

# Financial Statements of Public Service Superannuation Plan Year ended March 31, 2022





KPMG LLP  
Purdy's Wharf Tower One  
1959 Upper Water Street, Suite 1000  
Halifax NS B3J 3N2  
Canada  
Tel 902-492-6000  
Fax 902-429-1307

## INDEPENDENT AUDITORS' REPORT

To the Public Service Superannuation Plan Trustee Inc.

### **Opinion**

We have audited the financial statements of Public Service Superannuation Plan (the "Entity"), which comprise:

- the statement of financial position as at March 31, 2022;
- the statement of changes in net assets available for benefits for the year then ended;
- the statement of changes in pension obligation for the year then ended
- the statement of changes in deficit for the year then ended;
- and notes to the financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Entity as at March 31, 2022, and its changes in net assets available for benefits and its changes in pension obligation for the year then ended in accordance with Canadian accounting standards for pension plans.

### **Basis for Opinion**

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the **"Auditors' Responsibilities for the Audit of the Financial Statements"** section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### **Responsibilities of Management and Those Charged with Governance for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian accounting standards for pension plans, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

### ***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.



- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

*KPMG LLP*

Chartered Professional Accountants

Halifax, Canada

June 23, 2022

# Financial Statements of Public Service Superannuation Plan Year ended March 31, 2022

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## Statement of Financial Position

March 31, 2022, with comparative information for 2021	2022	2021
(in thousands of dollars)		
<b>Net assets available for benefits</b>		
<b>Assets</b>		
Cash	\$ 198,503	\$ 176,654
Contributions receivable:		
Employers'	6,769	6,056
Employees'	6,573	5,971
Accounts receivable	2,631	3,485
Receivable from pending trades	20,867	11,299
Accrued investment income	16,777	18,379
Investments (note 5)	7,330,305	7,055,589
<b>Total assets</b>	<b>7,582,425</b>	<b>7,277,433</b>
<b>Liabilities</b>		
Due to administrator (note 14)	1,370	2,714
Accounts payable and accrued liabilities	4,952	4,547
Payable for pending trades	110,936	20,465
Investment-related liabilities (note 5)	9,185	9,529
<b>Total liabilities</b>	<b>126,443</b>	<b>37,255</b>
<b>Net assets available for benefits</b>	<b>\$ 7,455,982</b>	<b>\$ 7,240,178</b>
<b>Purchases of service via instalments (note 7)</b>	<b>-</b>	<b>75</b>
<b>Fair value of net assets available for benefits</b>	<b>\$ 7,455,982</b>	<b>\$ 7,240,253</b>
<b>Accrued pension obligation and deficit</b>		
Accrued pension obligation (note 9)	\$ 7,588,411	\$ 7,414,946
Deficit:		
Funding deficit (note 9)	(132,429)	(174,693)
	(132,429)	(174,693)
Commitments (note 10)		
<b>Accrued pension obligation and deficit</b>	<b>\$ 7,455,982</b>	<b>\$ 7,240,253</b>

The accompanying notes are an integral part of these financial statements.

On behalf of the board:

Approved by Geoff Gatien, *Vice-Chair, Public Service Superannuation Plan Trustee Inc.*

Approved by Nancy MacLellan, *Vice-Chair, Public Service Superannuation Plan Trustee Inc.*



### Statement of Changes in Net Assets Available for Benefits

Year ended March 31, 2022, with comparative information for 2021	2022	2021
(in thousands of dollars)		
<b>Increase in assets</b>		
Contributions (note 4)	\$ 238,110	\$ 236,420
Transfers from other pension plans:		
Universities, municipalities & other (note 8)	15,387	26,917
Individuals	6,591	2,659
Interest on pension plan transfer deficits (note 8)	20	84
Investment income (note 5)	192,975	226,697
Change in market value of investments (note 5)	220,486	783,582
Total increase in assets	673,569	1,276,359
<b>Decrease in assets</b>		
Benefits paid (note 11)	431,644	414,249
Transfers to other pension plans	5,384	4,576
Administrative expenses (note 12)	20,737	20,411
Total decrease in assets	457,765	439,236
<b>Increase in net assets available for benefits</b>	215,804	837,123
<b>Net assets available for benefits, beginning of year</b>	7,240,178	6,403,055
<b>Net assets available for benefits, end of year</b>	\$ 7,455,982	\$ 7,240,178

The accompanying notes are an integral part of these financial statements.



### Statement of Changes in Pension Obligation

Year ended March 31, 2022, with comparative information for 2021	2022	2021
(in thousands of dollars)		
<b>Accrued pension obligation, beginning of year</b>	<b>\$ 7,414,946</b>	<b>\$ 7,007,434</b>
<b>Increase in accrued pension benefits</b>		
Interest on accrued pension obligation	389,285	385,409
Benefits accrued	200,474	187,815
Purchases of service	3,369	3,230
Transfers from other pension plans	21,978	29,576
Changes in actuarial assumptions (note 9)	-	214,482
Net experience losses (note 9)	-	5,825
	<b>615,106</b>	<b>826,337</b>
<b>Decrease in accrued pension benefits</b>		
Benefits paid	431,644	414,249
Transfers to other pension plans	5,384	4,576
Net experience gains (note 9)	4,613	-
	<b>441,641</b>	<b>418,825</b>
<b>Net increase in accrued pension benefits</b>	<b>173,465</b>	<b>407,512</b>
<b>Accrued pension obligation, end of year</b>	<b>\$ 7,588,411</b>	<b>\$ 7,414,946</b>

### Statement of Changes in Deficit

Year ended March 31, 2022, with comparative information for 2021	2022	2021
(in thousands of dollars)		
<b>Deficit, beginning of year</b>	<b>\$ (174,693)</b>	<b>\$ (604,220)</b>
Increase in net assets available for benefits	215,804	837,123
Decrease in purchases of service via instalments	(75)	(84)
Net increase in accrued pension obligation	(173,465)	(407,512)
<b>Deficit, end of year</b>	<b>\$ (132,429)</b>	<b>\$ (174,693)</b>

See accompanying notes to financial statements.



# Notes to Financial Statements

Year ended March 31, 2022  
(in thousands of dollars)

1.

## Authority and description of Plan

The following description of the Public Service Superannuation Plan (the “Plan”) is a summary only. For more complete information, reference should be made to the Plan legislative documents and agreements.

### General

The Plan is governed by the *Public Service Superannuation Act* (the “Act”) as part of the Acts of Nova Scotia. It is a contributory defined benefit pension plan that covers employees of the Province of Nova Scotia (the “Province”) and certain other public sector organizations. The Act established the Nova Scotia Public Service Superannuation Fund (the “Fund”) for the purpose of crediting employer and employee contributions, investment earnings and meeting the Plan’s obligations.

The detailed provisions of the Plan, including pension eligibility criteria and benefit formulas, are also contained in the Act and in the Plan text made under the Act.

Effective April 1, 2013, the Plan and the Fund transitioned to a new joint governance structure. The newly created Public Service Superannuation Plan Trustee Inc. (“PSSPTI”) assumed fiduciary responsibility for the Plan and the Fund from the Minister of Finance and Treasury Board. As of April 1, 2013, the Minister of Finance and Treasury Board no longer has further legal liability for the Plan and the Fund. These changes are outlined in the 2012 *Public Service Superannuation Act*. That Act repealed the existing *Public Service Superannuation Act* and replaced it with a new *Public Service Superannuation Act*.

The PSSPTI is responsible for the administration of the Plan and the investment management of the Fund assets. The investment of the Fund assets is guided by the Plan’s Statement of Investment Policies & Goals (the “SIP&G”) as written by the PSSPTI. The SIP&G sets out the parameters within which the investments are made. These parameters include permissible investments and the policy asset mix. The Investment Beliefs, also found within the SIP&G, state the general principles upon which the investments are made.

### Funding

The Plan is funded by investment earnings and employee and matching employer contributions of 8.4% of salary up to the Year’s Maximum Pensionable Earnings (the “YMPE”) and 10.9% of salary above the YMPE. The YMPE is a figure set annually by the Canada Pension Plan (the “CPP”).

## Authority and description of Plan (continued)

### Retirement benefits

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

- age 50 with an age plus years of pensionable service totaling 80 (Rule of 80);
- age 55 with an age plus years of pensionable service totaling 85 (Rule of 85) for members first hired by a participating employer on or after April 6, 2010;
- age 55 with two years of pensionable service (reduced pension);
- age 60 with two years of pensionable service.

