a. in the Consumer Price Index, and (iii) the value of prospective benefits to persons entitled to an annuity or annual allowance includes the value of all supplementary benefits based on the Benefit Index for January 1984 and makes provision for continued increases in accordance with assumed increases of 3.5% p.a.

Assets

	($ millions)
Balance of Superannuation Account and share of Superannuation contributors in Supplementary Retirement Benefits Account	19,035.5
Credit from Government outstanding as at December 31, 1983	293.3
Actuarial present value of future instalments from contributors and related Government Credits in respect of prior service	372.2
Total assets	19,701.0
Unfunded actuarial liability	14,509.4
	34,210.4

Liabilities

Actuarial present value of prospective benefits to and in respect of active contributors	20,488.5
Actuarial present value of future benefits to persons entitled to an annuity or annual allowance	13,721.9
Total actuarial liability	34,210.4

The foregoing balance sheet indicates an unfunded actuarial liability of about $14,509 million as at December 31, 1983.

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 $7,350 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.

The unfunded liability of $14,509 million is about $6,646 million greater than the corresponding value shown in Appendix 1(B) of the preceding report. The major actuarial gain and loss items combining to produce this increase were calculated to be as follows:

Actuarial Gains and Losses
(in $ millions)

	Gain	Loss	Net Gain (Loss)
Operational gains and losses			
- Indexation		2017	
- Indexation benefits charged directly to Consolidated Revenue Fund	1015		
- General salary increases		1317	
- Interest		1304	
- Contribution shortage		701	
- Retirements		382	
- Terminations		318	
- Promotional salary increases	87		
- Mortality of persons in receipt of annuities or allowances	75		
- Data correction		33	
- Programming changes		263	
- Miscellaneous gains (net)	36		
	1213	6335	(5122)
Changes in actuarial assumptions and methods			
- Pensioner mortality		1244	
- Terminations (5 or more years of service)		489	
- Elections of deferred annuities	140		
- Age retirement	131		
- Salary Scale		72	
- Disability retirement	59		
- Other assumptions and methods (net)		49	
	330	1854	(1524)
Total net loss			(6646)

(D) Valuation Balance Sheet (PSSA 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 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 salary 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, 1986.

Dynamic Economic Assumptions

Year	Rates of Interest: New Money %	Rates of Interest: Projected Fund Yield %	Rates of Interest: Assumed Fund Yield %	Assumed Increases in CPI %	General Salary Increases %	Rate of Indexing %
1984*	diverse	10.8	9.8	4.4	5.0	5.5
5*	"	11.2	10.2	4.0	3.5	4.6
6*	"	11.1	10.1	4.1	3.4	3.9
7*	9.6	11.1	10.1	3.9	3.5	4.1
8	8.8	11.1	10.1	3.8	3.7	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
2005	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

Assets

	($ millions)
Balance of Superannuation Account and share of Superannuation contributors in Supplementary Retirement Benefits Account	19,035.5
Credit from Government outstanding as at December 31, 1983	293.3
Actuarial present value of future instalments from contributors and related Government Credits in respect of prior service	317.2
Total assets	19,646.0
Unfunded actuarial liability	4,001.4
	23,647.4

Liabilities

Actuarial present value of prospective benefits to and in respect of active contributors	12,875.1
Actuarial present value of future benefits to persons entitled to an annuity or annual allowance	10,772.3
Total actuarial liability	23,647.4

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 deferred charges amounting to $773.2 million as at December 31, 1983. This is particularly significant in the case of the foregoing balance sheet, since there would not be much by way of interest credit 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, the total actuarial liabilities and, therefore, the notional unfunded actuarial liability as at December 31, 1983 might be reduced by about $10.5 billion.

APPENDIX 2

Summary of Basic Plan
(Public Service Superannuation Act - Part I)

A. Coverage

The Public Service Superannuation Act requires contributions from and grants benefits to every full-time employee in the Public Service who has attained age 18 and is in receipt of an annual salary of at least $900, subject to a few exceptions.

The term Public Service as used in the Act includes all positions in any department or portion of the executive government of Canada, or the Senate and House of Commons, the Library of Parliament and any board, commission or corporation listed in a Schedule to the Act.

Persons engaged as sessional employees, postmasters or assistant postmasters in revenue post offices and some others may be designated as contributors by the President of the Treasury Board either individually or as members of a class.

The main groups of persons employed in the Public Service to which the Act does not apply are part-time employees, persons engaged locally outside Canada and employees of some Crown Corporations covered by separate pension plans.

Two main groups of persons are entitled to receive benefits under the Act, namely:

(i) former contributors who become entitled to lump sum payments, immediate or deferred annuities or immediate or deferred annual allowances payable out of the Account;

and

(ii) surviving spouses and children who are entitled to annual allowances payable out of the Account by reason of the death of a contributor while employed in the Public Service or while entitled to an annuity or allowance payable from the Account.

Benefits may also be payable to the estates of deceased contributors or former contributors in certain cases where there are no eligible spouses or children entitled to receive annual allowances.

B. Contributions and Credits to the Account

1. By Contributor

(a) Current Service

The rate of contributions for contributors is 6.5% of salary reduced in each case by the amount that the contributor would be required to contribute under the Canada Pension Plan (CPP) in respect of that salary if that salary, expressed in terms of an annual rate, were the total amount of his income for the year from pensionable employment as defined in that Act and that Act applied* to his employment. For example, in 1986, the CPP required contributions of 1.8% of that portion of annual salary between $2,500 and $25,800 as earned.

