



**Nova Scotia Public Service  
Long Term Disability Plan  
Trust Fund**

Actuarial Valuation as at  
December 31, 2022



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# Executive Summary

This report has been prepared for the Trustees of the Nova Scotia Public Service Long-term Disability Plan Trust Fund (the Plan). The Board has retained HUB International to perform an actuarial valuation of the Plan as at December 31, 2022.

The results of the valuation are summarized below.

## Funding Position as at Dec. 31, 2022

	Amount
Benefit liabilities	\$114,374,000
Net assets available for benefits	\$151,069,000
Funding margin	\$36,695,000
Funded Ratio	132.1%

The Plan's benefit liabilities have been calculated using a discount rate of 4.25%. The liabilities include both active claims as of the valuation date as well as a reserve for claims that were incurred but not yet reported (IBNR) as of the valuation date. Our total liability also includes a liability for claims related administrative expenses of 8.0% of total future benefit payments.

The Plan's funding margin of \$36,695,000 represents a \$21,420,000 decrease in funding margin at the last valuation (December 31, 2020). The following factors contributed to the decrease:

- Investment returns in 2021 and 2022 lower than expected resulted in a decrease in funding margin of \$18.6 million;
- Increase in claims experience greater than expected, resulting in a decrease in funding margin of \$18.6 million; and
- A change in actuarial assumptions, resulting in an increase to the funded position of \$26.3 million.
  - Change in discount rate to 4.25% from 2.50% resulting in an increase of \$12.1 million
  - Change in termination assumption to reflect recent actuarial tables and plan experience resulting in an increase of \$12.1 million; and
  - Decrease in expense assumption to reflect the growth of claim payments relative to expenses under the Plan resulting in an increase of \$2.1 million.

While it is not reflected in our calculation of the actuarial liabilities, we have also provided an analysis of the cost of ad hoc indexing for January 1, 2024 and January 1, 2025. When granted, ad hoc indexing is calculated based on the year-over-year change in Consumer Price Index (CPI) for Canada from November to October. Based on our inflation assumption of 2.50%, the present value of the cost of this ad hoc indexing is \$3.8 million.

We have estimated the cost of new claims as \$25,854,000. This calculation is based on the Plan's actual experience over the most recent 5 calendar years (2018 to 2022).



# Purpose of the Valuation

This report has been prepared for the Trustees of the Nova Scotia Public Service Long-term Disability Plan Trust Fund (the Plan). The Trustees have retained HUB International to perform an actuarial valuation of the Plan as at December 31, 2022. The previous actuarial valuation of the Plan was completed as at December 31, 2020.

The purposes of this actuarial valuation are:

- To determine the funded status of the Plan's claims and administrative expenses as at December 31, 2022, on a going-concern basis;
- To report the cause(s) of change from the previous to the current valuation;
- To estimate the cost of new claims going forward;
- To calculate inputs required to assess the Plan's contribution rates in accordance with the Plan's funding policy.

Other than potential ad hoc indexing, which has not yet been approved by the trustees, we are not aware of any subsequent events that may affect the results of this valuation.

Certain results from the actuarial valuation will also be used for financial reporting purposes by the Plan in accordance with its accounting standards.

# 1. Membership Data

## Disabled Members – Active Claims

Manulife is the Plan's disability claims paying agent. Manulife provided a database of in-force claims which includes both benefit and offset amounts as of December 31, 2022 on February 28, 2023. Our December 31, 2022 valuation results for active claims (presented in Section 4) are based on this data.

The data is produced by their internal systems and has not been audited prior to the valuation. As such, we performed reasonability tests on the active claims data, as deemed appropriate under the circumstances, to satisfy ourselves that the data was sufficient and reliable for the purposes of the valuation. No changes were made to the data as a result of these tests.

The Plan implemented a 6% cost of living adjustment, effective January 1, 2023, for claims that were beyond their change in definition. This 6% increase was not yet reflected in the data. As such, we increased the net benefit payable by 6% for all claims with a change in definition date of December 31, 2022, or earlier.