Pension benefits are made up of two components:

Lifetime pension:

- 1.3% of the members' highest average salary (best five years) below or up to the YMPE for each year of pensionable service (maximum 35 years), plus
- 2.0% of the member's highest average salary (best five years) above the YMPE for each year of pensionable service (maximum 35 years)

Pension benefits are integrated with CPP benefits at age 65. To supplement members' income until unreduced CPP benefits are payable from CPP at age 65, a bridge benefit is payable until age 65. Members who receive reduced CPP benefits before age 65 will still receive the bridge benefit until age 65.

Bridge benefit payable until age 65:

- 0.7% of the members' highest average salary (best five years) below or up to the average YMPE (best five years) for each year of pensionable service

### Death benefits

Upon the death of a vested member, the surviving spouse is entitled to receive 66.67% of the member's pension benefit payable for life (60% for the surviving spouse of a member first hired by a participating employer on or after April 6, 2010). Eligible children are entitled to receive 10% of the member's pension benefit, payable until age 18 (or 25 while still in school).

### Termination benefits

Upon termination of employment, a vested member may choose to defer their pension until they satisfy one of the above eligibility criteria, or they may remove their funds from the plan in the form of a commuted value.

### Refunds

The benefit payable upon termination or death of a non-vested member, or upon death prior to retirement of a vested member with no eligible survivors, is a lump sum refund of the member's contributions with interest.

### Indexing

Subject to the conditions specified in the Act, pensions in pay are indexed at a rate of 0.0% from January 1, 2021 through to December 31, 2025.

## 2.

**Basis of Preparation****a. Basis of presentation**

These financial statements are prepared in Canadian dollars, which is the Plan's functional currency in accordance with the accounting standards for pension plans in Part IV of the Chartered Professional Accountants ("CPA") Canada Handbook ("Section 4600 – Pension Plans"). Section 4600 – Pension Plans provides specific accounting guidance on investments and pension obligations. For accounting policies that do not relate to either investments or pension obligations, the Plan must consistently comply with either International Financial Reporting Standards ("IFRS") in Part I or Accounting Standards for Private Enterprises in Part II of the CPA Canada Handbook. The Plan has elected to comply on a consistent basis with IFRS in Part I of the CPA Canada Handbook. To the extent that IFRS in Part I is inconsistent with Section 4600, Section 4600 takes precedence.

Consistent with Section 4600, investment assets are presented on a non-consolidated basis even when the investment is in an entity over which the Plan has effective control. Earnings of such entities are recognized as income is earned and as dividends are declared. The Plan's total investment income includes valuation adjustments required to bring the investments to their fair value.

These financial statements are prepared on a going concern basis and present the aggregate financial position of the Plan as a separate reporting entity.

These financial statements were authorized for issue by the Board of Trustees of the Public Service Superannuation Plan Trustee Inc. on June 23, 2022.

**b. Basis of measurement**

The financial statements have been prepared on the historical cost basis except for financial instruments which are measured at fair value through the statement of changes in net assets available for benefits and derivative financial instruments which are measured at fair value. Units of subsidiaries held are measured at the fair value of the underlying assets and liabilities.

**c. Use of estimates and judgments**

The preparation of the financial statements in conformity with Section 4600 and IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities at the date of the statement of financial position, the reported amounts of changes in net assets available for benefits and accrued pension benefits during the year. Actual results may differ from those estimates. Significant estimates included in the financial statements relate to the valuation of real estate, infrastructure and private equity investments and the determination of the accrued pension obligation.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future years affected.

## Significant accounting policies

### a. Investment transactions, income recognition and transaction costs

#### i. Investment transactions:

Investment transactions are accounted for on a trade date basis.

#### ii. Income recognition:

Investment income is recorded on an accrual basis and includes interest, dividends, and distributions. Change in market value of investments includes gains and losses that have been realized on disposal of investments and the unrealized appreciation and depreciation in the fair value of investments.

#### iii. Transaction costs:

Brokers' commissions and other transaction costs are recorded in the statement of changes in net assets available for benefits when incurred.

### b. Foreign currency translation

Transactions denominated in foreign currencies are translated into Canadian dollars at the rates of exchange prevailing on the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated into Canadian dollars at the exchange rate at that date.

Foreign currency differences arising on re-translation are recognized in the statement of changes in net assets available for benefits as a change in market value of investments.

### c. Financial assets and liabilities

#### i. Non-derivative financial assets:

Financial assets are recognized initially on the trade date, which is the date that the Plan becomes a party to the contractual provisions of the instrument.

The Plan classifies all of its financial assets at fair value through the statement of changes in net assets available for benefits. Financial assets are designated at fair value through the statement of changes in net assets available for benefits if the Plan manages such investment and makes purchase and sale decisions based on their fair value in accordance with the Plan's documented risk management or investment strategy. Upon initial recognition, attributed transaction costs are recognized in the statement of changes in net assets available for benefits as incurred. Financial assets at fair value through the statement of changes in net assets available for benefits are measured at fair value and changes therein are recognized in the statement of changes in net assets available for benefits.

#### ii. Non-derivative financial liabilities:

All financial liabilities are recognized initially on the trade date at which the Plan becomes a party to the contractual provisions of the instrument.

Financial assets and liabilities are presented in the statement of financial position. The net amount is presented in the statement of financial position, when and only when, the Plan has a legal right to offset the amounts and it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

The Plan considers its amounts payable to be a non-derivative financial liability.

## Significant accounting policies (continued)

### iii. Derivative financial instruments:

Derivative financial instruments are recognized initially at fair value and their related transaction costs are recognized in the statement of changes in net assets available for benefits as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and all changes are recognized immediately in the statement of changes in net assets available for benefits.

Derivative-related assets and liabilities are presented in the statement of financial position. The net amount is presented in the statement of financial position, when and only when, the Plan has a legal right to offset the amounts and it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

### d. Fair value measurement

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction on the measurement date.

As allowed under IFRS 13, if an asset or a liability measured at fair value has a bid and an ask price, the price within the bid-ask spread that is the most representative of fair value in the circumstances shall be used to measure fair value. The Plan uses closing market price as a practical expedient for fair value measurement.

When available, the Plan measures the fair value of an instrument using quoted prices in an active market for that instrument. A market is regarded as active if quoted prices are readily and regularly available and represent actual and regularly occurring market transactions on an arm's length basis.

If a market for a financial instrument is not active, then the Plan establishes fair value using a valuation technique. Valuation techniques include using recent arm's length transactions between knowledgeable, willing parties (if available), reference to the current fair value of other instruments that are substantially the same, discounted cash flow analyses and option pricing models.

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e. the fair value of the consideration given or received, unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument or based on a valuation technique whose variables include only data from observable markets. When a transaction price provides the best evidence of fair value at initial recognition, the financial instrument is initially measured at the transaction price and any difference between this price and the value initially obtained from a valuation model is subsequently recognized in profit or loss on an appropriate basis over the life of the instrument but not later than when the valuation is supported wholly by observable market data or the transaction is closed out.

All changes in fair value, other than interest and dividend income and expense, are recognized in the statement of changes in net assets available for benefits as part of the change in market value of investments.

## Significant accounting policies (continued)

### Fair values of investments are determined as follows:

- i. Fixed income securities, equities, and repurchase and resell agreements are valued at year-end quoted closing prices, where available. Where quoted prices are not available, estimated fair values are calculated using comparable securities.
- ii. Short-term notes, treasury bills, and term deposits maturing within one year are stated at cost, which together with accrued interest income approximates fair value given the short-term nature of these investments.
- iii. Pooled fund investments include investments in fixed income, equities, commodities, and real estate. Pooled funds are valued at the unit values supplied by the pooled fund administrator, which represent the Plan's proportionate share of underlying net assets at fair values determined using closing market prices. These net asset values are reviewed by management.
- iv. Directly held real estate is valued based on estimated fair values determined by appropriate techniques and best estimates by management, appraisers, or both. Where external appraisers are engaged to perform the valuation, management ensures the appraisers are independent and compares the assumptions used by the appraisers with management's expectations based on current market conditions and industry practice to ensure the valuation captures the business and economic conditions specific to the investment.
- v. Private fund investments include investments in private equity, real estate, infrastructure, and agriculture & timber assets. The fair value of a private fund investment where the Plan's ability to access information on underlying individual fund investments is restricted, such as under the terms of a limited partnership agreement, is equal to the value provided by the fund's general partner unless there is specific and objectively verifiable reason to vary from the value provided by the general partner. These net asset values are reviewed by management.
- vi. Derivatives, including futures, credit default swaps, interest rate swaps, total return swaps, and currency forward contracts, are valued at year-end quoted market prices, interest, spot, and forward rates, where available. Where quoted prices are not available, appropriate alternative valuation techniques are used to determine fair value. The gains or losses from derivative contracts are included in the realized and unrealized gains or losses on investments.
- vii. Absolute return strategy investments, comprised of hedge funds, are recorded at fair value based on net asset values obtained from each of the hedge funds' administrators. These net asset values are reviewed by management.
- viii. Promissory notes issued by subsidiaries are valued at cost, non-interest bearing and mature on-demand.

