

**Board of Governors**  
**PENSION & BENEFITS COMMITTEE**  
**Friday 19 November 2021**  
**9:30 a.m. to 12:00 noon**

**This meeting will be held via Microsoft Teams**  
**Non-members may arrange to join the open session of the electronic meeting by contacting Cindy Baker, [cindy.baker@uwaterloo.ca](mailto:cindy.baker@uwaterloo.ca)**

	<b>OPEN SESSION</b>	<b>ACTION</b>
9:30	1. Approval of the 22 October 2021 Minutes (Open Session)* and Business Arising a. Engagement of Benefits Insurers/Administrators – update [Hornberger]	Decision Information
9:35	2. Execution Against the Work Plan* [Wickens]	Information
9:40	3. Update on Government Pension Plan Initiatives [Aon]	Information
9:45	4. Q3 Pension Dashboard* [Aon]	Information
9:55	5. Policies 23 and 59 – follow-up [Joan Kennedy]	Information
10:05	6. Indexing of Plan Maxima* [Joan Kennedy]	Decision
10:15	7. Employee and Family Assistance Program Utilization*[Joan Kennedy]	Information
 <b>CONFIDENTIAL SESSION</b>  		
	8. Approval of the 22 October 2021 Minutes (Confidential Session)+ and Business Arising	Decision
	9. Pension Appeal** [Sue McGrath, Aon]	Decision
	<u>Next Meeting:</u> Friday 10 December 2021, 9:30 a.m. – 12:00 noon	

\*attached  
\*\* to be distributed  
+ distributed separately

25 October 2021

Rebecca Wickens  
Associate University Secretary

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**Please convey regrets to Cindy Baker at 519-888-4567 x32623 or [cindy.baker@uwaterloo.ca](mailto:cindy.baker@uwaterloo.ca)**

Future Agenda Items

- a. Pension Contribution for Members on LTD
- b. Level of LTD coverage vs. practical requirements

**University of Waterloo  
Board of Governors  
PENSION & BENEFITS COMMITTEE  
Minutes of the 22 October 2021 Meeting  
[in agenda order]**

**Present:** Terrence Birmingham, Ted Bleaney, Sara Cressman, , Tony Giovinazzo, Michael Herz, Dennis Huber, Ranjini Jha, James Rush, David Saunders, David Taylor, Marilyn Thompson, Ken Vetzal, Rebecca Wickens (secretary)

**Regrets:** Peter Barr

**Consultants/Resources:** Linda Byron, Sarah Hadley, Lee Hornberger, Joan Kennedy, Sue McGrath, Scott Palmer (1, 2), Allan Shapira

**Guests:** Sheryl Kennedy (6, 7)

**Organization of Meeting:** Tony Giovinazzo took the chair, and Rebecca Wickens acted as secretary. The secretary advised that a quorum was present. The agenda was accepted as distributed.

There was a motion to move into confidential session for item 1 on the agenda. Bleaney and Huber. Carried.

**OPEN SESSION**

**2. RFP RECOMMENDATION – CARRIER TO INSURE/ADJUDICATE LTD/HEALTH AND DENTAL**

Following a presentation and discussion in confidential session, there was a motion to approve the engagement of:

- Sun Life Financial to insure the long-term disability program effective 1 May 2022; and
- Green Shield Canada to administer the health and dental plans effective 1 January 2023;

subject to completion of due diligence and execution of contracts, satisfactory to the University. Bleaney and Taylor. Carried.

**3. APPROVAL OF THE 10 SEPTEMBER 2021 MINUTES (OPEN SESSION) AND BUSINESS ARISING**

There was a motion to approve the minutes as distributed. Bleaney and Huber. Carried.

**4. EXECUTION AGAINST THE WORK PLAN**

This item was received for information.

**5. UPDATE ON GOVERNMENT PENSION PLAN INITIATIVES**

Members heard: there has not been much activity by the provincial government re: pensions recently; an update regarding changes to the standards for calculating commuted values will be brought to a future meeting.

**6. REPORT FROM THE PENSION INVESTMENT COMMITTEE**

Sheryl Kennedy joined the meeting. Kennedy spoke to the report distributed with the agenda, highlighting: pension fund investments are performing well; a subcommittee has been formed to consider new infrastructure investments; PIC is reviewing the investment reports received from consultants and investment managers, and considering opportunities for enhancement; while working on the Statement of Investment Policies & Procedures, PIC identified the need for a funding policy to document the framework for funding the plan.

**7. DRAFT REVISED SIPP, FUND IMPLEMENTATION PROCEDURES, AND RESPONSIBLE INVESTMENT POLICY**

Members heard: a subcommittee of PIC reviewed Waterloo's current pension investment policies and procedures as well as similar documents at other public sector pension plans; the subcommittee consulted with Aon Hewitt and PIC; PIC is requesting feedback from Finance & Investment Committee and Pension & Benefits Committee before seeking approval. Kennedy provided an overview of the changes, in particular, structural changes to the SIPP such that the SIPP will cover all legal requirements and remain subject to Board of Governors' oversight, while information not legally required to be in the SIPP but useful for administration and transparency of the plan will be contained in supplementary procedural documents overseen by Pension & Benefits Committee.

Comments included: the need to clarify the governance structure and legal responsibilities with respect to pension investments; the history, benefits and concerns with Finance & Investment Committee being consulted or otherwise involved in pension investments; proposed changes to the asset allocation and questions re: how often it will be reviewed; the currency for the benchmark and whether PIC is considering hedging; rationale for and benefits of tightening the ranges; questions re: how often the policy and procedure documents will be reviewed; the revised documents should include a covering note detailing changes when it comes time for approval. Kennedy thanked members for the thorough review and comments. Members were asked to send any further comments in writing to a PIC member. Sheryl Kennedy left the meeting.

**8. FOLLOW-UP ACTIVITY – DATA ANALYSIS AND POLICY 23/59**

Hornberger reported: members will recall that data analysis was deemed necessary to understand the impact of the recommendation re: changing full benefit eligibility from three to two years; the analysis has recently been completed, and it appears that the Bill 124 limitation of 1% increases to total compensation each 12 month period within the moderation period will prevent the implementation of that recommendation; resources are meeting with legal counsel and will report back in November. Members asked that the details of the oral report be circulated by email following the meeting. [Note: the follow-up email was sent to members on 22 October 2021.]

With no further business in open session, the committee moved into confidential session.

**NEXT MEETING**

The next regular meeting is scheduled for Friday 19 November 2021, 9:30 a.m. – 12:00 noon.

9 November 2021

Rebecca M. Wickens  
Associate University Secretary

## Execution against Work Plan

### Pension & Benefits Committee, Board of Governors, University of Waterloo

The below represents the annual responsibilities of the P&B Committee and has been prepared as an aid to planning only. The committee's activities are much broader, however, and include: legislative changes, plan changes and improvements; selection of managers and service providers; and requests from the UW community regarding pension and benefits plans.

Task	Frequency (Target month)	20 Nov 2020	15 Dec 2020	15 Jan 2021	11 Feb 2021	12 Mar 2021	14 May 2021	18 June 2021	10 Sept 2021	22 Oct 2021	19 Nov 2021
Approval of Actuarial Valuation Assumptions	Annual (Jan)			✓							
Investment Status of PPP	Annual (Feb)				✓						
Cost-of-living Increase for Pensioners	Annual (Feb)				✓						
Pensions for Deferred Members	Annual (Feb)				✓						
Salaries for Pension Purposes for Individuals on Long-term Disability	Annual (Feb)				✓						
Actuarial Valuations (RPP and PPP), with posting to website once approved	Annual (Mar)					✓					
Review of Contribution and Protocol Caps (RPP and PPP)	Annual (Mar)					✓					
Benefits Plan Premium Renewals	Annual (Mar)					✓					
Indexing of Long-term Disability Plan Benefits and Maxima	Annual (Mar)					✓					
Annual Committee Self-Assessment	Annual (Mar)					✓					
Budget Overview	Annual (May)						✓				
Previous Years' Fees and Expenses	Annual (May)						✓				
Annual Audit of the Pension Plan Fund Financial Statements	Annual (May)						✓				

D = deferred

Task	Frequency	20 Nov 2020	15 Dec 2020	15 Jan 2021	11 Feb 2021	12 Mar 2021	14 May 2021	18 June 2021	10 Sept 2021	22 Oct 2021	19 Nov 2021
Benefits Utilization Report	Annual (June)							✓			
Annual review re: benefits added/removed from insured plans in the market	Annual (June)							✓			
Review of Committee Terms of Reference	Annual (June)							✓			
Indexing of Plan Maxima – Health, Dental, Retiree Life Insurance	Annual (Nov)	✓									✓
Employee and Family Assistance Program – report on utilization	Annual (Nov)										✓
Maximum pension limits and caps adjustments, based on average industrial wage increase (AIW)	Annual (Dec)		✓								
Total Fund Overview	Quarterly	✓				✓		✓	✓		
Investment Manager Review	Semi-annually										
Approval of the Statement of Investment Policies and Procedures (SIPP)	Annual										
Annual Report to the Community	Annual				✓						
Actuarial Filing - Minimum every three years Most recent filings: 2017, 2018, 2020, 2021											



# Pension Risk Management Dashboard

**University of Waterloo**  
As of September 30, 2021

To protect the confidential and proprietary information included in this material, it may not be disclosed or provided to any third parties without the approval of Aon.



# About This Material

This dashboard was prepared for the University of Waterloo to track changes in funded status of the Pension Plan over successive reporting periods, as well as quantify the amount of risk to which the Pension Plan is exposed. The report presents the funded status and performs the analysis on three bases:

**Risk-Free Benchmark Basis** – This liability is calculated using best estimate assumptions for retirement, termination and other demographic experience, and a discount rate and inflation assumption determined with reference to the risk-free environment. For this report, the liability has been determined at the real return bond yield plus a 40 basis point credit spread to reflect additional yield that can be achieved with relatively little additional risk. This liability differs from the solvency calculation in that the demographic assumptions are best estimate and statutory “grow-in” provisions are not included.

**Going Concern Basis** – This liability is calculated using the going concern assumptions at the most recent valuation. The analysis is performed using the market value of assets with Provision of Adverse Deviation as prescribed by the *Pension Benefits Act* (Ontario).

**Solvency/Hypothetical Wind Up Basis** – This liability is calculated using assumptions determined in accordance with the Canadian Institute of Actuaries Annuity Purchase guidance and Commuted Value standards in effect at each measurement date shown in this report. A summary of these assumptions is included on page 16.

This dashboard also contains a reconciliation that compares the going concern liability with the liability calculated using the risk-free benchmark. The difference between the two liabilities represents the amount of return expected to be provided by taking on risk in the investment portfolio. Over successive quarters the tool helps quantify how that risk changes as the underlying interest rates change.

On both bases the following information is shown:

- **Current Funded Status and Historical Asset Liability Performance**
  - How well funded is the plan?
  - What has been the return on plan assets and liabilities?
- **Detailed Asset and Liability Performance Attribution**
  - What factors drove the performance of assets and liabilities over the prior period?
  - What is the relative impact of these factors on the assets and liabilities in isolation and in combination?

