

**Board of Governors
PENSION & BENEFITS COMMITTEE
Friday 12 March 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 Melissa Holst, mjholst@uwaterloo.ca**

	CONFIDENTIAL SESSION	ACTION
9:30	1. PIC Recommendation re: Global Manager Search* (Sheryl Kennedy)	Decision
	OPEN SESSION	
	2. Update on Activity – Advisory Group on Responsible Investment* (Sheryl Kennedy)	Information
	3. Report from Pension Investment Committee* (Sheryl Kennedy)	Information
	4. Approval of the 11 February 2021 Minutes (Open Session)* and Business Arising	Decision
	5. Execution Against the Work Plan* [Grivicic]	Information
	6. Update on Government Pension Plan Initiatives [Shapira]	Information
10:00	7. Actuarial Valuations (RPP and PPP) and Review of Contribution and Protocol Caps* [Byron, Shapira]	Discussion/ Decision
10:25	8. Overview of Pension Plans for the U15 Research-Intensive Universities* [Aon]	Information
10:35	9. Benefits Plan Premium Renewals* [Hornberger]	Decision
10:45	10. May 1, 2021 Extended Health Plan Amendment, Implementation Update* [Hornberger]	Decision
	a. Update on Activity of Holistic Benefits Working Group	Information
11:00	11. Vision Care – Eye Exams* [Hornberger]	Recommendation to BOG
11:20	12. Pension Administration System: Ariel, APS Agreement with Morneau Shepell* [Hornberger]	Information
11:25	13. Update from Working Group on Definitions in Policy 23, 59	Information
11:30	14. Investment Update, Q4 2020* [Huber]	Information
	15. Annual Committee Self-Assessment** [Grivicic]	Information
	16. Other Business	
	CONFIDENTIAL SESSION	
	17. Approval of the 11 February 2021 Minutes (Confidential)+ and Business Arising	Decision
	Next Meeting: Friday 14 May 2021, 9:30 a.m. – 12:00 noon	

*attached
** to be distributed
+ distributed separately

8 March 2021
revised 11 March 2021

Mike Grivicic
Associate University Secretary

Please convey regrets to Melissa Holst at 519-888-4567 x36125 or mjholst@uwaterloo.ca

Future Agenda Items

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

Proposed Agendas for Solution Set Discussions

Meeting #1 – Portfolio-level carbon targets (March 3)

1. Carbon reduction/net zero/carbon neutrality as an investment strategy
 - a. Within integrated ESG, responsible investing philosophy
 - b. Consistent with fund purposes, fiduciary obligations
 - c. Due regard to risk/reward return and contribution stability objectives
2. Metrics to measure carbon intensity of university portfolios
 - a. Scope 1, 2 and 3
 - b. Offsets counted at company and manager level?
3. Portfolio-level targets, timeline/stages
 - a. Endowment
 - i. Part
 - ii. All
 - iii. Special Purpose Trust
 - b. Pension fund

Meeting #2 – Climate risk appetite and investment opportunities (March 17)

1. Scenario Analysis
2. Risk appetite/managing climate change risks/resilience (e.g. physical, transition, reputation, liability, stranded assets)
3. Investment Opportunities, e.g.
 - a. New technologies
 - b. Timberland
 - c. Support transition
 - d. Green bonds
 - e. Green funds
4. Canadian considerations

Meeting #3 – Active ownership/engagement (March 31)

1. Active Ownership/Engagement
 - a. Engagement and proxy voting expectations of managers
 - b. Collectives that the university might join to enhance engagement
2. Implementation Considerations:
 - a. Administrative considerations
 - b. Manager and/or investment selection and monitoring
 - c. Manager and/or investment termination/divestment
 - d. Carbon sequestration/offsets at portfolio level
3. Disclosure

Version 2 (10 March 2021)

RIAG Schedule/Workplan including Updates and Consultations with Board of Governors and its Committees

Wednesday, February 17, 2021	FI RIAG	Determine work plan, topics/options, lexicon
Monday, March 1, 2021	PIC	Update
Wednesday, March 3, 2021	FI RIAG	Portfolio-level carbon targets
Thursday, March 11, 2021	FI	Update
Friday, March 12, 2021	PB	Update
Wednesday, March 17, 2021	FI RIAG	Climate risk appetite and investment opportunities
Wednesday, March 31, 2021	FI RIAG	Active ownership/Engagement
Tuesday, April 6, 2021	BOG	Update
Wednesday, April 14, 2021	FI RIAG	Develop recommendations
Wednesday, April 28, 2021	FI RIAG	Complete draft report/recommendations
Monday, May 3, 2021	PIC	Prospective consultations
Wednesday, May 12, 2021	FI RIAG	
Thursday, May 13, 2021	FI	
Friday, May 14, 2021	PB	
Wednesday, May 26, 2021	FI RIAG	
Tuesday, June 1, 2021	BOG	Present report/recommendations
Monday, June 7, 2021	PIC	Follow-up activity as appropriate
Friday, June 18, 2021	PB	
Thursday, September 30, 2021	FI	
Friday, October 15, 2021	PB	
Tuesday, October 26, 2021	BOG	

Version 3 (10 March 2021)

Report to the Pension & Benefits Committee
Pension Investment Committee
12 March 2021

The Pension Investment Committee (PIC) met on 8 September 2020, 16 November 2020 and 1 March 2021, and are, per the terms of reference, forwarding the following items to the Committee for information or approval as noted below.

INFORMATION

Asset/Liability Study. At its orientation in June 2020, PIC reviewed the pension fund investments, asset mix and a previous asset liability study (several years old). PIC, with the support of Pension & Benefits Committee (P+B), engaged Aon to conduct a new asset-liability study with the goals of revisiting the asset mix and investment philosophy embodied in the Statement of Investment Policies & Procedures (SIPP), and making recommendations re: new investments. PIC will be coming forward with a recommendation on asset mix likely after its May meeting.

ESG Factors in Investing. With a view to understanding the University's existing commitments, best practices and potential future directions, PIC commissioned two education sessions on ESG factors in investing. These sessions were held on 15 September 2020 and 22 October 2020, and were open to all members of PIC, Finance & Investment Committee (F+I) and P+B. The focus was on legal/fiduciary requirements and best practices for policies and implementation. The presentations will inform discussions re: updating related policies, processes and other governing documents, as well as investment and engagement decisions. PIC is of the view that the University should have a responsible investment policy in addition to the references to ESG integration in the SIPP.

Investment Philosophy. PIC has reviewed the investment philosophy contained in the SIPP and other universities' SIPPs, and is seeking input from F+I before bringing forward a recommendation to P+B. Please see Attachment 1 for discussion points.

SIPP. PIC reviewed the SIPP at its September and November meetings. In addition to identifying minor technical updates and the above specific items for further study, PIC will be reviewing the processes for hiring, terminating and monitoring investment managers. PIC is conferring with F+I on the global manager selection scorecard (Attachment 2) and manager selection procedures. Recommended changes to the SIPP and related procedures will come forward to P+B for input and approval before being recommended to the Board of Governors, likely in Fall 2021.

Investment and Investment Manager Monitoring. At each meeting, PIC receives reports from Aon Hewitt on pension fund and investment manager performance. PIC met with each of the investment managers in the Fall, beginning with Sionna Investment Managers and TD Asset Management, followed by Walter Scott & Partners. PIC formed a subcommittee in Fall 2020 to review potential new global investment managers. Recommendations from that subcommittee will be brought to PIC, F+I and P+B, before proceeding to the Board of Governors for approval.

If you have questions, comments or input on the above, please contact committee secretary, Rebecca Wickens at rebecca.wickens@uwaterloo.ca. Your feedback is welcome and appreciated.

Sheryl Kennedy
Chair, Pension Investment Committee



Memorandum

To: Pension Investment Committee

From: Sheryl Kennedy and Ranjini Jha

Date: 1 March 2021

Re: **FOR DISCUSSION: Statement of Investment Policies and Procedures – Investment Philosophy**

Discussion Points for SIPP Investment Philosophy

1. Objective, e.g.:
 - minimize risk while maintaining sufficient return to provide promised benefits at a reasonable cost
 - long term security of promised retirement benefits, stable reasonable level of contributions
 - comply with all relevant legislation
2. Considerations, e.g.:
 - characteristics of the plan and its liabilities
 - demographics
 - funded position
 - net cash flow position
 - financial impact on plan beneficiaries, equity
 - fiduciary obligations under relevant legislation
3. Asset Mix:
 - categories, e.g., from AON A/L study and different SIPPs: return-seeking vs liability-hedging; interest rate sensitive, inflation sensitive, return enhancing; fixed income, equities, alternatives
 - active vs passive, e.g.: active employed where there is expectation of adding value relative to a benchmark over the long-term net of expenses
 - diversification:
 - o asset classes
 - o style (sources of added value), e.g.: value, growth, size, momentum, quality/profitability, low volatility
 - o risks
 - o geography, especially Canada, Emerging Markets
 - currency hedging/overlay
 - time horizon
 - liquidity, both capturing illiquidity premium and meeting cashflow requirements
 - Target Asset Mix (investment weights; directly, pooled, mutual funds etc.; minimum size per asset class and per manager; maximum number of managers; target mix adjustment until fully invested for certain alternatives)
4. Rebalancing
5. Expected Return
6. Risk Tolerance (influenced by funded status? Other aspects of risk appetite?)
7. Responsible Investing

Global Investment Manager ScorecardGlobal Equity Manager A

Qualitative

ScoreCommentsFirm

Size
 Stability
 Experience
 Access/Location

Investment Team

Quality/Depth of PM & resources
 Capacity
 Retention of Key Personnel
 Client Access

Investment Process

High Conviction
 Repeatable Process which is
 Consistent with philosophy
 Stability
 Risk Management
 ESG Integration Strength
 Overall Fit with University Objectives

Reporting

Quality
 Frequency (monthly/qtrly/etc.)
 Timeliness
 Depth
 ESG Commentary
 Quantitative analysis

Track Record

Historical Performance
 Quantitative Ratios
 Investment Risk
 Volatility
 References

Fees

Competitive
 Reasonable

University of Waterloo
Board of Governors
PENSION & BENEFITS COMMITTEE
Minutes of the 11 February 2021 Meeting
[in agenda order]

Present: Peter Barr, Terrence Birmingham, Ted Bleaney, Tony Giovinazzo, Mike Grivicic (secretary), Dennis Huber, Ranjini Jha, Jim Rush, David Saunders, Michael Steinmann, Marilyn Thompson, Mary Thompson, Ken Vetzal

Regrets: Michael Herz

Consultant: Linda Byron, Allan Shapira

Resources: Sarah Hadley, Lee Hornberger, Samantha Lou, Sue McGrath

Organization of Meeting: Peter Barr took the chair, and Mike Grivicic acted as secretary. The secretary advised that a quorum was present. The meeting was held via videoconference. One additional item was added as item 10 of the agenda in open session.

1. APPROVAL OF THE 15 JANUARY 2021 MINUTES (OPEN SESSION) AND BUSINESS ARISING

Items 1 and 2 were taken together, and a motion was heard to approve both sets of minutes as distributed. Bleaney and Huber. Carried.

2. APPROVAL OF THE 25 JANUARY 2021 MINUTES (OPEN SESSION) AND BUSINESS ARISING

See item 1.

3. EXECUTION AGAINST THE WORK PLAN

This item was received for information.

4. UPDATE ON GOVERNMENT PENSION PLAN INITIATIVES

Shapira noted the recent insolvency at Laurentian and observed that such a process would not be expected to result in a wind up of that university's pension plan; the court-appointed monitor has requested that special payments be stayed until the main process is settled. Members discussed: Waterloo continues to make regular payments to provincial Pension Benefits Guarantee Fund; any changes to pension benefits at Laurentian would be in the future service formula; accrued pensions would not be expected to be impacted.

5. BENCHMARKING UW PENSION PLAN VS. COMPARATORS

Shapira provided a short overview, noting that Aon regularly conducts environmental scans of other comparator plan when Waterloo plan changes are being contemplated. The Waterloo plan could be considered typical of the sector, though there are also hybrid plans and defined contribution plans. Members discussed: in comparison to other institutions, governance oversight re: pension is active and robust at Waterloo; some other universities mainly deal with pension matters during collective bargaining; retirement incentives usually reside outside of pension plans; difficult to compare funded status of plans, given varying filing dates of valuations at each institution. It is expected that a version of the analysis will be provided as part of the report to the Board of Governors to the April 2021 meeting.