## Significant accounting policies (continued)

### e. Non-investment assets and liabilities

The fair value of non-investment assets and liabilities are equal to their amortized cost value and are adjusted for foreign exchange where applicable.

### f. Receivable/payable for pending trades

For securities transactions, the fair value of receivable from pending trades and payable for pending trades approximate their carrying amounts due to their short-term nature.

### g. Accrued pension obligation

The value of the accrued pension benefit obligation of the Plan is based on a going concern method actuarial valuation prepared by an independent firm of actuaries using the projected unit credit method as at December 31 and then extrapolated to March 31. The accrued pension benefit obligation and its extrapolation is measured in accordance with accepted actuarial methods using actuarial assumptions and methods adopted by the PSSPTI for the purpose of establishing the long-term funding requirements of the Plan. The actuarial valuation and extrapolated accrued pension benefit obligation included in the financial statements is consistent with the valuation for funding purposes.

### h. Contributions

Basic contributions from employers and members due to the Plan as at the end of the year are recorded on an accrual basis. Service purchases that include but are not limited to leaves of absence and transfers from other pension plans are recorded and service is credited when the purchase amount is received.

### i. Benefits

Benefit payments to retired and surviving members, commuted value payments and refunds to former members, and transfers to other pension plans are recorded in the period in which they are paid. Accrued benefits are recorded as part of the accrued pension benefit obligation.

### j. Administrative expenses

Administrative expenses, incurred for plan administration and direct investment management services, are recorded on an accrual basis. Plan administration expenses represent expenses incurred to provide direct services to the Plan members and employers. Investment management expenses represent expenses incurred to manage the Fund. Base external manager fees for portfolio management are expensed in investment management expenses as incurred.

### k. Actuarial value of net assets and actuarial adjustment

The actuarial value of net assets of the Plan is used in assessing the funding position of the Plan, including the determination of contribution rates. The actuarial value of net assets is determined by smoothing investment returns above or below the actuarial long-term rate of return assumption over a five-year period. The fair value of net assets is adjusted by the unrecognized actuarial value adjustment to arrive at the actuarial value of net assets.

## Significant accounting policies (continued)

### l. Income taxes

The Fund is the funding vehicle for a registered pension plan, as defined by the *Income Tax Act (Canada)* and, accordingly is not subject to income taxes.

### m. Future changes to accounting policies

No relevant new guidance has been issued by the International Accounting Standards Board.

## 4.

### Contributions

	2022	2021
(in thousands of dollars)		
<b>Employer</b>		
Matched current service	\$ 117,159	\$ 115,651
Matched past service	361	292
	117,520	115,943
<b>Employee</b>		
Matched current service	117,160	115,716
Unmatched past service	2,646	3,955
Matched past service	361	292
Unmatched current service	423	514
	120,590	120,477
	\$ 238,110	\$ 236,420



## 5.

**Investments and investment-related liabilities**

- a. The fair value of the Plan's investments and investment-related liabilities along with the related income as at March 31 are summarized in the following tables:

	2022		2021	
(in thousands of dollars)		%		%
<b>Investments</b>				
<b>Fixed income</b>				
Money market	\$ 118,331	1.6	\$ 286,943	4.1
Canadian bonds & debentures	527,186	7.2	626,707	8.9
Non-Canadian bonds & debentures	1,182,418	16.2	1,239,575	17.6
Canadian real return bonds	361,106	4.9	257,208	3.6
<b>Equities</b>				
Canadian	333,665	4.6	370,026	5.2
US	567,558	7.7	650,608	9.2
Global	733,840	10.0	865,010	12.3
Private	296,047	4.0	211,833	3.0
<b>Commodities</b>	230,452	3.1	186,683	2.6
<b>Real assets</b>				
Real estate	1,070,918	14.7	882,547	12.5
Infrastructure	808,878	11.0	673,877	9.6
Agriculture & timber	75,209	1.0	31,925	0.5
<b>Absolute return strategies</b>				
Hedge funds	830,663	11.4	696,763	9.9
<b>Investment-related receivables</b>				
Agreements to resell securities	104,795	1.4	-	-
Promissory notes	34,611	0.5	21,190	0.3
Derivative-related, net	54,628	0.7	54,694	0.7
	\$ 7,330,305	100.0	\$ 7,055,589	100.0
<b>Investment-related liabilities</b>				
Agreements to repurchase securities	\$ -	-	\$ (3,503)	36.8
Derivative-related, net	(9,185)	100.0	(6,026)	63.2
	\$ (9,185)	100.0	\$ (9,529)	100.0
<b>Net investments</b>	\$ 7,321,120		\$ 7,046,060	

## Investments and investment-related liabilities (continued)

**2022**

(in thousands of dollars)

Changes in market value of investments and derivatives

	Investment income	Changes in market value of investments and derivatives		
		Realized	Unrealized	Total
Fixed income	\$ 69,357	\$ (9,907)	\$ (148,548)	\$ (158,455)
Equities	35,056	233,162	(135,035)	98,127
Commodities	-	4,695	83,442	88,137
Real assets	89,493	62,821	56,545	119,366
Absolute return strategies	-	12,565	7,268	19,833
Derivatives	(1,428)	56,697	(3,225)	53,472
Other	497	1	5	6
	\$ 192,975	\$ 360,034	\$ (139,548)	\$ 220,486

**2021**

(in thousands of dollars)

Changes in market value of investments and derivatives

	Investment income	Changes in market value of investments and derivatives		
		Realized	Unrealized	Total
Fixed income	\$ 63,651	\$ 33,883	\$ (95,352)	\$ (61,469)
Equities	35,216	76,680	465,292	541,972
Commodities	-	-	33,422	33,422
Real assets	126,148	33,229	(72,394)	(39,165)
Absolute return strategies	-	37,274	3,231	40,505
Derivatives	(406)	32,005	236,312	268,317
Other	2,088	-	-	-
	\$ 226,697	\$ 213,071	\$ 570,511	\$ 783,582

**b. Derivatives**

Derivatives are financial contracts, the value of which is “derived” from the value of underlying assets or interest or exchange rates. The Plan utilizes such contracts to provide flexibility in implementing investment strategies and for managing exposure to interest rate and foreign currency volatility.

Notional amounts of derivative contracts are the contract amounts used to calculate the cash flows to be exchanged. They represent the contractual amount to which a rate or price is applied for computing the cash to be paid or received. Notional amounts are the basis upon which the returns from, and the fair value of, the contracts are determined. They do not necessarily indicate the amounts of future cash flows involved or the current fair value of the derivative contracts. They are a common measure of volume of outstanding transactions but do not represent credit or market risk exposure. The derivative contracts become favourable (assets) or unfavourable (liabilities) as a result of fluctuations in either market rates or prices relative to their terms. The aggregate notional amounts and fair values of derivative contracts can fluctuate significantly.

## Investments and investment-related liabilities (continued)

Derivative contracts transacted either on a regulated exchange market or in the over-the-counter (“OTC”) market, directly between two counterparties include the following:

### Futures

Futures are transacted in standardized amounts on regulated exchanges and are subject to daily cash margining. The futures contracts that the Plan enters into are as follows:

- Government futures - contractual obligations to either buy or sell at a fixed value (the contracted price) government fixed income financial instruments at a predetermined future date. They are used to adjust interest rate exposure and replicate government bond positions. Long future positions are backed with high grade, liquid debt securities.
- Money market futures - contractual obligations to either buy or sell money market financial instruments at a predetermined future date at a specified price. They are used to manage exposures at the front end of the yield curve. Futures are based on short-term interest rates and do not require delivery of an asset at expiration. Therefore, they do not require cash backing.