## Disabled Members – Historical Payment Data

Manulife also provided a list of actual claim payments, by claimant, for calendar years 2013 to 2022. This data was used to calculate the actual cost of claims by disability year and to calculate a projected expected cost of new claims.

At December 31, 2022, there were 688 active LTD claims, an increase of 65 from the 633 claims reported in the December 31, 2020 valuation. Claims data at the current and previous valuation dates are summarized in the table below:

	December 31, 2020	December 31, 2022
Number of active claims	633	688
Average attained age	54.7	54.4
Average age disabled	47.8	48.1
Average net benefit (monthly)	\$2,631.17	\$2,899.35
Average duration of claim	6.9 years	6.3 years

## 2. Plan Assets

The following table shows the progress of the fund (in \$1,000s) as of December 31, 2022 since December 31, 2020. This data is reported to us by the Plan's external auditor.

	2021	2022
<b>Net Assets at beginning of period</b>	<b>\$174,274,000</b>	<b>\$171,339,000</b>
<b>Income</b>		
Contributions	\$15,776,000	\$16,908,000
EI rebate	\$1,208,000	\$2,308,000
Investments	\$3,374,000	(\$14,361,000)
<b>Total income</b>	<b>\$20,359,000</b>	<b>\$4,585,000</b>
<b>Expenditure</b>		
Net benefits paid	\$20,756,000	\$22,307,000
Program administration	\$1,319,000	\$1,368,000
Administrative expenses	\$750,000	\$752,000
Investment expense	\$469,000	\$428,000
<b>Total expenditure</b>	<b>\$23,293,000</b>	<b>\$24,856,000</b>
<b>Net assets at end of period</b>	<b>\$171,339,000</b>	<b>\$151,069,000</b>

# 3. Actuarial Assumptions and Methods

The Plan's liabilities are valued on a going concern basis. For this valuation, it is necessary to make certain assumptions that affect these liabilities in the future. Emerging experience, differing from the assumptions, will result in gains or losses that will be revealed in future valuations. These factors and assumptions form the actuarial basis and are described below.

## Assumptions

### Discount Rate

The Plan invests assets in two portfolios: a liability-hedging portfolio that is invested 100% in fixed income assets, and a balanced portfolio, which includes an allocation to equities. Based on the expected returns of the combined portfolios, we have used a discount rate of 4.25%<sup>1</sup> per annum for the current valuation. This rate is net of expected investment expenses. This change in this assumption resulted in a reduction to the liability of approximately \$12,108,000.

For further detail regarding the analysis of the valuation discount rate, please see Appendix C.

### Inflation

We have assumed a rate of inflation of 2.50%. This is an increase from the 2.00% used in the previous valuation.

### Expenses

Based on a review of actual expenses as a percent of net benefit payments, we have assumed an expense load of 8.0% in the calculation of actuarial liabilities. This is a reduction from the 10% used at the prior valuation. This change in assumption resulted in a reduction to the liability of \$2,118,000. Investment expenses are excluded from this analysis and accounted for in the discount rate.

For the calculation of cost of new claims, we have maintained an expense load of 10.0%.

### Benefit Amount

The future benefits for current LTD claimants are based on each member's gross benefit and offsets as at the date of the data file (December 31, 2022).

For claims incurred on or after January 1, 2009, benefit is assumed to change from 65% to 70% of pre-disability earnings in month 41. Claims in month 41 (or beyond) are assumed to reflect a 70% benefit.

We have maintained the CPP approval assumption from the previous valuation and have set out the assumed proportion of approved claims in the table below.

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<sup>1</sup> A 1.0% decrease to the discount rate results in a 5.0% increase to the liability.