Contributions cease after a contributor has to his credit 35 years of pensionable service (less the number of years of service upon which any pension benefit is based that is payable to the contributor out of the Consolidated Revenue Fund, or out of any account or fund in the Consolidated Revenue Fund other than the Superannuation account, or out of a pension fund pursuant to which contributions have been paid out of the Consolidated Revenue Fund in respect of employees engaged locally outside Canada).

Air traffic controllers are required to contribute an additional two percent of salary.

(b) Prior Service

A contributor may count as pensionable service certain types of prior service** for which he elects to contribute. In general, if an election for a period of pensionable service is made by an employee within one year after he last became a contributor under the Act, the amount that he is required to contribute is equal to the total annual contributions that would have been during that period of service at the rate of contribution in force for current service at that time applied to the salary authorized to be paid to the contributor at the most recent date of becoming a contributor, together with interest. The amount of the interest is equal to simple interest at 4% per annum from the middle of each fiscal year in which contributions would have been made, if the contributor had been making such contributions during the period for which he elected to pay, until the date of the election.

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* Residents of Quebec contribute to the Quebec Pension Plan which, except in 1973, has maintained required contributions at an identical level.

** See Note 1 in section D of this Appendix.

For some major types of prior pensionable service for which a contributor elects to pay, the amount of contribution required is double that determined by this general rule. Included in this category is any period of service in pensionable employment, prior to becoming employed in the Public Service, to the credit of the contributor in a superannuation or pension plan approved by the President of the Treasury Board for purposes of the Act, which had been established for the benefit of persons engaged in that employment.

If a contributor makes an election for a period of pensionable prior service more than one year after becoming a contributor, the amount of contribution that he is required to contribute is based on the contributor's salary at date of election.

Any contributor electing to contribute for pensionable prior service must be medically examined as prescribed by regulation, unless the contributor was employed in the Public Service, or was a member of the Canadian Forces or R.C.M.P. for a period of at least five years immediately prior to last becoming a contributor. A contributor making an election more than one year after last becoming a contributor must pass the medical examination for the election to be valid. For other elections, if the contributor fails to pass the medical examination when required, benefits related to such pensionable prior service are limited to a return of contributions, unless the contributor continues to be employed in the Public Service for a further period of not less than five years after the date of the examination or is again medically examined and passes the examination.

The total amount of contributions for prior service determined in accordance with the above rules may be paid in a lump sum at date of election or by monthly instalments. For contributors under age 45 at date of election, the monthly instalment period may not extend beyond the 65th birthday; if the contributor is age 45 or over, the monthly instalment period may not be longer than 20 years. Monthly instalments are computed in accordance with regulations on the basis of the Canadian Life Tables No. 2 (1941) Males or Females, as the case may be, and interest at 4% per annum.

2. <u>By Employer</u>

The Government and the Public Service Corporations, as employers credit the Account with amounts matching the contributions of their respective employees to the Account. In addition, the Government credits the Account with such amounts as, in the opinion of the Minister of Finance, are required to provide for the increase in cost of the benefits payable under the Act as a result of any salary increase applicable to at least one percent of the contributors or are required to meet the cost of benefits payable under the Act as shown by the most recent actuarial report on the Account.

The "matching credits" by the Government are made in the fiscal year following the year in which the contributions were made by its employees. The technique for financing the other two types of employer contributions is to credit to the Account the full amount estimated to be required in the fiscal year that the salary increase is authorized or the actuarial report is laid before Parliament and to charge such amounts to the Consolidated Revenue Fund in five equal annual instalments beginning in such fiscal year.

In its role as custodian of the account, the Government credits the Account with amounts 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 may be provided by regulation. (See Section III B of this report for further details). However, the Minister may apply such supplementary interest to reduce the instalments being charged to the Consolidated Revenue Fund in respect of increases in costs due to salary increases and in respect of unfunded actuarial liabilities indicated in statutory actuarial reports.

C. Summary of Benefits*

(1) Contributors with less than five years of pensionable service (Note 1)

With a few exceptions, the only benefit to which a contributor in this category is entitled upon termination of service is a "return of contributions" (Note 2).

(2) Contributors with five or more years of pensionable service

(a) Contributors employed in Public Service at date contingency occurs

Contingency	Benefit
Retirement because of age or age and service (Note 3)	Immediate annuity (Note 4)
Retirement because of disability (Note 3)	At option of contributor (Note 10): (A) immediate annuity (Note 5), or (B) cash termination allowance (Note 6) or return of contributions, whichever is greater
Termination for reasons other than age, age and service, disability, misconduct or death (Note 3)	At option of contributor (Note 10): (A) return of contributions, (B) deferred annuity (Note 7), (C) annual allowance payable immediately, if age 50 or over, and otherwise upon attaining age 50 (Note 8)
Dismissal because of misconduct	(A) return of contributions, or (B) with the consent of the Treasury Board, the whole or part specified by the Treasury Board of any benefit to which the contributor would have been entitled had he ceased to be employed for a reason other than misconduct (Note 9)
Death leaving no surviving spouse or eligible children	Return of contributions or five times the annuity to which the contributor would have been entitled at the time of his death, whichever is greater
Death leaving surviving spouse and/or eligible children	Annual allowance (Notes 11 and 12)

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* The explanatory notes referred to in this summary are given in section D of this Appendix. Supplementary benefits to offset the loss of purchasing power are provided under another act and are described in Appendix 1.