6. ANNUAL COST OF LIVING ADJUSTMENTS

Item (a) was received for information. Members noted that the maximum COLA adjustment for deferred members is determined by the guiding principles approved by the committee in November 2015. A motion was heard to approve the COLA adjustment of 0.717% to deferred pensions. Huber and Giovinazzo. Carried. A motion was heard to approve an indexation increase for members on LTD of 0.717%, according to the approved guiding principles. Bleaney and Giovinazzo. Carried.

7. INVESTMENT STATUS OF PAYROLL PENSION PLAN

Hadley provided an overview, and the item was received for information.

8. DRAFT 2020 REPORT TO THE COMMUNITY

The secretary provided an overview of the draft and members directed that additional detail on the funded status of the plan be included, in light of recent media coverage of Laurentian.

9. NEXT STEPS – EXCERPT FROM APPROVED AMENDMENTS TO EMPLOYEE BENEFITS

By consensus, members agreed that members of the Holistic Benefits Working Group will continue engagement on this file to implement the Board-approved recommendation. Huber offered to supply a resource from Finance in support, and members noted that the School of Optometry & Vision Science ought to be engaged on the suggestions made at the February 2021 meeting of the Board of Governors.

10. PENSION RISK MANAGEMENT DASHBOARD – Q4 2020

Byron spoke to the dashboard, noting the plan's funded status on going concern, solvency and hypothetical wind up bases. Members observed that it may be prudent to file a valuation with the regulator this year.

OTHER BUSINESS

There was no other business. The committee proceeded into confidential session.

NEXT MEETING

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

8 March 2021
amended 17 March 2021

Mike Grivicic
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 Mar 2020	15 May 2020	12 June 2020	18 Sept 2020	16 Oct 2020	20 Nov 2020	15 Dec 2020	15 Jan 2021	11 Feb 2021	12 Mar 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 Mar 2020	15 May 2020	12 June 2020	18 Sept 2020	16 Oct 2020	20 Nov 2020	15 Dec 2020	15 Jan 2021	11 Feb 2021	12 Mar 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											



Actuarial Valuation Results as of January 1, 2021

Pension & Benefits Committee Meeting on March 12, 2021
Posted With Permission of Aon

Prepared by Retirement Solutions

Presentation to University of Waterloo

PB 12 March 2021, page 12 of 75 [v2]

AON
Empower Results®

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- Solvency and Wind Up Valuation Results as of January 1, 2021
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Understanding the Actuarial Process

- Ultimate cost of Pension Plan equals the sum of benefits paid
- Cost is funded by University and member contributions and investment earnings, net of expenses
- Actuarial process from a funding perspective:
 - Using actuarial estimates to make periodic funding contributions in a systematic manner to meet the ultimate cost

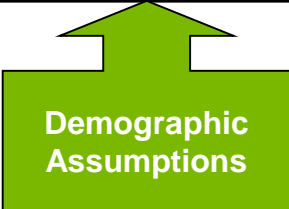
Understanding the Actuarial Process (Cont'd)

- Elements of an actuarial valuation:


Pension Plan:	Contractually promises to pay benefits defined by the plan formula(s) on retirement, death, disability and termination
Plan Members:	Current employees, retirees and beneficiaries in this group will be or are entitled to the benefits promised by the plan. Specific data is gathered and validated for all members
Actuarial Assumptions:	Actuary uses these to estimate who will receive a benefit, what the amount of benefit will be, when the benefit will start, and how long it will be paid
Actuarial Cost Method:	Used to allocate the cost of the estimated benefits (determined using the member data and actuarial assumptions) to various time periods

Actuarial Assumptions for Going Concern Valuation

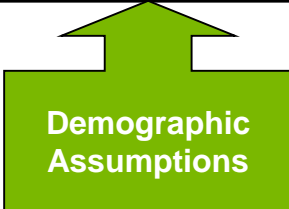
Assumptions to Estimate:			
When Pension Benefits Are Payable	Amount of Pension Benefits Payable	How Long Pension Benefits are Payable	How Much Money to Set Aside
<ul style="list-style-type: none"> Termination Rates Disability Rates Preretirement Mortality Rates Retirement Ages 	<ul style="list-style-type: none"> Increases in CPP Wage Base Increases in ITA Maximum Pension Increases in Salaries Inflation 	<ul style="list-style-type: none"> Postretirement Mortality Rates 	<ul style="list-style-type: none"> Investment Return on Pension Fund




Demographic Assumptions



Economic Assumptions



Demographic Assumptions



Economic Assumptions

Pension Liability/Asset Relationship

Growth in Liabilities From Year to Year	Growth in Assets From Year to Year
Liabilities at beginning of year (representing discounted present value of pension benefits earned in respect of service up to the valuation date)	Value of pension fund assets at beginning of year
Plus	Plus
Interest on liabilities at rate used to discount the liabilities	Rate of return on pension fund assets
Plus	Plus
New liability for benefits earned by members in the year (current service) and increase/(decrease) in liability from experience losses/(gains)	Contributions made by members and University
Less	Less
Pension payments and lump-sum transfers	Pension payments, lump-sum transfers, fees and expenses

Highlights of January 1, 2021 Valuation Results

- This material includes the going concern valuation results for the Registered Pension Plan (RPP) and the Payroll Pension Plan (PPP) as at January 1, 2021 as well as the solvency and hypothetical wind up valuation results for the RPP at January 1, 2021
- This January 1, 2021 actuarial valuation of the RPP is not required to be filed with the regulators, but it may be filed
- The going concern results have been determined using the set of assumptions discussed with the Pension & Benefits Committee on January 15, 2021 and on an alternate assumption basis reflecting recent salary agreements and the impact of Bill 124

Highlights of January 1, 2021 Valuation Results

- The impact of the following changes to member contributions and the RPP cap are also included:
 - The hard dollar cap is \$3,400 at January 1, 2021 and then increases each year (beginning January 1, 2022) by 1/3 of the increase in the Average Industrial Wage (AIW)
 - Required member contributions will increase as follows:

Date	On Pensionable Earnings Up to YMPE	On Pensionable Earnings Above YMPE
May 1, 2020	6.95%	9.95%
May 1, 2021	7.40%	10.60%
May 1, 2022	7.80%	11.20%

Plan Members – Demographics

	January 1, 2020	January 1, 2021
Active Members (Including Leaves)		
Number	4,891	4,905
Average age	46.8	47.1
Average years of credited service	9.9	10.2
Average pensionable earnings ¹	\$ 102,157	\$ 105,460
Total pensionable earnings ¹	\$ 499,650,000	\$ 517,281,000
LTD Members		
Number	90	104
Average age	55.4	55.5
Average years of credited service	16.9	17.7
Average pensionable earnings ¹	\$ 66,791	\$ 68,518
Total pensionable earnings ¹	\$ 6,011,000	\$ 7,126,000
Suspended Members		
Number	2	1
Average age	34.4	33.9
Average years of credited service	3.0	3.1

¹ Year following valuation date

Plan Members – Demographics (Cont'd)

	January 1, 2020	January 1, 2021
Pensioners and Survivors		
Number	2,092	2,176
Average age	74.6	74.7
Average annual pension	\$ 31,643	\$ 32,149
Total annual pension	\$ 66,197,000 ¹	\$ 69,956,000 ¹
Deferred Members: Eligible for COLA on All Service		
Number	305	321
Average age	57.8	58.5
Average annual pension	\$ 8,056	\$ 8,651
Deferred Members: Eligible for COLA on Pre-2008 Service		
Number	115	105
Average age	46.9	46.9
Average annual pension	\$ 9,575	\$ 9,078
Deferred Pensions: Not Eligible for COLA		
Number	164	204
Average age	40.4	41.4
Average annual pension	\$ 4,262	\$ 4,073

¹ Does not reflect increase as of May 1, 2020 or 2021, as applicable

Actuarial Assumptions for Going Concern Valuation – Economic Assumptions

Economic Assumptions	January 1, 2020	January 1, 2021	January 1, 2021 (Alternate)
Increase in Consumer Price Index (CPI)	2.00% per year	No change	Same
Increase in Year's Maximum Pensionable Earnings under Canada Pension Plan	2.75% per year (CPI + 0.75%)	No change	Same
Increase in <i>Income Tax Act</i> maximum pension	\$3,092.22 in 2020; increased after 2020 at 2.75% per year subject to dollar cap of \$3,400 which increases at 0.92% per year beginning in 2022 ¹	\$3,245.56 in 2021; increased after 2020 at 2.75% per year subject to dollar cap of \$3,400 which increases at 0.92% per year beginning in 2022 ¹	Same
Increase in salaries ²	4.00% per year (CPI + 2.00%)	No change	3.00% per year for 3 years; 4.00% per year ultimate
Increase in salaries (disabled)	2.00% per year (CPI + 0.00%)	No change	Same
Interest rate used to discount liabilities	5.60% per year (CPI + 3.60%)	5.30% per year (CPI + 3.30%)	Same
Interest rate used to calculate 50% rule	1.20% ³ per year for 10 years; 1.20% per year thereafter	0.60% ³ per year for 10 years; 0.80% per year thereafter	Same
Interest rate for crediting on required member contributions	3.00% per year	2.50% per year	Same
Loading for administrative expenses	Explicit assumption of \$1,500,000 in 2020 added to current service cost	Explicit assumption of \$1,560,000 in 2021 added to current service cost	Same
Provision for Adverse Deviation (PfAD)	9.00% of non-indexed liabilities and current service cost	No change	Same

¹ PPP limit of \$3,400 in 2020 and 2021

² Across the board increases plus grid steps / merit / promotion

³ 1.50% / 1.60% for 75% indexed benefits in 2020; 0.80% / 1.30% for 75% indexed benefits in 2021

Actuarial Assumptions for Going Concern Valuation – Demographic Assumptions

Demographic Assumptions	January 1, 2020	January 1, 2021																								
Retirement age	Retirement Rates as follows:	No change																								
	<table border="1"> <thead> <tr> <th>Age</th> <th>Rates Per 100</th> </tr> </thead> <tbody> <tr><td>60</td><td>5</td></tr> <tr><td>61</td><td>5</td></tr> <tr><td>62</td><td>25</td></tr> <tr><td>63</td><td>10</td></tr> <tr><td>64</td><td>10</td></tr> <tr><td>65</td><td>50</td></tr> <tr><td>66</td><td>25</td></tr> <tr><td>67</td><td>25</td></tr> <tr><td>68</td><td>25</td></tr> <tr><td>69</td><td>50</td></tr> <tr><td>70</td><td>100</td></tr> </tbody> </table>	Age	Rates Per 100	60	5	61	5	62	25	63	10	64	10	65	50	66	25	67	25	68	25	69	50	70	100	
Age	Rates Per 100																									
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69	50																									
70	100																									
Mortality rates	2014 Canadian Pensioners Public Table (“CPM2014Public”) with Improvements under Scale MI-2017	No change																								
Termination rates	<table border="1"> <thead> <tr> <th>Age</th> <th>Rates Per 100</th> </tr> </thead> <tbody> <tr><td>20</td><td>10.0</td></tr> <tr><td>25</td><td>10.0</td></tr> <tr><td>30</td><td>5.6</td></tr> <tr><td>35</td><td>3.2</td></tr> <tr><td>40</td><td>2.2</td></tr> <tr><td>45</td><td>1.7</td></tr> <tr><td>50</td><td>1.2</td></tr> <tr><td>55</td><td>0.7</td></tr> <tr><td>60</td><td>0.2</td></tr> <tr><td>65</td><td>0.0</td></tr> </tbody> </table>	Age	Rates Per 100	20	10.0	25	10.0	30	5.6	35	3.2	40	2.2	45	1.7	50	1.2	55	0.7	60	0.2	65	0.0	No change		
Age	Rates Per 100																									
20	10.0																									
25	10.0																									
30	5.6																									
35	3.2																									
40	2.2																									
45	1.7																									
50	1.2																									
55	0.7																									
60	0.2																									
65	0.0																									

Reconciliation of Plan Assets (Market Value)