For the Risk-Free Benchmark Basis, the following information is also shown:

- **Scenario Testing**
  - What risk exposures does the plan face?
  - What would be the impact of a downside event for each risk factor?

# Highlights

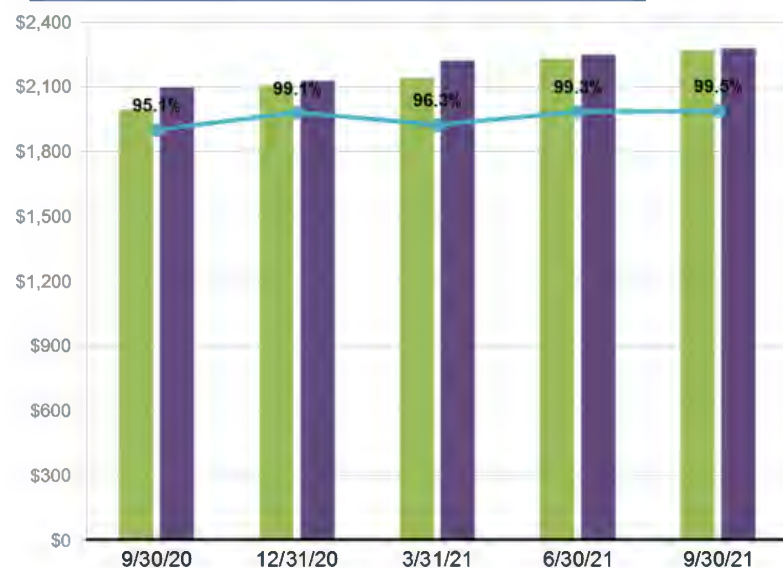
- The going concern deficit decreased from \$16.6 million to \$11.3 million over the quarter due to asset performance in line with expectations while contributions exceeded new benefit accruals.
- The risk-free deficit decreased from \$1,150.5 million to \$1,070.0 million over the quarter due to an increase in risk-free rates.
- The solvency deficit decreased from \$69.7 million to \$19.7 million over the quarter primarily due to a decrease in liabilities resulting from an increase in effective interest rate.
- The total fund had a rate of return after all fees of 1.3% for last quarter, about in line with expectations.
- The estimated September 30, 2021 liabilities are projected based on the most recent actuarial valuation, with membership data as at January 1, 2021.
- The annuity purchase guidance educational note for valuations as of September 30, 2021 and October 1, 2021 (published as of July 26, 2021) has been reflected in the interest rates used to calculate the September 30, 2021 Solvency and Hypothetical Wind Up liabilities.
- The transfer ratio as at September 30, 2021 is 72.0%. Compared to the transfer ratio of 64.8% in the last filed valuation on January 1, 2021, this represents an increase of 11%. Since the transfer ratio did not decrease 10% over that period, no Regulation 19 filing is required. See slide 11 for more details.
- The most recent actuarial valuation was performed as at January 1, 2021.
- All figures are in \$1,000,000 (CAD).



# Executive Summary – Going Concern

Values in \$1,000,000 (CAD)

## Funded Status



## Highlights for the Quarter-Ending 9/30/21

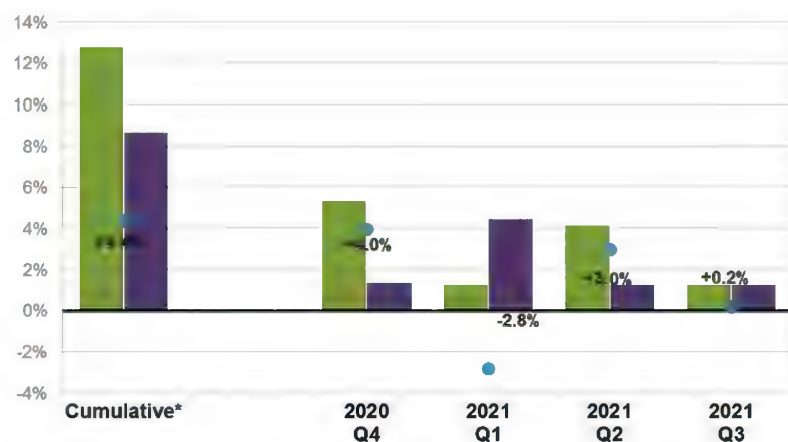
The plans' funded ratio increased to 99.5% at 9/30/21. This result was primarily due to the combined effects of:

- Asset performance about in line with expectations, and
- Contributions of \$27.1 million which exceeded new benefit accruals.

	9/30/20	12/31/20	3/31/21	6/30/21	9/30/21
Market Value of Assets	\$ 1,993.9	\$ 2,108.2	\$ 2,140.1	\$ 2,233.1	\$ 2,267.7
Going Concern Liability	2,097.6 <sup>1</sup>	2,127.7 <sup>1</sup>	2,222.3 <sup>1</sup>	2,249.7 <sup>1</sup>	2,279.0 <sup>1</sup>
Surplus/(Deficit)	\$ (103.7)	\$ (19.5)	\$ (82.2)	\$ (16.6)	\$ (11.3)
Periodic Contributions	\$ 25.8	\$ 25.6	\$ 25.6	\$ 26.4	\$ 27.1
Effective Interest Rate	5.60%	5.60%	5.30%	5.30%	5.30%
Funded Ratio:	95.1%	99.1%	96.3%	99.3%	99.5%
Asset Duration:	2.1	2.1	1.9	1.8	1.8
Going Concern Liability Duration:	14.5	14.5	14.4	14.4	14.4

<sup>1</sup>After application of the PfAD at 9.00%

## Asset-Liability Return



## Asset Liability Return for Quarter-Ending 9/30/21

Assets returned 1.3% during the quarter while liabilities returned 1.3%, resulting in a funded status increase of 0.2%.

	Periodic Return/Change	Cumulative	12/31/20	3/31/21	6/30/21	9/30/21
Market Value of Assets Return		12.8%	5.4%	1.3%	4.2%	1.3%
Going Concern Return		8.7%	1.4%	4.5%	1.3%	1.3%
Funded Ratio Change		4.4%	4.0%	-2.8%	3.0%	0.2%

## Executive Summary – Going Concern (PfAD Impact)

Values in \$1,000,000 (CAD)

### Funded Status

	12/31/20	3/31/21	6/30/21	9/30/21
Going Concern Liability with 9.00% PfAD	\$ 2,127.7	\$ 2,222.3	\$ 2,249.7	\$ 2,279.0
New PfAD Impact	36.6 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.00 <sup>4</sup>
Market Value of Assets	\$ 2,108.2	\$ 2,140.1	\$ 2,233.1	\$ 2,267.7
Going Concern Liability with New PfAD	<u>2,164.3</u>	<u>2,222.3</u>	<u>2,249.7</u>	<u>2,279.0</u>
Surplus/(Deficit)	\$ (56.18)	\$ (82.2)	\$ (16.6)	\$ (11.3)
PfAD	11.15%	9.00%	9.00%	9.00%

<sup>1</sup>Impact of change in PfAD from 9.00% to 11.15%

<sup>2</sup>Impact of change in PfAD from 9.00% to 9.00%

<sup>3</sup>Impact of change in PfAD from 9.00% to 9.00%

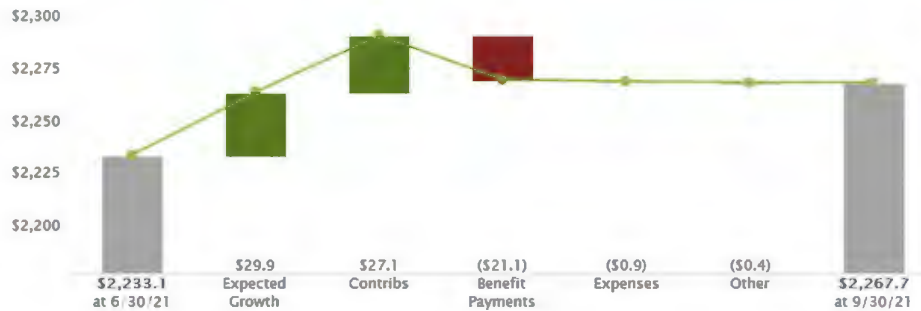
<sup>4</sup>Impact of change in PfAD from 9.00% to 9.00%

The going concern deficit decreased from \$16.6 million to \$11.3 million over the quarter due to asset performance in line with expectations while contributions exceeding new benefit accruals.

# Asset-Liability Performance Attribution – Going Concern

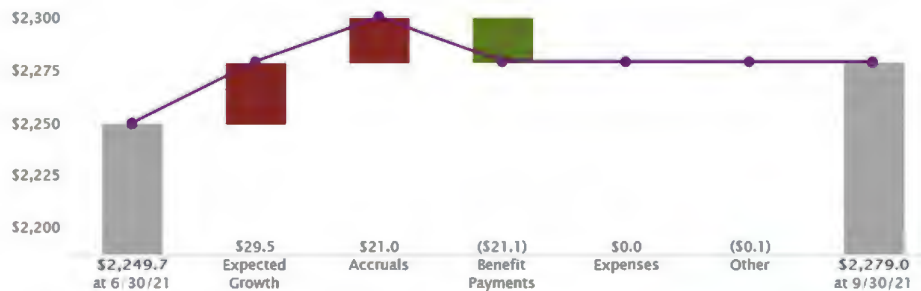
Values in \$1,000,000 (CAD)

## Assets



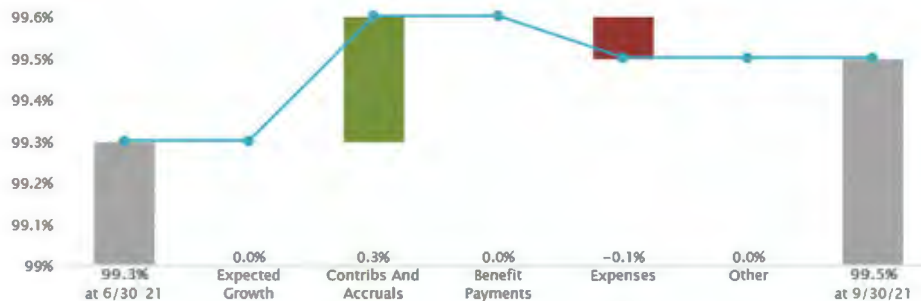
- Overall, assets returned 1.3% during this quarter, in line with an expected growth assumption of about 1.3% per quarter.
- The fixed income assets lost value due to an increase in the underlying risk-free rates.
- The University and members made \$27.1 million in contributions during the quarter and the trust paid \$21.1 million in benefits to the participants.
- “Other” includes the impact of active management, and differences between benchmark and actual investment allocations.

## Liabilities



- Liabilities as of 9/30/21 are based on 5.30%.
- Liabilities were expected to grow by \$29.5 million due to interest cost during the quarter.
- New benefit accruals increased the liability by \$21.0 million during the quarter.
- Plan liabilities decreased by \$21.1 million during the quarter as benefits were paid.