(b) <u>Contributors who have ceased to be employed in the Public Service and are entitled to annuities or annual allowances</u>

Contingency	Benefit
Disability before age 60 while entitled to a deferred annuity or an annual allowance	Immediate annuity (Note 5)
Death leaving no surviving spouse or eligible children	Minimum benefit (Note 12)
Death leaving surviving spouse and/or eligible children	Annual allowances (Notes 11 and 12)

D. Explanatory Notes

Note 1

The amount of any annuity or allowance to which a contributor or the surviving spouse or children may become entitled under the Act and in some cases the reduction factor used in determining the amount of an annual allowance payable to a contributor depend on the number of years of pensionable service to the credit of the contributor at the date employment in the Public Service ceased.

"Pensionable Service" of a contributor is defined in the Act and includes in general terms any period of service in the Public Service for which the contributor has been required to contribute or has elected to contribute, if eligible to do so, and such other types of service for which the contributor has elected to make special contributions as required by the terms of the Act. The periods of service in the Public Service or in other employment for which a contributor may be eligible to elect to contribute include the following:

(a) a period of service before becoming a contributor under the Act during which the contributor was employed in the Public Service and was receiving a salary,

(b) a period of service in respect of which the contributor has received any amount by way of a return of contributions or other lump sum payment under the Act,

(c) a period of active service in the forces during World War II or with the Korean Special Force prior to becoming a member of the Public Service,

(d) a period of pensionable full-time service with the Canadian Forces, the Royal Canadian Mounted Police, or an employer with whom a reciprocal transfer agreement has been completed,

(e) a period of service in civilian war service of a kind specified by regulation,

(f) a period of service in pensionable employment, immediately prior to becoming employed in the Public Service, subject to a pension plan approved by the President of the Treasury Board for this purpose.

Note 2

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

Note 3

In this summary, "retirement because of age or age and service" means ceasing to be employed in the Public Service, for any reason other than misconduct or death, at age 60 or over with at least five years of pensionable service, or at ages 55 to 59 with pensionable service of 30 years or more. In the case of Air Traffic Controllers it also means ceasing to be employed after completion of 20 years of operational service in case of "involuntary retirement" or after attainment of age 50 and completion of 25 years of operational service in case of "voluntary retirement". It follows that "retirement because of disability" refers only to those retirements for that reason where the contributor would not be entitled to the same benefits by reason of age or age and service and that (excluding Air Traffic Controllers) "termination for reasons other than age, age and service, disability, misconduct or death" refers only to terminations before age 55 or at ages 55 to 59 with less than 30 years of pensionable service.

Note 4

"Immediate annuity" means an annuity that becomes payable to a contributor immediately upon his becoming entitled thereto. The annual amount of "basic annuity" is equal to 2% of average annual salary in respect of any selected six-year period of pensionable service multiplied by the number of years of pensionable service up to a maximum of 35. The six-year period may consist of consecutive periods of pensionable service totalling six years. If a contributor has less than six years of pensionable service, the average annual salary is based on salary in respect of the contributor's total pensionable service. Any annuity or annual allowance is ordinarily payable in equal monthly instalments in arrears until the end of the month in which the person receiving it dies or ceases to be entitled thereto.

When a contributor entitled to an annuity or annual allowance has reached age 65 or has become entitled to a disability pension under the terms of the Canada Pension Plan or Quebec Pension Plan, the annuity or annual allowance is reduced by an amount equal to 0.7% of the average salary multiplied by the number of years of pensionable service after 1965 that are counted in the calculation of the basic annuity, provided that the average salary used in this calculation will have a maximum value of the "Average Maximum pensionable Earnings". The latter amount is the average of the "Year's Maximum Pensionable Earnings" as defined in the Canada Pension Plan for the year in which the contributor ceased to be employed in the Public Service and for each of the two preceding years.

Note 5

When a contributor under age 60 and entitled to an annuity in respect of a disability is certified in accordance with regulations to have regained his health or to be capable of performing the duties of his or her former position in the Public Service or any other position in the Public Service commensurate with the contributor's qualifications, entitlement to that annuity ceases and entitlement to a deferred annuity becomes effective.

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

Note 6

"Cash termination allowance" means an amount equal to one month's salary for each year of pensionable service (in the usual case at the rate of salary authorized to be paid to the contributor at the time that he ceases to be employed in the Public Service) less an amount equal to the reduction in contributions paid to the Account because of co-ordination with the Canada Pension Plan and the Quebec Pension Plan.

Note 7

"Deferred annuity" means an annuity that becomes payable to a former contributor upon reaching age 60. The annual amount of the annuity is computed as described in Note 4.

Note 8

The amount of the annual allowance is equal to the amount of the deferred annuity to which the contributor could have elected to receive, reduced by the product obtained by multiplying 5% of that amount by a factor varying with age and length of pensionable service at retirement.

For a contributor age 50 or more with not less than 25 years of credited pensionable service, the factor is the greater of fifty-five minus the age and thirty minus the number of years of pensionable service.

For a contributor age 55 or more who has been employed in the Public Service on a full-time basis for a period of periods totalling at least ten years and who does not retire voluntarily the factor is thirty minus the number of years of pensionable service. In any such case the whole or part of the reduction calculated using this factor may be waived by the Treasury Board.

For all other cases the factor is sixty minus the contributor's age.

In all cases, the factor is determined by expressing age or length of service to the nearest one-tenth of a year.

Note 9

In the case of dismissal because of misconduct, the capitalized value of any annuity or annual allowance granted by the Treasury Board computed in accordance with regulations on the basis of the a(f) and a(m) Ultimate Tables of mortality and interest at 4% per annum may not be less than the "return of contributions" as defined in Note 2.