	Total
Market Value of Assets, January 1, 2020 (Unadjusted for In-transit items)	\$ 1,940,803,000
Plus	
Member contributions	\$ 39,033,000
University contributions	61,790,000
Flex contributions	0
Transfers in from other plans	222,000
Investment income	147,835,000
Net transfers from other accounts	<u>0</u>
	\$ 248,880,000
Less	
Pensions and lump-sum refunds paid	\$ 76,069,000
Expenses and fees	<u>5,396,000</u>
	\$ 81,465,000
Market Value of Assets, December 31, 2020 (Unaudited)	\$ 2,108,218,000
 Rate of return (net of expenses and fees)	 7.29%

Development of Actuarial Value of Assets

- The Actuarial Value of Assets as of January 1, 2020 and January 1, 2021 is set equal to the Market Value of Assets at that date, net of adjustments for amounts payable/receivable upon receipt of the audited financial statements

Pension Fund Asset Mix as of January 1, 2021

Asset Class	Current Asset Mix	Target Asset Mix
Cash and short term	4%	2%
Fixed-income	35%	33%
Equities	52%	55%
Infrastructure	6%	5%
Real estate	<u>3%</u>	<u>5%</u>
Total	100%	100%

Going Concern Valuation Results as of January 1, 2021— Registered Pension Plan – Past Service

	January 1, 2020	January 1, 2021 (After Assumption Changes ¹)	January 1, 2021 (Alternate Salary Assumption ²)
Past Service			
Actuarial (Market) value of assets	\$ 1,938,502,000	\$ 2,106,687,000	\$ 2,106,687,000
Less: Accrued liability			
Active members	\$ 1,014,559,000	\$ 1,136,203,000	\$ 1,117,509,000
Disabled and suspended members	17,412,000	24,076,000	24,076,000
Pensioners and beneficiaries	779,799,000	840,980,000	840,980,000
Deferred vested members	40,261,000 ³	46,683,000 ⁴	46,683,000 ⁴
Additional voluntary contribution balances	491,000	413,000	413,000
Members flex contribution balances	967,000	811,000	811,000
Cost of living increase effective May 1	15,218,000	6,051,000	6,051,000
Total	\$ 1,868,707,000	\$ 2,055,217,000	\$ 2,036,523,000
Going concern position	\$ 69,795,000	\$ 51,470,000	\$ 70,164,000
Provision for Adverse Deviation (PfAD)	<u>(145,837,000)</u>	<u>(159,748,000)</u>	<u>(158,269,000)</u>
Funding excess/(unfunded liability)	\$ (76,042,000)	\$ (108,278,000)	\$ (88,105,000)
Going Concern Funded Ratio (with PfAD)	96.2%	95.1%	96.0%

¹ Reflects changes in assumptions (discount rate from 5.60% to 5.30%)

² Reflects change in salary increase assumption (from 4.00% to 3.00% for the first three years and 4.00% thereafter for active members)

³ Reflects actual indexation as of May 1, 2020 of 1.95% (1.46% for 75% indexed benefits), and expected indexation in following two years

⁴ Reflects actual indexation as of May 1, 2021 of 0.72% (0.54% for 75% indexed benefits), and expected indexation in following two years

Going Concern Valuation Results as of January 1, 2021— Registered Pension Plan – Current Service

	January 1, 2020 to December 31, 2020		January 1, 2021 to December 31, 2021	
	\$ Amount	% of Pensionable Earnings	\$ Amount	% of Pensionable Earnings
Current Service				
Total current service cost	\$ 81,378,000	16.09%	\$ 90,471,000	17.25%
Provision for non-investment expenses	1,500,000	0.30%	1,560,000	0.30%
PfAD in respect of current service cost	6,611,000	1.31%	7,320,000	1.40%
Less: Members' required contributions	<u>(39,855,000)</u>	<u>(7.88%)¹</u>	<u>(44,027,000)</u>	<u>(8.40%)¹</u>
University current service cost	\$ 49,634,000	9.82%	\$ 55,324,000	10.55%
As a % of members' required contributions	124.5%		125.7%	
Pensionable earnings	\$ 505,660,000		\$ 524,407,000	
January 1, 2022 to December 31, 2022				
	\$ Amount	% of Pensionable Earnings	\$ Amount	% of Pensionable Earnings
Current Service				
Total current service cost	\$ 94,090,000	17.25%	\$ 97,854,000	17.25%
Provision for non-investment expenses	1,622,000	0.30%	1,687,000	0.30%
PfAD in respect of current service cost	7,613,000	1.40%	7,918,000	1.40%
Less: Members' required contributions	<u>(48,213,000)</u>	<u>(8.84%)¹</u>	<u>(50,944,000)</u>	<u>(8.98%)¹</u>
University current service cost	\$ 55,112,000	10.11%	\$ 56,515,000	9.96%
As a % of members' required contributions	114.31%		110.94%	
Pensionable earnings	\$ 545,383,000		\$ 567,198,000	

¹ Reflects increase in members' required contributions at May 1, 2020, May 1, 2021 and May 1, 2022

Going Concern Valuation Results as of January 1, 2021— Registered Pension Plan – Current Service (Alternate Salary Assumption)

	January 1, 2020 to December 31, 2020		January 1, 2021 to December 31, 2021	
	\$ Amount	% of Pensionable Earnings	\$ Amount	% of Pensionable Earnings
Current Service				
Total current service cost	\$ 81,378,000	16.09%	\$ 89,236,000	17.02%
Provision for non-investment expenses	1,500,000	0.30%	1,560,000	0.30%
PfAD in respect of current service cost	6,611,000	1.31%	7,223,000	1.38%
Less: Members' required contributions	<u>(39,855,000)</u>	<u>(7.88%)¹</u>	<u>(44,027,000)</u>	<u>(8.40%)¹</u>
University current service cost	\$ 49,634,000	9.82%	\$ 53,992,000	10.30%
As a % of members' required contributions	124.5%		122.6%	
Pensionable earnings	\$ 505,660,000		\$ 524,407,000	
Current Service				
Total current service cost	\$ 91,913,000	17.02%	\$ 94,670,000	17.02%
Provision for non-investment expenses	1,607,000	0.30%	1,655,000	0.30%
PfAD in respect of current service cost	7,440,000	1.38%	7,663,000	1.38%
Less: Members' required contributions	<u>(47,749,000)</u>	<u>(8.84%)¹</u>	<u>(49,969,000)</u>	<u>(8.98%)¹</u>
University current service cost	\$ 53,211,000	9.85%	\$ 54,019,000	9.71%
As a % of members' required contributions	111.4%		108.1%	
Pensionable earnings	\$ 540,139,000		\$ 556,343,000	

¹ Reflects increase in members' required contributions at May 1, 2020, May 1, 2021 and May 1, 2022

Going Concern Valuation Results as of January 1, 2021— Development of Special Payments

- Under new funding rules, going concern deficits are amortized over 10 years, with any adjustment to the annual special payment deferred 12 months from the valuation date
- The going concern unfunded liability of \$108,278,000 as of January 1, 2021 must be amortized in minimum annual special payments as follows:

Effective Date	Annual Payment	Present Value as of January 1, 2021
January 1, 2021 to December 31, 2021	\$ 9,264,000 ¹	\$ 9,009,000
January 1, 2022 to December 31, 2031	\$ 13,416,000	<u>99,269,000</u>
		\$ 108,278,000

- Under alternate salary assumption, the going concern unfunded liability of \$88,105,000 as of January 1, 2021 would be amortized in minimum annual special payments as follows:

Effective Date	Annual Payment	Present Value as of January 1, 2021
January 1, 2021 to December 31, 2021	\$ 9,264,000 ¹	\$ 9,009,000
January 1, 2022 to December 31, 2031	\$ 10,692,000	<u>79,096,000</u>
		\$ 88,105,000

¹ Special payment required under most recently-filed valuation at January 1, 2020

Analysis of Experience – Past Service

	In \$ Millions
Funding excess/(unfunded liability) as of January 1, 2020	\$ (76.0)
Plus: University contributions for current service	48.6
Member contributions for current service	39.0
Special payments	13.2
Less: Total current service cost	(88.0)
Plus: Interest at 5.60% per year	<u>(3.9)</u>
Equals: Expected funding excess/(unfunded liability) as of January 1, 2021	\$ (67.1)
Plus: Gains (losses) due to:	
Return on actuarial value of assets	35.6
COLA adjustment lower than assumed	10.5
Salary increases lower than assumed	2.9
Change in ITA maximum pension and YMPE higher than assumed	(1.3)
Mortality experience	(2.4)
Retirement experience	5.0
Termination experience	(2.9)
Additional year of COLA for deferred members	(0.6)
Data adjustments	(0.2)
Miscellaneous experience	<u>1.6</u>
Equals: Funding excess/(unfunded liability) as of January 1, 2021, before change in assumptions and Plan provisions	\$ (18.9)
Plus: Impact of change in discount rate from 5.60% to 5.30%	(89.4)
Impact of change in salary assumption	<u>20.2</u>
Equals: Funding excess/(unfunded liability) as of January 1, 2021	\$ (88.1)

Going Concern Valuation Results as of January 1, 2021— Payroll Pension Plan

	January 1, 2020 ¹	January 1, 2021 ¹ (After Assumption Changes)	January 1, 2021 ¹ (Alternate Salary Assumption)
Past Service			
Market value of assets	\$ 43,660,000	\$ 45,872,000	\$ 45,872,000
Less: Accrued liability			
Active members	\$ 7,956,000	\$ 3,303,000	\$ 3,295,000
Pensioners and beneficiaries	20,536,000	22,005,000	22,005,000
PfAD	N/A	N/A	N/A
Total	\$ 28,492,000	\$ 25,308,000	\$ 25,300,000
Funding excess/(unfunded liability)	\$ 15,168,000	\$ 20,564,000	\$ 20,572,000
Current Service			
University current service cost	\$ 174,000	\$ 26,000	\$ 26,000
As a % of pensionable earnings	0.04%	0.005%	0.005%

¹ Reflects maximum benefit in 2020 and 2021 of \$3,400 per year of credited service

Total Current Service Cost for 2021

	RPP		PPP		Total	
	\$ Amount	% of Pensionable Earnings	\$ Amount	% of Pensionable Earnings	\$ Amount	% of Pensionable Earnings
Total current service cost ¹	\$ 99,351,000	18.95%	\$ 26,000	0.005%	\$ 99,377,000	18.95%
Less: Members' required contributions	<u>(44,027,000)</u>	<u>(8.40%)</u>	<u>-</u>	<u>-</u>	<u>(44,027,000)</u>	<u>(8.40%)</u>
University current service cost	\$ 55,324,000	10.55%	\$ 26,000	0.005%	\$ 55,350,000	10.55% ²

¹ Including PfAD and provision for non-investment expenses in the RPP only

² Total University contributions shown on following page

Total Current Service Cost for 2021— (Alternate Salary Assumption)

	RPP		PPP		Total	
	\$ Amount	% of Pensionable Earnings	\$ Amount	% of Pensionable Earnings	\$ Amount	% of Pensionable Earnings
Total current service cost ¹	\$ 98,019,000	18.70%	\$ 26,000	0.005%	\$ 98,045,000	18.70%
Less: Members' required contributions	<u>(44,027,000)</u>	<u>(8.40%)</u>	<u>-</u>	<u>-</u>	<u>(44,027,000)</u>	<u>(8.40%)</u>
University current service cost	\$ 53,992,000	10.30%	\$ 26,000	0.005%	\$ 54,018,000	10.30% ²

¹ Including PfAD and provision for non-investment expenses in the RPP only

² Total University contributions shown on following page

Contributions for 2021—Based on 2020 Filed Valuation

Member Contributions:	\$ 44,027,000	8.40% of pensionable earnings
University Contributions:	1.483 x \$ 44,027,000	12.45% of pensionable earnings
	= \$ 65,289,000	
	\$ 48,531,000	Allocated to pay University current service cost under RPP in 2021 (110.23% of member contributions)
	9,264,000	Allocated to pay University statutory special payments to amortize unfunded liability
	<u>7,494,000</u>	Additional contributions allocated to fund the unfunded liability
	\$ 65,289,000	Total University contributions

- Assumes no contribution to Payroll Pension Plan

Contributions for 2021—Based on 2021 Filed Valuation (Preliminary Assumptions)

