

**Dalhousie University  
Staff Pension Plan**

**Report on the Actuarial Valuation  
as at June 30, 2025**

(Registration No. C242297)

**March 2026**

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## Summary of Results

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Going Concern Financial Position	
June 30, 2025	
Going concern value of assets	\$2,032,343
Going concern actuarial liabilities	(1,923,868)
Provision for adverse deviations ("PfAD")	(130,785)
Going concern excess / (unfunded actuarial liabilities)	(\$22,310)
Required PfAD	6.8%

Solvency Financial Position	
June 30, 2025	
Solvency assets	\$2,030,543
Solvency liabilities x 85% for measuring solvency deficiency	(1,578,905)
Solvency excess / (deficiency) excluding present value of special payments	\$451,638
Solvency concerns ratio	109.4%

Wind-up Financial Position	
June 30, 2025	
Wind-up assets	\$2,030,543
Total wind-up liabilities	(1,857,535)
Wind-up surplus / (deficiency)	\$173,008
Transfer ratio	109.4%

Funding Requirements (annualized)		
June 30, 2025		
	% of Payroll	\$
Estimated pensionable earnings		360,363
Total annual current service cost	15.78%	56,862
Employee regular contributions	6.08%	21,907
Employee supplementary contributions	1.37%	4,948
Employer matching regular contributions	6.08%	21,907
Balance of cost = employer "overmatching contribution"	2.25%	8,100
Employer contributions as a percentage of employee contributions	111.74%	
Total employer contributions in year following valuation		\$30,007
Minimum annual special payment towards amortization of unfunded actuarial liabilities (starting July 1, 2026)		\$3,194



## Section I Introduction and Purpose of Valuation

At the request of Dalhousie University, we have completed an actuarial valuation of the *Dalhousie University Staff Pension Plan* (the "Plan") as of June 30, 2025. The last actuarial valuation was performed as at January 31, 2023.

The purposes of this actuarial valuation are as follows:

- to determine the financial position of the Plan on going concern, solvency, and hypothetical wind-up bases;
- to establish the minimum and maximum contributions to the Plan until the next valuation; and
- to meet the statutory filing requirements under the Nova Scotia *Pension Benefits Act* (the "PBA") and the *Income Tax Act* (Canada).

In this report, we have first provided the valuation results, along with an actuarial opinion with recommended funding levels for use until the next valuation. The data, actuarial assumptions and methodology used in valuing both the assets and the actuarial liabilities are provided by way of appendices for ease of reference.

The intended users of this report are Dalhousie University, the Nova Scotia Superintendent of Pensions and the Canada Revenue Agency. This report is not intended or necessarily suitable for purposes other than those listed above. Any party reviewing this report for other purposes should have their own actuary or other qualified professional assist in their review to ensure that the party understands the assumptions, results and uncertainties inherent in our estimates.

The next valuation of the Plan must be completed as at a date no later than June 30, 2028.

### Terms of Engagement

For the purposes of this actuarial valuation report, the significant terms of engagement with Dalhousie University are:

- For the going concern, hypothetical wind-up and solvency valuations we have been directed to use the market value of assets adjusting for amounts in transit and amounts payable.
- In accordance with the PBA, an explicit Provision for Adverse Deviations (PfAD) has been added to the going concern liabilities. No margin for adverse deviations has been included in the going concern discount rate assumption.
- Plausible adverse scenarios are being applied to the going concern valuation.

The terms of our engagement are in accordance with applicable pension regulations and accepted actuarial practice in Canada.

## ***Reliance***

We have relied on the asset information in the financial statements provided by Dalhousie University. We have also relied on the Plan sponsor to provide all relevant data and to confirm the pertinent Plan terms.

## Section II Plan Changes and Subsequent Events

This pension plan is a “best average salary” defined benefit plan. This means that each Member’s retirement pension is calculated as a specified percentage of his or her average salary during the best three years of membership in the Plan.

The previous valuation was prepared as at January 30, 2023. Effective January 1, 2024, the Plan was amended to change the accrual rate from 2.0% to 1.8% on pensionable earnings below the Year’s Additional Maximum Pensionable Earnings (“YAMPE”) as defined under the Canada Pension Plan (“CPP”) in respect of pensionable service on or after January 1, 2024. In addition, the Plan was amended to change Member Supplementary Contributions from 2.0% to 1.11% on pensionable earnings up to the YAMPE. This amendment aimed to integrate the Plan with enhancements made to the CPP.

There have been no other amendments or changes to the Plan between the last actuarial valuation and this valuation effective June 30, 2025.

A detailed description of the current provisions of the Plan is contained in Appendix E, at the end of this report.

### **Actuarial Assumptions**

There have been a number of changes to the going concern assumptions since the last valuation. We have decreased the pre-retirement discount rate assumption to 6.50% from 6.60% used at the previous valuation to reflect the current expectation of the long-term rate of return. In respect of the post-retirement period, we have maintained the assumption used in the previous valuation for PTF liabilities and as specified in the Plan Rules, i.e., 4.55% per annum. This post-retirement interest rate incorporates some conservatism in that it includes (in accordance with plan rule 9(b)) a “holdback as a provision against life expectancy variations and other contingencies”. For RTF liabilities, the post-retirement interest rate is unchanged from the 5.05% per annum used for the prior valuation.

There has also been a change to the salary scale assumption. The prior valuation used a flat 2.75% per annum assumption plus merit/promotion table for periods on or after January 31, 2025. The current valuation is maintaining the 2.75% per annum assumption for the long-term but applying an additional 1.85% per annum for the first two years following the valuation to account for recent salary negotiations. Therefore, the June 30, 2025 salary scale assumption is 4.60% per annum for two years and 2.75% per annum thereafter, plus merit/promotion.

In April 2024, the CIA published a report on a Mortality Improvement Research Study Project, detailing a new Mortality Improvement Scale (MI-CAN-2024). For this valuation, the mortality improvement was modelled according to improvement scale MI-CAN-2024, with a long-term improvement rate of 1.3%. This is a change from the mortality improvement scale of CPM-B used in the prior valuation. The effect of this change is to reflect higher future rates of mortality improvement compared to CPM-B.

We have also updated the withdrawal rates assumption based on a review of recent experience completed in December 2025. The change in the withdrawal rates did not have a significant impact on the liabilities. See Appendix B for a complete description of the withdrawal rates used in the current valuation.

The impact of these assumption changes on the going concern liabilities is summarized in Section III.

All other assumptions used in the going concern valuation are the same as those used in the previous valuation.

The solvency assumptions have been updated to reflect market conditions as at the valuation date in accordance with the Canadian Institute of Actuaries' (CIA's) Standards of Practice and the CIA's Educational Note: Assumptions for Hypothetical Wind-up and Solvency Valuations with Effective Dates on or after June 30, 2025, and No Later Than June 29, 2026.

The actuarial assumptions used in the valuation are provided in Appendix B.

## **Subsequent Events**

The valuation reflects the financial position of the Plan on the valuation date and does not reflect any experience (investment, demographic, etc.) after that date.

We are not aware of events that occurred between the valuation date and the date this report was completed that would have a material impact on the results of this valuation.

## Section III Financial Position of the Plan

### A. Going Concern Basis: Financial Position as at June 30, 2025

The tables below set out the going concern valuation balance sheet as of June 30, 2025 for the Pension Trust Fund (PTF), the Retirees Trust Fund (RTF), and the Plan as a whole, respectively. The results as at January 31, 2023 are also shown for comparative purposes.

#### **Pension Trust Fund - Going Concern Actuarial Balance Sheet (All figures in \$000's)**

	January 31, 2023	June 30, 2025
<b>Going concern assets</b>		
Market value of assets	\$861,792	\$971,692
Financial statement (payables) / receivables	(21,253)	(25,153)
Present value of special payments	0	0
<b>Total going concern assets</b>	<b>\$840,539</b>	<b>\$946,539</b>
<b>Going concern actuarial liabilities</b>		
Active members	\$754,544	\$874,095
Additional voluntary contributions (AVCs)	358	547
Deferred pensioners and pending transfers	53,132	68,718
Termination solvency holdbacks	131	105
<b>Total going concern actuarial liabilities</b>	<b>\$808,165</b>	<b>\$943,465</b>
PfAD = 6.8%% of actuarial liabilities (excluding AVCs)	54,931	64,118
<b>Total going concern liabilities including PfAD</b>	<b>\$863,096</b>	<b>\$1,007,583</b>
<b>Going concern excess / (unfunded liability)</b>	<b>(\$22,557)</b>	<b>(\$61,044)</b>

## Retirees Trust Fund - Going Concern Actuarial Balance Sheet (All figures in \$000's)

	January 31, 2023	June 30, 2025
<b>Going concern assets</b>		
Market value of assets	\$887,724	\$1,065,421
Financial statement (payables) / receivables	16,473	20,383
Total going concern assets	\$904,197	\$1,085,804
<b>Going concern actuarial liabilities</b>		
Pensioners and beneficiaries	\$784,364	\$958,345
Deferred members	19,231	22,058
Total going concern actuarial liabilities	\$803,595	\$980,403
PfAD = 6.8% of actuarial liabilities	54,644	66,667
Total going concern liabilities including PfAD	\$858,239	\$1,047,070
<b>Going concern excess / (unfunded liability)</b>	<b>\$45,958</b>	<b>\$38,734</b>