## Funded Ratio

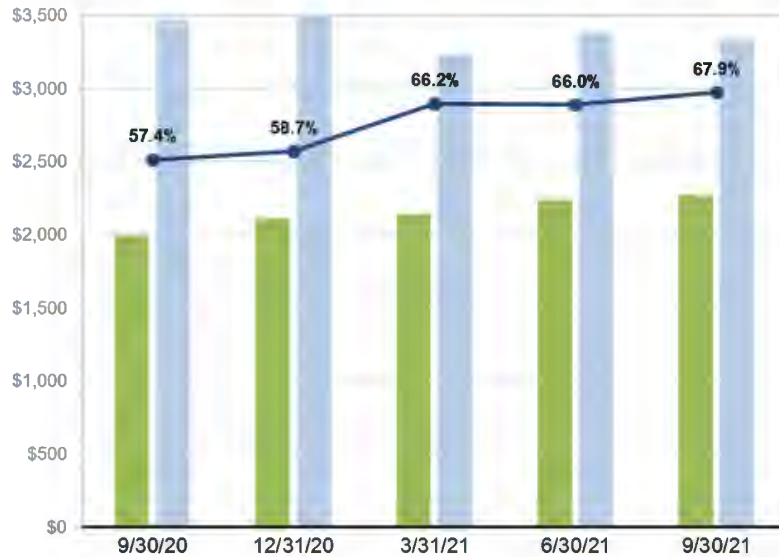


- Assets returned 1.3% during the quarter while liabilities returned 1.3%, resulting in a funded status increase of 0.2%.

# Executive Summary – Risk Free

Values in \$1,000,000 (CAD)

## Funded Status



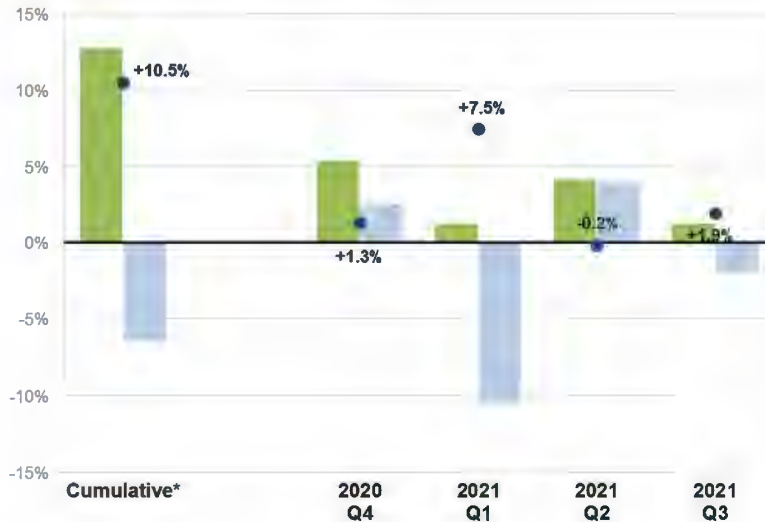
### Highlights for the Quarter-Ending 9/30/21

The plans' funded ratio increased to 67.9% at 9/30/21. This result was primarily due to the combined effects of:

- Asset performance in line with expectations,
- New benefit accruals which exceeded contributions, offset by
- A decrease in liabilities due to an increase in risk-free rates.

	9/30/20	12/31/20	3/31/21	6/30/21	9/30/21
Market Value of Assets	\$ 1,993.9	\$ 2,108.2	\$ 2,140.1	\$ 2,233.1	\$ 2,267.7
Risk-Free Liability	3,471.8	3,591.0	3,235.0	3,383.6	3,337.7
Surplus/(Deficit)	\$ (1,477.9)	\$ (1,482.8)	\$ (1,094.9)	\$ (1,150.5)	\$ (1,070.0)
Periodic Contributions	\$ 25.8	\$ 25.6	\$ 25.6	\$ 26.4	\$ 27.1
Discount Rate	0.22%	0.12%	0.65%	0.48%	0.62%
Funded Ratio:					
Assets/Risk-Free Liability	57.4%	58.7%	66.2%	66.0%	67.9%
Asset Duration:	2.1	2.1	1.9	1.8	1.8
Risk-Free Liability Duration:	19.8	20.0	18.8	19.1	18.8

## Asset-Liability Return



### Asset Liability Return for Quarter-Ending 9/30/21

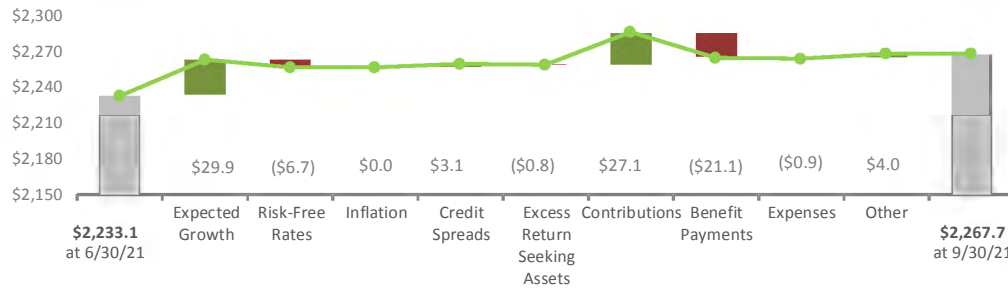
Assets returned 1.3% during the quarter while liabilities returned -2.0%, resulting in a funded status increase of 1.9%.

	Periodic Return/Change	Cumulative	12/31/20	3/31/21	6/30/21	9/30/21
Market Value of Assets Return		12.8%	5.4%	1.3%	4.2%	1.3%
Risk Free Return		-6.5%	2.6%	-10.5%	4.0%	-2.0%
Funded Ratio Change		10.5%	1.3%	7.5%	-0.2%	1.9%

# Asset-Liability Performance Attribution – Risk Free

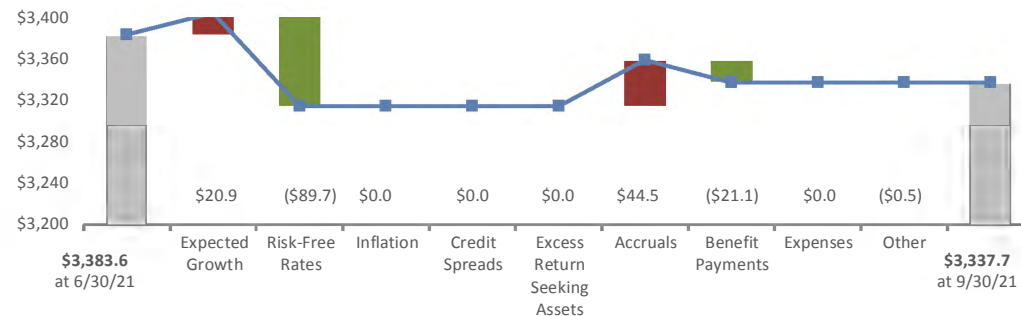
Values in \$1,000,000 (CAD)

## Assets



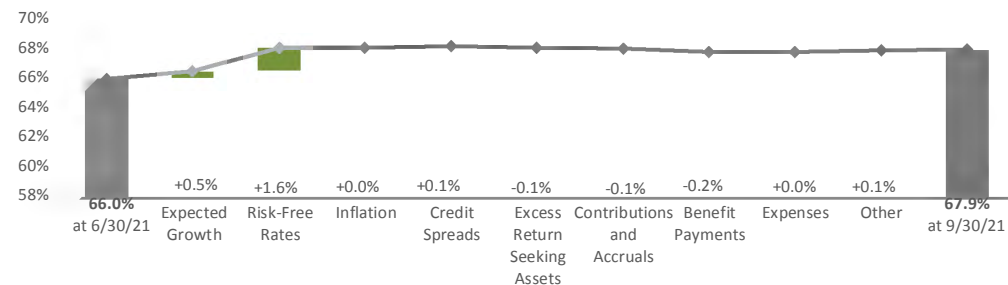
- Assets returned 1.3% during this quarter.
- The fixed income assets lost value due to an increase in the underlying risk-free rates.
- The plans' return-seeking assets (Alternatives and International Equities) performed lower than expected during the quarter.
- \$27.1 million in contributions during the quarter and the trust paid \$21.1 million in benefits to the participants.
- "Other" includes the impact of active management, and differences between benchmark and actual investment allocations.

## Liabilities



- Liabilities were expected to grow by \$20.9 million due to interest cost during the quarter.
- Risk-free rates increased resulting in a decrease in liabilities of \$89.7 million.
- Expected inflation rates remained the same
- New benefit accruals increased the liability by \$44.5 million during the quarter.
- Plan liabilities decreased by \$21.1 million during the quarter as benefits were paid.

## Funded Ratio



- The difference in exposure to risk-free rates between assets and liabilities combined with changes in risk-free rates resulted in an increase in funded status of 1.6%.
- Changes in credit spreads resulted in an increase in funded status of 0.1%.
- Return-seeking assets experienced losses during the quarter, deducting 0.1% to the plans' funded status during the period.

# Sensitivity Analysis – Risk-Free Benchmark

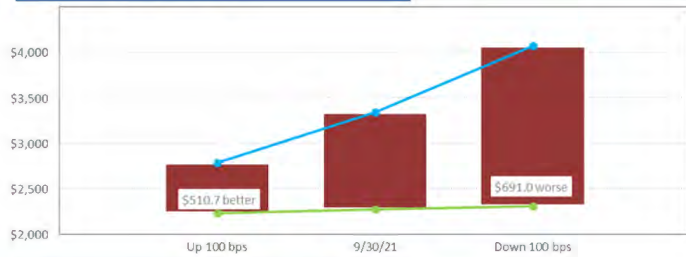
Values in \$1,000,000 (CAD)

## Credit Spreads



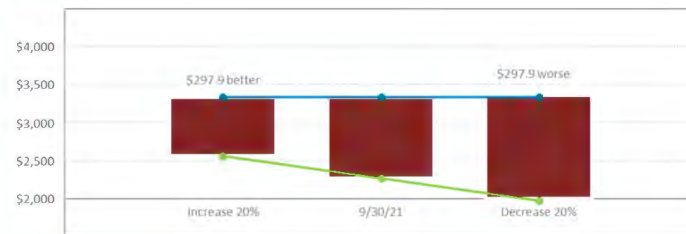
	Up 50bps	Current	Down 50bps
Market Value of Assets	\$2,254.8	\$2,267.7	\$2,280.7
Risk Free	\$3,337.7	\$3,337.7	\$3,337.7
Surplus/(Deficit)	(\$1,082.9)	(\$1,070.0)	(\$1,057.0)
Change		(\$12.9)	\$13.0

## Risk-Free Rates



	Up 100bps	Current	Down 100bps
Market Value of Assets	\$2,227.2	\$2,267.7	\$2,309.0
Risk Free	\$2,786.5	\$3,337.7	\$4,070.0
Surplus/(Deficit)	(\$559.3)	(\$1,070.0)	(\$1,761.0)
Change		\$510.7	(\$691.0)