### Credit default swaps

Credit default swaps (“CDS”) provide protection against the decline in value of the referenced asset as a result of specified events such as payment default or insolvency. The purchaser pays a premium to the seller of the CDS in return for payment related to the deterioration in the value of the referenced asset. The referenced asset for CDS is a debt instrument. They are used to manage credit exposure without buying or selling securities outright. Written CDS increase credit exposure (selling protection), obligating the Plan to buy bonds from counterparties in the event of a default. Purchased CDS decrease exposure (buying protection), providing the right to “put” bonds to the counterparty in the event of a default. Net long exposures are backed with high grade, liquid debt securities. Underlying credit exposures are continuously monitored.

### Interest rate swaps

Interest rate swaps involve contractual agreements between two counterparties to exchange fixed and floating interest payments based on notional amounts. They are used to adjust interest rate yield curve exposures and substitute for physical securities. Long swap positions increase exposure to long-term interest rates and short positions decrease exposure. Long swap positions are backed with high grade, liquid debt securities.

## Investments and investment-related liabilities (continued)

### Total return swaps

Total return swaps are contractual agreements under which the total return receiver assumes market and credit risk on a bond or loan, where the total return payer forfeits risk associated with market performance but takes on the credit exposure that the total return receiver may be subject to. The total return receiver receives income and capital gains generated by an underlying loan or bond. In return, the total return receiver must pay a set rate and any capital losses generated by the underlying loan or bond over the life of the swap.

### Currency forwards

Currency forwards are contractual obligations to exchange one currency for another at a specified price or settlement at a predetermined future date. Forward contracts are used to manage the currency exposure of investments held in foreign currencies. The notional amount of a currency forward represents the contracted amount purchased or sold for settlement at a future date. The fair value is determined by the difference between the market value and the notional value upon settlement.

## Investments and investment-related liabilities (continued)

The following tables set out the notional values of the Plan's derivatives and their related assets and liabilities as at March 31:

2022				
(in thousands of dollars)		Fair value		
	Notional value	Assets	Liabilities	Net
<b>Derivatives</b>				
Futures	\$ 32,870	\$ 2,048	\$ (3,020)	\$ (972)
Options	37,300	-	(60)	(60)
Credit default swaps	5,000	264	(103)	161
Interest rate swaps	68,600	1,222	(1,743)	(521)
Total return swaps	133,888	-	(4,256)	(4,256)
Currency forwards	2,803,106	49,564	(3)	49,561
	\$ 3,080,764	\$ 53,098	\$ (9,185)	\$ 43,913
<b>Cash collateral</b>	-	1,530	-	1,530
<b>Notional and fair value</b>	\$ 3,080,764	\$ 54,628	\$ (9,185)	\$ 45,443

2021				
(in thousands of dollars)		Fair value		
	Notional value	Assets	Liabilities	Net
<b>Derivatives</b>				
Futures	\$ 18,042	\$ 1,210	\$ (1,233)	\$ (23)
Options	-	-	-	-
Credit default swaps	4,768	286	(49)	237
Interest rate swaps	80,800	1,374	(548)	826
Total return swaps	137,260	-	(2,322)	(2,322)
Currency forwards	2,891,247	50,113	(21)	50,092
	\$ 3,132,117	\$ 52,983	\$ (4,173)	\$ 48,810
<b>Cash collateral</b>	-	1,711	(1,853)	(142)
<b>Notional and fair value</b>	\$ 3,132,117	\$ 54,694	\$ (6,026)	\$ 48,668

## Investments and investment-related liabilities (continued)

The following tables set out the contractual maturities of the Plan's derivatives and their net related assets and liabilities as at March 31:

2022					
(in thousands of dollars)	Under 1 year	1 to 5 years	Over 5 years	Total	
<b>Derivatives, net</b>					
Futures	\$ (972)	\$ -	\$ -	\$	(972)
Options	(60)	-	-		(60)
Credit default swaps	-	120	40		160
Interest rate swaps	-	(521)	-		(521)
Total return swaps	(3)	(4,253)	-		(4,256)
Currency forwards	49,562	-	-		49,562
	\$ 48,527	\$ (4,654)	\$ 40	\$	43,913
<b>Cash collateral, net</b>					1,530
<b>Fair value, net</b>	\$ 48,527	\$ (4,654)	\$ 40	\$	45,443

2021					
(in thousands of dollars)	Under 1 year	1 to 5 years	Over 5 years	Total	
<b>Derivatives, net</b>					
Futures	\$ (23)	\$ -	\$ -	\$	(23)
Options	-	-	-		-
Credit default swaps	-	136	101		237
Interest rate swaps	-	(282)	1,108		826
Total return swaps	(2,322)	-	-		(2,322)
Currency forwards	50,092	-	-		50,092
	\$ 47,747	\$ (146)	\$ 1,209	\$	48,810
<b>Cash collateral, net</b>					(142)
<b>Fair value, net</b>	\$ 47,747	\$ (146)	\$ 1,209	\$	48,668

Cash is deposited or pledged with various financial institutions as collateral if the Plan was to default on payment obligations on its derivative contracts. On the statement of financial position, collateral is represented as part of the net balance of derivative-related receivables and liabilities.

# 6.

## Financial Instruments

### a. Fair values

The fair values of investments and derivatives are as described in note 3(d). The fair values of other financial assets and liabilities, being cash, contributions receivable, receivable from pending trades, accrued investment income, and payable from pending trades and approximate their carrying values due to the short-term nature of these financial instruments.

Fair value measurements recognized in the statement of financial position are categorized using a fair value hierarchy that reflects the significance of inputs used in determining the fair values.

- Level 1: Fair value is based on inputs that reflect unadjusted quoted prices in active markets for identical assets or liabilities that the Investment Manager has the ability to access at the measurement date. Level 1 primarily includes publicly listed investments.
- Level 2: Fair value is based on valuation methods that make use of inputs other than quoted prices included in Level 1, that are observable for the asset or liability, either directly or indirectly, including inputs in markets that are not considered to be active. Level 2 primarily includes debt securities and derivative contracts not traded on a public exchange and public equities not traded in an active market.
- Level 3: Fair value is based on valuation methods where inputs that are based on non-observable market data have a significant impact on the valuation. Level 3 includes real return bonds, private equity, real estate, infrastructure, and agriculture & timber investments valued based on financial statements and or investor statements. Promissory notes are valued at cost.

## Financial instruments (continued)

2022					
(in thousands of dollars)					
	Level 1		Level 2		Total
<b>Investments</b>					
<b>Fixed income</b>					
Money market	\$ -	\$ 118,331	\$ -	\$ -	\$ 118,331
Canadian bonds & debentures	133,366	393,820	-	-	527,186
Non-Canadian bonds & debentures	20,036	1,162,382	-	-	1,182,418
Canadian real return bonds	-	294,824	66,282	-	361,106
<b>Equities</b>					
Canadian	253,257	80,408	-	-	333,665
US	198,449	369,109	-	-	567,558
Global	519,296	214,544	-	-	733,840
Private	-	-	296,047	-	296,047
<b>Commodities</b>	-	230,452	-	-	230,452
<b>Real assets</b>					
Real estate	-	187,402	883,516	-	1,070,918
Infrastructure	-	-	808,878	-	808,878
Agriculture & timber	-	-	75,209	-	75,209
<b>Absolute return strategies</b>					
Hedge funds	-	830,663	-	-	830,663
<b>Investment-related receivables</b>					
Agreements to resell securities	-	104,795	-	-	104,795
Promissory notes	-	-	34,611	-	34,611
Derivative-related, net	3,578	51,050	-	-	54,628
	\$ 1,127,982	\$ 4,037,780	\$ 2,164,543	\$ -	\$ 7,330,305
<b>Investment-related liabilities</b>					
Agreements to repurchase securities	\$ -	\$ -	\$ -	\$ -	\$ -
Derivative-related, net	(3,080)	(6,105)	-	-	(9,185)
	\$ (3,080)	\$ (6,105)	\$ -	\$ -	\$ (9,185)
<b>Net investments</b>	\$ 1,124,902	\$ 4,031,675	\$ 2,164,543	\$ -	\$ 7,321,120



## Financial instruments (continued)

2021						
(in thousands of dollars)	Level 1		Level 2		Level 3	Total
Investments						
Fixed income						
Money market	\$	27,565	\$	259,378	\$ -	\$ 286,943
Canadian bonds & debentures		180,420		446,287	-	626,707
Non-Canadian bonds & debentures		57,341		1,182,234	-	1,239,575
Canadian real return bonds		-		187,326	69,882	257,208
Equities						
Canadian		297,870		72,156	-	370,026
US		195,315		455,293	-	650,608
Global		560,267		304,743	-	865,010
Private		-		-	211,833	211,833
Commodities		-		186,683	-	186,683
Real assets						
Real estate		-		167,550	714,997	882,547
Infrastructure		-		-	673,877	673,877
Agriculture & timber		-		-	31,925	31,925
Absolute return strategies						
Hedge funds		-		696,763	-	696,763
Investment-related receivables						
Agreements to resell securities		-		-	-	-
Promissory notes		-		-	21,190	21,190
Derivative-related, net		2,921		51,773	-	54,694
	\$	1,321,699	\$	4,010,186	\$ 1,723,704	\$ 7,055,589
Investment-related liabilities						
Agreements to repurchase securities	\$	-	\$	(3,503)	\$ -	\$ (3,503)
Derivative-related, net		(3,086)		(2,940)	-	(6,026)
	\$	(3,086)	\$	(6,443)	\$ -	\$ (9,529)
Net investments						
	\$	1,318,613	\$	4,003,743	\$ 1,723,704	\$ 7,046,060

There were no significant transfers between level 1, level 2, and level 3 financial instruments during the years ended March 31, 2022 and 2021.