## Total Plan - Going Concern Actuarial Balance Sheet (All figures in \$000's)

	January 31, 2023	June 30, 2025
<b>Going concern assets</b>		
Market value of PTF assets*	\$840,539	\$946,539
Market value of RTF assets*	904,197	1,085,804
Present value of special payments	0	0
Total going concern assets	\$1,744,736	\$2,032,343
<b>Going concern actuarial liabilities</b>		
PTF actuarial liabilities	\$808,165	\$943,465
RTF actuarial liabilities	803,595	980,403
Total going concern actuarial liabilities	\$1,611,760	\$1,923,868
PfAD = 6.8% of actuarial liabilities (excluding AVCs)	109,575	130,785
Total going concern liabilities including PfAD	\$1,721,335	\$2,054,653
<b>Going concern excess / (unfunded liability)</b>	<b>\$23,401</b>	<b>(\$22,310)</b>

\* Net of (Payables)/Receivables

As shown above, the June 30, 2025 actuarial valuation has revealed a going concern unfunded liability in the amount of \$22,310,000. This compares to a going concern excess at the previous valuation of \$23,401,000. In accordance with Section 99 of the Regulations under the PBA, special payments are required to liquidate the going concern unfunded liability as at June 30, 2025. These additional funding requirements are described in Section IV.

## ***Sensitivity Analysis***

Below we show the impact on the going concern actuarial liability as at June 30, 2025 of a one percentage point drop in the discount rate assumption. All other assumptions were kept unchanged.

	<b>Impact of 1% Drop</b>
Total Going Concern Actuarial Liability (excluding PfAD)	\$2,196,011,000

The change would have the impact of increasing the going concern liabilities by \$272,143,000, or 14.1%.

## **Reconciliation of Going Concern Financial Position**

The reconciliation provides an independent cross-check of the calculations performed, and also determines the chief reasons leading to the changes in the going concern financial position that have occurred since the previous valuation date.

Although a complete analysis down to the final dollar can be made, such an analysis requires the processing of a considerable amount of detailed data relating to the Plan, the expense of which would not normally be justified unless there were special circumstances. However, it is possible to make an approximate analysis along broader lines and under normal circumstances, this type of analysis will produce meaningful results.

The table below summarizes the results of our reconciliation of change in financial position over the period under consideration.

**Analysis of Sources of Gain and Loss Between January 31, 2023 and June 30, 2025  
(Going Concern Valuation – All Figures in \$000's)**

	PTF	RTF	Total
Going concern excess / (unfunded liability) at January 31, 2023	(\$22,557)	\$45,958	\$23,401
Interest on market value surplus / (deficit)	5,408	12,722	18,130
Investment income greater / (less) than expected	21,493	83,883	105,376
Special payments plus interest	1,580	0	1,580
Salary increases (greater) / less than expected	(8,585)	0	(8,585)
Change in maximum pension (greater) / less than expected	(4,534)	0	(4,534)
Retirement, termination, active death experience	12,165	0	12,165
Change in prescribed interest rates for pending terminations	(983)	0	(983)
Cost of pension indexing	0	(64,113)	(64,113)
PTF-to-RTF transfer greater than RTF best estimate liability	0	5,846	5,846
Pensioner mortality experience	0	(1,457)	(1,457)
Net impact of assumption changes	(57,885)	(31,253)	(89,138)
Change in Provision for Adverse Deviation	(9,187)	(12,023)	(21,210)
Miscellaneous experience gains / (losses) <sup>1</sup>	2,041	(829)	1,212
<b>Going concern excess / (unfunded liability) at June 30, 2025</b>	<b>(\$61,044)</b>	<b>\$38,734</b>	<b>(\$22,310)</b>

<sup>1</sup> Miscellaneous experience includes all items not specifically traced, and imprecision imposed by valuation and measurement methodologies in some of the items that are traced. Included are experience gains and losses associated with data refinements, and the interplay among assumptions in dealing with actual versus expected results.

## **B. Solvency Basis: Financial Position as at June 30, 2025**

The tables below set out the solvency valuation balance sheet as of June 30, 2025 for the Pension Trust Fund (PTF), the Retirees Trust Fund (RTF), and the Plan as a whole, respectively. The results as at January 31, 2023 are also shown for comparative purposes.

### **Pension Trust Fund – Solvency Balance Sheet (All figures in \$000's)**

	January 31, 2023	June 30, 2025
<b>Solvency assets</b>		
Market value of assets	\$861,792	\$971,692
Financial statement (payables) / receivables	(21,253)	(25,153)
Estimated wind-up expenses	(1,200)	(1,800)
<b>Total solvency assets</b>	<b>\$839,339</b>	<b>\$944,739</b>
<b>Solvency liabilities</b>		
Active members	\$774,304	\$832,663
Additional voluntary contributions	358	547
Deferred Pensioners and Pending transfers	53,132	68,718
Termination solvency holdbacks	131	105
<b>Total solvency liabilities</b>	<b>\$827,925</b>	<b>\$902,033</b>
85% of solvency liabilities for purposes of measuring solvency deficiency	\$703,736	\$766,728
<b>Solvency excess / (deficiency) excluding present value of special payments</b>	<b>\$135,603</b>	<b>\$178,011</b>
Present value of 5 years' worth of unfunded liability special payments (i.e., the solvency asset adjustment)	n/a	13,725
<b>Solvency excess / (deficiency)</b>	<b>\$135,603</b>	<b>\$191,736</b>

## Retirees Trust Fund – Solvency Balance Sheet (All figures in \$000's)

	January 31, 2023	June 30, 2025
<b>Solvency assets</b>		
Market value of assets	\$887,724	\$1,065,421
Financial statement (payables) / receivables	16,473	20,383
Total solvency assets	\$904,197	\$1,085,804
<b>Solvency liabilities</b>		
Pensioners and beneficiaries	\$800,421	\$933,443
Deferred members	19,375	22,059
Total solvency liabilities	\$819,796	\$955,502
85% of solvency liabilities for purposes of measuring solvency deficiency	\$696,827	\$812,177
<b>Solvency excess / (deficiency)</b>	<b>\$207,370</b>	<b>\$273,627</b>

## Total Plan – Solvency Balance Sheet (All figures in \$000's)

	January 31, 2023	June 30, 2025
<b>Solvency assets</b>		
Market value of PTF assets <sup>1</sup>	\$840,539	\$946,539
Estimated wind-up expenses	(1,200)	(1,800)
Market value of RTF assets <sup>1</sup>	904,197	1,085,804
Total solvency assets	\$1,743,536	\$2,030,543
<b>Solvency liabilities</b>		
PTF solvency liabilities	\$827,925	\$902,033
RTF solvency liabilities	819,796	955,502
Total solvency liabilities	\$1,647,721	\$1,857,535
85% of solvency liabilities for purposes of measuring solvency deficiency	\$1,400,563	\$1,578,905
<b>Solvency excess / (deficiency) excluding present value of special payments</b>	<b>\$342,973</b>	<b>\$451,638</b>
Present value of 5 years' worth of unfunded liability special payments (i.e., the solvency asset adjustment)	n/a	13,725
<b>Solvency excess / (deficiency)</b>	<b>\$342,973</b>	<b>\$465,363</b>

<sup>1</sup> Net of (payables) / receivables

As shown above, the solvency valuation has revealed a solvency excess of \$451,638,000 prior to the inclusion of the present value of any special payments as at June 30, 2025. With the inclusion of five years' worth of special payments beginning no later than June 30, 2026, there is a solvency excess of \$465,363,000.

## ***Sensitivity Analysis***

Below we show the impact on the solvency liability as at June 30, 2025 of a one percentage point drop in the discount rate assumption. All other assumptions were kept unchanged.

	<b>Impact of 1% Drop</b>
Total Solvency Actuarial Liability	\$2,077,437,000

A 1% decline in the solvency discount rate would increase the solvency liability by \$219,902,000 or 11.8%.

## ***Incremental Cost***

The incremental cost is the present value, at the valuation date, of the expected aggregate change in the hypothetical wind-up or solvency liability between the valuation date and the next valuation date. It also reflects expected benefit payments between the valuation date and the next calculation date.

In our report, we have determined the incremental cost on a solvency basis. The incremental cost was determined as the sum of (a) and (b) minus (c):

- (a) the projected solvency liability at the next valuation date for those members at the current valuation date, allowing for expected decrements, change in membership status and service accrual between the current valuation date and the next valuation date. No adjustment was made for new entrants between the two valuation dates. The resulting projected solvency liability was then discounted to the current valuation date;
- (b) the present value of the benefit payments expected to be paid between current valuation date and the next valuation date, discounted to the current valuation date; and
- (c) the solvency liability as at the current valuation date.

For purposes of calculating the solvency incremental cost, the expected decrements, as well as the expected benefit payments between the current valuation date and the next valuation date, were determined using the going concern demographic assumptions. The projected solvency liability at the next valuation date was determined using the same methods and assumptions as disclosed in Appendix B of this report. In particular, we have assumed that the discount rates will remain the same throughout the projection period and the Standards of Practice for determining Pension Commuted Values in effect at the valuation date will remain unchanged, as will the current educational guidance on the estimation of annuity purchase costs.