## Proportion of Active Claims Approved for CPP Disability Benefits

Months from disability	Age at disability
4–12	0%
13–24	20%
25–36	50%
37–48	75%
49+	90%

We have also assumed that future CPP recipients will be awarded a maximum of 12 months of retroactive CPP benefits. This assumption is maintained from the previous valuation.

Future CPP offsets are estimated as \$1,143 based on the average non-zero CPP offset for active claims for disability years 2018 to 2022.

## Claims Termination

It has been assumed that disabled members will terminate from claim based on a modification of the 2019 CIA Group Long-Term Disability (19GLTD) Tables (Rest of Canada) for a four-month elimination period. The 19GLTD tables provide termination rates based on sex, age at disability, and time on claim (duration) based on industry experience from 2009 -2015. The modification applied for the purposes of this valuation involves multiplying a factor by the base termination rates in the 19GLTD tables.

The termination rates used in the current valuation are based on a study performed as of December 31, 2022. The results of the study are outlined in the following table.

### % Adjustment to 19GLTD Table

Months from disability	Female			Male		
	13–22 Actual %	18–22 Actual %	2022 Valuation Basis %	13–22 Actual %	13–22 Actual %	2022 Valuation Basis %
4–12	53	51	50	63	59	60
13–24	91	87	85	82	74	75
25–36	102	110	105	110	118	100
37–48	122	138	110	189	167	130
49–60	128	124	100	218	145	100
61+			100			100

Due to limited exposure, we have assumed 100% of the underlying table for durations 61 and beyond.

The previous claims termination assumption was based on the 2011 CIA Group Long-Term Disability study, adjusted for plan experience according to the following table:

Months from disability	Previous assumption (all claims)
4–12	75%
13–24	105%
25–36	105%
37+	75%

The change in termination assumption resulted in a reduction to the liability of \$12,081,000.



## Ad Hoc Indexation

Other than the cost of potential ad hoc indexing calculated in Appendix D, we have assumed no cost-of-living adjustment in the calculation of reported actuarial liabilities.

## Termination Age

We have maintained the termination age assumptions from the previous valuation. The termination age assumption is set out in the table below.

Cohort	2022 assumption
Pre-May 2002	Age 63 unless over 63 at valuation date, in which case age 65
May 2002 to Dec 2008	Age 60
Post 2008	Age 63 or 2 years a benefits

## Actuarial Valuation Method

### Active Claimants

A liability was calculated for each disabled member in receipt of benefits (as at the valuation date) as the present value of future benefits until retirement, based on the assumptions described above. As outlined below, we have used a number of approximations in the calculation of these present values:

- Claims termination rates are based on monthly factors and the duration for each claimant is rounded to the nearest month; and
- The GLTD tables include termination rates for only nine ages at disability (i.e., 22, 27, 32, 37, 42, 47, 52, 57, and 62). We have assumed that these rates would be applied for each claimant in the corresponding quinquennial age brackets; therefore, the termination rates for ages 30–34 are based on the GLTD rates for age 32, etc.

### Estimated Cost of New Claims

We estimate the cost of new claims using five years of actual experience (2018 through 2022). For this calculation, we obtained the actual payments made by claimant and by plan year from January 1, 2018 to December 31, 2022 and combined it with the actuarial liabilities as at December 31, 2022. For disabilities occurring in fiscal year 2022, the liability figure included an IBNR.

In order to estimate the cost of new claims for each fiscal year of disability, we discounted all payments and actuarial liabilities to the mid-point of year of disability, assuming that claims incurred on average halfway through the year. The total cost for each year of claims is then compared to the payroll for that disability year to calculate cost of claims rate (i.e. breakeven rate). The projected rate of new claims is then calculated as the average of total costs as a percentage of total estimated payroll for the full 5 years. The results of this calculation are set out in the table below.