## Financial instruments (continued)

The following tables present the changes in the fair value measurement in Level 3 of the fair value hierarchy:

### 2022

(in thousands of dollars)

	Fixed income	Equities	Real assets	Investment - related receivables	Total
<b>Balance, beginning of year</b>	\$ 69,882	\$ 211,833	\$ 1,420,799	\$ 21,190	\$ 1,723,704
Purchases, contributed capital	-	80,360	413,220	13,421	507,001
Sales, capital returned	(179)	(30,122)	(100,911)	-	(131,212)
Realized gains	244	24,990	57,025	-	82,259
Unrealized gains (losses)	(3,665)	8,986	(22,530)	-	(17,209)
<b>Balance, end of year</b>	\$ 66,282	\$ 296,047	\$ 1,767,603	\$ 34,611	\$ 2,164,543

### 2021

(in thousands of dollars)

	Fixed income	Equities	Real assets	Investment - related receivables	Total
<b>Balance, beginning of year</b>	\$ 68,258	\$ 138,205	\$ 1,470,043	\$ 21,190	\$ 1,697,696
Purchases, contributed capital	-	53,037	94,341	-	147,378
Sales, capital returned	(1,020)	-	(101,555)	-	(102,575)
Realized gains	232	-	7,920	-	8,152
Unrealized gains (losses)	2,412	20,591	(49,950)	-	(26,947)
<b>Balance, end of year</b>	\$ 69,882	\$ 211,833	\$ 1,420,799	\$ 21,190	\$ 1,723,704

The total realized and unrealized gains (losses) included in the change in market value of investments from level 3 financial instruments held as at March 31, 2022 and 2021, respectively, was \$65,050 and (\$18,795).

### Fair value assumptions and sensitivity

Level 3 financial instruments are valued using various methods. Listed real return bonds are valued by a third-party using broker prices and comparable securities. Certain unlisted private equity, real estate and infrastructure funds are valued using various methods including overall capitalization method and discount rate method. Real estate subsidiaries are valued using the overall capitalization method and discount rate method and the valuations are significantly affected by non-observable inputs, the most significant of which are the capitalization rate and the discount rate.

## Financial instruments (continued)

Significant unobservable inputs used in measuring fair value:

The table below sets out information about significant unobservable inputs used at March 31, 2022 in measuring financial instruments categorized as level 3 in the fair value hierarchy.

(in thousands of dollars)				
Description	2022 Fair value	2021 Fair value	Valuation technique	Unobservable inputs
Unlisted real estate subsidiaries	\$ 802,325	\$ 664,753	Income approach technique: overall capitalization rate method and discounted cash flow method	Capitalization rates, discount rates
Unlisted funds: private equity, real estate, infrastructure, agriculture & timber	1,261,325	967,879	Net asset value - audited financial statements	Information not available
Listed real return bond	66,282	69,882	Vendor supplied price - proprietary price model	Information not available
Unlisted promissory notes	34,611	21,190	Issued by subsidiaries; valued at cost	N/A
	\$ 2,164,543	\$ 1,723,704		

The following analysis illustrates the sensitivity of the Level 3 valuations to reasonably possible capitalization rate and discount rate assumptions for real estate properties where reasonably possible alternative assumptions would change the fair value significantly.

Valuations determined by the direct capitalization method and discounted cash flow method are most sensitive to changes in the capitalization and discount rates.

	2022	2021
(in thousands of dollars)		
<b>Unlisted direct real estate subsidiaries</b>		
<b>Direct capitalization method</b>		
Minimum capitalization rate	3.25%	3.50%
Maximum capitalization rate	6.75%	6.75%
Increase of 25 basis points in capitalization rate	\$ (36,628)	\$ (37,696)
Decrease of 25 basis points in capitalization rate	\$ 41,865	\$ 37,861
<b>Discounted cash flow method</b>		
Minimum discount rate	3.40%	3.50%
Maximum discount rate	8.50%	8.32%
Increase of 25 basis points in discount rate	\$ (25,605)	\$ (17,201)
Decrease of 25 basis points in discount rate	\$ 28,181	\$ 17,315

**Note: 1 basis point is equal to 0.01%**

## Financial instruments (continued)

The Plan does not have access to underlying information that comprises the fair market value of real return bonds, and certain private equity, real estate and infrastructure fund investments. The fair market value is provided by the general partner or other external managers. In the absence of information supporting the fair market value, no other reasonably possible alternative assumptions could be applied.

### Significant investments

The Plan's investments, each having a fair value or cost exceeding one per cent of the fair market value or cost of net investment assets and liabilities as follows:

#### March 31, 2022

(in thousands of dollars)

	Number of investments	Fair value	Cost
Private market investments	19	\$ 3,209,162	\$ 2,449,213
	19	\$ 3,209,162	\$ 2,449,213

#### March 31, 2021

(in thousands of dollars)

	Number of investments	Fair value	Cost
Private market investments	18	\$ 2,836,323	\$ 2,053,722
	18	\$ 2,836,323	\$ 2,053,722

The Plan's significant private market investments consist of fixed income and equity pooled funds, commodities, real estate, and infrastructure.

## b. Investment risk management

Risk management relates to the understanding and active management of risks associated with all areas of the business and the associated operating environment. Investments are primarily exposed to interest rate volatility, market price fluctuations, credit risk, foreign currency risk and liquidity risk. The Plan has set formal goals, policies, and operating procedures that establish an asset mix among equity, fixed income, real assets, absolute return strategy investments and derivatives that requires diversification of investments within categories, and set limits on the size of exposure to individual investments and counterparties. Risk and credit committees have been created to regularly monitor the risks and exposures of the Plan. Trustee oversight, procedures and compliance functions are incorporated into Plan processes to achieve consistent controls and to mitigate operational risk.

## Financial instruments (continued)

### i. Interest rate risk

Interest rate risk refers to the fact that the Plan's financial position will change with market interest rate changes, as fixed income securities are sensitive to changes in nominal interest rates. Interest rate risk is inherent in the management of a pension plan due to prolonged timing differences between cash flows related to the Plan's assets and cash flows related to the Plan's liabilities. To properly manage the Plan's interest rate risk, appropriate guidelines on the weighting and duration for the bonds and other fixed income investments are set and monitored.

#### March 31, 2022

(in thousands of dollars)

	Under 1 year	1 to 5 years	5 to 10 years	Over 10 years	Total	Average yield (%)(1)
<b>Fixed income</b>						
Money market	\$ 116,505	\$ -	\$ -	\$ -	\$ 116,505	-
Bonds and debentures	18,169	375,614	411,573	398,716	1,204,072	3.6
Real return bonds (2)	-	-	-	66,282	66,282	5.3
	\$ 134,674	\$ 375,614	\$ 411,573	\$ 464,998	\$ 1,386,859	3.3
Pooled funds					802,182	
<b>Total fixed income</b>					\$ 2,189,041	

#### March 31, 2021

(in thousands of dollars)

	Under 1 year	1 to 5 years	5 to 10 years	Over 10 years	Total	Average yield (%)(1)
<b>Fixed income</b>						
Money market	\$ 285,284	\$ -	\$ -	\$ -	\$ 285,284	-
Bonds and debentures	23,448	476,930	477,002	502,323	1,479,703	3.5
Real return bonds (2)	-	-	-	69,882	69,882	5.3
	\$ 308,732	\$ 476,930	\$ 477,002	\$ 572,205	\$ 1,834,869	3.0
Pooled funds					575,564	
<b>Total fixed income</b>					\$ 2,410,433	

1. The average effective yield reflects the estimated annual income of a security as a percentage of its year-end fair value. The total average yield is the weighted average of the average yields shown.
2. Real return bond yields are based on real interest rates. The ultimate yield will be impacted by inflation as it occurs.