The estimated incremental cost from June 30, 2025 to June 30, 2028 is \$243,325,000. The estimated incremental cost does not impact the funding requirements of the Plan under the Nova Scotia *Pension Benefits Act* and is for information purposes only.

### **C. Transfer Ratio as at June 30, 2025**

The Regulations under the PBA require the determination of a “transfer ratio”. This transfer ratio is used to determine whether transfers of commuted values to terminating members can be made in full, immediately. The transfer ratio is the ratio of:

- (i) the solvency assets (at market value), minus the lesser of the previous year credit balance and the sum of the minimum employer contributions required under the Regulations until the next valuation date (\$2,032,343,000 – \$0), to
- (ii) the sum of the solvency liabilities and the liabilities for benefits that were excluded in calculating the solvency liabilities (note that there were no such benefits excluded for the solvency valuation).

As at June 30, 2025 the transfer ratio was 109.4% (i.e., \$2,032,343,000 divided by \$1,857,535,000). Therefore, transfer of commuted values to terminating members can be made in full.

### ***Next Valuation Date***

The ratio of solvency assets to solvency liabilities is 109.4% at June 30, 2025. Because this ratio is greater than 85%, the Plan does not have “solvency concerns” as defined by the Regulations under the PBA. The next full actuarial valuation of the Plan must be at a date no later than June 30, 2028 (i.e., within 3 years following the valuation).

## **D. Hypothetical Wind-up Basis: Financial Position as at June 30, 2025**

The financial position of the Plan on a wind-up basis as of June 30, 2025 is as follows:

### **Total Plan – Wind-up Balance Sheet (All figures in \$000's)**

	January 31, 2023	June 30, 2025
<b>Wind-up assets</b>		
Market value of PTF assets*	\$840,539	\$946,539
Estimated wind-up expenses	(1,200)	(1,800)
Market value of RTF assets*	904,197	1,085,804
Total wind-up assets	\$1,743,536	\$2,030,543
<b>Wind-up liabilities</b>		
PTF wind-up liabilities	\$827,925	\$902,033
RTF wind-up liabilities	819,796	955,502
Total wind-up liabilities	\$1,647,721	\$1,857,535
<b>Wind-up excess / (deficiency)</b>	<b>\$95,815</b>	<b>\$173,008</b>

\* Net of (payables) / receivables

As shown above, on a wind-up basis there is an excess of \$173,008,000 in the Plan after providing for settlement of all accrued benefit entitlements as at June 30, 2025.

## Section IV Funding Requirements

### A. Current Service Cost

The Plan's current service cost (also referred to as the "normal cost") is the value of the benefits accruing to members in the year following the valuation, determined on a going concern basis.

The table below summarizes the results of the Plan's current service cost for the 12-month period following June 30, 2025.

#### Current Service Cost

	% of Payroll	(\$000's)
Estimated pensionable earnings		360,363
Total annual current service cost	15.78%	56,862
Employee regular contributions	6.08%	21,907
Employee supplementary contributions	1.37%	4,948
Employer matching regular contributions	6.08%	21,907
Balance of cost = employer "overmatching contribution"	2.25%	8,100
Employer contributions as a percentage of employee contributions	111.74%	

The cost of benefits accruing in respect of the year following the valuation date is \$56,862,000. This amounts to 15.78% of active contributory payroll. The employee regular and employer matching contributions in the year amount to \$21,907,000 (i.e., 6.08% of contributory payroll) each. Employees are also required to contribute supplementary contributions in the amount of \$4,948,000 (i.e., 1.37% of contributory payroll). The balance remaining (i.e., \$8,100,000 or 2.25% of payroll) represents employer "overmatching contributions". Total employer contributions (i.e., 21,907,000 + 8,100,000 = 30,007,000, or 6.08% + 2.25% = 8.33% of payroll) amount to 111.74% of employee contributions.

The total current service cost has increased from 14.94% of payroll reported in the addendum to the actuarial valuation as at January 31, 2023 to 15.78% of payroll for the current valuation, as a result of the net impact of demographic changes and assumption changes. The following sets out an approximate reconciliation of the change in the total current service cost as a percentage of payroll:

### Current Service Cost Reconciliation

	% of Payroll
Total current service cost as at the previous valuation*	14.94%
Demographic changes	(0.06%)
Assumption changes	0.90%
Total current service cost as at the current valuation	15.78%

\* As per the Addendum to the Actuarial Valuation as at January 31, 2023 dated January 2024.

### Sensitivity Analysis

Below we show the impact on the 2025/2026 current service cost as at June 30, 2025 of a one percentage point drop in the discount rate assumption. All other assumptions were kept unchanged.

	Impact of 1% Drop
Total Current Service Cost	\$70,541,000

The change would have the impact of increasing the current service cost by \$13,679,000 or 24.1% as at June 30, 2025. With employee regular and supplementary contributions remaining at a total 7.45% of pay, the employer contribution requirement (i.e., matching and overmatching) would rise to 12.12% of pay (i.e., a total cost of 19.57% of pay).

### B. Special Payments

The valuation as at June 30, 2025 revealed a going concern unfunded liability. Therefore, in accordance with the Regulations under the PBA, the University is required to make special payments to liquidate the going concern unfunded liability as at June 30, 2025.

The following special payments are equal to that required to amortize the going concern unfunded liability over a 10-year period (starting effective one year following the valuation date):

## Annual Special Payments Determined as at June 30, 2025

Payment Type	Date Established	Term Remaining as at June 30, 2025	Annual Payment (\$000's)	Present Value of Remaining Payments <sup>2</sup> (\$000's)
Going Concern	June 30, 2025	10 years <sup>1</sup>	3,194	22,310
<b>Total</b>			<b>3,194</b>	<b>22,310</b>

<sup>1</sup> As per Regulations 99(3) of the Nova Scotia Pension Benefits Act, the special payments required to liquidate the going concern unfunded liability must be made over a period no longer than 10 years beginning 1 year after the valuation date. Consequently, the special payment established as at June 30, 2025 should commence on July 1, 2026.

<sup>2</sup> Present value of payments calculated at 6.50% per annum.

### C. Timing of Contributions

Employer contributions for current service must be paid in monthly installments, no later than 30 days after the month for which contributions are payable. Special payments must be paid by equal monthly installments, within 30 days following the end of each month in which they were required.

## Section V Summary of Conclusions and Recommendations

The following represents our primary conclusions as a result of our actuarial valuation of the Dalhousie University Staff Pension Plan as at June 30, 2025:

1. As at the valuation date, there exists a going concern unfunded liability of \$22,310,000.
2. As at the valuation date, the Plan has a solvency excess of \$465,363,000 (after including the present value of 5 years' worth of scheduled special payments).
3. The going concern unfunded actuarial liability must be amortized according to the special payment schedule detailed in Section IV. In summary, special payments must commence starting July 1, 2026 and are equal to \$3,194,000 per annum for the following ten years.
4. The cost of benefits accruing in respect of the year following the valuation date is \$56,862,000, which amounts to 15.78% of active contributory payroll. Employee regular contributions (6.08% of payroll) and supplementary contributions (1.37% of payroll) are expected to generate contributions of 7.45% of payroll. In addition to the University's matching regular contribution (6.08% of payroll), employer overmatching contributions of 2.25% of payroll are required.
5. The adequacy and appropriateness of this funding level should be reviewed at the next actuarial valuation of this Plan, which should take place as of June 30, 2028 at the latest.
6. For purposes of paragraph 147.2(2)(d) of the *Income Tax Act* (Canada), the excess surplus based on the going concern valuation was nil as of June 30, 2025.
7. If the Plan were to be wound up on the valuation date, the value of Plan assets would be greater than the Plan's wind-up liabilities by an amount of \$173,008,000.
8. The transfer ratio of the Plan is 109.4%.
9. The previous year credit balance as at June 30, 2025 is \$0.
10. We are not aware of any events, other than those outlined in Section II, that occurred between the valuation date and the date this report was completed that would have a material impact on the results of this valuation. Any investment experience occurring between the valuation date and the report date, which differs from the assumption made, is not reported on in this valuation report and will be reported on in a future valuation.

We shall be pleased to provide any additional details or explanations you may require regarding any of the matters dealt with in this report.

## Section VI Actuarial Opinion

We hereby certify that in our opinion,

- (i) the data on which the valuation is based are sufficient and reliable for the purposes of the valuation as described in Section I;
- (ii) the assumptions described herein are appropriate for the purposes of the valuation; and
- (iii) the methods employed in the valuation are appropriate for the purposes of the valuation.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada. It has also been prepared in accordance with the funding and solvency standards set by the Nova Scotia *Pension Benefits Act*.

Nonetheless, emerging experience, differing from the assumptions, will result in gains or losses which will be revealed in future valuations.

