

Office of the Auditor General

1888 Brunswick Street Suite 302 Halifax, Nova Scotia, B3J 3J8 Bus: (902) 424-5907 Fax: (902) 424-4350

Auditor's Report

To the Members of the Legislative Assembly of Nova Scotia; and To the Minister of Finance

I have audited the statement of net assets available for benefits and accrued pension benefits net of deficiency of the Nova Scotia Public Service Superannuation Fund as at March 31, 2003 and the statement of changes in net assets available for benefits for the year then ended. These financial statements are the responsibility of the fund's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the net assets available for benefits and accrued pension benefits net of deficiency of the fund as at March 31, 2003 and the changes in net assets available for benefits for the year then ended in accordance with Canadian generally accepted accounting principles.

S. R. Salman

E. Roy Salmon, FCA Auditor General

Halifax, Nova Scotia May 23, 2003

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	2003	2002
	(in tho	usands)
NET ASSETS AVAILABLE FOR BENEFITS		
Assets		
Investments (Note 3)	\$ 2,518,904	\$ 2,923,397
Contributions receivable		
Employees'	2,221	1,862
Employer's	2,772	2,039
Accrued income	24,075	23,923
Net investment transactions outstanding	23,475	11,800
Cash	598	560
Total assets	2,572,045	2,963,581
Liabilities		
Accounts payable	16,515	16,540
Total liabilities	16,515	16,540
Net assets available for benefits	2,555,530	2,947,041
Actuarial asset value adjustment (Note 4)	749	955
Actuarial value of net assets available for benefits	<u>\$ 2,556,279</u>	<u>\$ 2,947,996</u>
ACCRUED PENSION BENEFITS NET OF		
DEFICIENCY		
Accrued pension benefits	\$ 3,318,275	\$ 3,128,720
Deficiency (Note 5)	(761,996)	(180,724)
Accrued pension benefits net of deficiency	<u>\$ 2,556,279</u>	<u>\$ 2,947,996</u>

Approved: Church

Minister of Finance

See accompanying notes to financial statements.

PROVINCE OF NOVA SCOTIA NOVA SCOTIA PUBLIC SERVICE SUPERANNUATION FUND STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS FOR THE YEAR ENDED MARCH 31, 2003

	2003	2002
	(in th	nousands)
Increase (Decrease) In Assets		
Investment activities (Note 3)	<u>\$ </u>	<u>\$ 127,078</u>
Contributions		
Employer's - matched	36,938	34,070
Employees' - matched	36,938	34,070
Employees' - unmatched	2,045	301
Interest on the purchase of prior years' service	1,003	1,391
Transfers from other pension plans	4,068	4,788
	80,992	74,620
Total increase in assets	80,992	201,698
Decrease In Assets		
Investment activities (Note 3)	304,838	-
Benefits paid	149,127	143,061
Operating expenses (Note 6)	7,101	7,486
Refund of contributions and interest and		
transfers to other pension plans	11,437	17,861
Total decrease in assets	472,503	168,408
Increase (Decrease) in Net Assets	(391,511)	33,290
Net Assets Available for Benefits at Beginning of Year	2,947,041	2,913,751
Net Assets Available for Benefits at End of Year	<u>\$ 2,555,530</u>	<u>\$ 2,947,041</u>

See accompanying notes to financial statements.

1. Authority and Description of Plan

The Public Service Superannuation Fund (the "Fund") was established by the Public Service Superannuation Act (the "Act"). It is the funding vehicle for the Public Service Superannuation Plan (the "Plan"), a pension plan which covers employees of the Province and certain other public sector organizations. The detailed provisions of the Plan, including pension eligibility criteria and benefit formulas are also contained in the Act and in the Regulations made under the Act.

The following description is a summary only. For more complete information, reference should be made to the Plan Agreements.

Employee and employer contributions and investment earnings are credited to the Fund. Pensions, payments to terminating employees and administration expenses are charged to the Fund. The Minister of Finance is trustee of the Fund which is invested in federal, provincial, municipal and corporate securities which qualify as eligible investments under the Provincial Finance Act.