Member Contributions:	\$ 44,027,000	8.40% of pensionable earnings
University Contributions:	1.483 x \$ 44,027,000	12.45% of pensionable earnings
	= \$ 65,289,000	
	\$ 55,324,000	Allocated to pay University current service cost under RPP in 2021 (125.66% of member contributions)
	9,264,000	Allocated to pay University statutory special payments to amortize unfunded liability
	<u>701,000</u>	Additional contributions allocated to fund the unfunded liability
	\$ 65,289,000	Total University contributions

- Assumes no contribution to Payroll Pension Plan
- Statutory special payments increase to \$13,416,000 in 2022 and 2023

Contributions for 2021—Based on 2021 Filed Valuation (Alternate Salary Assumption)

Member Contributions:	\$ 44,027,000	8.40% of pensionable earnings
University Contributions:	1.483 x \$ 44,027,000	12.45% of pensionable earnings
	= \$ 65,289,000	
	\$ 53,992,000	Allocated to pay University current service cost under RPP in 2021 (122.63% of member contributions)
	9,264,000	Allocated to pay University statutory special payments to amortize unfunded liability
	<u>2,033,000</u>	Additional contributions allocated to fund the unfunded liability
	\$ 65,289,000	Total University contributions

- Assumes no contribution to Payroll Pension Plan
- Statutory special payments increase to \$10,692,000 in 2022 and 2023

Solvency and Wind Up Valuations

- The solvency and wind up valuations are performed at January 1, 2021 using assumptions that are prescribed by legislation and actuarial standards
- The solvency and wind up valuations are both performed assuming the plan were to wind up on the valuation date and all benefits are settled either through an annuity purchase or the payment of lump-sum (commuted) values to members
- The solvency valuation excludes the value of indexation from the liabilities; solvency deficit is subject to funding requirements
- The wind up valuation represents the estimated liability of all benefits to be settled; wind-up deficit is calculated for reporting purposes but is not required to be funded
- The wind up valuation is based on the premise that a market for fully-indexed annuities exists, which may not be practical for a pension plan of this size
- In July 2020, the CIA's Actuarial Standards Board released the final version of the new commuted value standards that came into effect on December 1, 2020. We have reflected the new commuted value standards in the current valuation.

Actuarial Assumptions for Solvency and Wind Up Valuations

Assumptions	January 1, 2020	January 1, 2021
Retirement Ages	Age between 55 and 65 that produces highest value	50% at age between 55 and 65 that produces highest value and 50% at unreduced age 62
Mortality Rates	CPM2014 Combined with Generational Improvements Under Scale CPM-B	No change
Interest Rates— Solvency Valuation (Per Year)		
Active Members Age 55 and Over, Pensioners and Deferred Pensioners ¹	2.96%	2.50%
Active Members Under Age 55 ²	2.50% for 10 years; 2.60% thereafter	1.20% for 10 years; 2.80% thereafter
Interest Rates— Wind Up Valuation (Per Year)		
Active Members Age 55 and Over, Pensioners and Deferred Pensioners ¹	-0.29% (100% indexed) 0.52% (75% indexed)	-0.78% (100% indexed) 0.04% (75% indexed)
Active Members Under Age 55 ²	1.20% for 10 years; 1.20% thereafter (100% indexed) 1.80% for 10 years; 1.60% thereafter (75% indexed)	0.60% for 10 years; 0.80% thereafter (100% indexed) 0.80% for 10 years; 1.30% thereafter (75% indexed)

¹ Settled through annuity purchase

² Settled through commuted value

Solvency and Wind Up Valuation Results as of January 1, 2021

	January 1, 2020		January 1, 2021	
	Solvency Valuation	Wind Up Valuation	Solvency Valuation	Wind Up Valuation
Market Value of Assets	\$ 1,938,502,000	\$ 1,938,502,000	\$ 2,106,687,000	\$ 2,106,687,000
Less: Wind up expenses	<u>(500,000)</u>	<u>(500,000)</u>	<u>(500,000)</u>	<u>(500,000)</u>
Solvency/wind up assets	\$ 1,938,002,000	\$ 1,938,002,000	\$ 2,106,187,000	\$ 2,106,187,000
Solvency/Wind Up Liabilities				
Active members	\$ 1,235,747,000	\$ 1,651,387,000	\$ 1,413,850,000	\$ 1,836,115,000
Disabled and suspended members	23,248,000	32,039,000	32,542,000	42,911,000
Pensioners and beneficiaries	831,844,000	1,124,826,000	911,935,000	1,245,784,000
Deferred vested members	53,740,000	100,039,000	64,138,000	121,223,000
Voluntary contribution balances	491,000	491,000	413,000	413,000
Member flex contribution balances	<u>967,000</u>	<u>967,000</u>	<u>811,000</u>	<u>811,000</u>
Total	\$ 2,146,037,000	\$ 2,909,749,000	\$ 2,423,689,000	\$ 3,247,257,000
Solvency Excess/(Deficiency)	\$ (208,035,000)	\$ (971,747,000)	\$ (317,502,000)	\$ (1,141,070,000)
Transfer ratio (market value of assets/wind up liabilities)	N/A	0.67	N/A	0.65
Solvency ratio (market value of assets/solvency liabilities)	0.90	N/A	0.87	N/A

Notes:

- Difference between Solvency and Wind Up Valuation is that Wind Up Valuation includes indexation under Plan, whereas Solvency Valuation excludes the indexation.
- As of January 1, 2021, using the interest rates as prescribed under the new commuted value standards has lowered the Solvency Liabilities by 18.2 million.



Protocol Calculations

Past Service Liabilities – Impact of Indexing RPP Cap to Full Increase in ITA Limit – No Indexing of PPP Cap

- The chart below shows the increase in Accrued Liability at January 1, 2021 if the current RPP cap is indexed at the full increase in the ITA limit rather than 1/3 of the increase in the AIW (based on preliminary assumptions):

	RPP Cap Indexed at 1/3 of AIW Increase ¹	RPP Cap Indexed at Full Increase in ITA Limit	Increase
RPP	\$ 2,163,495,000	\$ 2,225,492,000	\$ 61,997,000
PPP	\$ <u>25,308,000</u>	\$ <u>25,308,000</u>	\$ <u>-</u>
Total	\$ 2,188,803,000	\$ 2,250,800,000	\$ 61,997,000

¹ Current \$3,245.56 RPP cap indexed annually subject to a dollar limit of \$3,400 which increases at 1/3 of the increase in the ITA limit

² Current \$3,245.56 RPP cap indexed annually at the same increase as ITA limit

Current Service Cost – Impact of Indexing RPP Cap to Full Increase in ITA limit – No Indexing of PPP Cap

- The chart below shows the increase in Current Service Cost at January 1, 2021 if the current RPP cap is indexed at the full expected increase in the ITA limit rather than 1/3 of the increase in the AIW (based on preliminary assumptions):

	RPP Cap Indexed at 1/3 of AIW Increase	RPP Cap Indexed at Full Increase in ITA Limit	Increase
RPP ¹	\$ 99,351,000	\$ 105,576,000	\$ 6,225,000
PPP	\$ 26,000	\$ 26,000	\$ -
Total	\$ 99,377,000	\$ 105,602,000	\$ 6,225,000
As a % of Pensionable Earnings	18.95%	20.14%	1.19%

¹ Includes PfAD and provision for expenses



Appendix

Definition of Terms

Definition

Accrued liability	The actuarial present value of the benefits earned by members in respect of their service prior to the valuation date. For active and disabled members, the accrued benefits reflect anticipated future salary increases. For pensioners, the accrued liability reflects the actuarial present value of future benefit payments.
Actuarial value of assets	The method for this valuation assumes the actuarial value of assets is set equal to the market value of assets.
Funding excess/(unfunded liability)	Amount by which the actuarial value of assets exceeds/(is less than) the accrued liability.
Funding reserve	The amount by which the market value of assets exceeds/(is less than) the actuarial value of assets.
Members' pensionable earnings	The covered earnings (see definition under "Plan Provisions") for active and disabled members accruing service at the valuation date.

Definition of Terms (Cont'd)

Definition

Current service cost

The actuarial present value of the benefits expected to be earned by active and disabled members in respect of service during the year following the valuation date. The required member contributions are subtracted from the total current service cost to derive the University current service cost. For funding purposes, the University current service cost is expressed as a percentage of the required member contributions. This amount is also shown as a percentage of members' pensionable earnings.

Solvency liability

The actuarial present value of benefits earned for service prior to the valuation date, determined as if the Pension Plan were terminated on the valuation date. The solvency liability excludes liabilities for future escalated adjustments (indexation).

Wind up liability

Equal to the solvency liability, but including liabilities for future escalated adjustments.

Transfer ratio

The ratio of market value of assets to the wind up liability.

Definition of Terms (Cont'd)

Personnel Data

Active members

Members contributing to the Pension Plan as of the valuation date. Includes both full-time and part-time members and members on a paid or unpaid leave of absence who have elected to pay their required member contributions.

Disabled members

Members who are certified to be totally disabled by a medical doctor and in receipt of disability income under the University's long-term disability income plan. Such members continue to accrue benefits but do not make the required member contributions.

Pensioners and surviving beneficiaries

Members who have retired as of the valuation date, or surviving beneficiaries of such members, and are in receipt of a pension from the trust fund.

Deferred vested members

Members who have terminated employment as of the valuation date and who are entitled to a monthly pension commencing at normal retirement date.

Suspended members

Members who have previously joined the Plan but elected to cease making further contributions to the Plan until age 35.

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OVERVIEW OF PENSION PLANS FOR THE U15 RESEARCH-INTENSIVE UNIVERSITIES

Attached is a document which provides an overview of the pension plans for the Canadian research-intensive universities included in the U15.

In addition, we have provided below some additional context on how the provisions of the University of Waterloo Pension Plan have evolved over the last 15 years.

The Pension & Benefits Committee at the University of Waterloo is quite unique in the university sector in that the P&B Committee has the ability to make recommendations to the Board of Governors on plan design. For most other single-employer pension plans in the university sector, the pension plans are collectively bargained, and changes can only be made through the bargaining process, often resulting in differences within the plans by employee group. One of the principles underlying the design of both the pension plan and benefit plans at the University of Waterloo has been common provisions for all Faculty and Staff.

As part of the stewardship of the University of Waterloo Pension Plan and benefit plans, the P&B Committee has periodically undertaken Benefit Index studies to compare the University of Waterloo pension and benefit programs to those of other universities and employers with whom the University competes for talent.

Over the last 15 years, the following changes to the University of Waterloo Pension Plan have been implemented to address plan sustainability as a result of recommendations from the Pension & Benefits Committee to the Board of Governors:

- Increasing member contribution rates starting in 2007, phased-in over a 3-year period.
- Removing indexation of pension benefits in the deferral period (i.e., between date of termination and the date of pension commencement) for pension benefits earned after January 1, 2008, unless the member has 20 years of service or is eligible for early retirement.
- Increasing member contribution rates in 2013.
- Lengthening the averaging period for calculating final average earnings from 3 years to 5 years and transitioned over the period from January 1, 2014 to December 31, 2015, and reducing indexation from 100% of the increase in CPI to 75% of the increase in CPI for pension benefits earned after January 1, 2014.
- Increasing member contribution rates starting in 2020 phased in over a 3-year period and phasing out of the Payroll Pension Plan.

Each set of pension changes has been accompanied by an environmental scan on pension plan provisions in the university sector in Ontario and across Canada, which was an important part of the consultations with the University community.

OVERVIEW OF TYPES OF PENSION PLANS

DEFINED BENEFIT PENSION PLANS

The following pages summarize the main provisions for the following U15 universities participating in a defined benefit pension plan:

- University of Waterloo
- University Pension Plan Ontario (UPP)
(includes University of Toronto and Queen's University)
- Alberta Universities Academic Pension Plan (UAPP)
(includes academic and professional staff at University of Alberta and University of Calgary)
- Alberta Public Service Pension Plan (PSPP)
(includes administrative staff at University of Alberta and University of Calgary)
- University of British Columbia (Staff)*
- McMaster University
- University of Ottawa
- Université de Montréal
- Université Laval
- Dalhousie University

*operates as a target benefit plan with defined benefit provisions and a fixed university contribution.