Respectfully submitted,



Jeff Turnbull, FCIA, FSA



Devon Mills, FCIA, FSA

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## Appendix A Plan Assets

The Plan's assets are currently managed in such a way as to allow for a mix of equity and fixed income investments. Several independent fund managers, who deal at arm's length with the University, manage the assets, which are segregated into two trusts: the Pension Trust Fund (PTF) invests the accumulated contributions in respect of active Members and supports benefits payable during the period of active membership, and the Retirees' Trust Fund (RTF) supports pension payments after retirement. The two trusts, together and in aggregate, form the portfolio of assets supporting the Plan.

### Reconciliation of Plan Assets

Financial statements of the Plan's holdings, in aggregate by asset class, were provided to us by the University for this valuation. The tables below contain summaries of the revenue accounts for the PTF and the RTF, respectively, based on the information supplied in respect of the period covered by this valuation (i.e., February 1, 2023 through June 30, 2025).

#### Reconciliation of Assets in the Pension Trust Fund (All figures in \$000's)

For the period ending	June 30, 2023	June 30, 2024	June 30, 2025
Market value at beginning of period	\$861,792	\$871,071	\$922,107
Employee regular contributions	7,450	20,165	20,706
Employee supplementary	2,412	5,439	4,608
Employee other contributions*	1,377	2,056	1,640
Employer contributions	13,247	23,512	25,518
Investment income	10,401	77,438	86,454
Plan expenses	(2,955)	(4,925)	(5,153)
Net change in payables	394	1,219	(2,486)
Transfer to RTF	(19,335)	(67,659)	(73,572)
Benefit withdrawals	(3,712)	(6,209)	(8,130)
<b>Market value at end of period</b>	<b>\$871,071</b>	<b>\$922,107</b>	<b>\$971,692</b>

\* Employee other contributions include additional voluntary contributions, past service purchases, and transfers from other plans.

## Reconciliation of Assets in the Retirees' Trust Fund (All figures in \$000's)

For the period ending	June 30, 2023	June 30, 2024	June 30, 2025
Market value at beginning of period	\$887,724	\$894,277	\$971,823
Transfers in from PTF	19,335	67,659	73,572
Investment income	18,717	85,987	103,310
Plan expenses	(3,573)	(4,472)	(5,057)
Net change in payables	616	216	156
Pension payments	(28,542)	(71,844)	(78,383)
<b>Market value at end of period</b>	<b>\$894,277</b>	<b>\$971,823</b>	<b>\$1,065,421</b>

### Performance of Plan Assets

The following table summarizes the net rate of return on the Plan's assets over the past 3 years.

### Pension Fund Rates of Return (Net of Expenses)

Period Ending June 30, 2025	Pension Trust Fund	Retirees Trust Fund	Total Plan (i.e., Combined PTF and RTF)
2023*	0.9%	1.8%	1.4%
2024	8.4%	9.1%	8.8%
2025	9.0%	10.2%	9.6%
<b>Average</b>	<b>7.3%</b>	<b>8.3%</b>	<b>7.8%</b>

\* Represents five months for the period from February 1, 2023 to June 30, 2023.

## Appendix B Actuarial Methods and Assumptions

### A. Valuation of Assets

For the valuation as at June 30, 2025, the market value of assets, plus any net payables / receivables was used as the actuarial value of assets. This is the same asset valuation method as was used in the previous valuation.

The table below summarizes the calculation of the going concern asset value as at June 30, 2025, rounded to the nearest \$1,000.

#### **Actuarial Value of Assets (All figures in \$000's)**

	June 30, 2025
Market value of assets	\$2,037,113
Benefits Payable	(2,911)
Expenses Payable	(1,859)
<b>Actuarial value of assets</b>	<b>\$2,032,343</b>

### B. Going Concern Valuation

For the purposes of a going concern valuation, we select actuarial assumptions with a long-term focus. That is, we anticipate that the pension plan will continue indefinitely into the future. Actuarial assumptions are selected giving consideration to historical trends, future expectations and pension plan specific experience, where possible. The assumptions chosen are expected to produce a stable pattern of funding and meet the Plan sponsor's desire to minimize potential for significant shortfalls or deficits in the future.

The purpose of this part of our analysis is to determine an appropriate method and series of assumptions to make proper allowance for the Plan's future liabilities by way of payment of pensions and other benefits. In making these calculations, assumptions must be made as to:

- the probability that a particular payment will be made at a certain time (for example, depending upon whether or not the individual concerned survives to that date); and
- the expected amount of each such payment.

In order to do this, we make a series of assumptions in connection with the many factors which will have a bearing upon the future financial operation of the Plan. These include the following:

- future rates of mortality (and the corresponding life expectancies of the Plan members and their spouses);
- future rates of salary increase for members of the Plan;
- the rate of increase in the maximum pension (as mandated by the *Income Tax Act*) that the Plan is allowed to pay;
- future rates of employee turnover (withdrawal from the Plan);
- the age at which retirement occurs; and
- the propensity for members who are eligible for an immediate pension, but who may choose between the receipt of such pension and a lump-sum termination benefit, to choose the latter.

Finally, we consider the rate of interest that will be earned on the assets of the pension funds in future years.

As part of our process of analysis, all of these factors have received consideration. Where applicable, we have taken into account the actual experience of this pension plan. However, it should be noted that, from a statistical point of view, actual experience data developed from a single pension plan has limited validity unless the number of plan members is very large. Therefore, it becomes necessary to take into account statistics developed from many other larger pension plans.

The assumptions we have adopted, as well as a brief commentary where appropriate, are described below.

### ***Going Concern Discount Rate Assumption***

We have decreased the pre-retirement discount rate assumption from 6.60% (used in the January 31, 2023 actuarial valuation) to 6.50% per annum for the June 30, 2025 actuarial valuation. The economic assumptions (i.e., those related to interest rates and inflation) for this valuation are based on reasonable expectations with respect to the relationships among key economic variables over the long term, as well as the expected impact of those economic variables on the investment performance of the pension fund given the fund's investment policy.

We have taken a “best estimate” approach to the determination of the discount rate, based on the expected future investment return on the assets of the pension plan. In particular, our approach consists of:

- determining the best estimate of long-term, expected future investment returns for the various asset classes in which the Plan invests;
- combining these best estimate, long-term expected future investment returns to reflect the Plan’s investment policy, thereby creating an “expected” fund return that is a weighted average of the asset class returns;
- including an allowance for additional return due to active versus passive management, and the impact of rebalancing and diversification, which we have considered appropriate in the circumstance as a result of stochastic modelling specific to the Plan’s target asset mix; and
- making appropriate provision for expenses.

The result of our analysis is depicted in the following table:

## Discount Rate

	Discount Rate
Unadjusted “best estimate” return	6.30%
Less fees	(0.60%)
Plus value added return from active management	0.40%
Plus “rebalancing and diversification effect”	0.40%
<b>Best estimate discount rate</b>	<b>6.50%</b>

The unadjusted best estimate asset return assumption was determined using the Plan’s target investment mix and the expected return for each asset class. Expected returns are developed each year through a rigorous stochastic modelling process. This model is designed to simulate all key economic and market variables over thousands of different paths that are path-wise consistent. Key variables include bond yields (nominal and real), inflation, equity market returns, and alternative asset class returns. Adjustments for specific approaches to investment implementation are applied to asset class expected returns where appropriate. The details are depicted in the following table:

Asset Class	Target Weight	Expected Return
Universe bonds	7.00%	3.8%
Corporate bonds	5.50%	4.6%
Core Plus bonds	12.50%	4.5%
Private debt	10.00%	7.0%
Canadian equity	8.75%	6.8%
US equity	10.00%	6.8%
Non-North American equity	13.75%	6.8%
Real estate	10.00%	6.1%
Infrastructure	10.00%	6.6%
Private equity	12.50%	8.5%
<b>Total portfolio</b>	<b>100.00%</b>	<b>6.3%</b>

In respect of the post-retirement period, we have maintained the assumption used in the last valuation for PTF liabilities and as specified in the Plan Rules, i.e., 4.55% per annum. This post-retirement interest rate incorporates some conservatism in that it includes (in accordance with plan rule 9(b)) a “holdback as a provision against life expectancy variations and other contingencies”. For RTF liabilities, we have maintained the post-retirement interest rate of 5.05% per annum for the June 30, 2025 valuation.

### **Salary Scale**

Pensions from the Plan are based on the average of an employee’s best 3 years of earnings. Since wage levels typically increase over time, an employee’s best 3 years of earnings usually occur towards the end of their career. In conducting our valuation, it is prudent to project each employee’s accrued pension to the time of their retirement by projecting their earnings level, and this is accomplished through the use of a salary scale assumption.

In respect of the salary scale assumption, the assumption used in the January 31, 2023 actuarial valuation for periods on or after January 31, 2025 was a flat 2.75% per annum assumption combined with the following merit/promotion table:

- 1.75% for ages below 45;
- 1.00% for ages between 45 and 55; and
- 0.00% for ages after 55.

This assumption has been adjusted with the June 30, 2025 actuarial valuation to reflect recent salary negotiations. The revised assumption uses a salary scale assumption of 4.60% per annum for the two years following the valuation and then 2.75% per annum thereafter. The merit/promotion table remains the same as it was in the previous valuation.