The Plan is funded by employee and matching employer contributions of 5.4% of salary up to the Year's Maximum Pensionable Earnings ("YMPE") per the Canada Pension Plan ("CPP") and 7% of salary above the YMPE. The basic pension formula is 2% for each year of pensionable service times the number of years of pensionable service. Pensions are integrated with CPP benefits at age 65. Pensions in pay and deferred pensions are increased on January 1 of each year at a rate equal to the increase in the Consumer Price Index for Canada to a maximum of 6%.

Plan members are eligible for a pension upon reaching any of the following criteria:

- ▶ age 50 with an age plus pensionable service factor of 80 "Rule of 80;
- age 55 with two years of service (reduced pension);
- age 60 with two years of service;
- ▶ age 65.

Certain pension payments are attributable to previous early retirement programs and other unfunded benefits. They are charged to the Consolidated Fund of the Province and participating employers and are not paid from the Fund. These payments amounted to \$15.9 million for the year ended March 31, 2003 (2002 - \$15.8 million).

2. Summary of Significant Accounting Policies

(a) Basis of Presentation:

These financial statements are prepared on the going-concern basis and present the aggregate financial position of the Fund as a separate financial reporting entity. In the event there are insufficient funds within the Fund to make all payments required by the Act, the Province of Nova Scotia guarantees cash flow assistance with respect to the pension benefits in pay. These financial statements are prepared in accordance with Canadian generally accepted accounting principles.

(b) Foreign Currency Translation:

Transactions denominated in foreign currencies are translated into Canadian dollars at the rates of exchange prevailing on the trade dates of the transactions. The market value of foreign investments and cash balances held at year end are translated at the rates in effect at that date. The resulting gain or loss from changes in these rates is included in current period change in market value of investments.

(c) Investments:

- (i) Investments are reported as of the trade date and are stated at market value. Market value is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.
- (ii) The derivative contracts held by the Fund at year end are recorded at market value with the resulting gains or losses being recognized in the current period change in market value of investments.
- (iii) Investments include debentures of the Province of Nova Scotia with total market value of \$41.8 million (1.6% of total assets) as at March 31, 2003 (\$44.2 million (1.5% of total assets) as at March 31, 2002).
- (d) Actuarial Value of Net Assets Available for Benefits:

The Fund values assets using a technique known as "Actuarial Smoothing", whereby the actuarial asset values are adjusted to reflect the portion of investment gains or losses (relative to actuarial assumptions) not yet recognized for purposes of determining the net assets available for benefits. The adjustment is based on the difference between the market value of assets and what the market value would have been if the Fund had earned the assumed rate of return, and is amortized over the current year and the following two years. This adjustment is subject to the condition that the actuarial asset value will not be greater than the fair market value of investments.

3. Investments and Derivatives

The investment objectives of the Plan are to provide long-term security of pension benefits to members and to minimize any increases in contributions required by members and the employers. A strategy of investing in assets of Canadian and foreign equities, bonds, debentures, mortgages and money market securities is aimed at achieving these objectives.

(a) Market value of investments and related income before allocating the effect of derivative contracts:

	<u>A</u>	<u>s at March</u> Asset	<u>31, 2003</u> %	 <u>the Y</u> ome (I	<u>′ear</u> Loss)*	<u>A</u>	<u>s at March :</u> Asset	<u>31, 2002</u> %		<u>e Year</u> e (Loss)*
		(000's)		(0	000's)		(000's)			(000's)
Money market	\$	230,207	9.2%	\$	5,396	\$	234,636	8.0%	\$	8,374
Real Estate										
- Canadian		36,001	1.4%		1,140		-	0.0%		-
Fixed income		964,767	38.3%		102,928		1,057,207	36.2%		57,721
Equities										
- Canadian		713,236	28.3%	(1	27,643)		832,435	28.5%		73,045
- US		402,586	16.0%	(1	61,358)		544,789	18.6%		3,686
- Other foreign		176,080	7.0%	((88,362)		252,246	8.6%		(14,321)
Derivatives		(3,973)	(0.2%)	((36,959)		2,084	0.1%		(1,489)
Other	_		0.0%		20		_	0.0%		62
	\$ 2	2,518,904	100.0%	<u>\$ (</u> 3	<u>804,838)</u>	<u>\$</u>	2 <u>,923,397</u>	<u>100.0%</u>	<u>\$</u>	127,078

* Includes realized losses of \$42.1 million (\$25.4 million - 2002) and unrealized losses of \$321.5 million (gains of \$69.6 million - 2002).