HYBRID PENSION PLANS

Hybrid pension plans in the university sector are unique to the sector. They are essentially plans that provide the greater of a money-purchase pension (through the plan's self-annuitization of money-purchase account balances) and a minimum guarantee defined benefit pension. There are two pension plans in the U15, identified below, that use the hybrid pension model. Queen's University also has this model for service prior to joining the UPP. There are a number of other non-U15 universities that use this model.

- University of Manitoba
- McGill University

DEFINED CONTRIBUTION PENSION PLANS

- University of British Columbia (Faculty)
- University of Saskatchewan (Faculty and non-CUPE Staff)
- University of Western Ontario

OTHER

- University of Saskatchewan (CUPE Staff)
(participate in CAAT Pension Plan DBPlus option for future service)



Empower Results®

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SUMMARY OF DEFINED BENEFIT PROVISIONS (FOR FUTURE SERVICE)

Provision	University of Waterloo	UPP	Alberta UAPP	Alberta PSPP	UBC (Staff)	University of Ottawa	McMaster University ⁵	Dalhousie University
Average Earnings (Years)¹	5	4	5	5	3	5	4	5
Average YMPE (Years)	5	4	5	5	N/A	1 ⁴	4	N/A
Benefit Rate (Below YMPE/Above YMPE)	1.4% / 2.0%	1.6% / 2.0%	1.4% / 2.0%	1.4% / 2.0%	1.8%	1.3% / 2.0%	1.4% / 2.0%	2.0%
Bridge Benefit to Age 65	none	none	0.6% YMPE	0.6% YMPE	none	none	none	none
Subsidized Payment Form								
With Spouse	LG10	50% J&S	66% J&S	LG5	LG10	60% J&S	50% J&S	LG7
Without Spouse	LG10	LG10	LG10	LG5	LG10	LG5	LG7	LG7
Eligibility For Unreduced Early Retirement	Age 62	Age 60 + 80 Points (Service)	Age 60 + 80 Points (Pensionable Service)	Age 55 + 85 Points (Service)	none	Age 60, or 90 Points (Pensionable Service)	80 to 90 points (Pensionable Service), depending on employee group	none
Reductions on Reduced Early Retirement	6% per year from age 62	5% per year from normal retirement date	3% per year from unreduced retirement date	3% per year from unreduced retirement date	Actuarially reduced from normal retirement date	Actuarially reduced from unreduced retirement date	6% per year from normal retirement date	3% to 5% per year from normal retirement date, depending on age
Indexation After Pension Commencement	75% of CPI (guaranteed)	75% of CPI (funded conditional)	60% of CPI (guaranteed)	60% of CPI (guaranteed)	Based on plan funded status	CPI ≤ 3%: 100% of CPI up to 2% CPI ≥ 3%: CPI-1% (guaranteed)	Excess investment return over 4.5%, up to 100% of CPI	Excess investment return over 5.05%, up to 100% of CPI
Indexation in Deferral Period	none	none	Same as above	Same as above	none	Same as above	Same as above	none
Member Contribution Rates (Below YMPE/Above YMPE)	7.8% / 11.2% ²	9.2% / 11.5%	12.37% / 16.32% ³	10.47% / 14.95% ³	6.5%	7.15% / 10.95% ⁴	8.0% / 11.0%	6.65% up to \$5,000, 8.15% above \$5,000

¹ Most provisions are best average, not final average.

² Ultimate rate.

³ Includes contributions toward unfunded liability.

⁴ Breakpoint for benefit and contribution formula is 85% of 1999 YMPE increased by 55% of the increase in the YMPE since 2003 (\$40,028 in 2020).

⁵ Management members hired on or after June 16, 2009, participate in a DC plan; Lower benefits for UNIFOR members hired on or after May 1, 2010.



Empower Results®

February 23, 2021

Page 4

Provision	Université Laval (Academic)	Université Laval (Office Staff)	Université Laval (Other Employees)	Université de Montréal
Average Earnings (Years)	3	Indexed career average ¹	3	5
Average YMPE (Years)	none	none	5	5
Benefit Rate (Below YMPE/Above YMPE)	1.85%	2.0%	2.52% FAE – 0.7% YMPE (1.82% / 2.52%)	2% FAE – RRQ (CPP) (1.3% / 2.0%)
Bridge Benefit to Age 65	none	none	0.7% YMPE	OAS benefit
Subsidized Payment Form				
With Spouse	LG5	LG10	LG5	LG10
Without Spouse	LG5	LG10	LG5	LG10
Eligibility For Unreduced Early Retirement	none	none	Age 60	Age 60
Reductions on Reduced Early Retirement	Actuarially reduced from normal retirement date	Table with reductions between 1.7% to 4.5% per year from normal retirement date	5% per year from unreduced retirement date	5% per year from unreduced retirement date
Indexation After Pension Commencement	100% of CPI up to 2% (funded conditional)	100% of CPI (funded conditional)	100% of CPI (funded conditional)	75% of CPI (funded conditional)
Indexation in Deferral Period	none	none	none	none
Ultimate Member Contribution Rates (Below YMPE/Above YMPE)	9.6% until 2031% / 9.35% thereafter	8.8%	10.0% / 11.5%	8.55% / 11.05%

¹ Accrued benefit is indexed at 4.4% per year until the employee has reached the last pay scale and 2% per year thereafter.

Group Benefits Program
Annual Renewal effective May 1, 2021

a. Life Insurance – Premium Rate

The University participates in the University Life Insurance Plan (ULIP) which is insured by Sun Life Financial. The underwriting method utilized is experience-rated for rate determination and refund accounting for the funding of ULIP. Premium rates are established based on claims experience and the participating universities have a share in the financial results. Claims experience analysis indicates that a 13% increase to the contract rate for Basic Life is required for the upcoming year; no changes are required for the Optional Life rates.

Basic Life Volume	Current		Effective May 1, 2021		Change	
	Contract Rate	Annual Premium	Contract Rate	Annual Premium		
\$1,014,852,000	\$0.108 per \$1,000	\$1,315,248	\$0.122 per \$1,000	\$1,485,743	\$170,495	13%

Note: Rates do not include any applicable taxes

Costs exceeded premium paid during the May 1, 2019 to April 30, 2020 financial accounting period which generated a deficit of \$486,957 that required a transfer from the Claims Fluctuation Reserve (CFR). In contrast with last year’s fully funded CFR, the reserve is partially funded as of April 30, 2020 (43% of the required 25% of premium). The Unrestricted Deposit Account (UDA) is \$1,851,603 as at April 30, 2020 (was \$2,103,867 at April 30, 2019; April 30, 2021 estimate is \$1,583,803). The full amount in the UDA is available for withdrawal; alternatively, a transfer could be made to fully fund the CFR or used to reduce the premium rate for the upcoming year.

The University has been remitting premium to Sun Life Financial based on a rate that is subsidized by the UDA, the “paid rate”. At present, the paid rate is \$0.086 per \$1,000 which is 20% lower than the 2020/21 contract rate. Due to the balance in the UDA, the University has some flexibility with respect to the paid rate to be implemented effective May 1, 2021.

	Option 1 (30% Subsidy) Maintain 2020/21 Paid Rate		Option 2 Maintain 20% Subsidy		Option 3 Implement 10% Subsidy	
	Rate per \$1,000	Annual Premium	Rate per \$1,000	Annual Premium	Rate per \$1,000	Annual Premium
Contract	\$0.122	\$1,485,744	\$0.122	\$1,485,744	\$0.122	\$1,485,744
Paid	\$0.086	\$1,047,327	\$0.098	\$1,193,466	\$0.110	\$1,339,605
Difference		\$438,416		\$292,277		\$146,139

Notes: “Difference” would be funded through the UDA; rates do not include any applicable taxes; the University pays 100% of the premium for a Basic Life benefit of 1 times earnings and 67% of the premium for 2 or 3 times earnings. Optional Life is 100% employee paid. All employer paid life insurance premium results in a taxable benefit for employees.

Action Required: Decision (premium rate effective May 1, 2021 and UDA direction)

Pension & Benefits Committee
March 12, 2021

b. Long Term Disability (LTD) – Premium Rate

The LTD benefit is insured by Canada Life (formerly Great-West Life) and the underwriting method utilized is an experience-rated, non-refund arrangement. Premium rates are established based on 66 months of claims experience but the University does not have a share in the financial results. The LTD benefit is fully paid for by employees and as a result, in the event of a claim, benefit payments are non-taxable.

Canada Life initially proposed a premium rate increase of 97.2% for the upcoming year driven by a 30% increase in the number of new claims in the analysis (74 in comparison with 57 at last year's renewal). Based on Aon's analysis and their negotiations with Canada Life, a lesser increase of 50% is required for the upcoming year.

Insured Earnings	Current		Effective May 1, 2021		Change	
	Rate (% of earnings)	Annual Premium	Rate (% of earnings)	Annual Premium		
\$458,238,929	0.971%	\$4,449,500	1.457%	\$6,676,500	\$2,227,000	50%

Note: Rates do not include applicable taxes; insured earnings based on projected 2021/22 volumes

Illustration of Employee Impact

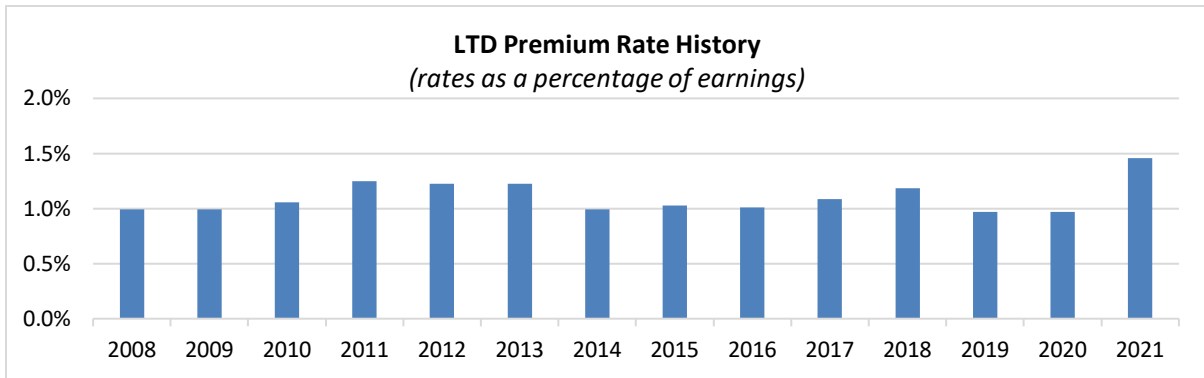
Sample Salary	LTD Monthly Premium for Employees*			
	May 2020-April 2021	May 2021-April 2022	Difference	
\$35,000	\$28.32	\$42.47	\$14.15	
\$65,000	\$52.60	\$78.87	\$26.27	
\$100,000	\$80.92	\$121.33	\$40.41	
\$125,000	\$101.15	\$151.67	\$40.52	
Maximum Insured Salary	\$182,971	\$148.05	\$222.00	\$73.95
	\$184,283 ¹	\$148.05**	\$223.60	\$75.55

*Based on rates that exclude any applicable taxes
 **Premium is capped at the insured earnings maximum of \$182,971

¹The LTD plan design includes an annual indexing provision for the maximum insured earnings; the provision applies 100% of the COLA adjustment as calculated under the pension plan text methodology (i.e. COLA of 0.717% effective May 1, 2021).

One of the recommendations from the Holistic Benefits Review working group is for the University to conduct a Request for Proposal (RFP) process to determine whether Canada Life should continue to be the provider for the LTD benefit.

The LTD benefit has been insured through Canada Life since January 1, 2008 and since then, the premium rate has fluctuated with changes effective May 1 most years but not to the degree required for 2021, as illustrated in the following chart:



The current plan design is generous (43% richer than the average comparator in Aon’s most recent Benefit Index) and as a result, it is a costly benefit for employees. The LTD premium increase could be tempered by reducing the plan design. For reference, the following options were presented by Aon to the Holistic Benefits Review working group; however, the working group decided not to recommend any changes to the plan design.