### ***Maximum Pension***

Pensions are capped by regulation at \$3,756.67 per year of service for retirements occurring in 2025 and \$3,932.22 per year of service for retirements occurring in 2026. It is expected that this maximum will be increased in accordance with an average wage index from 2026 onward. For purposes of the valuation, we have assumed that the maximum pension will increase after 2026 by 2.75% per annum (i.e., equal to the base salary scale rate). This is the same assumed rate of increase as in the January 31, 2023 valuation.

### ***Going Concern Mortality Assumption***

In the prior valuation, we used the 2014 Canadian Pensioners' Mortality (Public Sector) Table (CPM 2014 Public) projected generationally with improvement scale CPM-B. In April 2024, the CIA published a report on a Mortality Improvement Research Study Project, detailing a new Mortality Improvement Scale (MI-CAN-2024). MI-CAN-2014 is a two-dimensional scale developed by the CIA, fitted to Canadian population mortality data for males and females, published by the Human Mortality Database Project and tested against data received from the QPP, CPP and OAS. The analysis was limited to a core age range of 40 to 90 years and included experience from 1980 to 2019. According to the report, the range of acceptable long-term mortality improvement rates is 1.0% - 1.8%. For this valuation, the mortality improvement was modelled according to improvement scale MI-CAN-2024, with a long-term improvement rate of 1.3%. The effect of this change is to reflect higher future rates of mortality improvement compared to CPM-B.

For the RTF liabilities, we have used the 2014 Canadian Pensioners' Mortality (Public Sector) Table (CPM 2014 Public) with 90.0% adjustment for males, and 97.3% adjustment for females projected generationally with improvement scale MI-CAN-2024. These size adjustments result in an increase in predicted life expectancy for RTF pensioners.

We expect to review the mortality assumption from time to time, both to reflect trends in mortality, as well as the development of new actuarial tables and standards. Notably, it is expected the CIA will release new base mortality tables and associated guidance in 2026.

## **Retirement Age**

There has been no change to the retirement age assumption. Rates of retirement are based on an experience study completed in February 2023. Detail on the retirement age assumption is provided in the table below.

Age of Member	Probability of Retirement
55	3%
56	3%
57	3%
58	3%
59	6%
60	7%
61	7%
62	12%
63	12%
64	15%
65	35%
66	25%
67	25%
68	25%
69	25%
70	25%
71	*100%

*\* Note the 100% reflects the fact that, under the Income Tax Act, all Members, whether or not they retire from active employment, must commence their pension by no later than the end of the year in which they turn age 71*

## **SOCC/CV Take-up Rate**

Upon termination of employment, a Member is offered the choice between a lump sum transfer from the Plan and a deferred pension. The value of the lump sum transfer is the greater of (i) the Member's "Sum of Contributions Compounded", or "SOCC", which generally represents the Member's required contributions, times two, plus interest, and (ii) the commuted value ("CV") of the deferred pension.

For each Member of the Plan, we have projected the Member’s SOCC/CV to the assumed points of early and normal retirement, and, at each point, compared the SOCC/CV to the amount that would be transferred from the Pension Trust Fund to the Retirees Trust Fund were the Member to retire at that point.

There has been no change to the SOCC Take-up Rate since the previous valuation. We assume that 15% of members (where their projected SOCC/CV is greater than the projected PTF-to-RTF-transfer) at all ages up to and including age 65 would take their SOCC/CV rather than receive an immediate pension.

### ***Withdrawal Rates***

The scale of “termination of membership” rates have changed from the rates used in the previous valuation based on a review of recent experience completed in December 2025. The following table details the rates used in the current valuation.

Service of Member	Termination Rates
1 year	13.7%
2 years	12.1%
3 years	10.4%
4 years	8.0%
5 years	6.5%
6-10 years	4.4%
11-15 years	3.2%
16-20 years	2.2%
21-25 years	1.2%
More than 25 years	0.0%

Termination benefits are projected to each service date, and the liability determined using a commuted value discount rate of 4.50% per annum. Projected liabilities take into consideration the minimum withdrawal benefit of twice contributions, plus interest.

### ***Proportion Married and Spouse’s Age***

We have continued to assume that seventy percent of active members have a spouse at the time of their retirement or death.

We have continued to assume that male spouses are 2 years older than their female counterparts.

## ***Going Concern Actuarial Methods***

The actuarial cost method used in conducting this valuation is the projected unit credit method. This is the same method as was used in the previous valuation.

In using this method, as a first step, a calculation is made of the liability in respect of all benefits that have accrued to members on account of service up to and including the valuation date. This represents the "accrued liability". It should be noted that this calculation takes into account projected future pay increases for each member up to and including expected retirement date.

As a completely separate process, the current year cost has been calculated (using the same actuarial assumptions). This represents the cost of providing the benefits that will accrue in respect of the 12-month period following the valuation date. This is compared with the amount of required employee contributions, supplementary contributions, and regular matching employer contributions over that period. The difference represents the additional minimum required employer contribution (referred to as the "overmatching contribution") necessary in order for these benefits to be properly funded.

For an individual member, the funding pattern produced by the projected unit credit cost method is one that increases (both in dollar terms and as a percentage of salary) over time. However, for the group as a whole, if the average age remains constant (which can occur through the retirement of older members and the addition of new, younger members) and salary levels increase in accordance with the salary scale, the contribution rate recommended under this method will remain relatively constant. If the Plan's average age increases, on the other hand, the current year cost will also increase. Such increases would be revealed in future valuations.

## ***Provision for Adverse Deviations (PfAD)***

For actuarial valuations with an effective date on or after December 31, 2019, the Regulations under the PBA require a PfAD when determining the going concern financial position of the plan. The PfAD is derived from the target investment portfolio of the Plan and Section 12B of the Regulations under the PBA. There are two components when determining the PfAD:

- A) A flat 5%; plus
- B) A value determined under Section 12D of the Regulations, based on the Plan's combined target asset allocation for non-fixed income assets as determined under Section 12C of the Regulations.

As per Section 12B(2) of the Regulations, the value of "A" in the formula above is zero for a pension plan that is exempt from solvency funding. The following table details the calculation of the PfAD as at June 30, 2025:

## Determination of PfAD as per the Regulations under the Nova Scotia *Pension Benefits Act*

Asset Class	Target Asset Allocation Per Plan's Statement of Investment Policies and Procedures	Per Regulation 12C, Percentage of Asset Class Deemed Fixed Income Assets	Adjustment for Portion of Asset Class Deemed Non-Fixed Income	"Product" Used to Determine Value of "C" under Regulation 12C
Formula	M	N	O	P = M x N x (100% - O)
Universe bonds	7.0%	100%		7.0%
Corporate bonds	5.5%	100%		5.5%
Core plus bonds	12.5%	100%	15% <sup>1</sup>	10.6%
Private debt	10.0%	50%		5.0%
CND equity	8.8%	0%		0.0%
US equity	10.0%	0%		0.0%
Non-NA equity	13.8%	0%		0.0%
Real estate	10.0%	50%	40% <sup>2</sup>	3.0%
Infrastructure	10.0%	50%	40% <sup>2</sup>	3.0%
Private Equity	12.5%	0%		0.0%
<b>Total</b>	<b>100.0%</b>			
Value of "C" under Regulation 12C				34%
100% - C = "Non-fixed Income Assets" under Regulation 12C(1)				66%
<b>Determine Provision for Adverse Deviations (Regulation 12B)</b>				
Per Regulation 12D(1), table amount for 60% non-fixed income assets				5.0%
Per Regulation 12D(1), table amount for 70% non-fixed income assets				8.0%
Per Regulation 12D(2), linear Interpolation = 0.4 X 5.00% + 0.6 X 8.00%				6.8%

<sup>1</sup> Adjustment to reflect the fact that within Core Plus strategies a portion of the investments can be allocated to fixed income instruments that would be deemed to be "non-fixed income" under the Regulations.

<sup>2</sup> Long term expectations for the Real Estate and Infrastructure asset classes are that approximately 40% of the indicated allocations will be achieved through the purchase of public equities listed on public stock exchanges. Because these allocations are subject to the potential increased volatility of public stock markets, this 40% is deemed to be fully non-fixed income (i.e., similar to other equities in the Plan's portfolio).

Therefore, the total PfAD for the Plan is equal to "A" + "B" = 0% + 6.8% = 6.8%.

The following table details the actuarial assumptions that have been used in the going concern valuation:

## Going Concern Valuation Actuarial Assumptions

June 30, 2025	
Interest	
▪ Pre-retirement:	6.50% p.a.
▪ Post-retirement:	PTF: 4.55% p.a. RTF: 5.05% p.a.
Salary scale:	4.60% p.a. for 2 years; 2.75% p.a thereafter; Plus merit/promotion scale of 1.75% p.a. for ages below 45, 1.00% p.a. for ages between 45 and 55, and 0.00% for ages after 55
Maximum pension:	\$3,756.67 in 2025 and \$3,932.22 in 2026, increasing at 2.75% p.a. thereafter
Mortality:	PTF: 2014 Canadian Pensioner Mortality tables (Public Sector) projected generationally with mortality improvement at Scale MI-CAN-2024-1.3% RTF: 2014 Canadian Pensioner Mortality tables (Public Sector) projected generationally with mortality improvement at Scale MI-CAN-2024-1.3% (with adjustment factors of 90.0% for males, 97.3% for females)
Retirement age:	In accordance with the retirement rates described previously in this section
Withdrawals:	In accordance with the termination rates described previously in this section Commutated value discount rate: 4.50% per annum
Percentage married:	70% of active members
Spouse's age:	Actives: Male spouses are assumed to be 2 years older than their female counterparts Pensioners: Actual spouse's age
Interest credited on employee contributions:	3.00% p.a.
SOCC/CV take-up assumption:	15% at all ages up to and including age 65
Funding method:	Projected Unit Credit

## **C. Solvency Valuation**

The PBA prescribes a solvency valuation. A solvency valuation permits the regulator to assess the solvency of the Plan should it terminate or wind-up effective on the valuation date. That is, an assessment is made as to whether the assets of the pension fund would be sufficient if no further benefits were provided and all members were paid their entitlements.