Disability Year	Breakeven Rate	Applied to 2023 Estimated Payroll
2018 breakeven	2.47%	\$28,120,000
2019 breakeven	2.78%	\$31,673,000
2020 breakeven	2.19%	\$24,963,000
2021 breakeven	2.06%	\$23,477,000
2022 breakeven	1.94%	\$22,078,000
<b>2023 Projected (5yr avg)</b>	<b>2.27%</b>	<b>\$25,854,000</b>

We have not adjusted the above experience for any potential impact of the COVID-19 pandemic.

Our estimated cost of new claims for 2023 is \$25,854,000. To estimate the cost of new claims, we have applied the projected rate (2.27%) to 2022 payroll (increased by 6% to reflect the Jan 1, 2023 pay increase). Payroll for 2022 is estimated to be \$1,074,479,000 based on remittance data from December 2022.

### Incurred but Not Reported (IBNR) Reserve

We have established a liability for IBNR claims which is intended to estimate the cost for claimants who were disabled at the valuation date but were not on the valuation file.

We established an IBNR assumption of \$11,414,000 which is calculated as  $20/52 * 12 + 1 = 5.6154$  months (or 46.79%) of 2.27% multiplied by the 2022 payroll presented above.

# 4. Financial Position

## Summary of Funded Position

	2020	2022
Future LTD payments	\$95,299,000	\$94,489,000
IBNR	\$10,300,000	\$11,414,000
Expense	\$10,560,000	\$8,472,000
<b>Total liability</b>	<b>\$116,159,000</b>	<b>\$114,374,000</b>
<b>Net assets available for benefits</b>	<b>\$174,274,000</b>	<b>\$151,069,000</b>
<i>Funding margin</i>	<i>\$58,115,000</i>	<i>\$36,695,000</i>
<i>Funded ratio</i>	<i>150.0%</i>	<i>132.1%</i>

The current funding margin of \$36,695 represents a decrease of \$21,420 from funding margin reported in the previous valuation report.

## Summary of Gain/(Loss)

	2022	Change
Liability at December 31, 2020	\$116,159,000	-
Liability at December 31, 2022	\$140,681,000	\$24,522,000
- New data, prior assumptions		
- Change in discount rate	\$128,573,000	(\$12,108,000)
- New termination assumptions	\$116,492,000	(\$12,081,000)
- New expense assumption	\$114,374,000	(\$2,118,000)

# 5. Reconciliation

## Reconciliation of Net Assets

	2021	2022
Net assets at beginning of period	<b>\$174,274,000</b>	<b>\$171,339,000</b>
Contributions	\$15,776,000	\$16,908,000
El rebate	\$1,208,000	\$2,038,000
Interest on assets	\$4,278,000	\$4,210,000
Net benefits paid	(\$20,756,000)	(\$22,307,000)
Expenses paid	(\$2,537,000)	(\$2,549,000)
Investment gain/(loss)	(\$904,000)	(\$18,571,000)
Net assets at end of period	<b>\$171,339,000</b>	<b>\$151,069,000</b>

## Reconciliation of Liabilities

	2021	2022
Liability at beginning of period	<b>\$116,159,000</b>	<b>\$119,233,000</b>
Interest on liability	\$2,906,000	\$2,979,000
Benefits accrued	\$23,000,000	\$24,391,000
Net benefits paid	(\$20,756,000)	(\$22,307,000)
Expense assumption release	(\$2,076,000)	(\$2,231,000)
Experience (gain)/loss	-	\$18,615,000
Change in actuarial assumptions	-	(\$26,306,000)
Liability at end of period	<b>\$119,233,000</b>	<b>\$114,374,000</b>

## Reconciliation of Funded Position

	2021	2022
Margin at beginning of period	<b>\$58,115,000</b>	<b>\$52,106,000</b>
Expected margin	\$53,010,000	\$47,574,000
Investment gain/(loss)	(\$904,000)	(\$18,571,000)
Claims experience gain/(loss)	-	(\$18,615,000)
Change in actuarial assumptions	-	\$26,306,000
Margin at end of period	<b>\$52,106,000</b>	<b>\$36,695,000</b>