Note 10

If on termination of employment a contributor has attained age 45 and has 10 or more years of credited pensionable service, the right to select a "return of contributions" or a "cash termination allowance" benefit is limited to the period of pensionable service prior to October 1, 1967. With respect to the service on and after that date, the benefit must be an annuity or an annual allowance.

Note 11

"Annual allowance" to the surviving spouse of an active contributor or a former contributor entitled to receive an annuity or annual allowance means one-half of the annual amount of "basic annuity" computed as described in Note 4. This is termed the "basic allowance".

No allowance is payable to the widower of a female contributor unless the contributor was employed in the Public service and had 35 years of pensionable service or was required to contribute to the Superannuation Account on or after December 20, 1975.

If the age of the contributor exceeds that of the surviving spouse by 20 or more years, the spouse allowance is reduced. If a contributor dies within one year following marriage, no allowance is payable to the surviving spouse, if the Treasury Board is not satisfied that the contributor was at the time of marriage in such a condition of health as to justify his or her in having an expectation of surviving for at least one year thereafter. Also if a contributor marries after having become entitled to an annuity or annual allowance, the surviving spouse is not entitled to any annual allowance unless, after the marriage, the former contributor again became or continued to be a contributor.

If a surviving spouse remarries, the allowance is either suspended during the period of remarriage or forfeited, if the spouse requests and receives a return of contributions less all payments made to the contributor, surviving spouse and children. Such request can only be made during the period of remarriage if there is no child of the contributor entitled to an annual allowance under the Act.

The allowance to a surviving spouse which has been suspended upon remarriage will be resumed in the event of the dissolution or annulment of that marriage, or the death of the new spouse.

"Annual allowance" to each child of a deceased contributor means one-fifth of the "basic allowance" described above, or if there is no living spouse, two-fifths of the basic allowance. The allowance is payable to any children under age 18 until they reach their 18th birthday, and to any children 18 years or older until they reach their 25th birthday provided they remain unmarried and have been in full-time attendance at school or university substantially without interruption since their 18th birthday or the death of the contributor whichever occurred later. The total amount of allowance payable to the eligible children of a deceased contributor may not exceed that which would be payable if there were four eligible children.

A child born to the widow of a contributor is not entitled to an annual allowance unless the child was conceived before the death of the contributor. Also a child who was born or adopted by a contributor or who became the stepchild of a contributor after the contributor ceased to be employed in the Public Service is not entitled to an annual allowance unless, in the case of a child born to a contributor, the child was conceived before the contributor ceased to be employed.

<u>Note 12</u>

If upon the death of a contributor there is no person to whom an allowance provided under the terms of the Act 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 contributor:

(1) if the contributor was not employed in the Public Service on or after December 20, 1975, any amount by which the amount of return of contributions exceeds the aggregate of all amounts paid to those persons and to the contributor,

(2) if the contributor was employed in the Public Service on or after December 20, 1975, any amount by which the greater of the amount of the return of contributions and an amount equal to five times the immediate annuity to which the contributor was or would have been entitled at the time of his death exceeds the aggregate of all amounts paid to those persons and to the contributor.

APPENDIX 3

Promotional Salary Scales

Age	Males	Females
18	.331	.409
19	.356	.431
20	.378	.453
21	.398	.475
22	.417	.496
23	.437	.516
24	.461	.536
25	.487	.555
26	.508	.575
27	.528	.593
28	.547	.612
29	.565	.631
30	.582	.650
31	.598	.666
32	.614	.682
33	.629	.696
34	.643	.709
35	.656	.722
36	.668	.733
37	.679	.743
38	.689	.754
39	.699	.763
40	.707	.773
41	.715	.782
42	.722	.791
43	.729	.800
44	.735	.809
45	.741	.817
50	.766	.863
55	.793	.907
60	.810	.943
65	.923	.983
70	1.000	1.000

APPENDIX 4

Select rates of termination for all reasons

Age at start of pensionable service	Males: Completed years of pensionable service 0	1	2	3	4	Females: Completed years of pensionable service 0	1	2	3	4
18	.342	.182	.127	.092	.078	.259	.152	.107	.086	.077
19	.328	.166	.115	.086	.070	.269	.155	.113	.091	.081
20	.306	.153	.103	.081	.059	.272	.164	.121	.095	.083
21	.284	.143	.096	.075	.052	.274	.175	.127	.100	.086
22	.268	.141	.092	.069	.049	.275	.182	.131	.105	.088
23	.258	.139	.089	.064	.050	.285	.185	.137	.107	.089
24	.252	.138	.087	.063	.053	.284	.183	.142	.109	.088
25	.249	.137	.089	.068	.053	.282	.184	.142	.110	.089
30	.234	.122	.091	.074	.054	.275	.168	.120	.094	.080
35	.231	.124	.082	.067	.049	.258	.136	.090	.081	.060
40	.221	.123	.080	.061	.048	.258	.139	.087	.062	.055
41	.225	.125	.077	.059	.046	.259	.138	.087	.062	.053
42	.229	.126	.078	.060	.045	.262	.137	.086	.063	.052
43	.238	.128	.079	.062	.044	.267	.136	.085	.065	.053
44	.251	.128	.078	.063	.044	.271	.135	.085	.067	.052
45	.266	.125	.078	.066	.044	.271	.132	.086	.066	.054
46	.273	.124	.079	.065	.044	.263	.132	.086	.064	.057
47	.277	.126	.081	.063	.045	.254	.132	.086	.062	.062
48	.281	.130	.082	.062	.047	.250	.135	.086	.063	.065
49	.282	.133	.085	.062	.049	.253	.142	.084	.066	.066
50	.278	.135	.086	.062	.051	.264	.150	.082	.068	.064
51	.278	.137	.087	.062	.049	.276	.153	.082	.068	.064
52	.279	.137	.088	.061	.047	.288	.152	.084	.067	.064
53	.281	.137	.089	.063	.045	.300	.151	.086	.069	.065
54	.282	.139	.092	.067	.047	.306	.151	.088	.074	.067
55	.282	.142	.095	.070	.052	.312	.153	.092	.081	.074
56	.288	.149	.099	.077	.061	.319	.159	.099	.090	.086
57	.298	.156	.107	.088	.080	.326	.169	.111	.104	.105
58	.316	.168	.119	.108	.110	.337	.180	.131	.126	.136
59	.344	.185	.141	.141	.150	.353	.197	.158	.160	.175
60	.382	.208	.176	.189	.201	.374	.223	.194	.201	.221
61	.426	.244	.227	.248	.257	.400	.258	.238	.251	.271
62	.478	.296	.290	.307	.312	.434	.301	.289	.304	.318
63	.535	.360	.355	.364	.368	.472	.350	.343	.354	.364
64	.596	.428	.417	.420	.423	.516	.403	.394	.404	.410