For active members not eligible for immediate retirement (i.e., those under age 55), the interest rate used for calculating solvency liabilities was 3.70% p.a. for 10 years and 4.90% p.a. thereafter. These rates were determined in accordance with Section 3500 of the Canadian Institute of Actuaries ("CIA") Standards of Practice – Pension Commuted Values with rates in effect for June 2025. The mortality assumption used was the CPM-2014 (Combined) mortality table projected with Scale CPM-B.

For retired lives and active members 55 or older, the solvency liabilities were calculated using an interest rate of 4.74% per annum and the Canadian Pensioner Mortality (CPM2014 Combined) tables projected generationally with mortality improvement at Scale CPM-B. These assumptions represent the estimated basis for settlement of the Plan's obligations for retired lives by the purchase of insured annuities on the valuation date and were determined in accordance with the Canadian Institute of Actuaries' (CIA's) Standards of Practice and the CIA's Educational Note: Assumptions for Hypothetical Wind-up and Solvency Valuations with Effective Dates on or after June 30, 2025, and No Later Than June 29, 2026.

Note that the solvency valuation does not make any assumptions about future pay increases or future termination of employment, since all members are assumed to terminate on the valuation date. The actuarial assumptions for the solvency valuation are described in the following table:

## Solvency Valuation Actuarial Assumptions

June 30, 2025	
Interest:	For actives < 55, 3.70% p.a. for 10 years, 4.90% p.a. thereafter For pensioners and actives > 55, 4.74% p.a.
Mortality:	2014 Canadian Pensioner Mortality tables (Combined) projected generationally with mortality improvement at Scale CPM-B
Salary scale:	None
ITA maximum pension:	\$3,756.67 per year of service
Retirement age (Transfer value basis):	50% at age that maximizes the lump sum value, 50% at age that maximizes the pension amount
Retirement age (Annuity purchase basis):	Age that maximizes the value of the benefits
SOCC take-up assumption:	100% for Active Members less than Age 55; 0% for Active Members greater than Age 55
Withdrawals:	None
Percentage married:	70% of active members
Spouse's age:	Actives: Males spouses are assumed to be 2 years older than their female counterparts Pensioners: Actual spouse's age
Cost method:	Termination method

### **D. Hypothetical Wind-up Valuation**

The only difference between solvency and wind-up assumptions for the Dalhousie Plan is that the wind-up valuation assumptions must account for indexation (for years prior to June 1, 2015). However, at the time of this valuation there is no difference in wind-up and solvency assumptions because interest rates are at levels low enough that there is no expectation of excess interest indexing. Therefore, the wind-up valuation liability assumptions are the same as those used in the solvency valuation.

## Appendix C Plausible Adverse Scenarios

A plausible adverse scenario is considered to be one that will occur in the short term (immediately to one year) with a likelihood of occurring between 1 in 10 and 1 in 20 based on the opinion of the actuary. The purpose of the following scenarios is to illustrate the impact on the Plan's financial position of the following adverse but plausible assumptions relative to the best estimate assumptions selected for the Plan's going concern valuation. The purpose of disclosing these results is to demonstrate the sensitivity of the funded status and annual current service cost between June 30, 2025 and June 30, 2028 to certain key risk factors affecting the Plan. The results of the scenarios selected are shown in the table below, with a description of each scenario following.

	Going Concern Results at June 30, 2025 (\$000's)	Plausible Adverse Scenario Results at June 30, 2025		
		Interest rate risk* (\$000's)	Deterioration of Asset Values* (\$000's)	Longevity Risk (\$000's)
Going concern assets	2,032,343	2,061,246	1,794,356	2,032,343
Going concern liabilities	1,923,868	1,946,641	1,923,868	1,964,070
PfAD on going concern liabilities	130,785	132,334	130,785	133,520
Total going concern liabilities plus PfAD	2,054,653	2,078,975	2,054,653	2,097,590
<b>Going concern excess / (unfunded liability)</b>	<b>(22,310)</b>	<b>(17,729)</b>	<b>(260,297)</b>	<b>(65,247)</b>
Current service cost	56,862	58,783	56,862	57,784
Deficit funding requirement (starting July 1, 2026)	3,194	2,493	37,263	9,340
Change in going concern liabilities plus PfAD		24,322	-	42,937
% change in going concern liabilities plus PfAD		1.18%	-	2.09%
Change in current service cost		1,921	-	922
% change in current service cost		3.38%	-	1.62%
Change in deficit funding requirement		(701)	34,069	6,146
Discount rate	6.50%	6.15%	6.50%	6.50%
PfAD	6.8%	6.8%	6.8%	6.8%
Life expectancy (in years) for a retiree age 65	26	26	26	27

\* Scenario shown represents the median of the worst 10% of stochastic simulations.

## **Interest Rate Risk**

This scenario illustrates the sensitivity of the funded status of the Plan and current service cost to an immediate change in the market interest rates underlying fixed income investments.

In order to assess the impact of a decrease in interest rates of a magnitude consistent with a 1 in 10 likelihood of occurring, we have used the same stochastic model that is used to determine the going concern discount rate (see Appendix B). The stochastic model is based on 5,000 simulations of projected financial variables, including long-term yields on fixed income investments and asset class returns. Our long-term best estimates for these variables, and the going concern discount rate are based on the median values of these 5,000 simulations.

To determine the sensitivity to interest rate risk, and the resulting impact on Plan assets and liabilities, we have:

- considered the hypothetical going concern discount rate over the 500 trials where fixed income yields are lowest at the one-year horizon, and
- determined the decrease in median long-term fixed income yields over the 500 trials where fixed income yields are the lowest at the one-year horizon.

Based on the above analysis, we have determined that the going concern discount rate would decrease by 35 basis points as of June 30, 2025, and long-term yields on fixed income investments would decrease by 82 basis points.

Based on the estimated duration of the Plan assets, liabilities and current service cost, we have then determined the estimated change to the Plan's funded status under the interest rate risk scenario.

## **Deterioration of Asset Values**

This scenario illustrates the sensitivity of the funded status of the Plan to short-term shock which causes a reduction in the market value of assets, with no change to the liabilities of the Plan. This scenario is assumed not to impact the current expectation of the long-term rate of return, and consequently, the going concern discount rate.

In order to assess the impact of a decrease in asset values of a magnitude consistent with a 1 in 10 likelihood of occurring, we have used the same stochastic model that is used to determine the going concern discount rate (see Appendix B). The stochastic model is based on 5,000 simulations of projected financial returns, including long-term yields on fixed income investments and asset class returns.

To determine the sensitivity to a deterioration in asset values based on the Plan's target asset mix, we have reviewed the 500 trials where investment returns are lowest at the one-year horizon and determined that at the median scenario, the market value of assets would decrease by 11.7% as of June 30, 2025.

## **Longevity Risk**

This scenario illustrates the sensitivity of the funded status of the Plan to pension plan members living longer than expected. The impact of this scenario was determined using a one-year age setback to the mortality table used for the going concern valuation as of June 30, 2025. This is a more conservative mortality assumption than currently employed.

## Appendix D Membership Data

The data in respect of active membership (including members on disability or leave of absence), and in respect of all pensioners and deferred pensioners are maintained on a computerized pension administration system called Ariel. The system is updated by Retirement Services, a unit of Dalhousie University's Human Resources Department. The information was extracted by TELUS Health (the Ariel vendor) and submitted to us in electronic format. A summary of the data is shown in this Appendix.

We subjected this data to a number of tests of reasonableness and consistency, including the following:

- a member's (and partner's as applicable) age is within a reasonable range;
- all dates remained unchanged from the data used in the previous actuarial valuation of the Plan;
- salaries increased at a reasonable rate;
- credited service increased by a reasonable amount;
- pensions in pay changed by a reasonable amount (e.g., by the amount of indexing applied for retired members, etc.);
- a member's gender did not change;
- the form of pension payment did not change (other than resulting from the death of a retired member);
- the pension amounts on the pensioner file was compared with the payments reported in the financial statements for the Plan; and
- we examined the additions to and deletions from each of the data files (i.e., the files for active employees, pensioners and terminated members entitled to a deferred vested pension) since the previous valuation to determine whether all Plan members were accounted for in this valuation, to check for duplicate records and to confirm pension amounts.