## Return-Seeking Assets



	Increase 20%	Current	Decrease 20%
Market Value of Assets	\$2,565.6	\$2,267.7	\$1,969.8
Risk Free	\$3,337.7	\$3,337.7	\$3,337.7
Surplus/(Deficit)	(\$772.1)	(\$1,070.0)	(\$1,367.9)
Change		\$297.9	(\$297.9)

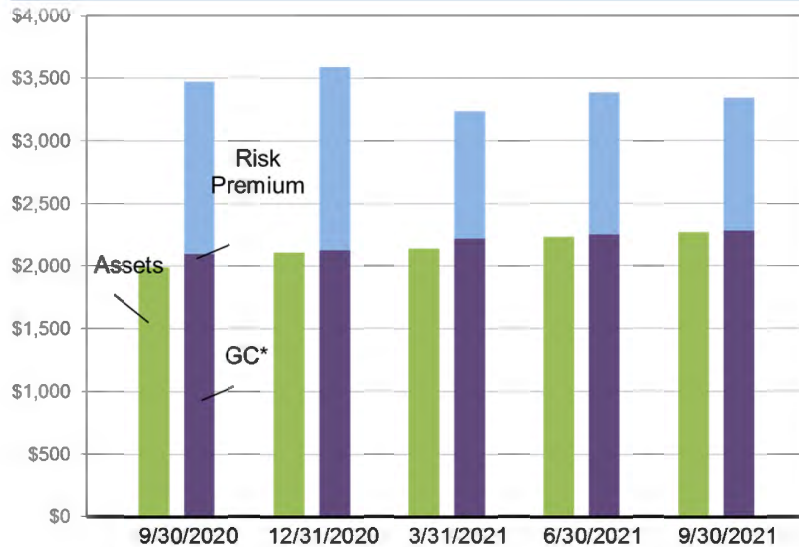
## Inflation



	Up 100bps	Inflation	Down 100bps
Market Value of Assets	\$2,267.7	\$2,267.7	\$2,267.7
Risk-Free	\$4,070.0	\$3,337.7	\$2,786.5
Surplus/(Deficit)	(\$1,802.3)	(\$1,070.0)	(\$518.8)
Change		(\$732.3)	\$551.2

# Reconciliation of Risk-Free Benchmark and Going Concern Funded Status

Values in \$1,000,000 (CAD)



	9/30/20	12/31/20	3/31/21	6/30/21	9/30/21
Market Value of Assets	\$ 1,993.9	\$ 2,108.2	\$ 2,140.1	\$ 2,233.1	\$ 2,267.7
Going Concern Liability	\$ 2,097.6	\$ 2,127.7	\$ 2,222.3	\$ 2,249.7	\$ 2,279.0
Risk Premium	<u>1,374.2</u>	<u>1,463.3</u>	<u>1,012.7</u>	<u>1,133.9</u>	<u>1,058.7</u>
Risk-Free Liability	\$ 3,471.8	\$ 3,591.0	\$ 3,235.0	\$ 3,383.6	\$ 3,337.7

\*Going Concern

The difference between the Risk-Free Liability and the Going Concern Liability is a measure of the amount of risk premium on which the Pension Plan funding is based.

## Hypothetical Wind Up (HWU) and Transfer Ratio

Values in \$1,000,000 (CAD)

	1/1/2021 (Last Filed)		7/1/2021		10/1/2021	
■ HWU Assets *	\$	2,105.4	\$	2,232.6	\$	2,267.2
■ HWU Liability		<u>3,247.2</u>		<u>3,152.0</u>		<u>3,149.5</u>
Surplus/(Deficit)	\$	(1,141.8)	\$	(919.4)	\$	(882.3)
Transfer Ratio:						
■ Market Value of Assets/HWU Liability		64.8%		70.8%		72.0%

\* Net of estimated wind up expenses

■ Restrictions on commuted values may come into effect if the administrator of the pension plan knows or ought to know that since the valuation date of the last filed report, events have taken place that may result in the reduction of the transfer ratio by 10% or more of the most recently determined transfer ratio. In such case, the administrator shall not transfer any part of the commuted value without prior approval of the Superintendent.

■ If the transfer ratio (the hypothetical wind up assets divided by the hypothetical wind up liabilities including indexation) drops by 10% or more since the last filed valuation, the administrator must stop paying commuted values and seek approval from the regulators to restart paying commuted values. The application is made in a prescribed format. This is generally referred to as a "Regulation 19 Filing".

■ During Q3 2021, the financial position of the Pension Plan as measured on a wind-up basis did not drop by more than 10% since January 1, 2021 (the last filed valuation). Therefore, no Regulation 19 Filing is required as of October 1, 2021.

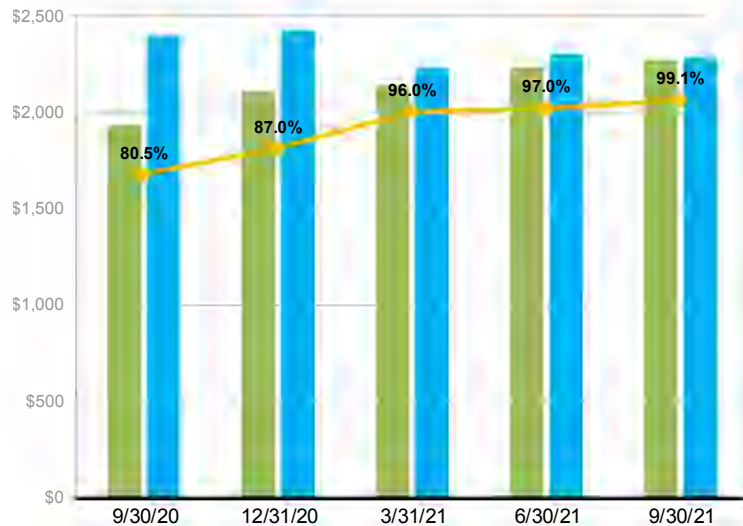
■ The Regulation 19 filing requirements will be monitored throughout 2021 on a quarterly basis.



# Executive Summary - Solvency

Values in \$1,000,000 (CAD)

## Funded Status



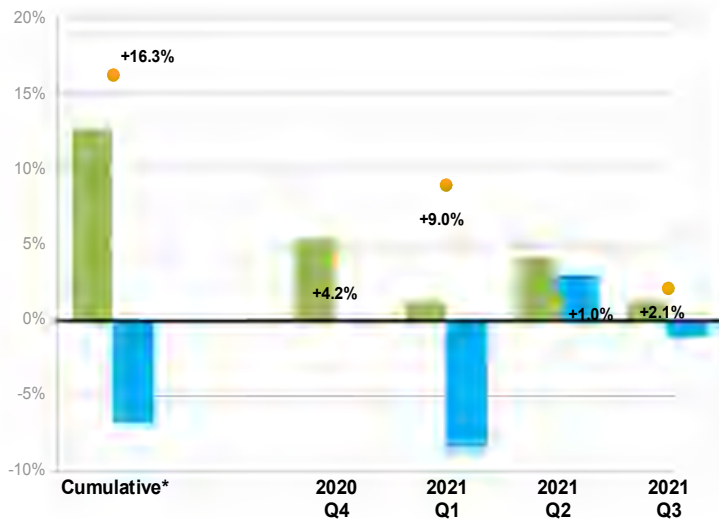
### Highlights for the Quarter-Ending 9/30/21

The plans' funded ratio increased to 99.1% at 9/30/21. This result was primarily due to the combined effects of:

- Asset performance in line with expectations,
- New benefit accruals which exceeded contributions, offset by
- A decrease in liabilities due to an increase in effective interest rate.

	9/30/2020	12/31/2020	3/31/2021	6/30/2021	9/30/2021
Market Value of Assets	\$ 1,993.9	\$ 2,108.2	\$ 2,140.1	\$ 2,233.1	\$ 2,267.7
Solvency Liability	2,409.0	2,424.3	2,229.4	2,302.8	2,287.4
Surplus/(Deficit)	\$ (415.1)	\$ (316.1)	\$ (89.3)	\$ (69.7)	\$ (19.7)
Periodic Contributions	\$ 25.8	\$ 25.6	\$ 25.6	\$ 26.4	\$ 27.1
Effective Interest Rate	2.37%	2.43%	3.06%	2.88%	3.01%
Funded Ratio:					
Assets/Solvency Liability	82.8%	87.0%	96.0%	97.0%	99.1%
Assets Duration:					
Solvency Liability	2.1	2.1	1.9	1.8	1.8
Duration:	14.9	14.9	14.4	14.8	14.3

## Asset-Liability Return



### Asset Liability Return for Quarter-Ending 9/30/21

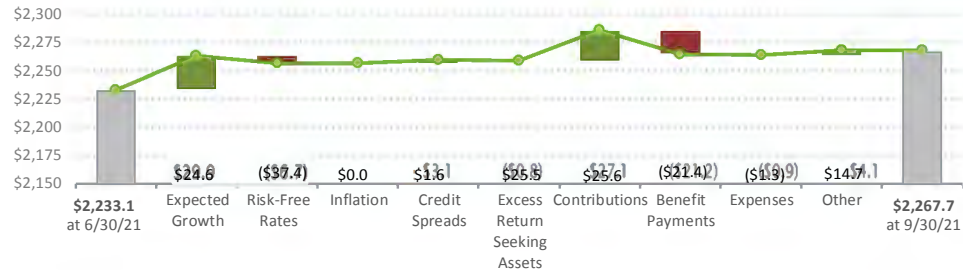
Assets returned 1.3% during the quarter while liabilities returned -1.1%, resulting in a funded status increase of 2.1%.

	Periodic Return/Change	Cumulative	12/31/20	3/31/21	6/30/21	9/30/21
Market Value of Assets Return		12.8%	5.4%	1.3%	4.2%	1.3%
Solvency Return		-6.8%	0.0%	-8.4%	3.0%	-1.1%
Funded Ratio Change		16.3%	4.2%	9.0%	1.0%	2.1%

# Asset-Liability Performance Attribution - Solvency

Values in \$1,000,000 (CAD)

## Assets



- Overall, assets returned 1.3% during this quarter, in line with an expected growth assumption of about 1.3% per quarter.
- The fixed income assets lost value due to an increase in the underlying risk-free rates, partially offset by narrowing credit spreads.
- The plans' return-seeking assets (Alternatives and International Equities) performed lower than expected during the quarter.
- \$27.1 million in contributions during the quarter and the trust paid \$21.2 million in benefits to the participants.
- "Other" includes the impact of active management, and differences between benchmark and actual investment allocations.

## Liabilities



- Liabilities were expected to grow by \$16.6 million due to interest cost during the quarter.
- Risk-free rates increased, and annuity purchase spreads were unchanged, resulting in a net decrease of \$43.7 million (\$43.7 million - \$0.0 million).
- New benefit accruals increased the liability by \$31.4 million during the quarter.
- Plan liabilities decreased by \$21.2 million during the quarter as benefits were paid.