Plan Design Option		Change	
		Impact to Premium Rate	Annual Cost Increase (Decrease)
Change COLA from 5% per year to:	None	-17.1%	(\$1,141,000)
	2% per year	-12.0%	(\$801,900)
	3% per year*	-7.0%	(\$467,400)
	4% per year	-2.2%	(\$146,700)
Adjust definition of disability to 24 months own occupation from date of disability (currently is 24 months from LTD start)*		-0.8%	(\$50,400)
Change benefit formula from 85% of net earnings to:	65% of gross earnings	-27.0%	(\$1,800,100)
	70% of gross earnings	-20.0%	(\$1,332,800)
	75% of gross earnings*	-11.3%	(\$751,000)
	80% of gross earnings	-6.1%	(\$407,500)
	Graded schedule with target 75% net replacement	-9.0%	(\$599,300)
	Graded schedule with target 65% net replacement	-20.0%	(\$1,332,600)

**Changes suggested by Aon would result in a premium reduction of approximately 19.1%; this reduced plan would still be approximately 16% richer than the average comparator*

Action Required: Decision (premium rate effective May 1, 2021 and confirm plan design)

**Pension & Benefits Committee
March 12, 2021**

c. Healthcare Benefits – ASO Fees/Charges

The healthcare benefits (i.e. prescription drugs, paramedical practitioners, out-of-country, hospital, medical services & supplies, and dental) are provided by Canada Life on an Administrative Services Only (ASO) basis. With an ASO arrangement, the University is responsible for paying Canada Life for all claims paid plus their fees for providing this coverage. A pooling charge applies so that claims in excess of \$50,000 per year per individual are not charged to the University. Global Medical Assistance (GMA) provides individuals outside of the country with assistance in the event of a medical emergency (i.e. locating medical care, hospital admission, transportation services); GMA is provided on a fully pooled basis with the same rates applied throughout Canada Life’s book of business. Canada Life’s initial renewal proposal was no change to the current charges; however, Aon was able to negotiate a decrease of 16.3% to the pooling charge which is projected to result in annual savings of approximately \$148,500.

A new charge. Canada Life currently mails plastic pay direct drug cards for eligible members to HR in bulk as generated and then HR sorts through the bulk in order to mail them to employees. This time consuming manual process has been a challenge during the COVID-19 pandemic and a change to a more efficient, cost effective process is required. Canada Life’s charge to mail cards directly to members is \$1.18 per card (including postage and carrier sheet). Similar to other Canadian benefit providers, Canada Life is moving away from providing plastic cards for sustainability reasons since a digital card is available through GroupNet and includes the pertinent numbers (i.e. Plan, ID) required to process claims at the pharmacy. Canada Life recently discontinued the use of plastic cards for all of their small clients and advised that this change will be applied to all of their clients eventually.

ASO Fee/Charge		Current		Effective May 1, 2021		Change	
		Charge	Annual Cost	Charge	Annual Cost		
General Administration		0.75%	\$153,159	0.75%	\$153,159	\$0	0%
Profit		0.41%	\$83,727	0.41%	\$83,727	\$0	0%
Claims Settlement	Pay Direct Drugs	2.70%	\$236,005	2.70%	\$236,005	\$0	0%
	Other Medical	5.79%	\$297,248	5.79%	\$297,248	\$0	0%
	Dental	3.25%	\$212,761	3.25%	\$212,761	\$0	0%
Drug Card Mailing (DCM)		n/a	n/a	\$1.18 per card	\$2,000	\$2,000	n/a
Individual Pooling		6.57%	\$911,700	5.50%	\$763,200	(\$148,500)	-16.3%
GMA		\$0.50	\$ 44,600	\$0.50	\$44,600	\$0	0%
<i>Combined</i>		<i>\$1,939,200</i>		<i>\$1,790,700</i>		<i>(\$146,500)</i>	<i>- 7.6%</i>

Note: Charges are calculated as a percentage of paid claims except for GMA and DCM which are a monthly charge per covered member and estimate based on historical drug cards issued; exhibit is based on projected claims (approx. \$20.4M on a combined basis, 43% pay direct drug, 25% other medical, and 32% dental) and December 2020 headcounts

**Pension & Benefits Committee
March 12, 2021**

One of the recommendations from the Holistic Benefits Review working group is for the University to conduct a Request for Proposal (RFP) process to determine whether Canada Life should continue to be the provider for the extended health and dental benefits. Aon estimates that through a marketing exercise, the ASO fees would reduce to enable annual savings of at least \$166,000.

Action Required: *Decision (ASO fees/charges effective May 1, 2021)*

d. Healthcare Benefits – Budget Rates

Budget rates are calculated each year by Aon using underlying claims experience, ASO fees/charges, recent plan amendments, and loss ratio against budget. In Aon’s analysis, the University’s claims during the experience period (January to December 2020) were adjusted to pre-COVID levels to isolate any impact from the pandemic.

These budget rates are used to determine applicable cost sharing (with affiliates and part-time employees) and to generate funds in the account which is used to pay the monthly ASO bill from Canada Life. The healthcare benefits are fully employer paid with the exception of part-time employees who have a share in the cost relative to their full-time equivalency (e.g. an employee who works 50% of the standard workweek pays 50% of the monthly rate).

Projected claims analysis indicates changes to the budget rates for the extended health and dental benefits for the upcoming year. The trend factors used by Aon for extended health has decreased from 7.125% to 6% and for dental, has increased from 4% to 6%.

Benefit	Coverage Level	Participants	Current		Effective May 1, 2021		Change	
			Monthly Rate	Aggregate Annualized	Monthly Rate	Aggregate Annualized		
Extended Health	Single	2,085	\$70.71	\$1,769,164	\$71.20	\$1,781,424	\$114,227	0.7%
	Family	5,378	\$225.64	\$14,561,903	\$227.22	\$14,663,870		
Dental	Single	1,050	\$45.80	\$577,080	\$48.00	\$604,800	\$347,148	4.8%
	Family	4,021	\$137.81	\$6,649,608	\$144.43	\$6,969,036		
<i>Combined</i>			\$23,557,755		\$24,019,130		\$461,375	1.96%

Note: Rates include a margin for tax; based on projected claims experience and December 2020 headcounts

Action Required: *Decision (budget rates effective May 1, 2021)*

May 1, 2021 Extended Health Plan Amendment

Implementation Update

Recap of Changes

Following the Board of Governors' approval (February 2, 2021), Human Resources informed Canada Life of planned benefit changes that will come into effect May 1, 2021 for active and retired employees. In summary these are:

- Psychologist maximum of \$943 per year (increased from \$743)
- Include registered social workers and psychotherapists in the Psychologist category
- Add continuous glucose monitors (CGM) at 80% coverage, to a maximum of \$4000 per year*
- Add in vitro fertilization (IVF) treatment at 80% coverage, reasonable and customary limits apply*
- Remove medical referral requirement for: psychologist, massage therapists, speech therapists, and dieticians
- Include athletic therapists in the Physiotherapist category
- Out-of-country maximum of \$5,000,000 per lifetime (increased from \$1,000,000)
- Overage dependent children covered to age 25 (increased from 23)
- Implement drug management programs (SMART, HCM, EGD) (Appendix A)

*The addition of CGM and IVF provisions require confirmation of specific plan design details before Canada Life is able to commence implementation activity. As a result, the May 1, 2021 effective date for these coverages may need to be retroactive.

Canada Life has indicated that, with the exception of CGM and IVF, these amendments are straightforward and implementation activity has commenced accordingly. Proposed plan design details for CGM and IVF follow below for consideration and approval.

Continuous Glucose Monitors (CGM)

A CGM constantly transmits blood glucose levels to a transmitter. Another type of glucose monitor is a Flash Glucose Monitor (FGM) which provides snapshots of blood glucose levels. Both monitors are standardly available for coverage through Canada Life; however, they are classified as separate and distinct benefit provisions with reimbursement provided through either medical supplies or prescription drug components of the extended health benefit.

For CGMs, a pre-treatment form (see Appendix B) is required by Canada Life and the member must manage their diabetes with insulin to be eligible. The standard coverage for CGMs is an overall maximum of \$4,000 per calendar year for the reader, sensors, and transmitters. For FGMs, patients must be insulin dependent and Canada Life relies on prescription drug data from their system to determine members' eligibility. The standard coverage for FGMs is no annual maximum but reasonable and customary limits apply (approximate annual cost per claimant is \$2,500 for reader and sensors).

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While not a standard adjudication practice, Canada Life has confirmed that they would be able to administer a combined annual maximum of \$4,000 for CGM/FGMs. Aon confirmed that the intent of their costing was to include CGMs and FGMs and projects that with a combined annual maximum of \$4,000, it would be part of the overall cost neutral package.

Action Required: *Decision (confirm amendment should include FGM as well as CGM)*

In Vitro Fertilization (IVF)

IVF is not standardly available for coverage through Canada Life and as such, reasonable and customary limits do not exist. Canada Life will agree to adjudicate claims but requires direction from the University with respect to the plan design. The costing that was performed by Aon indicates that the following plan design would be appropriate:

Eligible expenses:**

- anesthetist fees
- cycle monitoring fee
- 1 ultrasound and blood test once the in-vitro procedure has begun (usually only one is required to confirm pregnancy)
- embryo freezing - initial process, preparation and annual storage (annual storage limit of 1 year)
- embryo thawing
- in-vitro fertilization procedure
- sperm thawing
- sperm washing
- transfer of frozen embryo

**Includes expenses which are part of the IVF process. Coverage available through provincial healthcare programs must be exhausted first.

Ineligible expenses:

- embryo donation program (fee paid to a recognized clinic or qualified medical practitioner)
- donation to a sperm bank
- donor's fee or cost
- medical expenses or services incurred by the surrogate mother
- surrogate agency fee
- surrogate mother's fee

Coverage maximum: A lifetime maximum of \$30,000 per member. This maximum should enable two IVF attempts through the plan (in addition to the first attempt covered through provincial healthcare).

Age limitation: Provincial coverage in Ontario requires a patient to be under 43 years old and as such, the University plan design should align accordingly.

Since this is not a standard benefit, unique situations may arise through the introduction of coverage which may require review in order to provide Canada Life with appropriate direction for claims reimbursement. A process for requests for approval of/direction for unique situations and scenarios might be required.

Action Required: *Decision (plan design details for IVF coverage and process for scenarios)*

Communication

Following the Board of Governor's approval, a number of communication activities have been undertaken to inform plan members of plan benefit changes.

On February 8, an email message was released from the University's central Communications team on behalf of the Pension & Benefits Committee to all benefit participants to inform them of the changes. In addition, the [Holistic Benefits Review](#) website was updated and continues to be maintained with [FAQs](#) and other pertinent information.

A process is being developed to support plan members with dependent children of age 24 or 25, who are full-time students and who will now be eligible for coverage. Process details will be relayed to plan members who need to take action. Human Resources is working on a reconfiguration of Workday (and its integration to Canada Life) so that members will be able to enter their dependent information.

To support plan members and minimize processing delays, Canada Life has indicated eligible individuals can complete the Request for Brand Name Drug Coverage form (Appendix C) ahead of the May 1 implementation date. This supportive measure will be communicated to plan members in April 2021.

To support an understanding of these changes, Canada Life will provide a minimum of 4 information sessions to campus (2 offered in April and 2 in May); and their call centre will be able to support member inquiries starting May 1 (note that there could be a delay in CGM and IVF support depending on implementation timelines). In addition, the Employee Benefit Program booklet and other details on the Human Resources website will be revised, and communications will be released to active and retired employees in May.

Appendix A

Drug Management Program – Additional Information

It is estimated by Canada Life that 99.9% of the population of benefits participants will not be impacted by HCM or SMART. The Enhanced Generic Drug (EGD) program will be more impactful; however, there is already good utilization of generic drugs by the University's population across benefits participants.

Health Case Management (HCM)

Canada Life does not have any standard reports available for HCM; however, they should be able to provide the University with an annual report of the number of people being handled through HCM on an annual basis. This could potentially be an additional component of the Benefits Utilization Report each June (commencing in June 2022). Customer experience surveys with the HCM process are not conducted and therefore this metric cannot be reported against.

There are approximately 180 drugs on Canada Life's prior authorization listing. Of these, 27 drugs used for 6 conditions (i.e., Asthma, Ankylosing Spondylitis, Crohn's Disease, Psoriasis, Psoriatic Arthritis, Rheumatoid Arthritis) have been identified for HCM.

Canada Life's standard practice is to not subject a member to HCM if they are taking one of the drugs for one of the above conditions as of the effective date; however, if they are prescribed a new drug on the list on or after the effective date, HCM will apply. If there is an interruption in treatment for one of these drugs, it is typically because the drug is no longer effective and therefore lengthy breaks between prescriptions are uncommon; however, should this situation arise and there was a documented medical reason for the break in treatment, then coverage would resume for that drug.