## 6. Statement of Actuarial Opinion

In respect of the Nova Scotia Public Service Long Term Disability Plan, I state that in my opinion:

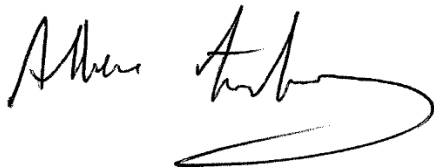
- As at December 31, 2022, the Plan has an actuarial liability of \$114.374 million and a funding margin of \$36.695 million calculated on a 4.25% discount rate;
- The data on which the valuation is based is sufficient and reliable for the purpose of the valuation;
- The assumptions made for the purpose of the valuation are, in aggregate, adequate and appropriate for the purpose of this report at the time the report was prepared; and
- The valuation methods employed are consistent with sound actuarial principles and appropriate for the purposes of this report.

This report has been prepared, and opinions given, in accordance with accepted actuarial practice.

The undersigned is available to respond to any comments or questions regarding this report.

Respectfully submitted,

## HUB International



Allen Furlong, F.S.A., F.C.I.A.

Associate Vice-President

April 19, 2023

# Appendix A - Summary of Plan Provisions

The following is a summary of the provisions of the Plan.

## Eligibility and Level of Benefit

In order to qualify for LTD benefits, an employee must first be disabled to the extent of being unable to perform the regular duties of his occupation for 100 consecutive workdays. Following completion of this elimination period an employee will be eligible to receive LTD benefits in accordance with the applicable Plan terms.

### Before May 1, 2002:

- An employee will be eligible to receive LTD benefits for up to 30 months as long as he continues to be unable to perform his own occupation. Thereafter, an employee continues to be eligible for LTD benefits, but not beyond age 65, provided he is unable to perform the duties of any occupation for which the employee is or may become suited through education, training, experience or rehabilitation, which occupation pays not less than 80% of the current rate of the position, class and step he held immediately prior to disability.
- The bi-weekly LTD benefit is 70% of the employee's salary at time of disability, to a maximum of \$2,000.

### On or after May 1, 2002 and prior to January 1, 2009:

- An employee will be eligible to receive LTD benefits for up to 24 months as long as he continues to be unable to perform his own occupation. Thereafter, an employee continues to be eligible for LTD benefits until age 60, or until they attain 35 years of pensionable service, whichever is earlier, provided he is unable to perform the duties of any occupation for which the employee is or may become suited through education, training, experience or rehabilitation, which occupation pays not less than 75% of the current rate of the position, class and step he held immediately prior to disability.
- The bi-weekly LTD benefit is 65% of the employee's salary at time of disability, to a maximum of \$3,000.

### On or after January 1, 2009:

- And the claimant's elimination period ends before or on the day they turn 63 years, the benefit will cease at age 65 or the attainment of 35 years of pensionable service, whichever is earlier.
- And the claimant's elimination period ends after they turn 63 years, the benefit will cease 2 years after the end of the elimination period or the attainment of 35 years of pensionable service, whichever is earlier.
- An employee will be eligible to receive LTD benefits for up to 24 months as long as he continues to be unable to perform his own occupation. Thereafter, an employee continues to be eligible for LTD benefits provided he is unable to perform the duties of

any occupation for which the employee is or may become suited through education, training, experience or rehabilitation, which occupation pays not less than 75% of the current rate of the position, class and step he held immediately prior to disability.

- The bi-weekly LTD benefit is 65% of the employee's salary at time of disability, to a maximum of \$4,375, for the first three years of benefits, and thereafter 70% of the employee's salary at the time of disability, to a maximum of \$4,711.54

## Benefit Offsets

The benefits are reduced by:

- (1) the amount of disability benefit entitlement, excluding children's benefits, under the Canada Pension Plan at the date of disability;
- (2) the amount of benefits payable from any other group disability plan or pension plan, sponsored by the Employer;
- (3) 50% of the amount of income received from rehabilitative employment;
- (4) the amount of Workers' Compensation payments, except permanent partial disability awards;
- (5) the amount of benefits payable from any disability plan sponsored by any employer, since inception of this Plan;
- (6) the amount of benefits payable as a result of a disability which occurred at work and is deemed to be less than 70 percent compensable by the Workers' Compensation Board;
- (7) the amount of income received by an employee from self-employment as set out in guidelines made pursuant to this Plan;
- (8) the amount of earnings recovered through a legally enforceable cause of action against some other person or corporation.