## Funded Ratio

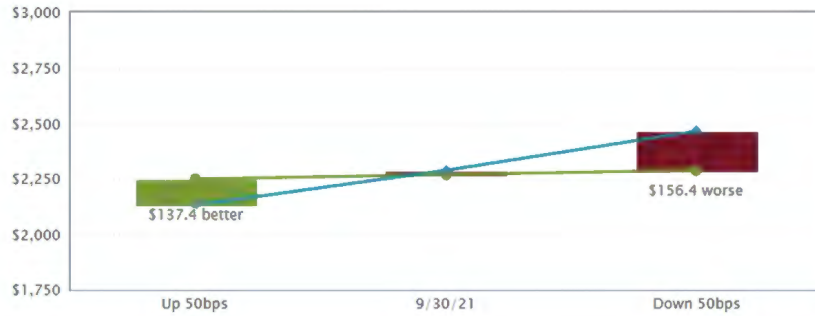


- The difference in exposure to risk-free rates between assets and liabilities combined with changes in risk-free rates resulted in an increase in funded status of 1.5%.
- The difference in exposure to credit spreads between assets and liabilities combined with changes in credit spreads resulted in an increase in funded status of 0.2%.
- Return-seeking assets did not perform as well as expected during the quarter, deducting 0.1% from the plans' funded status during the period.

# Sensitivity Analysis - Solvency

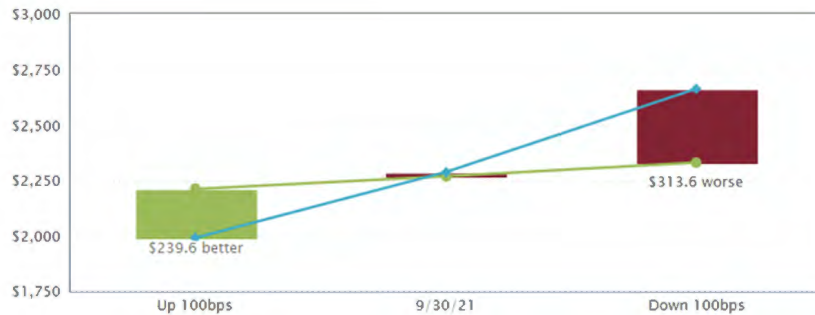
Values in \$1,000,000 (CAD)

## Credit Spreads



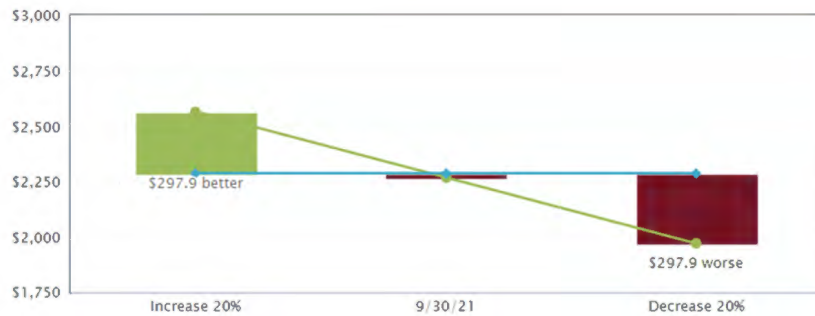
	Up 50bps	Current	Down 50bps
Market Value of Assets	\$2,248.2	\$2,267.7	\$2,287.8
Funding Target	\$2,130.5	\$2,287.4	\$2,463.9
Surplus/(Deficit)	\$117.7	(\$19.7)	(\$176.1)
Change		\$137.4	(\$156.4)

## Risk-Free Rates



	Up 100bps	Current	Down 100bps
Market Value of Assets	\$2,210.4	\$2,267.7	\$2,329.7
Funding Target	\$1,990.5	\$2,287.4	\$2,663.0
Surplus/(Deficit)	\$219.9	(\$19.7)	(\$333.3)
Change		\$239.6	(\$313.6)

## Return-Seeking Assets



	Increase 20%	Current	Decrease 20%
Market Value of Assets	\$2,565.6	\$2,267.7	\$1,969.8
Funding Target	\$2,287.4	\$2,287.4	\$2,287.4
Surplus/(Deficit)	\$278.2	(\$19.7)	(\$317.6)
Change		\$297.9	(\$297.9)



# Appendix

# Plan Provisions & Membership Data

Same as in the Actuarial Valuation Report as of January 1, 2021.

## Actuarial Methods & Assumptions

Our analysis of the estimated financial position of the Pension Plan is based on the following:

	9/30/20	12/31/20	3/31/21	6/30/21	9/30/21
<b>Going Concern</b>					
Discount Rate	5.60%	5.60%	5.30%	5.30%	5.30%
Inflation	2.00%	2.00%	2.00%	2.00%	2.00%
Salary Increase	4.00%	4.00%	3.00%/4.00% <sup>1</sup>	3.00%/4.00% <sup>1</sup>	3.00%/4.00% <sup>1</sup>
PfAD	12.75%	11.15%	9.00%	9.00%	9.00%
Mortality	CPM2014Public	CPM2014Public	CPM2014Public	CPM2014Public	CPM2014Public
<b>Risk-Free Benchmark</b>					
Discount Rate	0.22%	0.12%	0.65%	0.48%	0.62%
<b>Solvency</b>					
Annuity Purchase Interest Rate	2.49%	2.50%	3.10%	2.97%	3.12%
Effective Date of Annuity Purchase Guidance Used	9/30/20	12/31/20	3/31/21	6/30/21	9/30/21
Lump Sum Value Interest Rate (Years 1-10) <sup>2</sup>	1.30%	1.20%	1.90%	1.80%	1.90%
Lump Sum Value Interest Rate (Years 10+) <sup>2</sup>	2.40%	2.80%	3.50%	3.30%	3.40%
Mortality <sup>3</sup>	CPM2014	CPM2014	CPM2014	CPM2014	CPM2014
<b>Hypothetical Wind Up</b>					
Annuity Purchase Interest Rate (100% Indexed)	-0.68%	-0.78%	-0.22%	-0.39%	-0.25%
Annuity Purchase Interest Rate (75% Indexed)	0.11%	0.04%	0.61%	0.45%	0.59%
Effective Date of Annuity Purchase Guidance Used	9/30/20	12/31/20	3/31/21	6/30/21	9/30/21
Lump Sum Value Interest Rate (100% Indexed) (Years 1-10) <sup>2</sup>	0.80%	0.60%	0.80%	0.70%	0.80%
Lump Sum Value Interest Rate (100% Indexed) (Years 10+) <sup>2</sup>	0.70%	0.80%	1.40%	1.20%	1.30%
Lump Sum Value Interest Rate (75% Indexed) (Years 1-10) <sup>2</sup>	0.90%	0.80%	1.10%	1.00%	1.00%
Lump Sum Value Interest Rate (75% Indexed) (Years 10+) <sup>2</sup>	1.10%	1.30%	1.90%	1.70%	1.90%
Mortality <sup>3</sup>	CPM2014	CPM2014	CPM2014	CPM2014	CPM2014
<b>Underlying Canadian Reference Data</b>					
CANSIM v39054 (7 Year)	0.39%	0.46%	1.26%	1.15%	1.24%
CANSIM v39056 (30 Year Long Term)	1.11%	1.21%	1.97%	1.84%	1.98%
CANSIM v39057 (30 Year Real Return)	-0.18%	-0.28%	0.22%	0.11%	0.25%
CANSIM v39062 (Over 10 Years)	0.99%	1.10%	1.90%	1.77%	1.92%

<sup>1</sup> 3.00% per year for 3 years; 4.00% year thereafter

<sup>2</sup> Lump Sum Value Interest Rates are based on rates in effective on the first day of the month following quarter end (i.e. January 1st, April 1st, July 1st and October 1st).

<sup>3</sup> With improvement scale MI-2017 for Going Concern and Risk Free and CPM-B for Solvency.

All other assumptions and methods are the same as those shown in the Actuarial Valuation Report as of January 1, 2021. For the Risk-Free Benchmark basis, all other assumptions and methods are the same as those used for the Going Concern basis.

# Actuarial Attestation

**This document is intended to provide to the University of Waterloo a summary of the performance of the Pension Plan as of September 30, 2021.**

This analysis is intended to assist University of Waterloo with a review of the associated issues and options, and its use may not be appropriate for other purposes. This analysis has been prepared solely for the benefit of University of Waterloo. Any further dissemination of this report is not allowed without the written consent of Aon.

In conducting the analysis, we have relied on plan design, demographic and financial information provided by other parties, including the plan sponsor. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

Experience different than anticipated could have a material impact on the ultimate costs of the benefits. In addition, changes in plan provisions or applicable laws could have a substantial impact on cost. Actual experience may differ from our modeling assumptions.

Aon  
November 2021

# Asset Allocation and Benchmarking

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Asset Class	6/30/21
Alternatives	
■ FTSE EPRA NAREIT DEVELOPED Total Return Index USD	3.1%
■ MSCI USA Infrastructure Index	6.0%
Fixed Income	
■ FTSE TMX Universe Bond Index	34.3%
International Equities	
■ MSCI World Index	48.1%
■ S&P TSX	8.5%
Total	100.0%

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**Extended Health and Dental Benefits**  
*Indexation of Maxima effective January 1, 2022*

The University’s plan design for healthcare benefits is subject to an annual cost of living adjustment for the plan maxima.

**Indexing Model**

The adjustment to the maxima has been calculated as in previous years and the impact is identified in the table below. Aon has advised that to increase the benefit maxima for January 1, 2022 based on 1-year inflation results in a \$99,300 annual on-going cost.