The fair value of the Plan's investments is affected by short-term changes in nominal interest rates. Pension liabilities are exposed to the long-term expectation of rate of return of the Fund as well as expectations of inflation and salary escalation.

## Financial instruments (continued)

### Interest rate sensitivity

The Plan's investments in fixed income and fixed income related derivatives are sensitive to interest rate movements. The following table represents the assets held in the Plan as at March 31, subject to interest rate changes, average duration due to a one percent increase (decrease) in interest rate and the change in fair value of those assets:

	2022	2021
(in thousands of dollars)		
<b>Interest rate sensitive assets</b>	\$ 1,382,968	\$ 1,833,446
Average duration for 1% increase in interest rates	(6.5)	(6.5)
Sensitivity to 1% increase in interest rates	(90,374)	(119,632)
<b>Fair value after 1% increase in rates</b>	\$ 1,292,594	\$ 1,713,814
Average duration for 1% decrease in interest rates	6.5	6.5
Sensitivity to 1% decrease in interest rates	90,374	119,632
<b>Fair value after 1% decrease in rates</b>	\$ 1,473,342	\$ 1,953,078

### ii. Market price risk

Market price risk is the risk of fluctuation in market values of investments from influences specific to a particular investment or from influences on the market, including geopolitical risk. Market price risk does not include interest rate risk and foreign currency risk which are also discussed in this note. As all of the Plan's financial instruments are carried at fair value with fair value changes recognized in the statement of changes in financial position, all changes in market conditions will directly result in an increase (decrease) in net assets. Market price risk is managed by the Plan through the construction of a diversified portfolio of instruments traded on various markets and across various industries.

### Market sensitivity

The Plan's investments in equities are sensitive to market fluctuations. The following table represents the change in fair value of the Plan's investment in public and private equities due to a ten percent increase (decrease) in fair market values as at March 31:

	2022	2021
(in thousands of dollars)		
<b>Total equity</b>	\$ 1,931,110	\$ 2,097,477
10% increase in market values	193,111	209,748
<b>Fair value after 10% increase in market values</b>	\$ 2,124,221	\$ 2,307,225
10% decrease in market values	(193,111)	(209,748)
<b>Fair value after 10% decrease in market values</b>	\$ 1,737,999	\$ 1,887,729

## Financial Instruments (continued)

### iii. 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. Credit risk is generally higher when a non-exchange traded financial instrument is involved because the counterparty for the traded financial instrument is not backed by an exchange clearing house. Credit risk associated with the Plan is regularly monitored and analyzed through risk and credit committees.

### Fixed income

The Plan's Fixed Income Program includes two main sectors: the Government Sector and the Corporate Sector. One benefit to managing these two pieces separately is to provide the opportunity to access physical government bonds when required. When markets are at their utmost distress these may be the only securities available for liquidation. Managing the Corporate Sector and the Government Sector separately allows for the adjustment of credit risk within the Fixed Income Program by changing the allocation between these two sectors - increasing the Government Sector through periods of market duress and increasing the Corporate Sector through periods of stability. This approach also allows the active management of the Corporate Sector and taking active decisions where returns can be maximized. In order to minimize the exposure to credit risk, a comprehensive investment policy has been developed. There were no significant concentrations of credit risk in the portfolio in 2022.

The fair values of the Plan's fixed income investments exposed to credit risk are categorized in the following table as at March 31:

	2022	2021
(in thousands of dollars)		
<b>Fixed income</b>		
<b>Canadian</b>		
Governments	\$ 341,989	\$ 557,616
Corporate	160,552	206,832
<b>Non-Canadian</b>		
Governments	20,036	57,341
Corporate	864,282	1,013,080
	\$ 1,386,859	\$ 1,834,869
<b>Pooled funds</b>	802,182	575,564
<b>Total fixed income</b>	\$ 2,189,041	\$ 2,410,433

## Financial instruments (continued)

### Derivatives

The Plan is exposed to credit-related losses in the event counterparties fail to meet their payment obligations upon maturity of derivative contracts. The Plan limits derivative contract risk by dealing with counterparties that have a minimum “A” credit rating. In order to mitigate this risk, the Fund:

- i. Deals only with highly rated counterparties, with whom International Swap and Derivative Association agreements have been executed, normally major financial institutions with a minimum credit standard of “A” rating, as supported by a recognized credit rating agency; and
- ii. Credit risk represents the maximum amount that would be at risk as at the reporting date if the counterparties failed completely to perform under the contracts, and if the right of offset proved to be non-enforceable. Credit risk exposure on derivative contracts is represented by the receivable replacement cost of contracts with counterparties, less any prepayment collateral or margin received, as at the reporting date.

### Securities lending

The Plan engages in securities lending to enhance portfolio returns (see note 13). Through a securities lending program at the Plan’s custodian, the Plan lends securities for a fee to approved borrowers. Credit risk associated with securities lending is mitigated by requiring the borrowers to provide high quality collateral. In the event that a borrower defaults completely or in part, the custodian will replace the security at its expense. Regular reporting of the securities lending program ensures that its various components are continuously being monitored.

### iv. Foreign currency risk

Foreign currency risk is the risk that the value of future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Plan primarily invests in financial instruments and enters into transactions denominated in various foreign currencies, other than its measurement currency. Consequently, the Plan is exposed to risk that the exchange rates of the various currencies may change in a manner that has an adverse effect on the value of the portion of the Plan’s investment and non-investment assets or liabilities denominated in currencies other than the Canadian dollar. Foreign currency risk is hedged by using foreign exchange forward contracts. A policy of hedging up to 100% of the currency exposure helps to mitigate this risk.

The Plan’s currency policy allows for the management of risk of investment and non-investment assets and liabilities held in the Fund through hedging strategies that are implemented through the purchase of forward currency contracts. The forward currency contracts offset the Plan’s foreign currency exposure, hence reducing the Plan’s foreign currency risk.



## Financial Instruments (continued)

The Plan's investment and non-investment assets and liabilities that are held in the Fund are represented as unhedged and hedged currency exposures as at March 31 in the following table:

March 31, 2022		
(in thousands of dollars)	Unhedged	Hedged
<b>Summary FX exposure</b>		
Canadian dollar	\$ 2,708,122	\$ 5,309,631
United States dollar	4,024,713	2,103,189
Euro	267,877	(104,642)
British pound sterling	145,805	10,941
Japanese yen	96,786	96,622
Other	153,165	30,287
	<b>\$ 7,396,468</b>	<b>\$ 7,446,028</b>

March 31, 2021		
(in thousands of dollars)	Unhedged	Hedged
<b>Summary FX exposure</b>		
Canadian dollar	\$ 2,958,442	\$ 5,752,932
United States dollar	3,551,619	1,675,096
Euro	263,913	(193,205)
British pound sterling	142,005	(38,563)
Japanese yen	104,608	51,425
Other	161,152	(15,852)
	<b>\$ 7,181,739</b>	<b>\$ 7,231,833</b>

After the effect of hedging, and without change in all other variables, a ten percent increase (decrease) in the Canadian dollar against all other currencies would (decrease) increase the fair value of the Plan's investment and non-investment assets and liabilities held in the Fund, respectively.

## Financial instruments (continued)

The following table below represents these changes in the Plan's investment and non-investment assets and liabilities held in the Fund as at March 31:

	2022	2021
(in thousands of dollars)		
<b>Fund assets and liabilities</b>	<b>\$ 7,446,029</b>	<b>\$ 7,231,832</b>
10% increase in Canadian dollar	(194,218)	(134,445)
<b>Fund assets and liabilities after increase</b>	<b>\$ 7,251,811</b>	<b>\$ 7,097,387</b>
10% decrease in Canadian dollar	237,378	164,322
<b>Fund assets and liabilities after decrease</b>	<b>\$ 7,683,407</b>	<b>\$ 7,396,154</b>

### v. Liquidity risk

Liquidity risk is the risk that the Plan does not have sufficient cash to meet its current payment liabilities and acquire investments in a timely and cost-effective manner. Liquidity risk is inherent in the Plan's operations and can be impacted by a range of situation specific and market-wide events including, but not limited to, credit events and significant movements in the market. Cash obligations are fulfilled from contributions to the Plan, cash income of the Plan and planned dispositions of Plan assets as required. Cash requirements of the Plan are reviewed on an ongoing basis to provide for the orderly availability of resources to meet the financial obligations of the Plan. The Plan's cash management policy ensures that the quality and liquidity of the investment vehicles within the cash portfolios are consistent with the needs of the Plan.