## Termination of Benefits

Benefits terminate on the earliest of:

- (1) the date the employee returns to work;
- (2) the date the employee ceases to qualify for LTD benefits, as defined under the Plan;
- (3) death;
- (4) attainment of:
  - (a) age 65 for claims incurred before May 1, 2002,
  - (b) the earlier of attaining age 60 or 35 years of pensionable service for claims incurred after April 30, 2002 but before January 1, 2009, and
  - (c) the earlier of attaining age 65 and 35 years of pensionable service for claims incurred after December 31, 2008 and whose elimination period ends before or on the day the employee turns 63
  - (d) the earlier of 2 years of payment and attaining 35 years of pensionable service for claims incurred after December 31, 2008 and whose elimination period ends after the employee turns 63
- (5) upon the effective date of the employee's early retirement under the PSSP.

## Termination of Employee's Coverage

Termination of coverage for employees at work takes effect on the earliest of:

- (1) 100 working days prior to the end of the month in which the employee attains 35 years of pensionable service;
- (2) The date the employee occupies a position that is not eligible for coverage in accordance with the terms of the Plan;
- (3) The date of the employee's termination or retirement from service.

## Rehabilitation

The Plan makes provision for rehabilitation employment opportunities where deemed appropriate. For employees who qualify for rehabilitation employment, their LTD benefit will be reduced by 50% of their rehabilitation income for employees disabled prior to January 1, 2009 or disabled after December 31, 2008 and have been in receipt of benefit payments for less than 5 years, or reduced by 35% for employees disabled after December 31, 2008 who have been in receipt of benefit payments for more than 5 years. There is a further stipulation that where the total of LTD and any rehabilitation income exceeds the current rate of pay for the position and class held by the employee immediately prior to his date of disability, the LTD benefit shall be reduced in order that such total not exceed 100% of such rate of pay.



# Appendix B – Summary of Assumptions

Assumption	Description
<b>Discount rate</b>	4.25% compounded annually <i>(Previous assumption: 2.50%)</i>
<b>Expenses</b>	8.0% of liabilities  10.0% of benefit payments and liabilities (for rate setting) <i>(Previous assumption: 10.0% of liabilities)</i>
<b>IBNR</b>	20/52*12+1 months (or 46.79%) of expected annual cost based on 2022 payroll  <i>(Previous assumption: 110% of actual accumulated costs for most recent calendar year and 5% of actual accumulated costs for 2<sup>nd</sup> most recent calendar year)</i>
<b>Benefit indexing</b>	Nil  <i>(Previous assumption: accounted for pre-approved ad hoc indexing)</i>
<b>Benefit amount</b>	For claims incurred on or after January 1, 2009, benefit amount is assumed to change from 65% to 70% of pre-disability earnings in month 41. Claims already in month 41 (or beyond) are assumed to already reflect a 70% benefit.
<b>Termination from disability</b>	CIA's 19GLTD Basic Table adjusted for Plan experience. Adjustments are outlined below:

Months from disability	2022 valuation assumptions	
	Females (%)	Male (%)
4–12	50	60
13–24	85	75
25–36	105	100
37–48	110	130
49+	100	100

*(Previous assumption: CIA's 11GLTD Basic Table adjusted for Plan experience. Adjustments are outlined below:)*

Months from disability	2022 valuation assumptions
	All Claims (%)
4–12	75
13–24	105
25–36	105
37+	75

## CPP approval

CPP approval rates are based on duration of claim. Where CPP offsets are assumed, retroactive CPP offsets to a maximum of 12 months are applied. Assumed CPP offsets estimated as \$1,143 based on the average non-zero CPP offset for active claims for disability years 2018 to 2022.