For some employee groups, the raw data did not reflect outstanding salary increases that were effective prior to the valuation date. In these cases, Dalhousie provided us with the retroactive salary increase amounts.

Where there was data missing, we made the following assumptions for pensioners:

- Forms of pension were assumed to be the same as in the previous valuation.
- Male spouses are assumed to be 2 years older than their female counterparts.

All of our tests had satisfactory results, or the data was corrected. However, the tests may not have captured all deficiencies in the data. We have also relied on the Plan administrator's certification on the quality of the data.

## Reconciliation of Membership

	Active	Terminated non-vested members	Deferred (via PTF)	Deferred (via RTF)	Pensioners and survivors	Total
<b>Number as at January 31, 2023</b>	<b>3,436</b>	<b>306</b>	<b>654</b>	<b>109</b>	<b>1,690</b>	<b>6,195</b>
New entrants	863	-	-	-	-	863
Returned to active	4	-	(4)	-	-	-
Retirements	(215)	-	(27)	(19)	261	-
Terminations						
▪ Deferred or pending (via PTF)	(391)	-	391	-	-	-
▪ Deferred (via RTF)	(14)	-	-	14	-	-
▪ Fully settled	(188)	(2)	(65)	-	-	(255)
Deaths paid out	(15)	(1)	-	-	(107)	(123)
New survivors	-	-	-	-	38	38
New limited member pensions	-	-	-	-	8	8
<b>Number as at June 30, 2025</b>	<b>3,480</b>	<b>303</b>	<b>949</b>	<b>104</b>	<b>1,890</b>	<b>6,726</b>

## Statistical Profile of Active Members

	Number*	Average Age	Average Credited Service	Expected Salary, Year Following June 30, 2025	Average Accumulated Contributions**
Males	1,386	48.4	11.2	\$113,670	\$80,450
Females	2,030	47.1	9.9	\$100,318	\$59,590
Total	3,416	47.6	10.4	\$105,735	\$68,054

\* These figures do not include 64 individuals who have reached 35 years pensionable service and are therefore no longer accruing benefits for future service.

\*\* Includes past service contributions and transfers into the Plan

## January 31, 2023 Tables For Comparison

Total	3,373	47.6	10.5	\$96,157	\$66,106
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## Statistical Profile of Deferred Pensioners (under deferral via the PTF\*)

	Number	Average Age	Average Annual Lifetime Pension
Males	381	47.0	\$7,591
Females	568	45.9	\$6,543
Total	949	46.3	\$6,964

\* Under "deferral via the PTF", the individual is entitled to a deferred pension, or the commuted value of the pension (determined in accordance with CIA standards).

### January 31, 2023 Tables For Comparison

Total	654	47.6	\$7,225
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## Statistical Profile of Deferred Pensioners (under deferral via the RTF\*)

	Number	Average Age	Average Deferred Account Balance
Males	14	62.6	\$695,074
Females	17	60.8	\$554,854
Total	31	61.6	\$618,179

\* Under "deferral via the RTF", the individual is entitled to a pension that can be provided by their deferred account balance (determined on an actuarial equivalent basis).

### January 31, 2023 Tables For Comparison

Total	30	62.1	\$529,477
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## Statistical Profile of Pensioners (Including Survivors)

	Number	Average Age	Average Annual Lifetime Pension
Males	780	74.8	\$52,082
Females	1,110	72.7	\$35,199
Total	1,890	73.6	\$42,166

### January 31, 2023 Tables For Comparison

Total	1,690	73.1	\$39,796
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## Salary/ Age/ Service Distribution for Active Members

Age	Service (years)							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
20-24	32							32
	1,693,260							1,693,260
	52,914							52,914
25-29	126	9						135
	8,188,141	568,552						8,756,693
	64,985	63,172						64,864
30-34	221	55	9					285
	17,488,651	4,560,640	680,170					22,729,461
	79,134	82,921	75,574					79,752
35-39	258	110	46	6				420
	23,736,605	10,895,002	4,170,543	441,871				39,244,021
	92,002	99,045	90,664	73,645				93,438
40-44	232	172	92	40	3			539
	21,496,579	19,696,529	10,242,872	3,759,636	240,004			55,435,620
	92,658	114,515	111,336	93,991	80,001			102,849
45-49	163	118	99	100	33	5		518
	15,420,120	13,066,438	11,883,455	11,891,904	3,283,387	416,778		55,962,082
	94,602	110,733	120,035	118,919	99,497	83,356		108,035
50-54	113	91	76	116	94	30	4	524
	10,609,553	9,433,252	8,701,809	15,873,985	13,188,778	2,599,613	324,049	60,731,038
	93,890	103,662	114,497	136,845	140,306	86,654	81,012	115,899
55-59	71	74	70	89	100	63	36	503
	6,917,749	8,163,789	8,035,676	10,510,468	15,374,161	7,443,279	3,062,122	59,507,244
	97,433	110,321	114,795	118,095	153,742	118,147	85,059	118,305
60-65	37	54	30	58	77	55	35	346
	3,636,882	5,883,792	3,417,768	6,383,083	9,678,025	8,259,655	4,336,286	41,595,491
	98,294	108,959	113,926	110,053	125,689	150,176	123,894	120,218
Over 65	9	20	16	13	15	20	21	114
	979,077	2,140,673	1,762,077	1,490,425	1,974,549	3,241,460	3,948,840	15,537,102
	108,786	107,034	110,130	114,648	131,637	162,073	188,040	136,290
	<b>1,262</b>	<b>703</b>	<b>438</b>	<b>422</b>	<b>322</b>	<b>173</b>	<b>96</b>	<b>3,416</b>
<b>Grand Total</b>	<b>110,166,618</b>	<b>74,408,666</b>	<b>48,894,369</b>	<b>50,351,371</b>	<b>43,738,904</b>	<b>21,960,785</b>	<b>11,671,297</b>	<b>361,192,011</b>
	<b>87,295</b>	<b>105,844</b>	<b>111,631</b>	<b>119,316</b>	<b>135,835</b>	<b>126,941</b>	<b>121,576</b>	<b>105,735</b>

Key: Each cell contains the following information (in order): a "count" of the number of members who fit within the cell's parameters (for instance, the cell in the upper left corner indicates that 32 members are between the ages of 20 and 24, **and** have between 0 and 4 years of service); the total salaries paid to the members in the cell; and the average salary of members in the cell (the upper left cell, for instance, shows that the 32 members earned a total of \$1,693,260, or an average of \$52,914).

Note: These figures do not include individuals who have reached 35 years pensionable service and are therefore no longer accruing benefits for future service. There are 64 such members.

## Pensioners

Age at Valuation	Female	Male	Total
45 to 49	1		1
	5,053		5,053
	5,053		5,053
50 to 54	2	1	3
	20,676	1,396	22,072
	10,338	1,396	7,357
55 to 59	22	6	28
	460,162	180,311	640,474
	20,916	30,052	22,874
60 to 64	123	34	157
	3,872,972	1,010,572	4,883,544
	31,488	29,723	31,105
65 to 69	303	161	464
	10,363,220	6,331,175	16,694,396
	34,202	39,324	35,979
70 to 74	282	223	505
	11,093,253	11,421,784	22,515,037
	39,338	51,219	44,584
75 to 79	185	169	354
	6,626,444	9,669,496	16,295,939
	35,819	57,216	46,034
80 to 84	104	120	224
	3,687,628	8,198,319	11,885,947
	35,458	68,319	53,062
85 to 89	55	41	96
	1,881,386	2,358,363	4,239,749
	34,207	57,521	44,164
90 to 94	24	20	44
	774,682	1,100,950	1,875,632
	32,278	55,048	42,628
95 and over	8	5	13
	278,477	351,441	629,917
	34,810	70,288	48,455
<b>Total count by gender</b>	<b>1,110</b>	<b>780</b>	<b>1,890</b>
<b>Total lifetime benefit</b>	<b>39,070,667</b>	<b>40,623,808</b>	<b>79,694,475</b>
<b>Total average lifetime benefit</b>	<b>35,199</b>	<b>52,082</b>	<b>42,166</b>

Key: Each cell contains the following information (in order): count, sum of lifetime retirement benefit, and average lifetime retirement benefit.

## Appendix E Summary of Plan Provisions

The following is a summary of the Plan's main provisions in effect on June 30, 2025. This summary is not intended as a complete description of the Plan. For specific details of the Plan provisions, reference should be made to the Plan text.

### **Effective Date of the Plan**

Contributions to this Plan (and eligibility for pension benefits) commenced effective September 1, 1959.

### **Eligibility and Membership**

Up to June 30, 1996 all full-time employees and regular part-time employees of Dalhousie University are eligible to join the Plan upon completion of at least 75 days of employment with the University. After June 30, 1996 eligibility for membership occurs at the date of employment.

Statutory part-time employees may elect to join the Plan following completion of two consecutive calendar years of employment during which, in each of the calendar years, their earnings were at least 35% of the Canada Pension Plan YMPE, or their hours worked were at least 700.