Approximately 29.9% (2021 - 39.0%) of the Plan's investments are in liquid securities traded in public markets, consisting of fixed income and equities. Pooled funds consisting of exchange traded equities are approximately 25.3% (2021 - 24.4%) of the Plan's investments and are liquid within 30 days or less. Although market events could lead to some investments becoming illiquid, the diversity of the Plan's portfolio should ensure that liquidity is available for benefit payments. The Plan also maintains cash on hand for liquidity purposes and for payment of Plan liabilities. At March 31, 2022, the Plan had cash in the amount of \$198,503 (2021 - \$176,654).

## Financial instruments (continued)

### vi. COVID-19

On March 11, 2020, the outbreak of the novel strain of coronavirus, specifically identified as “COVID-19”, was classified as a global pandemic, which has resulted in governments enacting emergency measures to combat the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods and social distancing, have caused material disruption to business globally resulting in an economic slowdown. Global equity and capital markets have also experienced significant volatility and weakness. Governments have reacted with significant monetary and fiscal interventions designed to stabilize economic conditions. The duration and impact of the COVID-19 pandemic is unknown currently, as is the efficacy of the government’s interventions. The Plan’s administrator has implemented procedures in response to the COVID-19 pandemic, including employee education, monitoring of symptoms, increased sanitation practices, as well as employees working remotely when possible. The duration of the outbreak and economic impacts are uncertain and there may be impacts in the future on the Plan’s operations.

## 7.

### Purchases of service via instalments

The purchases of services via instalments of \$nil as at March 31, 2022 (2021 - \$75) represents the present value of outstanding employee and employer contributions that is due as a result of service purchases that are being paid for through payroll deductions. The liabilities associated with this service are already recognized in the accrued pension benefit obligation.

## 8.

### Universities, municipalities & other authorities pension plan transfers

On May 4, 2015, the *University Pension Plan Transfer Act* (Bill No. 102) was proclaimed to facilitate the transfer of university pension plans to the Plan and on November 9, 2016, the *Municipalities and Other Authorities Pension Plan Transfer Act* (Bill No. 55) was also proclaimed to facilitate the transfer of pension plans of municipalities and other authorities to the Plan.

Both the University Pension Plan Transfer Act and the Municipalities and Other Authorities Pension Plan Transfer Act allow the Trustee to enter into an agreement with a university, municipality or other authority to transfer, in whole or in part, assets and liabilities of a designated plan to the Plan and to allow the members, the survivors of the members, the post-transfer employees of the transferring party and the survivors of the post-transfer employees to participate in the Plan.

The Trustee’s guiding principle throughout this transfer process is that it must be beneficial to the long-term sustainability of the Plan and cost-neutral to the Plan and Plan members. A transfer to the Plan resulting in a deficit to the associated liability is recovered with interest owing from the transfer date.

# 9.

## Accrued pension obligation

### a. Actuarial assumptions

The actuarial present value of the accrued pension obligation is an estimate of the value of pension obligations of the Plan in respect of benefits accrued to date for all active and inactive members including pensioners and survivors. As the experience of the Plan unfolds, and as underlying conditions change over time, the actual value of accrued benefits payable in the future could be materially different than the actuarial present value.

Actuarial valuations of the Plan are conducted annually and provide an estimate of the accrued pension obligation (Plan liabilities) calculated using various economic and demographic assumptions, based on membership data as at the valuation date. The Plan's consulting actuaries, Mercer, performed a valuation as at December 31, 2021 and issued their report in June 2022. The report indicated that the Plan had a funding excess of \$143,512 (December 31, 2020 – deficit of \$156,497).

The actuarial valuation calculates liabilities for each member based on service earned to date and the employee's projected five-year highest average salary at the expected date of retirement or on the pension in pay, for retired members and survivors. The projected unit credit method was adopted for the actuarial valuation to determine the current service cost and actuarial liability. Under this method, the cost of providing benefits to an individual member will increase as the individual member ages and gets closer to retirement.

The assumed increases in the real rate of pensionable earnings (i.e. increase in excess of the assumed inflation rate) are dependent on the attained age of the members. These rates are based on recent experience of the Plan and current expectations for future years.

Demographic assumptions are used to estimate when future benefits are payable to members and beneficiaries, including assumptions about mortality rates, termination rates, and patterns of early retirement. Each of these assumptions is updated periodically, based on a detailed review of the experience of the Plan and on the expectations for future trends.

### Accrued pension obligation (continued)

The major economic and demographic assumptions used in the December 31 valuation were as follows:

	2022	2021
Discount rate	<b>5.25% per annum</b>	5.25% per annum
Inflation	<b>2.00% per annum</b>	2.00% per annum
Salary	<b>2.50% per annum plus merit ranging from 0.00% to 2.50%</b>	2.50% per annum plus merit ranging from 0.00% to 2.50%
Retirement age	<b>10% at age 59;</b> <b>20% at age 60;</b> <b>10% at each age 61-64;</b> <b>50% at each age 65-69;</b> <b>100% at age 70</b>  <b>However, 20% each year after EURD, if it is greater</b>  <b>40% at 35 years of service</b>	10% at age 59; 20% at age 60; 10% at each age 61-64; 50% at each age 65-69; 100% at age 70  However, 20% each year after EURD, if it is greater  40% at 35 years of service
Mortality	<b>120% of CPM 2014 Publ with generational mortality using 100% of CPM-B</b>	120% of CPM 2014 Publ with generational mortality using 100% of CPM-B

The accrued pension obligation as at March 31 is determined by an extrapolation performed by the Plan's actuary of the Plan's liabilities from December 31 of the immediately preceding calendar year, as reflected in the actuarial valuation. The following table reflects the extrapolated liability and funding deficit as at March 31:

	2022	2021
(in thousands of dollars)	Extrapolated	Extrapolated
Actuarial value of net assets	\$ 7,455,982	\$ 7,240,253
Accrued pension obligation	(7,588,411)	(7,414,946)
<b>Funding deficit</b>	<b>\$ (132,429)</b>	<b>\$ (174,693)</b>

## 10.

**Commitments**

The Plan has committed capital to investment in real estate and infrastructure over a definitive period of time. The future commitments are generally payable on demand based on the capital needs of the related investment. The table below indicates the capital amount committed and outstanding as at March 31, 2022.

<b>March 31, 2022</b>				
(in thousands of dollars)				
	Committed		Outstanding	
<b>Canadian dollar</b>				
Infrastructure	CAD	15,000	CAD	75
	CAD	15,000	CAD	75
<b>United States dollar</b>				
Infrastructure	USD	708,110	USD	167,865
Private equity		525,000		315,960
Real estate		25,000		4,445
Agriculture & timber		85,000		31,950
	USD	1,343,110	USD	520,220
<b>Euro</b>				
Infrastructure	EUR	65,000	EUR	51,917
Real estate		20,000		829
	EUR	85,000	EUR	52,746
<b>British pound sterling</b>				
Infrastructure	GBP	31,700	GBP	936
	GBP	31,700	GBP	936

## 11.

	2022	2021
(in thousands of dollars)		
Benefits paid to retired members	\$ 363,650	\$ 352,225
Benefits paid to surviving members	42,710	41,410
Refunds paid to terminated members	25,284	20,614
	\$ 431,644	\$ 414,249

## 12.

**Administrative Expenses**

The plan is charged by its service providers, including Nova Scotia Pension Services Corporation, a related entity, for professional and administrative services. The following is a summary of these administrative expenses.