APPENDIX 5

Age	Rates of termination for reasons other than age, age and service, disability or death (five or more years of service)*		Proportions electing deferred annuity or annual allowance**
	Males	Females	Males and Females
25	.0381	.0668	.0024
26	.0326	.0641	.0048
27	.0297	.0606	.0075
28	.0273	.0582	.0107
29	.0257	.0552	.0146
30	.0252	.0500	.0183
31	.0238	.0475	.0227
32	.0246	.0447	.0285
33	.0231	.0414	.0343
34	.0230	.0371	.0394
35	.0217	.0357	.0441
36	.0193	.0342	.0506
37	.0186	.0340	.0600
38	.0194	.0310	.0714
39	.0180	.0287	.0823
40	.0159	.0285	.0901
41	.0155	.0286	.0953
42	.0153	.0285	.0983
43	.0151	.0281	.1004
44	.0140	.0279	.1013
45	.0126	.0259	.1014
46	.0111	.0225	.1051
47	.0107	.0222	.1150
48	.0103	.0231	.1335
49	.0113	.0235	.1618
50	.0122	.0252	.1993
51	.0127	.0238	.2442
52	.0136	.0255	.2948
53	.0146	.0277	.3494
54	.0161	.0320	.4079
55	.0157	.0368	.4703
56	.0156	.0375	.5362
57	.0171	.0396	.6024
58	.0195	.0396	.6674
59	.0180	.0399	.7317

* See Note 3 in Appendix 2.

** See Note 10 in Appendix 2.

APPENDIX 6

Rates of retirement because of age or age and service*

Age	Males	Females
50	.0001	.000
51	.0001	.000
52	.0001	.000
53	.0001	.000
54	.010	.010
55	.065	.045
56	.045	.030
57	.045	.030
58	.045	.030
59	.075	.065
60	.160	.155
61	.140	.130
62	.145	.135
63	.170	.165
64	.560	.540
65	.965	.965
66	.650	.650
67	.420	.420
68	.350	.350
69	.470	.470
70	1.000	1.000

* See Note 3 in Appendix 2.

APPENDIX 7

Rates of retirement because of disability*

Age	Males	Females
20	.0010	.0000
21	.0009	.0000
22	.0008	.0000
23	.0006	.0000
24	.0005	.0000
25	.0004	.0001
26	.0003	.0002
27	.0003	.0003
28	.0002	.0004
29	.0002	.0005
30	.0002	.0006
31	.0003	.0006
32	.0003	.0006
33	.0002	.0005
34	.0002	.0005
35	.0002	.0004
36	.0003	.0005
37	.0004	.0006
38	.0005	.0008
39	.0006	.0010
40	.0008	.0011
41	.0010	.0012
42	.0011	.0013
43	.0013	.0015
44	.0015	.0018
45	.0018	.0022
46	.0022	.0028
47	.0026	.0034
48	.0030	.0041
49	.0036	.0048
50	.0045	.0055
51	.0056	.0063
52	.0069	.0072
53	.0081	.0083
54	.0090	.0097
55	.0100	.0110
56	.0110	.0120
57	.0123	.0126
58	.0136	.0129
59	.0145	.0127

* See Note 3 in Appendix 2.

APPENDIX 8

Rates of mortality for employed contributors

Age	Males	Females
20	.0004	.0002
25	.0005	.0003
30	.0006	.0004
35	.0007	.0005
40	.0012	.0007
41	.0014	.0008
42	.0016	.0009
43	.0018	.0009
44	.0020	.0010
45	.0022	.0011
46	.0025	.0012
47	.0028	.0013
48	.0031	.0014
49	.0034	.0015
50	.0037	.0016
51	.0041	.0017
52	.0045	.0019
53	.0049	.0020
54	.0054	.0022
55	.0058	.0024
56	.0063	.0026
57	.0068	.0028
58	.0074	.0031
59	.0079	.0034
60	.0085	.0037
61	.0090	.0040
62	.0096	.0043
63	.0102	.0047
64	.0108	.0051
65	.0115	.0055
66	.0121	.0060
67	.0128	.0064
68	.0134	.0069
69	.0141	.0075
70	.0147	.0081