### **Required Contributions**

- A. By Members: 4.65% of the first \$5,000 of annual salary plus 6.15% of annual salary in excess of \$5,000 (where the salary is ultimately limited to that which would produce a pension entitlement in the year equal to the maximum pension for that year according to the provisions of the *Income Tax Act*), plus Supplementary Contributions in the amount of 1.11% on pensionable earnings up to the YAMPE and 2.00% on pensionable earnings above the YAMPE.
- B. By the University: the amount required to meet the cost of all benefits not met by the Members' required contributions.

### **Interest**

Any refund of contributions, payable either to a member or his or her estate, includes interest credited each year from the 1st of October at a rate based on the average of the yields of 5-year personal fixed term chartered bank deposit rates (CANSIM series V122515) over the 12-month period ending on the most recent June 30th.

### **Normal Retirement Date**

The normal retirement date for all employees is the July 1st immediately following attainment of age 65 except for those members who were on full-time staff prior to July 1, 1964. In the latter case, normal retirement date is the 1st day of September immediately following the attainment of age 65.

## **Early Retirement**

A member who has attained age 55 may retire at any time prior to attainment of his or her normal retirement age. In these circumstances, the member would receive a reduced pension in accordance with the following table:

Full Years Prior to Age 65	Early Retirement Adjustment Factor	
	For benefits earned after June 30, 2004	For benefits earned up to June 30, 2004
10	.63	.76
9	.66	.80
8	.69	.84
7	.72	.88
6	.75	.92
5	.78	.95
4	.81	.98
3	.85	1.00
2	.90	1.00
1	.95	1.00

These adjustment factors are interpolated where retirement occurs between anniversary dates. Under Phase Three of the Surplus Use Agreement (1996), these reduction factors are applicable prior to exact age 65 instead of the normal retirement date.

## **Partial Early Retirement and Reduced Workload Arrangements**

Any regular full-time staff member may apply for partial early retirement through an approved reduced workload arrangement provided that he or she has completed at least three years of Continuous full-time or regular part-time employment since last date of hire. A Reduced Workload Period shall be for a fixed term. Participation in and approval of such RWA is by mutual consent and is not extended as a matter of right.

In respect of any Member working under an RWA, the following shall apply:

- (1) the calculation of the Member's pension benefit shall be based on the Member's Nominal Salary (pre-RWA Salary with adjustments for salary increases) rather than the actual Salary received by the Member under RWA;
- (2) the Member will make pension contributions through payroll deduction based on the actual Salary received during the period rather than the Member's Nominal Salary on which the benefits are based; and

(3) the University will pay contributions on behalf of the Member in respect of the difference between the Member's actual Salary and Nominal Salary as well as its contributions on the Nominal Salary.

This provision does not mean that a member can retire and commence receipt of pension benefits and continue to accrue benefits simultaneously. Such action is not permitted.

## **Deferment of Pension Benefits**

Any member eligible to receive a pension (either at normal or early retirement age) may elect to defer commencement of pension payments until some later date (but not beyond the end of the calendar year the member attains age 71 in any event). In these circumstances, the actuarial equivalent value of the member's pension as of the selected retirement date is transferred into the Retirees' Trust Fund and is credited with investment income until the member's pension payments start. The actual pension payable from deferred retirement date is calculated on a consistent actuarial equivalent basis. The ultimate pension at date of commencement must not exceed the maximum pension payable from a Defined Benefit Plan, as prescribed in the *Income Tax Act*.

## **Pension at Normal Retirement**

The pension provided under this Plan is expressed as a certain percentage of the average of the best three years of remuneration received by the member.

For pension accrual in respect of service prior to January 1, 2024, the percentage applicable is 2.0% on average pensionable earnings multiplied by the pensionable service accrued prior to January 1, 2024. For pension accrual in respect of service after December 31, 2023, the percentage applicable is 1.8% on average pensionable earnings up to the average YAMPE and 2.0% on average pensionable earnings above the average YAMPE, multiplied by the pensionable service after December 31, 2023.

The annual amount of lifetime pension payable to members, excluding any benefits derived from the member's AVCs, for the calendar year in which these benefits commence to be paid shall not exceed the product of:

- A. the number of years of Pensionable Service of the Member which, when combined with the Member's Pensionable Service prior to January 1, 1992, if any, will not exceed 35 years, and
- B. the lesser of:
  - (1) 1/9 of the Money Purchase Limit in the calendar year in which benefits commence, and
  - (2) 2% of the average of Member's best three consecutive years of Compensation in respect of the Employer.

## **Type of Pension**

Pensions are payable throughout the lifetime of a Pensioner. For service up to June 30, 2004, the minimum guaranteed number of payments for single members or for married members electing a single life form of pension is 120 months. For married members electing a joint form of pension, the normal form of pension is a lifetime pension payable to the member and spouse jointly. The benefit is payable at a rate reduced by one third to the spouse should the spouse survive the member, provided that the spouse is not younger than the member by more than 60 months. If the spouse is younger by more than 60 months, the benefit is reduced in consideration of the actual age of the spouse to be actuarially equivalent to the benefit payable to a member whose spouse is 60 months younger. No fewer than 60 monthly payments shall be paid in any event.

For service from July 1, 2004, the normal form of pension for all members is a lifetime pension payable to the member, with a guarantee that no fewer than 84 payments shall be paid in any event.

A member with a spouse is required to receive a pension which includes a 60% survivor's pension; such pension being the actuarial equivalent of the pension otherwise payable in the normal form. Other optional forms of pension are available on an actuarial equivalent basis subject to signature of a waiver form by member and spouse.

## **Adjustment to Pensions in Course of Payment**

Effective July 1, 1982, the decision was made to discontinue the previous policy of purchasing immediate annuities from life insurance companies in respect of retiring employees. Accordingly, a separate Retirees' Trust Fund was established and, in respect of employees retiring on or after July 1, 1982, pension payments are being made directly from this Retirees' Trust Fund.

At the time of retirement, a capital sum is transferred from the Pension Trust Fund into the Retirees' Trust Fund in respect of each retiring employee; the amount of this transfer being based on the mortality and interest assumptions used in the most recent actuarial valuation of this Pension Plan.

The three-year average investment yield on the Retirees' Trust Fund in excess of the post-retirement interest assumption (PRIA) will be used to fund indexing of pensions in the manner described below, subject to a "hold back" as a provision against life expectancy variations and other contingencies of 0.1% for Members who retired prior to June 30, 1994, 0.4% for Members who retired on or after June 30, 1994 but before June 30, 1996 and 0.5% for Members who retired on or after June 30, 1996.

In addition, accumulated pension increases shall not exceed corresponding accumulated increases in the Consumer Price Index.

Notwithstanding the above, in the event that the applicable three-year average investment yield on the Retirees' Trust Fund does not exceed the PRIA by the "hold back" percentages, then there shall be no adjustment to pensions in course of payment for that year except as may be provided with surplus funds. Furthermore, in these circumstances, there will be a corresponding reduction in the rate of increase of pensions in the following year or years of such amount, or amounts that would be required to bring pensions in course of payment to the same level that would apply if negative adjustments had been made in those years when the three-year average investment yield on the Retirees' Trust Fund did not exceed the PRIA by the "hold back" percentages.

The first such increase took effect as of January 1, 1984, and further increases after that date – to the extent an adjustment can be made – take place on each subsequent 1st of January.

## **Death Benefits Before Retirement**

Upon death prior to retirement, the benefit payable to the member's spouse or beneficiary is an amount equal to the sum of:

- (i) The greater of
  - a. The Member's required contributions plus interest in respect of service prior to January 1, 1988, plus 100% of the Commuted Value of the Member's pension accrued to the date of death, in respect of service after December 31, 1987; and
  - b. An amount equal to the Sum of Contributions Compounded of the Member up to the date of death; and
- (ii) The Member's additional voluntary contributions plus interest.

In lieu of the lump sum described above, the Member's spouse can elect to receive a lifetime pension equal to the actuarial equivalent of the lump sum.

## **Disability Benefit**

In the event that a member becomes totally and permanently disabled prior to normal retirement date and becomes eligible to receive benefits under the University's Long Term Disability Plan, provision is made for the continuation of joint contributions to the Pension Plan while the member is receiving LTD Benefits until normal retirement age. At that time, the disability benefit ceases, and a pension will become payable under this Plan with full credit being given both for years of active participation and for years when the member continued to contribute to the Plan while disabled.

## **Termination of Employment**

A Member who terminates employment is entitled to a deferred pension payable at the normal retirement date. A Member can elect to receive an early retirement pension which is the pension payable at the normal retirement date, with the appropriate actuarial reduction factors applied, as outlined above.

In lieu of a pension benefit as described above, a Member may elect to have the greater of (i) their Locked-in Contributions, and (ii) the Commuted Value of the Member's pension accrued to the date of termination, including any 50% rule excess employee contributions, transferred to a Registered Plan permitted under the *Pension Benefits Act* and the *Income Tax Act*, provided that such arrangement is administered as locked-in as required by the *Pension Benefits Act*.

## Appendix F Employer Certification

On behalf of Dalhousie University, I hereby certify that the employee data provided to Eckler Ltd. for the purposes of the actuarial valuation of the Dalhousie University Staff Pension Plan as at June 30, 2025 are accurate and complete.

March 25, 2026  
Date

*Ch. Pat*  
Signature

Manager, Retirement Services  
Title