	2022	2021
(in thousands of dollars)		
<b>Plan administration</b>		
Office and administration services	\$ 6,580	\$ 6,123
Actuarial & consulting services	190	146
Legal services	135	114
Audit services	48	59
Other professional services	91	76
	<b>7,044</b>	<b>6,518</b>
<b>Pension plan transfer-related costs</b>		
Professional services	309	479
Recovery (note 8)	(309)	(479)
	-	-
<b>Investment expenses</b>		
Investment management services	10,449	10,484
Transaction costs	435	567
Custody services	483	474
Advisory & consulting services	288	378
Information services	215	216
	<b>11,870</b>	<b>12,119</b>
<b>Bad debt</b>	<b>3</b>	<b>13</b>
<b>HST</b>	<b>1,820</b>	<b>1,761</b>
	<b>\$ 20,737</b>	<b>\$ 20,411</b>

Investment management and performance fees included in the unrealized gains/(losses) on investment vehicles consisting of pooled funds, limited partnerships and holding companies are estimated at \$41,247 (2021 - \$42,085) using financial statements and or investor statements where available, and when not available, estimates based on investment management contracts. These fees are not direct expenses of the Plan and therefore are not included in administrative expenses.

## 13.

**Securities lending**

The Plan participates in a securities lending program where it lends securities that it owns to third parties for a fee. For securities lent, the Plan receives a fee, and the borrower provides readily marketable securities of higher value as collateral which mitigates the credit risk associated with the program. When the Plan lends securities, the risk of failure by the borrower to return the loaned securities is alleviated by such loans being continually collateralized. The securities lending agent also provides indemnification if there is a shortfall between collateral and the lent security that cannot be recovered. The securities lending contracts are collateralized by securities issued by, or guaranteed without any limitation or qualification by, the Government of Canada or the governments of other countries.

The following table represents the estimated fair value of securities that were loaned out and the related collateral as at March 31:

	2022	2021
(in thousands of dollars)		
Securities on loan	\$ 308,706	\$ 329,670
Collateral held	\$ 333,458	\$ 356,428

## 14.

**Related party transactions**

Investments held by the Plan include debentures of the Province of Nova Scotia. The total fair value of these investments is \$7,168 (0.01% of total investment assets and liabilities) as at March 31, 2022 (2021 - \$12,534 (0.2% of total investment assets and liabilities)).

The Plan's administrator, Nova Scotia Pension Services Corporation, an entity co-owned by Teachers' Pension Plan Trustee Inc. and Public Service Superannuation Plan Trustee Inc. for the purpose of providing pension plan administration and investment services, charges the Plan, at cost, an amount equal to the expenses incurred in order to service the Plan. The administration expense charged to the Plan before HST for the year ending March 31, 2022 was \$7,033 (2021 - \$6,867). The amount due to the administrator as at March 31, 2022 was \$1,370 (2021 - \$2,714).



## 15.

**Interest in subsidiaries**

The Plan's subsidiaries were created for the purposes of providing investment earnings from US equities, private equities, real estate, and infrastructure. The Plan's subsidiaries are presented on a non-consolidated basis. The following table shows the fair values of the Plan's subsidiaries as at March 31:

			2022	2021
(in thousands of dollars)				
Subsidiary	Purpose	Ownership %	Fair value	Fair value
PSS Investments RE Inc.	Real estate	100	\$ 545,089	\$ 480,516
NT Combined Investments Inc.	US equities	53	369,109	455,293
PSS Investments AI Inc.	Private equities	100	296,047	211,833
PSS Investments II Inc.	Real estate	100	231,561	195,254
PSS Investments CS Inc.	Infrastructure	100	185,307	193,498
PSS Investments BR Inc.	Infrastructure	100	86,839	19,878
PSS Investments AX Inc.	Infrastructure	100	57,610	54,843
PSS Investments ES Inc.	Real estate	100	39,971	39,227
PSS Investments IV Inc.	Infrastructure	100	37,664	60,015
HV Combined Investments Inc.	Hedge funds	63	37,097	41,666
PSS Investments III Inc.	Infrastructure	100	25,783	24,217
PSS Investments MU Inc.	Infrastructure	100	21,178	-
PSS Investments AC Inc.	Infrastructure	100	12,864	12,427
PSS Investments KA Inc.	Infrastructure	100	11,437	7,488
PSS Investments CS II Inc.	Infrastructure	100	11	18
			\$ 1,957,567	\$ 1,796,173

The Plan either has 100% controlling interest or significant influence over its subsidiaries' cash flows. Funding is made via capital investment from the Plan. Certain subsidiaries have commitments that must be funded directly through capital investment by the Plan. These amounts are included in the Plan's commitments (note 10). Financing is provided as required via shareholder loan and is payable on demand to the Plan.

# 16.

## Capital management

The main objective of the Plan is to sustain a certain level of net assets in order to meet the Plan's pension obligations. The PSSPTI (note 1) manages the contributions and benefits as required by the Act and its related Regulations. The PSSPTI approves and incurs expenses to administer the commerce of the Plan in accordance with the Act.

Under the direction of the PSSPTI, the Plan provides for the short term financial needs of current benefit payments while investing members' contributions for the longer-term security of pensioner payments. The PSSPTI exercises duly diligent practices and has established written investment policies and procedures, and approval processes. Operating budgets, audited financial statements, yearly actuarial valuations and reports, and as required, the retention of supplementary professional, technical and other advisors, are part of the Plan's governance structure.

The Plan fulfils its primary objective by adhering to specific investment policies outlined in its SIP&G, which is reviewed annually by PSSPTI. The Plan manages net assets by engaging knowledgeable investment managers who are charged with the responsibility of investing existing funds and new funds (current year's employee and employer contributions) in accordance with the SIP&G. Increases in net assets are a direct result of investment income generated by investments held by the Plan and contributions into the Plan by eligible employees and participating employers. The main use of net assets is for benefit payments to eligible Plan members.

# Glossary

**Absolute Return Strategies:** An investment strategy which focuses on generating positive returns in rising and falling capital markets.

**Actuarial assumed rate of return:** The long term rate of return assumed by the Plan's external actuary in determining the value of the Plan's *liabilities*. Also, referred to as the Discount Rate.

**Asset(s):** Financial and real items owned by the Plan which have a monetary value, including cash, stocks, bonds, real estate, etc.

**Asset mix:** The allocation of funds to be used for investment purposes between different types of *assets*, including cash, stocks, bonds, real estate, etc.

**Benchmark:** A standard against which the performance of the Plan's *return on investment* can be measured.

**Commodities:** A commodity is a basic good used in commerce that is interchangeable with other *commodities* of the same type. *Commodities* are most often used as inputs in the production of other goods or services. The quality of a given commodity may differ slightly, but it is essentially uniform across producers.

**Equity(ies):** Common or preferred stock representing ownership in a company.

**Fixed Income:** *Assets* that generate a predictable stream of interest such as bonds and debentures.

**Funded ratio:** A ratio of the Plan's *assets* to *liabilities*, expressed as a percentage. A ratio above 100 per cent indicates that the Plan has more *assets* than required to fund its future estimated *liabilities*.

**Gross of investment management fees:** Refers to the fact that the *return on investment* is reported before the deduction of management fees.

**Liabilities:** An estimate of the current value of future obligations of the Plan as a result of retirement commitments made to past, current, and future employees.


**Net of investment management fees:** Refers to the fact that the *return on investment* includes investment management fees.


**Real Assets:** Physical real estate, infrastructure and commodity *assets* such as apartments, bridges, tolls, gold and farmland that are invested in either directly or through pooled vehicles.

**Return on investment(s):** A performance measure used to evaluate the efficiency of the Plan's investments, expressed as a percentage gain or loss on the initial investment at the beginning of the period.



NS Pension contact information:



 1-800-774-5070 (toll free)  
902-424-5070

 Purdy's Wharf, Tower 2, Suite 700,  
1969 Upper Water St., Halifax, NS  
B3J 3R7

 [info@nspension.ca](mailto:info@nspension.ca)

 PO Box 371 Halifax NS B3J 2P8

 [www.novascotiapension.ca](http://www.novascotiapension.ca)  
[www.nspssp.ca](http://www.nspssp.ca)

 [@yourNSPSSP](https://twitter.com/yourNSPSSP)  
 [www.facebook.com/yourNSPSSP](https://www.facebook.com/yourNSPSSP)

**pension**

*All information presented in this document is premised on the Plan rules and criteria which currently exist under the Public Service Superannuation Act (the "PSSA") and the plan text made thereunder. This document explains in plain language aspects of the rules and criteria of the Plan. Plan members, beneficiaries, and others who wish to determine their legal rights and obligations under the Plan should refer to the PSSA, the plan text, or other legal documents as appropriate. In the event of a discrepancy between the information provided in this document and the legislation and/or legal documents, the latter takes precedence.*

PSSP