APPENDIX 9

Rates of mortality for contributors retired for reasons other than disability

Age	Males	Females	Age	Males	Females
40	.001238	.000665	75	.044597	.023992
41	.001370	.000716	76	.049388	.027184
42	.001527	.000775	77	.054758	.030672
43	.001715	.000841	78	.060678	.034459
44	.001932	.000919	79	.067125	.038549
45	.002183	.001010	80	.074070	.042945
46	.002471	.001117	81	.081484	.047655
47	.002790	.001237	82	.089320	.052691
48	.003138	.001366	83	.097525	.058071
49	.003513	.001505	84	.106047	.063807
50	.003909	.001647	85	.114836	.069918
51	.004324	.001793	86	.124170	.076570
52	.004755	.001948	87	.133870	.084459
53	.005200	.002119	88	.144073	.091935
54	.005660	.002315	89	.154859	.101354
55	.006131	.002541	90	.166307	.111750
56	.006618	.002803	91	.178214	.123076
57	.007139	.003103	92	.190460	.135630
58	.007719	.003442	93	.203007	.149577
59	.008384	.003821	94	.217904	.165103
60	.009158	.004241	95	.234086	.182419
61	.010064	.004702	96	.248436	.201757
62	.011133	.005210	97	.263954	.222043
63	.012391	.005769	98	.280803	.243899
64	.013868	.006385	99	.299154	.268185
65	.015592	.007064	100	.319185	.295187
66	.017579	.007817	101	.341086	.325225
67	.019804	.008681	102	.365052	.358897
68	.022229	.009702	103	.393102	.395842
69	.024817	.010921	104	.427255	.438360
70	.027530	.012385	105	.469531	.487816
71	.030354	.014128	106	.521945	.545886
72	.033370	.016159	107	.586518	.614309
73	.036680	.018481	108	.665268	.694884
74	.040388	.021091	109	.760215	.789474

APPENDIX 10

Ultimate rates of mortality for contributors retired because of disability (applicable after at least two years have elapsed from date of retirement)

Age	Males	Females	Age	Males	Females
30	.0077	.0074	65	.0541	.0203
31	.0078	.0075	66	.0569	.0215
32	.0080	.0076	67	.0600	.0228
33	.0082	.0077	68	.0634	.0243
34	.0084	.0078	69	.0667	.0259
35	.0086	.0079	70	.0701	.0277
36	.0088	.0080	71	.0736	.0296
37	.0090	.0081	72	.0772	.0318
38	.0093	.0082	73	.0809	.0343
39	.0096	.0084	74	.0845	.0370
40	.0100	.0086	75	.0878	.0401
41	.0103	.0088	76	.0909	.0435
42	.0107	.0090	77	.0936	.0473
43	.0111	.0092	78	.0958	.0516
44	.0116	.0094	79	.0976	.0564
45	.0122	.0096	80	.1044	.0620
46	.0128	.0098	81	.1116	.0685
47	.0135	.0100	82	.1193	.0761
48	.0142	.0103	83	.1277	.0847
49	.0150	.0106	84	.1367	.0942
50	.0158	.0109	85	.1464	.1048
51	.0170	.0112	86	.1567	.1164
52	.0184	.0116	87	.1677	.1293
53	.0200	.0120	88	.1797	.1434
54	.0218	.0124	89	.1933	.1590
55	.0240	.0128	90	.2084	.1762
56	.0265	.0133	91	.2272	.1949
57	.0296	.0138	92	.2473	.2154
58	.0333	.0144	93	.2690	.2377
59	.0372	.0150	94	.2921	.2619
60	.0408	.0157	95	.3168	.2882
61	.0435	.0165	96	.3431	.3164
62	.0463	.0173	97	.3710	.3467
63	.0489	.0182	98	.4004	.3790
64	.0515	.0192	99	.4312	.4133

APPENDIX 11

Rates of remarriage and mortality assumed for widows

Age at becoming Widow	Remarriage rates by year of widowhood 1st yr.	3rd yr.	5th yr.	Attained Age	Mortality Rate	Ultimate Remarriage Rate*
25	.045	.121	.061	30	.0007	.056
30	.028	.090	.045	35	.0010	.039
35	.017	.058	.030	40	.0013	.024
40	.010	.031	.020	45	.0020	.015
45	.005	.016	.012	50	.0033	.009
50	.003	.010	.008	55	.0051	.006
55	.002	.007	.005	60	.0074	.004
				65	.0114	
				70	.0174	
				75	.0274	
				80	.0426	
				85	.0608	
				90	.0880	
				95	.1300	

Rates of remarriage and mortality assumed for widowers

Age at becoming Widower	Remarriage rates by year of being a widower 1st yr.	3rd yr.	5th yr.	Attained Age	Mortality Rate	Ultimate Remarriage Rate*
25	.071	.258	.258	30	.0015	.198
30	.065	.215	.198	35	.0019	.139
35	.047	.130	.116	40	.0029	.094
40	.031	.078	.069	45	.0046	.059
45	.019	.048	.040	50	.0076	.027
50	.013	.028	.022	55	.0121	.014
55	.008	.014	.011	60	.0192	.009
				65	.0296	
				70	.0444	
				75	.0655	
				80	.0970	
				85	.1436	
				90	.2098	
				95	.3003	

* Remarriage rates are duration-specific for 5 years.