<b>Provision</b>	<b>Current Maxima</b>	<b>Proposed Maxima (1 Year Inflation)</b>	<b>Change</b>
Paramedical/Hearing Aids	\$743	\$768	3.35% <sup>1</sup>
Private Duty Nursing	\$22,517	\$23,271	3.35% <sup>1</sup>
Out of pocket max: Single	\$130	\$133	2.05% <sup>2</sup>
Out of pocket max: Family	\$262	\$267	2.05% <sup>2</sup>
Dental Basic	\$2,358	\$2,466	4.60% <sup>3</sup>
Dental Major	\$3,553	\$3,716	4.60% <sup>3</sup>
Dental Orthodontia	\$3,553	\$3,716	4.60% <sup>3</sup>
<b>Total Additional Annual Cost of Indexing:<sup>4</sup></b>		<b>\$99,300</b>	
<p><sup>1</sup> Percentage increases are calculated from Stats Can Other Health Care index rates for each year that the inflation is applied.</p> <p><sup>2</sup> Percentage increases are calculated from Stats Can Medicinal and Pharmaceutical index and Other Health Care index rates for each year that the inflation is applied based on 60%/40% weighting.</p> <p><sup>3</sup> Dental Maxima increases based on the 2021 increase to the dental fee guide as an estimate for 2022 fee guide increase (current year fee guide applies)</p> <p><sup>4</sup> These costs are above the annual total claim costs projected based on UW’s claims experience from October 2020 to September 2021 (adjusted 2020 claims with plan design changes), inclusive of administration fees and applicable taxes. These are not a one-time cost but will be additional costs to claims experience on an on-going basis. This amount does not include any increase to the non-pension postretirement benefits liability or annual expense related to the plan amendment created by improving the ongoing retiree benefits design.</p>			

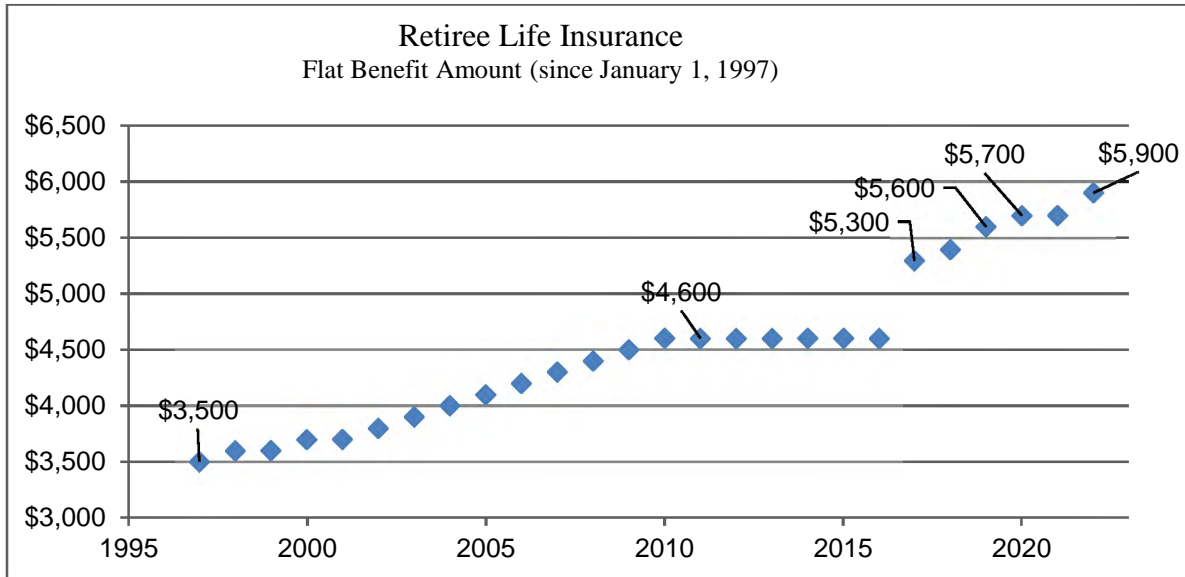
**Action Required: *Decision***



## Retiree Life Insurance

*Indexation of Coverage effective January 1, 2022*

Employees with 10 years of continuous regular service are eligible for a University paid life insurance benefit at retirement as long as they elect an immediate pension at their date of retirement. Eligible employees who retired prior to January 1, 1997 received coverage based on a percentage of earnings; however, eligible employees who retired on or after January 1, 1997 have been eligible for a flat benefit amount with changes occurring January 1<sup>st</sup> if applicable, as follows:



Note: Eligible retirees receive the life insurance coverage in effect as at their date of retirement; the volume is not subject to change during their retirement.

The University's retiree life plan design is subject to an annual cost of living adjustment to the flat benefit amount for future eligible retirees.

### Indexing Model

The proposed adjustment to the flat benefit amount for eligible individuals who retire on or after January 1, 2022 has been calculated based on indexing over the last year.

Effective Date	Retiree Life Insurance Coverage <i>For eligible individuals who retire on or after January 1, 2022</i>	
	<i>Current</i>	<i>Proposed</i>
January 1, 2022	\$5,700	\$5,900 <sup>1</sup>

<sup>1</sup> Based on the Consumer Price Index (Stats Can All Items) from September 2020 to September 2021, rounded to the nearest \$100 of benefit.

**Action Required: *Decision***

## **Employee and Family Assistance Program – 5<sup>th</sup> Annual Utilization Report** *for the September 2020 to August 2021 period*

The Employee and Family Assistance Program (EFAP) was implemented with Homewood Health effective September 1, 2016, with an employer paid cost of \$2.50 per employee per month. Homewood Health agreed to maintain the current rate for the September 1, 2021, to August 31, 2023 period and a competitive bidding process will be required to confirm the EFAP provider effective September 1, 2023.

Employees within the University of Waterloo as well as the Affiliated and Federated Institutes of Waterloo (AFIW) who are enrolled in the full benefits program, are eligible for the EFAP along with their eligible family members, if applicable. Effective October 1, 2018, St. Jerome's University College no longer participates in the program due to an equivalent arrangement with Homewood Health available through their payroll provider.

The EFAP can be accessed on a 24/7/365 basis through a toll-free number or by calling collect if the individual is located internationally (note: some services are not available outside of Canada and/or North America). There are five key components of the EFAP; the first three are accessed by individuals confidentially and directly, whereas the latter two are coordinated centrally, as follows:

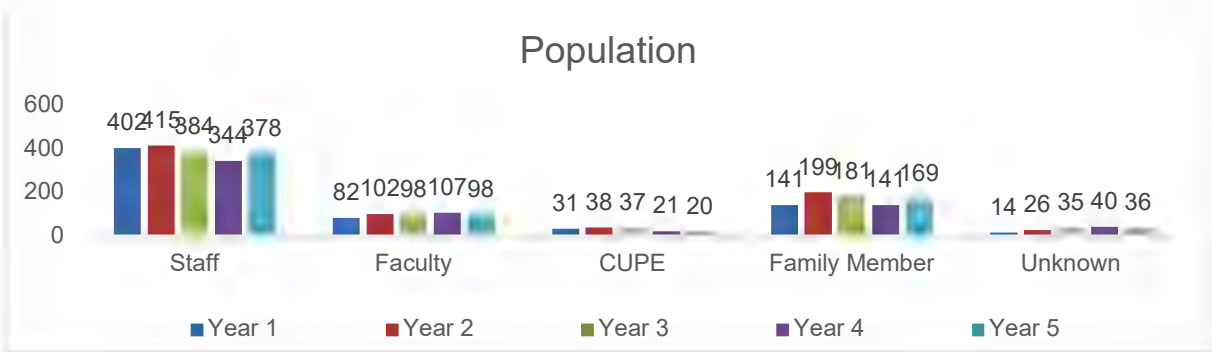
- Counselling Services – unlimited number of sessions within a short-term outcome-based model; services are available by telephone or online (in-person mode is suspended)
- Life Smart Coaching – a series of work-life balance services available by telephone
- Online Services – elder/childcare locator, e-learning courses and health risk assessments
- Crisis Management Services (CMS) – counselling assistance for individuals and/or groups in the event of employment termination/suspension or traumatic event (in-person only if necessary, with safety precautions)
- Wellness Sessions – 10 sessions per policy year are included in the contract (any sessions scheduled outside of regular work hours or with an audience in excess of 35 individuals in person/50 individuals virtually is subject to a surcharge); additional sessions available at a charge of \$495 per session

### **Overall Utilization**

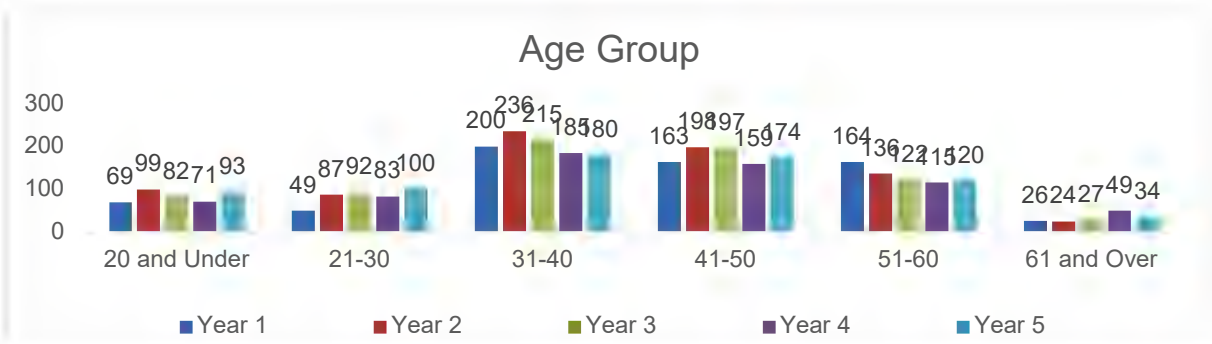
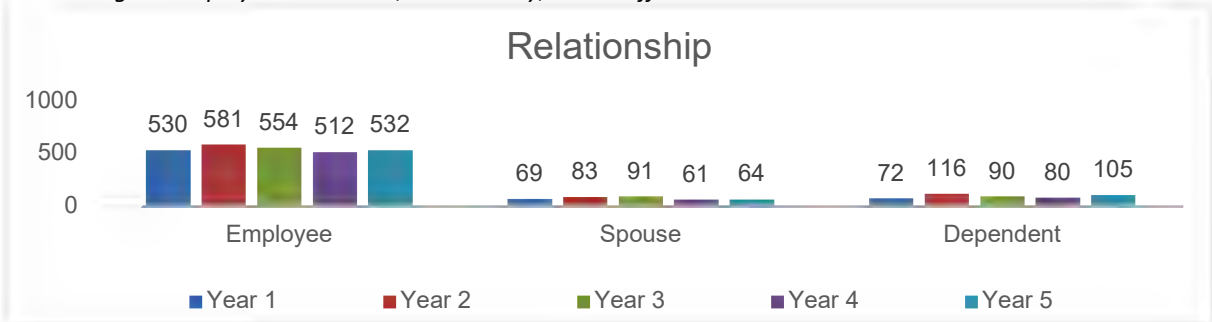
In total, there were 706.67 cases (607 counselling, 94 life smart coaching, and 5.67 online services) opened in Year 5 which represents an overall utilization rate of 15.16%.

This is a slight increase from the 14.34% utilization rates in Year 4, when utilization decreased at the commencement of the COVID-19 pandemic in March 2020. Utilization is slowly trending towards to typical volumes which had been 15.94%, 16.99%, and 15.28% in Year 3, Year 2, and Year 1, respectively. Homewood Health's benchmark based on recent data is 8.29% on an overall basis but 10.57% for the higher education sector.