(b) Derivative Contracts:

Derivatives are financial contracts, the value of which is 'derived' from the value of underlying assets or interest or exchange rates. Derivatives provide flexibility in implementing investment strategy. Money market-to-equity swaps have been used during the year to adjust the asset mix.

The following provides details of the derivative money market-to-equity swap contracts outstanding as at March 31, 2003. Notional amounts of derivative contracts represent the volume of outstanding transactions and serve as the basis upon which the return from and market value of the contracts are determined. These contracts are denominated in Canadian dollars and are reset quarterly.

3. Investments and Derivatives (Continued):

	tional <u>ncipal</u>	Original <u>Term</u>	Credit Rating of <u>Counter-party</u>	Equity Index	BA Index	Market <u>Value</u>
			(in th	ousands)		
\$	53,727	1.0 yr	AA(low)	S&P/TSE60	CAD-BA-CDOR	\$ 412
	13,977	1.0 yr	AA(low)	S&P/TSE60	CAD-BA-CDOR	(417)
	35,908	1.0 yr	AA(low)	S&P/TSE60	CAD-BA-CDOR	(2,428)
	53,918	1.0 yr	AA(low)	S&P/TSE60	CAD-BA-CDOR	(1,540)
<u>\$</u>	157,530					<u>\$ (3,973)</u>

(c) Market value of investments and related income after allocating the effects of derivative contracts:

	<u>As at March 31, 2003</u>		For the	For the YearAs at March		<u>h 31, 2002</u>	For th	For the Year		
	As	set	%	Income	(Loss)*		Asset	%	Income	(Loss)*
	((000's)		(000's)		(000's)		((000's)
Money market	\$	72,278	2.9%	\$	1,558	\$	43,656	1.5%	\$	3,225
Real Estate										
- Canadian		36,001	1.4%		1,140					
Fixed income		964,767	38.3%		102,928		1,057,207	36.2%		57,721
Equities										
- Canadian		867,192	34.4%	(160,764)		1,025,499	35.1%		76,705
- US		402,586	16.0%	(161,358)		544,789	18.6%		3,686
- Other foreign		176,080	7.0%		(88,362)		252,246	8.6%		(14,321)
Other			0.0%		20			0.0%	<u> </u>	62
	<u>\$ 2</u> ,	<u>518,904</u>	<u>100.0%</u>	<u>\$ (</u>	<u>304,838)</u>	<u>\$</u>	<u>2,923,397</u>	100.0%	<u>\$</u>	127,078

*Includes realized losses of \$42.1 million (\$25.4 million - 2002) and unrealized losses of \$321.5 million (gains of \$69.6 million - 2002).

3. Investments and Derivatives (Continued):

(d) Interest rate risk:

Interest rate risk refers to the fact that the Plan's financial position will change as market interest rates change. Interest rate risk is inherent in the nature of the pension plan business due to prolonged timing differences between cash flows related to the Plan's assets and cash flows related to the Plan's liabilities.

The value of the Plan's assets is affected by short-term changes in nominal interest rates and equity markets. Pension liabilities are exposed to the long-term expectation of rate of return on the investments as well as expectations of inflation and salary escalation. To meet these liabilities the Plan has established a asset mix policy of approximately 60% equities and 40% fixed income securities. Long-term equity returns have historically shown high correlation with changes in inflation and salary escalation, while fixed income securities are sensitive to changes in nominal interest rates. At March 31, 2003 the \$964.8 million fixed income securities had a modified duration of 6.0 years. This means a 1% decrease in nominal interest rates would increase their market value by approximately 6.00%.

(e) Credit risk:

Credit risk is the risk of loss in the event the counterparty to a transaction fails to discharge an obligation and causes the other party to incur a loss.

The Plan limits credit risk by purchasing fixed income securities with a credit rating of "BBB" and higher. In addition, the Plan limits derivative contract risk by dealing with counterparties that have a minimum "A" credit rating.

3. Investments and Derivatives (Continued):

(f) Foreign currency risk:

Foreign currency exposure arises from the Plan's holding of foreign currency-denominated equities. From time to time some of this exposure will be hedged based on interest rates or other economic fundamentals.