SMART

Canada Life does not have any standard reports available for SMART. As new drugs come to the market, they are not added to the plan while Canada Life conducts an assessment. Following their review, one of 3 situations occur: excluded, covered, included but with prior authorization. Canada Life will not provide the list of specific drugs that are in the excluded from coverage category nor will they disclose the list of drugs undergoing assessment.

Canada Life's standard practice is to continue to provide coverage to any member who is currently taking a drug that is excluded as a result of a SMART assessment (i.e., the drug will continue to be eligible to them through the plan). Coverage will not be available for prescriptions on or after May 1. As with HCM, if there is an interruption in treatment for one of these drugs, it is typically because the drug is no longer effective and therefore lengthy breaks between prescriptions are uncommon; however, should this situation arise and there was a documented medical reason for the break in treatment, then coverage would resume for that drug.

Enhanced Generic Drugs (EGD)

Canada Life has standard reports available for the number of prescriptions and dollar amount of brand name versus generic drugs. This could potentially be an additional component of the Benefits Utilization Report each June (commencing in June 2022).

Standard practice is to apply the EGD requirement to all prescriptions on or after May 1 (i.e. no “grandfathering” provision) – members who are currently taking a brand name drug will have reimbursement based on the lowest cost generic once implemented. Members who have an adverse reaction to the generic can have their physician complete the Request for Brand Name Drug Coverage form (see Appendix C) and an exception will be made for the brand name. If the member has already tried the generic and is aware of an adverse reaction, they can submit the request form ahead of May 1 and Canada Life will record the exception in their system so that coverage continues when the plan change is implemented.

Appendix B: Pre-Treatment / Estimate for CGM (Page 1 of 2)



Pre-treatment / Estimate for Continuous Glucose Monitor (CGM) To be submitted with initial CGM estimates only

Charges for completing this form or providing medical information are not covered by your plan.

INSTRUCTIONS

1. Complete page 1 and 2 of this form in full.
2. Plan member to complete parts 1 through 5, Physician to complete part 6
3. Attach estimate and retain copies for your files as originals will not be returned.
4. Send to the appropriate Benefit Payment Office for your plan. See Part 7.

PART 1 - Confirmation, Authorization and Signature

I certify that the information given on this claim form is true, correct and complete to the best of my knowledge. I certify that all goods and services being claimed have been received by me, my spouse and/or my dependents; and that my spouse and/or dependents are eligible under the terms of my plan.

The submission of fraudulent claims is a criminal offence. Canada Life takes the submission of fraudulent claims seriously. Suspected fraudulent claims may be reported to your employer or plan sponsor and to the appropriate law enforcement agency.

At Canada Life, we recognize and respect the importance of privacy. Personal information that we collect will be used for the purposes of assessing your claim and administering the group benefits plan. I authorize Canada Life, any healthcare or dental care provider, my plan administrator, other insurance or reinsurance companies, administrators of government benefits or other benefits programs, other organizations or service providers working with Canada Life located within or outside Canada, to exchange personal information when necessary for these purposes. I understand that personal information may be subject to disclosure to those authorized under applicable law within or outside Canada.

I also consent to the use of my personal information for Canada Life and its affiliates' internal data management and analytics purposes.

For a copy of our Privacy Guidelines, or if you have questions about our personal information policies and practices (including with respect to service providers), write to Canada Life's Chief Compliance Officer or refer to www.canadalife.com.

Plan Member signature X

Date: Day Month Year

PART 2 - Plan Member Information You must complete this section fully. If you are unsure of your plan name, plan number or plan member I.D. number, please contact your plan administrator.

Plan name			
Plan number		Plan member I.D. number	
Plan Member Name			
First name		Last name	
Plan Member Address			
Number and street		City or town	Province
			Postal code
Date of birth:		Language preference:	
Day	Month	Year	<input type="checkbox"/> English <input type="checkbox"/> French

PART 3 - Coordination of Benefits - Complete this section to indicate whether you or any member of your family have benefits coverage from any other plan.

1. Are you, or any member of your family, entitled to benefits under any other plan for the expenses being claimed? Yes No
If yes, please answer the questions below.

2. Who does the other insurance belong to? Self Spouse Child

Last Name First Name

3. If the patient is a dependent child, please provide spouse's date of birth: Day Month Year

4. Is the other insurance also with Canada Life? Yes No
If yes, please provide: Canada Life plan number ID Number

5. Is treatment required as the result of an accident? Yes No
If yes, what kind of accident? Motor Vehicle If other, please explain.

Page 1 of 2 PLEASE COMPLETE PAGE 2 OF STATEMENT

M7483-2/20

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Pension & Benefits Committee
March 12, 2021


Appendix B: Pre-Treatment / Estimate for CGM (Page 2 of 2)

PART 4 - Patient Information											
Patient name First name/Last name	Patient's Relationship to plan member Self Child Spouse			Patient's Date of birth Day Month Year			If child over 18 years		Does Patient Reside with Plan Member? Yes No		
							Full time student hours per week	Yes No			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

PART 5 - Estimate Expenses - Please attach a copy of your estimate	
Type of Expense	Estimated Charges

Please have Part 6 completed by your prescribing Physician. This is required with your initial Continuous Glucose Monitor and/or associated supplies only.

PART 6 - Confirmation of eligibility for a Continuous Glucose Monitor and/or associated supplies (To be completed by Physician)	
1. Are you prescribing a Continuous Glucose Monitor and/or supplies for the patient?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Please confirm the patient's medical diagnosis	<input type="checkbox"/> Type 1 diabetes <input type="checkbox"/> Type 2 diabetes <input type="checkbox"/> Other <input type="text"/>
3. Does the patient use insulin to manage their glucose?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Physician's Name and Address <input type="text"/>	
Registration Number	<input type="text"/>
Physician's Signature _____	Date: <input type="text"/> Day <input type="text"/> Month <input type="text"/> Year

PART 7 - Submitting Your Form	
Please send this form to the Benefit Payment Office below. If blank, please consult your plan administrator for the address.	
<p>Questions? Call Toll Free: 1.800.957.9777</p> <p>Winnipeg Benefit Payments PO Box 3050 Station Main Winnipeg MB R3C 0E6 www.canadalife.com</p>	<p> Deaf or hard of hearing and require access to a telecommunications relay service? Please contact us: TTY to Voice: 711 Voice to TTY: 1-800-855-0511</p>

Page 2 of 2 YOU MUST COMPLETE BOTH PAGES

**Pension & Benefits Committee
March 12, 2021**

Appendix C: Request for Brand Name Drug Coverage Form



Request for Brand Name Drug Coverage

The purpose of this form is to obtain information required to assess your request for coverage of a non-generic drug. To be eligible for coverage there must be medical evidence indicating that an adverse reaction to the generic drug will occur if used. Adverse reactions are undesirable effects that result from taking a prescription drug. If approved, coverage may be granted for a set period of time and you may be required to reapply for coverage at the request of Great-West Life. Assessment of your request may be delayed if this form is incomplete or contains errors.

Any costs incurred for the completion of this form are the responsibility of the patient/plan member.

Please complete the following (please print):

Plan Member Name	Patient Name	
Plan Name	Plan Number	Plan Member I.D. Number
Date of Birth (dd/mm/yyyy)	Home Phone Number	Work Phone Number
Address (number, street, city, province, postal code)		

At Great-West Life, we recognize and respect the importance of privacy. Personal information that we collect is used for the purposes of assessing eligibility for this drug and for administering the group benefits plan. For a copy of our Privacy Guidelines, or if you have questions about our personal information policies and practices (including with respect to service providers), refer to www.greatwestlife.com or write to Great-West Life's Chief Compliance Officer.

I authorize Great-West Life, any healthcare provider, my plan administrator, any insurance or reinsurance company, administrators of government benefits or other benefits programs, other organizations, or service providers working with Great-West Life or any of the above, located inside or outside Canada, to exchange personal information when relevant and necessary for these purposes. I understand that personal information may be subject to disclosure to those authorized under applicable law within or outside Canada.

I acknowledge that the personal information is needed to assess eligibility for this drug and to administer the group benefits plan. I acknowledge that providing my consent will help Great-West Life to assess my claim and that refusing to consent may result in delay or denial of my claim. This consent may be revoked by me at any time by sending written instruction to that effect.

I certify that the information given is true, correct, and complete to the best of my knowledge.

Plan Member's signature: _____ Date: _____

Please have the following completed by your prescribing physician (please print):

Name of Prescribing Physician		Specialty
Address (number, street, city, province, postal code)		
Telephone		Fax
Drug being requested	DIN	Dosage/Frequency
Generic drug tried	DIN	Dosage/Frequency
Outcome attributed to adverse reaction (check all that apply) <input type="checkbox"/> Life Threatening <input type="checkbox"/> Hospitalization <input type="checkbox"/> Allergic Reaction <input type="checkbox"/> Other (specify) _____	Description of adverse reaction (nature, extent, severity)	
Anticipated duration of therapy	Prescriber's Signature X	Date (dd/mm/yyyy)

Please mail the completed form to:
 The Great-West Life Assurance Company
 Drug Services, P.O. Box 6000
 Winnipeg, MB R3C 3A5

or

Fax the completed form to:
 The Great-West Life Assurance Company
 Attention: Drug Services
 Fax Number: 1.204.946.7664

M7088-10/11

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Pension & Benefits Committee
 March 12, 2021

Vision Care – Eye Exams

The February 19, 2021 memorandum of salary settlement between the University and the Faculty Association includes the following provision:

3. *The University will instruct the Pension & Benefits Committee (PBC) to provide FAUW members and their eligible dependents (the participants) with a basic vision care plan (the plan). The plan will provide a reimbursement of \$85 per participant every two years for eye exams. This plan will be paid for by the University increasing its annual contributions to the health benefits plan accordingly. The plan will be retroactive to May 1, 2021 such that reimbursements for eye exams performed on or after this date can be claimed once the plan is activated.*

If the proposed new basic vision care plan, or one providing higher vision care reimbursement levels, is not approved by the PBC, the net-new compensation entitlements shall be awarded instead as an equivalent amount of additional weeks of supplemental benefits under item 4 below.

In keeping with the one plan design guiding principle for all eligible employees, Aon was engaged to estimate the cost impact, taking into consideration provincial healthcare coverage as well as expected utilization patterns. The provincial healthcare plan in Ontario already covers 1 eye exam per year for residents in Ontario for those 19 and younger, or age 65 and over. Aon advises that most eligible individuals would obtain an exam in the first year following the introduction of coverage, with a decline in access in the second year, followed by a rise again in the third year, and so on based on the 2 year maximum. As such, while the inclusion of this coverage is expected to increase extended health claims by ~2% per year over the long term, Aon cautiously advises to increase the rates by 4% in the first plan year, as follows:

Benefit	Coverage Level	Participants	May 1, 2021 Renewal Rates		Proposed May 1, 2021 Rates with Vision		Change	
			Monthly Rate	Aggregate Annualized	Monthly Rate	Aggregate Annualized		
Extended Health	Single	2,085	\$71.20	\$1,781,424	\$74.05	\$1,852,731	\$657,939	4.0%
	Family	5,378	\$227.22	\$14,663,870	\$236.31	\$15,250,502		
Dental	Single	1,050	\$48.00	\$604,800	\$48.00	\$604,800	\$0	0.0%
	Family	4,021	\$144.43	\$6,969,036	\$144.43	\$6,969,036		
<i>Combined</i>			\$24,019,130		\$24,677,070		\$657,939	2.74%

Note: Rates include a margin for tax; based on projected claims experience and December 2020 headcounts

Action Required: Decision (plan amendment recommendation to the Board of Governors)

Pension Administration System: Ariel

APS Agreement with Morneau Shepell

Ariel is the system provided through Morneau Shepell (MS) that supports the University's internal administration of the defined benefit pension plan. The previous system (BenPlus provided by Buck Consultants) was inefficient – it required several manual workarounds, checks and balances by Human Resources (HR) to deliver accurate administration of the pension plan. Ariel was identified as the preferred solution by the Pension & Benefits Committee in June 2015, following Request for Information (RFI) and Request for Proposal (RFP) processes earlier in 2015.