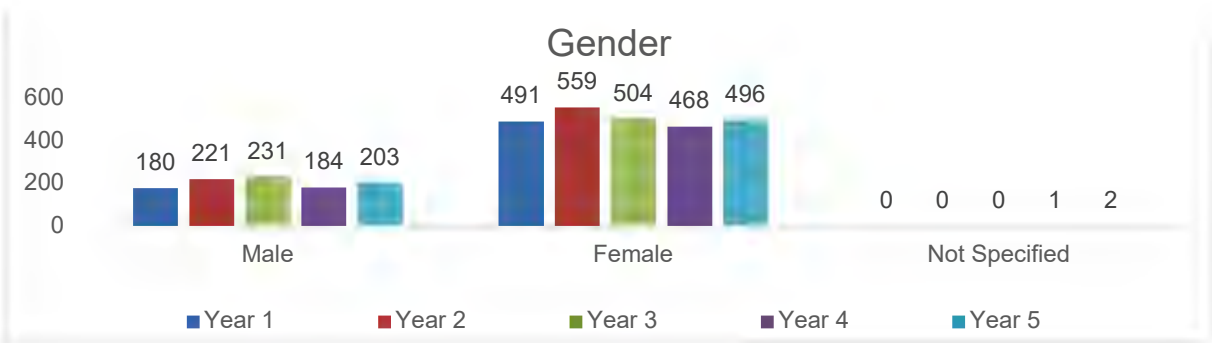
The distribution of the cases, excluding Online Services (based on how individuals self-identify - Homewood Health does not maintain eligibility data), is illustrated below:



\* UW's eligible employees: 9% CUPE, 39% Faculty, 52% Staff

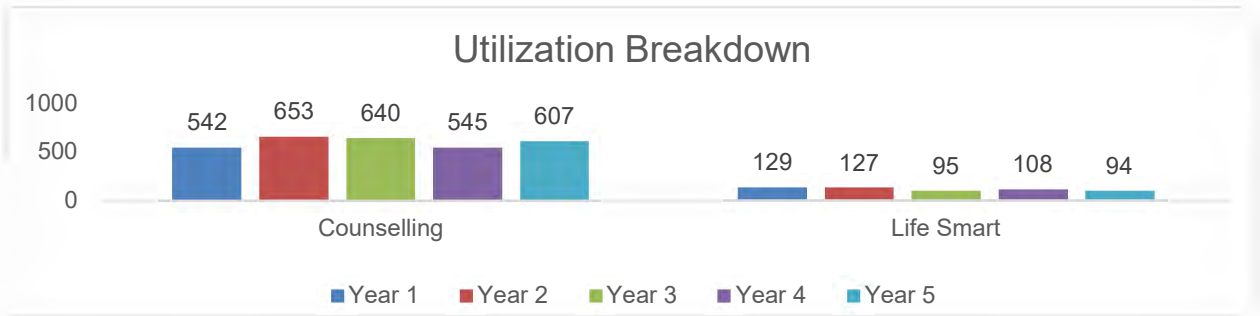


\* UW's eligible employees: 8% between 21-30, 27% 31-40, 26% 41-50, 27% 51-60, 12% 60 and older



\* UW's eligible employees: 52% female, 48% male

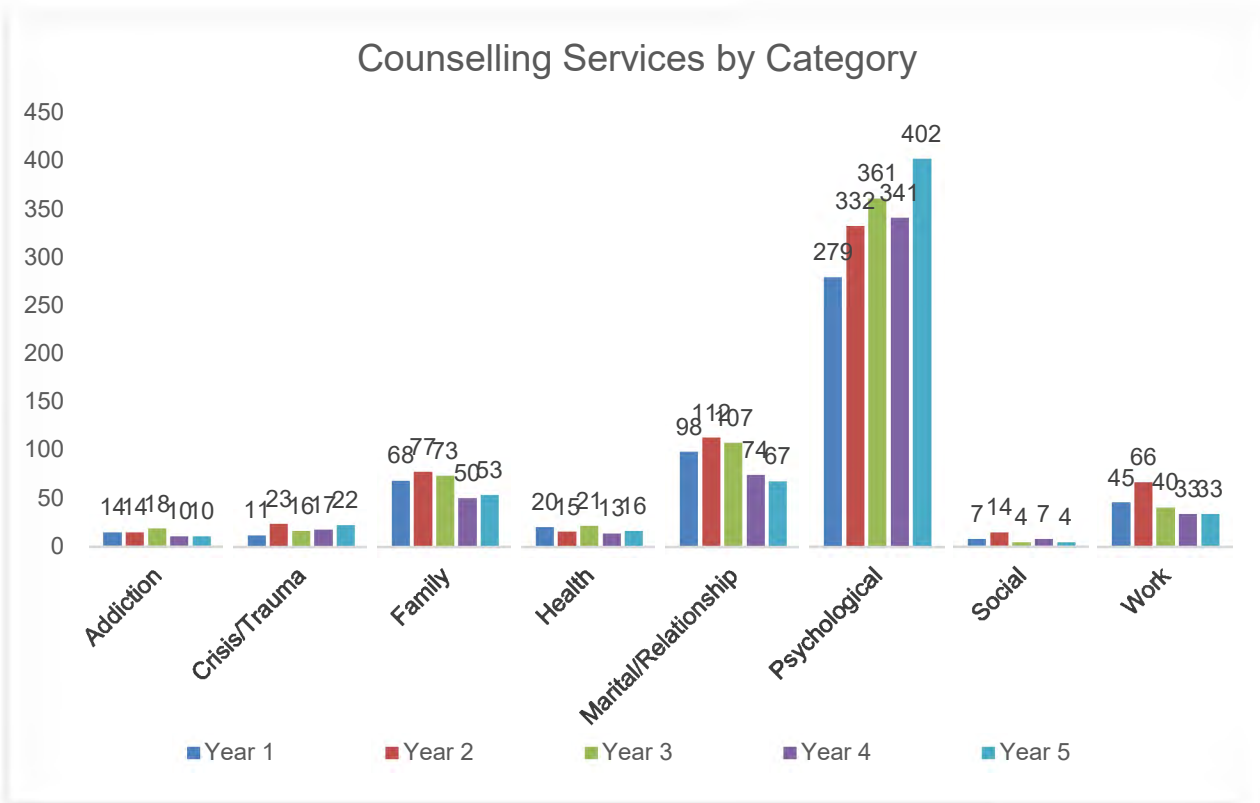
Excluding Online Services, 87% of the Year 5 utilization is associated with Counselling Services and 13% of the utilization is associated with Life Smart Services. Homewood Health’s benchmark for the higher education sector indicates 77% of utilization is typically aligned with Counselling Services.



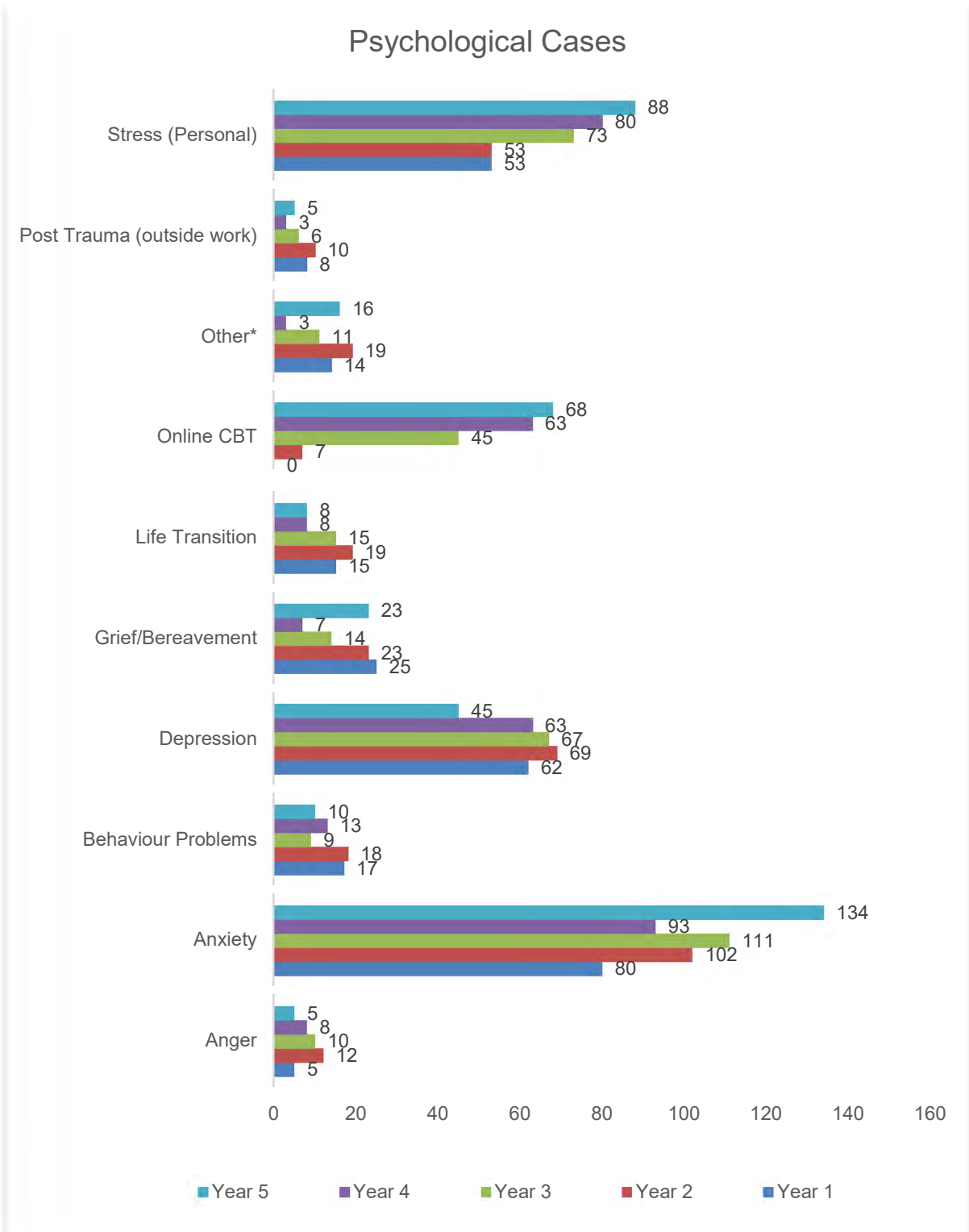
### Counselling Services

There were 607 cases of Counselling in Year 5. This is more than the number of cases in Year 4 (545) and Year 1 but less than the number of cases in Year 3 (640) and Year 2 (653).

Of the 607 cases, 66.2% correspond with psychological issues which represents an increase from the previous four years (i.e., 51.4% in Year 1, 50.8% in Year 2, 56.4% in Year 3, and 62.6% in Year 4); this proportion is slightly higher than Homewood Health’s benchmark of 64.3% for the higher education sector. Other significantly present categories continue to include marital/relationship, family, and work issues.



Within the Psychological category of Counselling Cases, the leading presenting issues in Year 5 are anxiety, personal stress, and online CBT.