The Plan's foreign currency exposure is summarized in the following table.

	March 31, 2003	March 31, 2002	
Currency	(in thousands)		
Canada	\$ 1,958,473	\$ 2,143,363	
Eurozone	42 ,447	63,021	
Japan	26,432	26,894	
United Kingdom	37,000	40,101	
United States	430,791	581,011	
Other	48,434	93,490	
Total	<u>\$ 2,543,577</u>	<u>\$ 2,947,880</u>	

4. Actuarial Asset Value Adjustment:

The actuarial asset value adjustment is comprised of the following:

	<u>2003</u>	<u>2002</u>
	(in the	ousands)
Service Buy-back Receivable	<u>\$ 749</u>	<u>\$ 955</u>

(a) Unamortized Investment Gains and Losses:

The net assets available for benefits is subject to an actuarial asset value adjustment which moderates the effects of market volatility on investment value. The adjustment is based on the difference between the market value of assets and what the market value would have been if the Fund had earned the assumed rate of return, and is amortized over the current year and the following two years. The actuarial asset value adjustment reflects the portion of investment gains or losses (relative to actuarial assumptions) not yet recognized for purposes of determining the net assets available for benefits. This adjustment is subject to the condition that the actuarial asset value will not be greater than the fair market value of investments.

(b) Service Buy-back Receivable:

This receivable represents the present value of outstanding employee and employer contributions which are due as a result of service buy-backs.

5. Actuarial Valuation:

Actuarial valuations of the Fund are carried out annually and provide an estimate of the accrued pension benefits ("Fund liabilities") calculated using various economic and demographic assumptions, based on membership data as at the valuation date. The Plan's consulting actuaries, Morneau Sobeco, performed a valuation as at December 31, 2002 and issued their report in May 2003. The report indicated that the Plan had an unfunded liability of \$587.0 million (December 31, 2001 - \$130.5 million). A projection to March 31, 2003, applying the same assumptions, indicated an unfunded liability of \$762.0 million (March 31, 2002 - \$180.7 million).

The actuarial valuation projects liabilities for each member on the basis of service earned to date and the member's projected five year average salary at the expected date of retirement. The actuaries have used the unit credit method of determining the current cost and actuarial liability. The major economic and demographic assumptions used in the last valuation are as follows:

	Valuation December 31, 2002	Valuation December 31, 2001
Inflation	3.0% per annum	3.0% per annum
Average Salary Increase	0.5% per annum real plus merit ranging from 0.0% to 2.5% based on 5 year age bands	0.5% per annum real plus merit ranging from 0.0% to 2.5% based on 5 year age bands
Real Rate of Return on Investment	4.25% per annum	4.25% per annum
Average Retirement Age	20% - age 55 or "Rule of 80" 80% - age 60 or 35 years service	20% - age 55 or "Rule of 80" 80% - age 60 or 35 years service
Mortality	1994 Group Annuity Mortality Table projected to 2000 using scale AA	1994 Group Annuity Mortality Table projected to 2000 using scale AA

5. Actuarial Valuation (continued):

The impact of the change in major actuarial assumptions and methodology used for December 31, 2002 as compared to December 31, 2001:

The assumed retirement age for members on Long Term Disability ("LTD") whose date of disability was after May 1, 2002 was changed to the earlier of age 60 or the age at which they attained 35 years of service. At the last valuation, all members on LTD were assumed to retire at the earlier of age 65 or the age at which they attained 35 years of service. This change increased Plan liabilities by \$1.1 million.

6. Operating Expenses:

The Fund is charged with administrative and certain other expenses incurred on behalf of the Fund by the Department of Finance. The following is a summary of these operating expenses:

	<u>2003</u> <u>20</u>	
	(in th	ousands)
Plan Administration		
Professional services	\$ 171	\$ 178
Salaries	720	657
Supplies and services	416	538
Travel	7	7
Other	84	77
	1,398	1,457
Investment Expenses		
Investment management fees	5,185	5,556
Professional services	29	31
Salaries	356	311
Supplies and services	72	70
Travel	22	18
Other	39	43
	5,703	6,029
Total Operating Expenses	<u>\$ 7,101</u>	<u>\$ 7,486</u>