APPENDIX 12

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

Age of Contributor at Death (last birthday)	Males			Females		
	Proportions Married		Average	Proportions Married		Average
	Employed Contributor	Retired Contributor	Age of Widow	Employed Contributor	Retired Contributor	Age of Widower
25	.826	.332	23.535	.506	.255	29.000
30	.861	.467	28.475	.609	.314	34.000
35	.895	.572	33.345	.691	.383	39.000
40	.923	.652	38.200	.750	.448	44.000
45	.944	.718	43.020	.787	.482	48.945
50	.957	.771	47.800	.800	.473	53.820
55	.957	.809	52.530	.795	.409	58.610
60	.948	.829	57.190	.770	.296	63.260
65	.939	.820	61.770	.714	.196	67.730
70	.926	.777	66.245	.625	.131	71.895
75		.692	70.610		.089	75.490
80		.580	74.820		.059	77.395
85		.470	78.800		.035	80.365
90		.373	82.440		.013	84.000
95		.299	86.030		-	-
100		.240	89.800		-	-

Proportions of Students Entitled to Allowances Remaining Eligible for Allowances (at the end of the year of age)

Age	Proportion
18	0.74
19	0.68
20	0.67
21	0.60
22	0.54
23	0.53
24	0.31

APPENDIX 13

Age	Proportion of contributors with salaries below YMPE*		Ratio of average salary to YMPE* for contributors with salaries below YMPE	
	Males	Females	Males	Females
18	.911	1.000	.705	.665
19	.839	.986	.735	.700
20	.768	.944	.763	.728
21	.696	.901	.784	.751
22	.625	.858	.802	.771
23	.556	.814	.816	.787
24	.491	.770	.826	.802
25	.430	.728	.836	.814
26	.376	.688	.842	.826
27	.328	.649	.848	.836
28	.287	.614	.850	.836
29	.253	.582	.850	.836
30	.224	.554	.850	.835
31	.200	.532	.850	.835
32	.180	.517	.851	.834
33	.164	.509	.851	.830
34	.151	.506	.851	.828
35	.141	.508	.851	.824
36	.134	.512	.852	.820
37	.128	.518	.852	.816
38	.125	.525	.852	.816
39	.124	.532	.852	.816
40	.125	.540	.852	.816
41	.127	.547	.852	.815
42	.131	.554	.852	.814
43	.136	.560	.852	.814
44	.141	.567	.852	.814
45	.147	.573	.852	.814
50	.176	.595	.848	.812
55	.210	.605	.844	.816
60	.248	.612	.836	.815
65	.296	.633	.806	.792
69	.326	.650	.758	.756

* YMPE = "Year's Maximum Pensionable Earnings" as defined in the Canada Pension Plan which for this purpose was assumed to be at the level of the industrial composite average of annual wages and salaries (Statistics Canada).

APPENDIX 14A

Number of active male contributors and their average salary on December 31, 1983

Attained Age	Completed years of service: 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	All Years of Service
to 24	6,770	283									7,053
	$21,845	$23,754									$21,922
25-29	13,672	8,603	407								22,682
	$25,238	$26,245	$26,737								$25,647
30-34	10,475	14,973	8,307	276							34,031
	$27,622	$29,487	$30,009	$29,142							$29,038
35-39	6,153	8,985	11,176	6,333	226						32,873
	$29,957	$32,191	$34,607	$31,554	$32,990						$32,477
40-44	3,217	4,386	5,436	6,681	3,498	542					23,760
	$30,685	$33,015	$36,699	$35,381	$32,973	$32,600					$34,192
45-49	1,987	2,886	3,151	4,125	3,808	4,095	560				20,612
	$30,212	$31,996	$35,027	$36,105	$35,467	$33,253	$32,697				$34,020
50-54	1,573	2,494	2,598	3,216	2,864	5,070	3,365	229			21,409
	$28,911	$30,355	$33,075	$34,077	$34,113	$34,222	$33,313	$33,911			$33,060
55-59	1,109	2,043	2,151	2,698	2,396	3,423	3,297	1,516	98		18,731
	$28,626	$29,117	$31,433	$32,734	$32,125	$32,816	$35,027	$34,259	$34,528		$32,420
60-64	614	1,447	1,819	2,137	2,054	2,230	1,952	1,455	416	11	14,135
	$27,789	$27,710	$30,083	$31,038	$30,197	$30,180	$32,946	$34,844	$33,988	$34,202	$30,920
65 +	42	132	162	158	129	122	90	67	38	5	945
	$29,976	$28,628	$30,188	$32,976	$30,377	$31,299	$35,151	$35,670	$39,257	$42,762	$31,889
All Ages	45,612	46,232	35,207	25,624	14,975	15,482	9,264	3,267	552	16	196,231
	$26,767	$29,838	$33,231	$33,665	$33,287	$32,993	$33,826	$34,524	$34,447	$36,877	$31,024

Average Age = 41.6 Average Service = 13.0 years

APPENDIX 14B

Number of active female contributors and their average salary on December 31, 1983

Attained Age	Completed years of service: 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	All Years of Service
to 24	11,089	744									11,833
	$19,569	$20,768									$19,643
25-29	14,273	9,564	766								24,603
	$22,308	$22,826	$23,617								$22,550
30-34	9,193	8,173	5,592	344							23,302
	$23,216	$26,165	$25,794	$25,254							$24,899
35-39	6,520	4,637	3,369	2,194	142						16,862
	$22,826	$26,187	$29,143	$26,277	$26,470						$25,492
40-44	4,197	3,232	1,895	1,003	743	195					11,265
	$22,159	$25,202	$27,577	$28,723	$26,805	$26,833					$24,916
45-49	2,680	2,703	1,593	841	535	678	116				9,146
	$21,689	$23,490	$25,899	$27,566	$26,890	$26,495	$26,261				$24,213
50-54	1,726	2,193	1,596	990	503	600	349	47			8,004
	$21,424	$23,097	$24,678	$25,841	$26,442	$26,517	$26,703	$28,131			$24,044
55-59	989	1,537	1,354	1,053	642	562	314	198	27		6,676
	$21,433	$22,539	$24,120	$24,915	$25,979	$25,586	$26,064	$26,241	$26,370		$23,949
60-64	395	841	880	828	532	500	223	133	88	2	4,422
	$21,475	$22,267	$23,190	$24,096	$24,639	$24,582	$25,586	$25,201	$25,997	$25,819	$23,601
65 +	23	56	52	45	44	40	20	9	7	-	296
	$23,389	$22,688	$22,560	$22,560	$24,077	$23,993	$24,520	$26,279	$29,650	-	$23,480
All Ages	51,085	33,660	17,097	7,298	3,141	2,575	1,022	387	122	2	116,409
	$21,846	$24,325	$26,183	$26,188	$26,172	$25,917	$26,170	$26,114	$26,289	$25,819	$23,736