The table below shows the proportion of claims assumed to be approved for CPP by duration of claim

Months from disability	Age at disability
	To age 55 (%)
4–12	0
13–24	20
25–36	50
37–48	75
49+	90

*(Previous assumption: no change)*

## Retirement Age

The table below illustrates assumed retirement ages by cohort

2022 assumption	
Pre May 2002	Age 63 unless over 63 at valuation date, in which case age 65
May 2002 to Dec 2008	Age 60
Post 2008	Age 63 or 2 years of benefits

*(Previous assumption: no change)*

# Appendix C – Analysis of Expected Future Returns

The Plan invests assets in two portfolios:

1. a liability-hedging portfolio that is invested 100% in fixed income assets, and
2. a balanced portfolio, which includes an allocation to equities.

Per the Board’s funding approach, the present value of expected future benefits is calculated using the expected rate of return on the Plan’s total assets (both portfolios combined) over an investment horizon of 10 to 15 years as the discount rate. The following table highlights factors in our analysis.

	Liability Hedging	Balanced	Combined
Proportion of assets	71.6%	28.4%	100.0%
Allocations			
• Cash & Short Term Index	10.0%	5.0%	8.6%
• Fixed Income Index	90.0%	40.0%	75.8%
• Canadian Equities	-	30.0%	85.5%
• U.S. Equities	-	12.5%	3.6%
• International Equities	-	12.5%	3.6%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

We then combine the allocations across both portfolios with expected returns by assets class. The expected returns are best estimate assumptions developed by HUB’s investment consulting practice. Expected returns by asset class are outlined in the table below.

	Liability Hedging	Balanced	Combined
Allocations			
• Cash & Short Term Index	2.75%	2.75%	2.75%
• Fixed Income Index	4.30%	4.30%	4.30%
• Canadian Equities	-	6.50%	6.50%
• U.S. Equities	-	6.50%	6.50%
• International Equities	-	7.70%	7.70%
<b>Total (Gross of Fees)</b>	<b>4.15%</b>	<b>5.58%</b>	<b>4.55%</b>
<b>Estimated Fees</b>	<b>(0.20%)</b>	<b>(0.45%)</b>	<b>(0.27%)</b>
<b>Total (Net of Fees)</b>	<b>3.95%</b>	<b>5.13%</b>	<b>4.28%</b>

Based on the expected split of Plan assets between the two portfolios, their individual strategic asset allocations, and expected future returns, we have selected a discount rate of 4.25% per annum for the current valuation. This rate is net of expected investment-related expenses for the Plan.

# Appendix D – Cost of Ad Hoc Indexing

While it is not reflected in our calculation of the actuarial liabilities, we have also provided an analysis of the cost of ad hoc indexing for January 1, 2024 and January 1, 2025. When granted, ad hoc indexing is calculated based on the year-over-year change in Consumer Price Index (CPI) for Canada from November to October. Based on our inflation assumption of 2.50%, the present value of the cost of this ad hoc indexing is \$3.8 million and illustrated in the table below.

	2022	2022 with Ad Hoc indexing of 2.50% for 2024 and 2025
Future LTD payments	\$94,489,000	\$97,980,000
IBNR	\$11,414,000	\$11,414,000
Expense	\$8,472,000	\$8,751,000
<b>Total liability</b>	<b>\$114,374,000</b>	<b>\$118,145,000</b>
<i>Change</i>		<b>+\$3,771,000</b>
<b>Net assets available for benefits</b>	<b>\$151,069,000</b>	<b>\$151,069,000</b>
<i>Funding margin</i>	\$36,695,000	\$32,924,000
<i>Funded ratio</i>	132.1%	127.9%