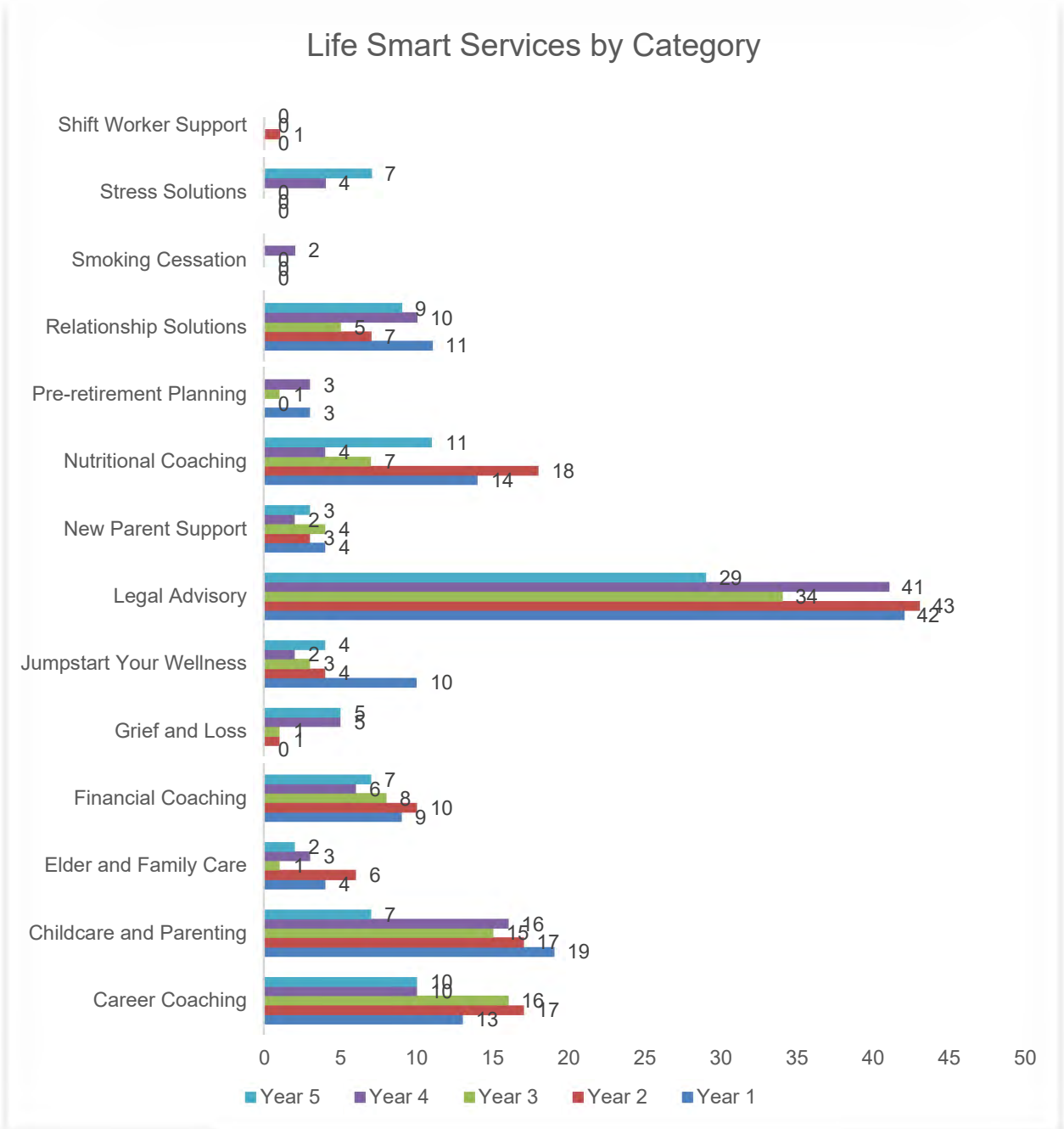
\*Includes sexuality, learning disabilities, eating disorders, self-esteem, and other

\*\*Online CBT (Cognitive Behavioural Therapy) was launched by Homewood Health in June 2018

## Life Smart Coaching

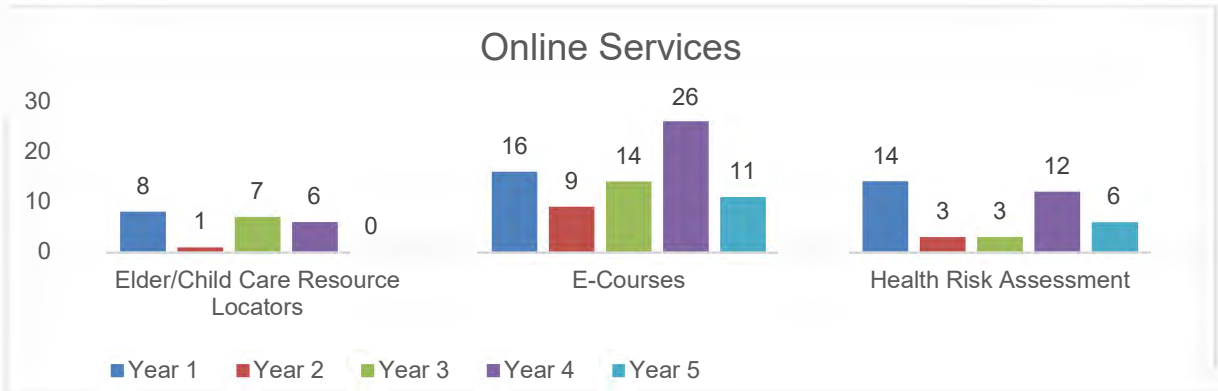
There were 94 cases of Life Smart Services in Year 5. This is less than the number of cases in Year 4 (108), Year 3 (95), Year 2 (127) and Year 1 (129).

31% of cases correspond with Legal Advisory Services (13% of which correspond with family/divorce/custody issues) which is higher than the higher education sector benchmark of 26% but lower than the overall benchmark of 38%. Other significantly present categories include relationship solutions, career coaching, and nutritional coaching.



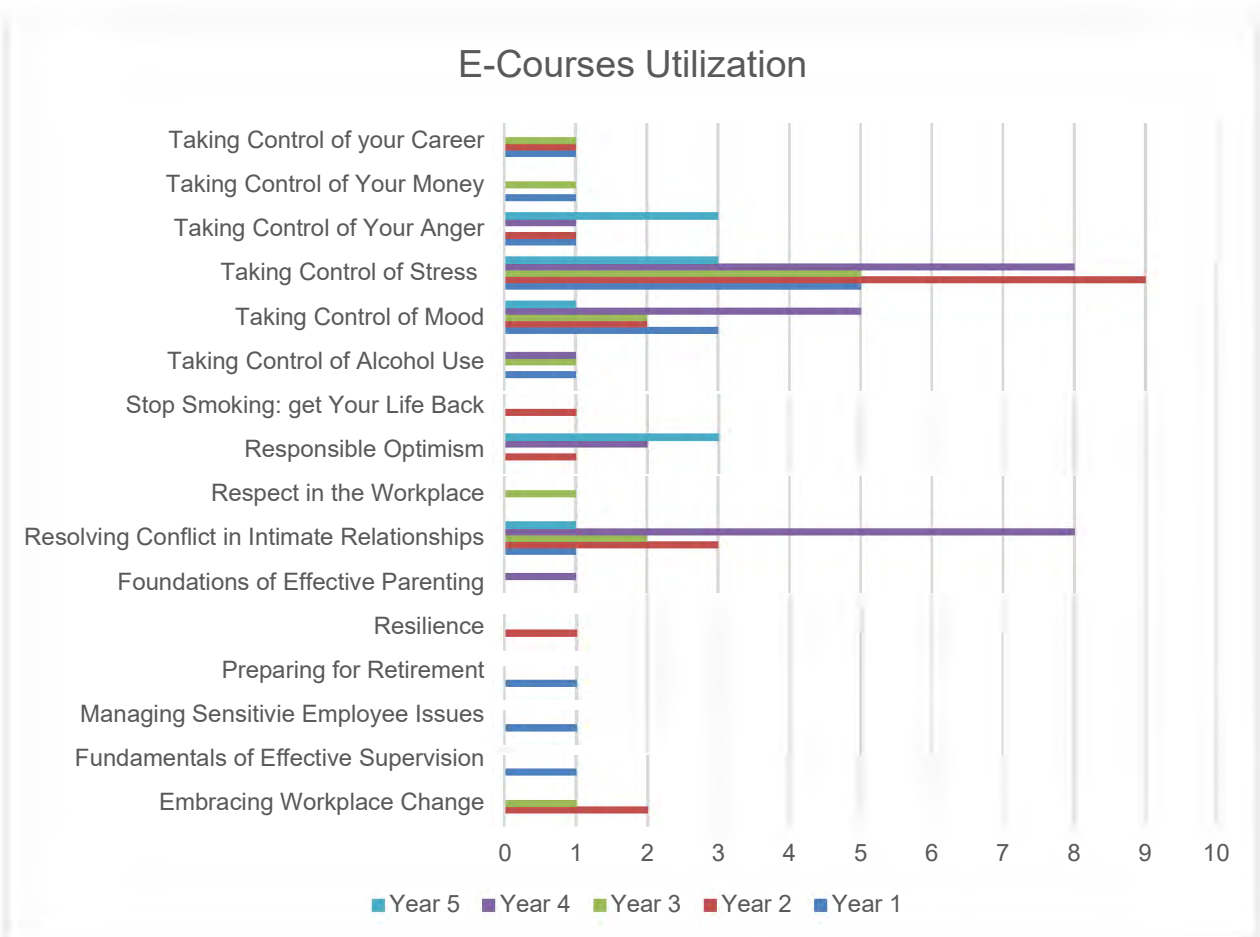
## Online Services

A total of 17 online service counts (representing 5.67 cases) occurred in Year 4; in comparison, there were 44 online service counts in Year 4, 24 online service counts in Year 3, 13 online service counts in Year 2 and 38 in Year 1. Most of the access in Year 5 related to e-courses.



*Note: 1 service count is tracked as 0.33 of a case for e-courses and the health risk assessment whereas 1 service count is tracked as 0.50 for the elder/child care resource locator*

Five separate e-courses were accessed in Year 5 with 11 service counts; the most popular courses were Taking Control of Stress/Anger and Responsible Optimism.



The Homeweb.ca website was accessed 635 times (265 returning users and 159 new users) and 159 new users registered in Year 5. The average visit duration was 5 minutes and 47 seconds (a decrease from the 7.38-minute average for Year 3 and 4, but an increase from the 6.5-minute average for Year 1 and 2).

- Top categories: Tools (menu includes i-volve, e-courses, life smart overviews, health risk assessment), counselling and family
- Top Articles: E-Counselling, Depression and Anxiety and Resolving Conflict in Intimate Relationships, e-courses

### Crisis Management Services (CMS)

Nine CMS cases were utilized in Year 5 (4 related to death, 1 employee health crisis, 1 organizational re-structuring, and 3 employment terminations/suspensions). In comparison, there were 16 CMS cases in Year 4, 19 CMS cases in Year 3, and 11 CMS cases in Year 2. CMS access is charged by Homewood Health at an hourly rate.

### Wellness Sessions

The allocation of 10 wellness sessions for Year 5 was as follows:

Topic	Date
Building Resilience in the Face of C-19	Friday, February 5
C-19 – Calming Your Mind in Challenging Times	Thursday, February 25 Wednesday, April 7
Beyond Stigma: Increasing Our Understanding of Mental Health in the Workplace	Friday, March 26 Friday, April 9
Establishing Work/Life Harmony	Wednesday, July 28
Building Working Relationships	Friday, July 30
Self-Care Strategies During C-19	Wednesday, August 11
C-19: Strategies for Managing Stress	Friday, August 13
The Fundamentals of Change and Transition	Wednesday, August 18

The Healthy Workplace Committee manages the allocation and coordination of wellness sessions; the EAP Committee monitors the EFAP usage on a quarterly basis.

**Action Required:** *None*