Average Age = 36.8 Average Service = 7.7 years

APPENDIX 15A

Retired contributors as at December 31, 1983

Other than disability pensions

Immediate Pensions

Age	Number of Pensioners Male	Female	Total	Annual Pension* PSSA	SRBA**
				$	$
45-49	2	-	2	12,730	2,605
50-54	388	224	612	3,602,304	635,491
55-59	3,421	1,389	4,810	52,814,785	12,447,419
60-64	13,738	4,334	18,072	159,821,723	65,480,465
65-69	19,582	6,405	25,987	159,460,202	88,876,303
70-74	12,896	4,886	17,782	73,740,431	81,642,079
75-79	6,880	3,173	10,053	28,757,210	48,200,442
80-84	3,163	1,761	4,924	10,838,255	21,359,155
85-89	1,866	857	2,723	5,162,019	11,586,818
90-94	583	248	831	1,339,535	3,396,000
95-99	82	36	118	174,524	490,774
100-104	12	2	14	19,571	57,876
105-109	2	-	2	4,378	13,021
TOTAL	62,615	23,315	85,930	495,747,667	334,188,448

Deferred Pensions

Age	Number of Pensioners Male	Female	Total	Annual Pension PSSA	SRBA**
				$	$
25-29	6	4	10	19,141	3,057
30-34	59	66	125	261,313	99,869
35-39	218	139	357	1,024,117	456,718
40-44	342	161	503	2,076,702	953,879
45-49	489	253	742	3,653,480	1,701,858
50-54	785	319	1,104	4,444,394	2,926,625
55-59	1,031	621	1,652	4,430,450	4,309,365
TOTAL	2,930	1,563	4,493	15,909,597	10,451,371

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* Amounts of pension at age 65 and over reflect the C/QPP integration adjustments.

** Accumulated indexing includes increase effective January 1, 1984.

APPENDIX 15B

Retired contributors as at December 31, 1983

Disability Pensions

	Number of Pensioners			Annual Pension*	
Age	Male	Female	Total	PSSA $	SRBA** $
20-24	1	-	1	1,472	40
25-29	5	4	9	14,999	1,363
30-34	12	26	38	72,625	12,763
35-39	32	23	55	100,258	36,306
40-44	80	39	119	380,749	121,743
45-49	167	107	274	982,326	361,923
50-54	511	205	716	3,401,017	1,273,165
55-59	1,271	522	1,793	8,391,683	4,020,300
60-64	2,322	753	3,075	11,405,491	9,281,199
65-69	1,334	608	1,942	4,901,881	6,690,245
70-74	554	364	918	1,916,900	3,516,621
75-79	155	155	310	563,154	1,227,527
80-84	57	74	131	169,993	444,623
85-89	53	47	100	129,256	370,213
90-94	22	10	32	42,688	126,726
95-99	7	4	11	17,710	52,673
100-104	1	-	1	1,884	5,603
TOTAL	6,584	2,941	9,525	32,494,086	27,543,033

* Reflects reductions related to C/QPP integration where C/QPP disability pension is payable or at age 65 and over.

** Accumulated indexing includes increase effective January 1, 1984.

APPENDIX 15C

Surviving spouses eligible for allowances as at December 31, 1983

	Widows			Widowers		
		Annual Allowances			Annual Allowances	
Age	Number	PSSA $	SRBA* $	Number	PSSA $	SRBA* $
20-24	3	2,272	333	-	-	-
25-29	29	34,371	9,155	2	1,912	119
30-34	72	112,895	32,580	9	12,381	3,433
35-39	181	400,576	142,168	16	24,872	5,082
40-44	298	749,474	303,301	7	9,907	1,997
45-49	549	1,296,636	636,793	28	59,772	16,660
50-54	1,215	3,123,349	1,760,933	33	66,952	25,065
55-59	2,947	7,063,430	5,189,529	74	134,145	53,176
60-64	5,118	11,399,536	10,807,137	100	211,600	85,949
65-69	5,400	10,095,442	12,458,585	106	202,630	90,658
70-74	5,463	8,267,467	13,132,999	57	94,332	59,513
75-79	4,792	5,731,240	11,176,416	35	49,059	34,080
80-84	4,004	4,031,168	9,100,155	10	19,298	11,827
85-89	2,885	2,675,064	6,625,084	3	3,418	3,646
90-94	1,084	954,196	2,531,759	-	-	-
95-99	226	187,220	523,833	-	-	-
100-104	24	19,171	54,808	-	-	-
105-109	4	5,091	15,142	-	-	-
TOTAL	34,294	56,148,598	74,500,710	480	890,278	391,205

* Accumulated indexing includes increase effective January 1, 1984.