Eighteen (18) months later, with the support of a dedicated HR/IST project team, Ariel was implemented for use by HR effective November 1, 2016. The corresponding new myPENSIONinfo portal was made available to pension plan members effective December 1, 2016 through the HR website, following the load and verification of data from the HR system (PeopleSoft at that time) to Ariel during the month of November. In comparison with the previous tool, the updated portal offers a more user-friendly interface, the ability to view beneficiary designation(s), and access annual pension statements. Additionally, the updated portal provides an enhanced tool to run estimated pension projections for active employees who are members of the pension plan.

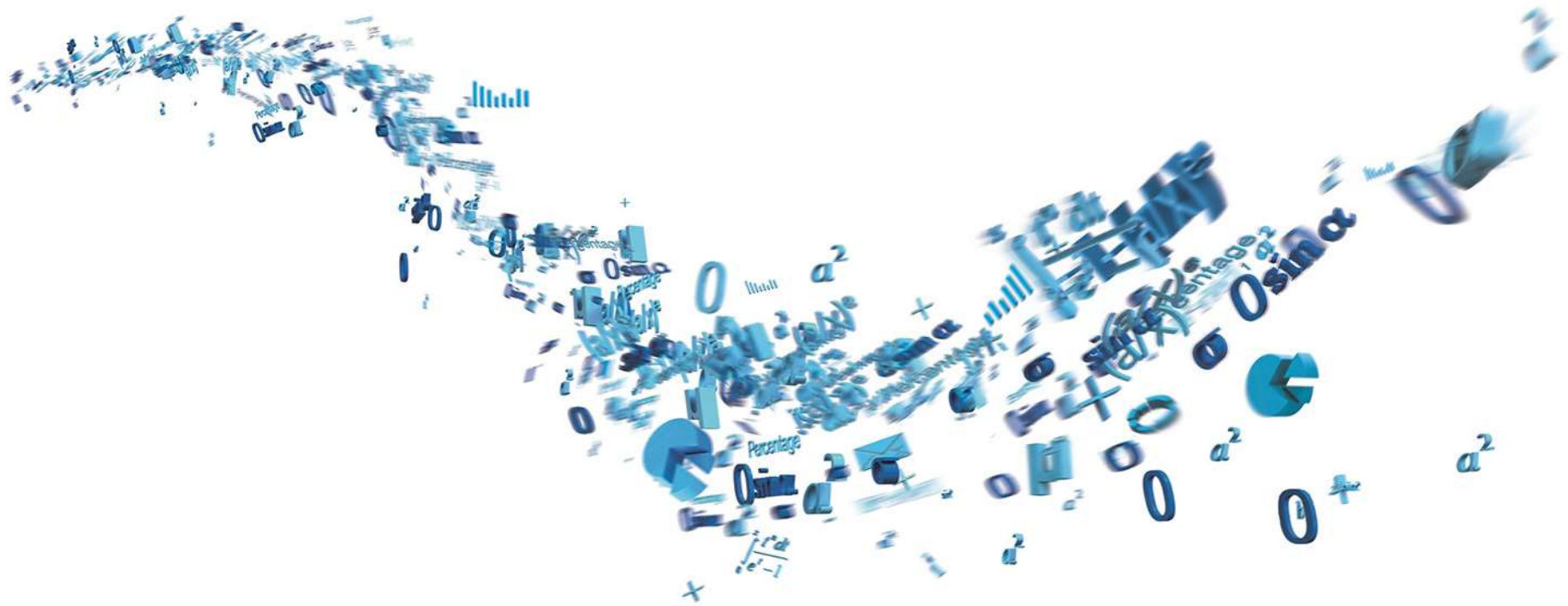
The Application Services Provider (ASP) agreement which provides the University with a license to utilize the Ariel software and to engage MS for corresponding services (i.e. implementation, hosting, maintenance, etc.), was effective November 30, 2016. The APS agreement is scheduled to terminate on October 31, 2021 unless renewed. The agreement states that the term can be renewed for successive one-year periods, up to a total of five (5) years. Notice of intention not to renew (by either party) must be confirmed at least 180 days prior to the expiry of the initial (i.e. April 30, 2021) or subsequent renewal term.

Ariel eliminated the issues experienced with the previous system and is an efficient and effective tool for administering the pension plan. Given the system's functionality and the satisfaction of the services provided by MS, HR would like to proceed with a renewal of Ariel. Proposed next steps for this year are as follows:

- March 12: Confirm that the annual renewal approach is acceptable to the P&B Committee (assuming ongoing satisfaction of system functionality and corresponding services)
- By April 30: Engage with MS to negotiate a new agreement effective November 1, 2021 (such as 5 one-year terms or 1 five-year term)
- May to October: Development and execution of renewal APS agreement

By adopting the renewal approach, a competitive bidding process will be required in late 2024/early 2025 in order to confirm the supporting system effective November 1, 2026.

Action Required: *Decision (renewal approach, RFP to commence in late 2024/early 2025)*



University of Waterloo Pension Plan | Quarterly Period Ending 31 December 2020

Detailed Investment Review

Visit the Aon Retirement and Investment Website (<https://retirement-investment-insights.aon.com/canada>); sharing our best thinking.



Performance Summary¹

As of 31 December 2020

	Allocation		Performance (%)							
	Market Value (\$000)	%	1 Quarter	2020	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Total Fund	2,108,218	100.0	5.39	7.60	7.60	10.47	7.03	7.53	7.26	7.84
CPI+3.6% ²			1.26	4.36	4.36	5.14	5.31	5.37	5.33	5.23
Value Added			4.13	3.24	3.24	5.33	1.72	2.16	1.93	2.61
Canadian Equities³										
TD Emerald Canadian Equity Index ⁴	40,616	1.9	8.95 (62)	5.60 (37)	5.60 (37)	13.86 (30)	5.72 (36)	6.54 (30)	9.29 (26)	5.74 (77)
S&P/TSX Composite Index			8.97 (62)	5.60 (37)	5.60 (37)	13.91 (28)	5.74 (36)	6.57 (30)	9.33 (25)	5.76 (77)
Value Added			-0.02	0.00	0.00	-0.05	-0.02	-0.03	-0.04	-0.02
Sionna ⁵	110,959	5.3	11.70 (29)	-2.64 (91)	-2.64 (91)	7.44 (92)	1.36 (88)	3.57 (89)	7.63 (73)	5.70 (78)
S&P/TSX Composite			8.97 (62)	5.60 (37)	5.60 (37)	13.91 (28)	5.74 (36)	6.57 (30)	9.33 (25)	5.76 (77)
Value Added			2.73	-8.24	-8.24	-6.47	-4.38	-3.00	-1.70	-0.06
Global Equities⁶										
MSCI World Index (Net) (CAD)	392,223	18.6	9.16 (53)	9.63 (56)	9.63 (56)	14.27 (59)	10.66 (43)	11.90 (47)	10.80 (38)	12.38 (56)
Value Added			0.16	-4.23	-4.23	-3.28	-0.50	-0.05	0.53	-0.26
Walter Scott ⁵	392,094	18.6	9.18 (53)	18.18 (29)	18.18 (29)	20.88 (28)	16.42 (18)	16.78 (20)	13.98 (18)	14.79 (21)
MSCI World Index (Net) (CAD)			9.00 (54)	13.86 (46)	13.86 (46)	17.55 (43)	11.16 (41)	11.95 (46)	10.27 (43)	12.64 (49)
Value Added			0.18	4.32	4.32	3.33	5.26	4.83	3.71	2.15
U.S. Equities										
TD Emerald U.S. Pooled Fund ⁷	348,425	16.5	6.93 (65)	16.27 (46)	16.27 (46)	20.44 (44)	14.76 (43)	14.50 (43)	13.18 (41)	-
S&P 500 (CAD)			6.96 (65)	16.32 (46)	16.32 (46)	20.50 (44)	14.81 (43)	14.57 (42)	13.24 (41)	16.75 (43)
Value Added			-0.03	-0.05	-0.05	-0.06	-0.05	-0.07	-0.06	-
International Equities										
TD Emerald International Equity Index ⁷	215,075	10.2	10.66 (43)	5.97 (58)	5.97 (58)	10.82 (61)	4.96 (55)	7.81 (59)	5.68 (63)	8.27 (81)
MSCI EAFE (Net)			10.68 (42)	5.92 (58)	5.92 (58)	10.77 (61)	4.86 (55)	7.73 (60)	5.61 (63)	8.16 (83)
Value Added			-0.02	0.05	0.05	0.05	0.10	0.08	0.07	0.11

1Parentheses contain percentile rankings. (1st percentile is the best performing). All returns are reported gross of fees.

2 CPI+3.6% benchmark has been implemented retrospectively since 1 November 2018. From 1 January 2017 to 31 October 2018, CPI+3.5% benchmark was used. From 1 January 2016 to 31 December 2016, CPI + 3.7% benchmark was used. From 1 January 2014 to 31 December 2016, CPI+3.75% benchmark was used. Prior to 1 January 2014, CPI+3.85% benchmark was used.

3There was no exposure to Canadian Equities from January 2012 to April 2012.

4TD Emerald Canadian Equity Index added July 2020. Returns prior to these dates are representative only.

5Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

6The global equities return prior to August 2018 includes Trilogy.

7In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

8The Currency Overlay was discontinued on 20 November 2017.

Performance Summary¹

As of 31 December 2020

	Allocation		Performance (%)									
	Market Value (\$000)	%	1 Quarter	2020	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years		
Fixed Income												
TDAM Universe Bond Index	366,691	17.4	0.57 (94)	8.45 (95)	8.45 (95)	7.58 (90)	5.48 (94)	4.72 (92)	4.07 (94)	4.40 (92)		
FTSE Canada Universe Bond			0.63 (91)	8.68 (91)	8.68 (91)	7.77 (89)	5.61 (91)	4.83 (91)	4.19 (93)	4.49 (87)		
Value Added			-0.06	-0.23	-0.23	-0.19	-0.13	-0.11	-0.12	-0.09		
TDAM Active Short Term Corporate	371,025	17.6	1.13	6.24	6.24	5.43	4.18	3.37	3.19	-		
FTSE Canada Short Term Corporate Bond			1.13	6.32	6.32	5.43	4.21	3.41	3.18	3.33		
Value Added			0.00	-0.08	-0.08	0.00	-0.03	-0.04	0.01	-		
Alternatives												
XRE ETF (Real Estate)	56,281	2.7	11.67	-13.57	-13.57	2.65	3.65	5.11	7.31	-		
BIP.UN (Infrastructure)	123,444	5.9	3.11	17.87	17.87	30.68	14.43	18.31	21.86	-		
Operating Account												
BAs/U.S. and CDN Cash	83,479	4.0										
Operating Account	68,675	3.3	0.04	0.59	0.59	1.16	1.29	1.21	1.09	-		
Operating Account	14,804	0.7	0.00	0.06	0.06	0.31	0.29	0.26	0.40	0.29		
Currency Overlay Effect (Historical)⁸												
Total Fund & CO	2,108,218	100.0	5.39	7.60	7.60	10.47	7.03	7.38	7.36	7.66		
Total Fund ex CO			5.39	7.60	7.60	10.47	7.03	7.53	7.26	7.84		
Value Added			0.00	0.00	0.00	0.00	0.00	-0.15	0.10	-0.18		

¹Parentheses contain percentile rankings. (1st percentile is the best performing). All returns are reported gross of fees.

²CPI+3.6% benchmark has been implemented retrospectively since 1 November 2018. From 1 January 2017 to 31 October 2018, CPI+3.5% benchmark was used. From 1 January 2016 to 31 December 2016, CPI + 3.7% benchmark was used. From 1 January 2014 to 31 December 2016, CPI+3.75% benchmark was used. Prior to 1 January 2014, CPI+3.85% benchmark was used.

³There was no exposure to Canadian Equities from January 2012 to April 2012.

⁴TD Emerald Canadian Equity Index added July 2020. Returns prior to these dates are representative only.

⁵Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁶The global equities return prior to August 2018 includes Trilogy.

⁷In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

⁸The Currency Overlay was discontinued on 20 November 2017.

Executive Summary

Rolling Year Performance¹

As of 31 December

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Total Fund	7.60	13.42	0.46	9.06	6.19	8.61	10.48	9.72	7.29	6.13
CPI+3.6% ²	4.36	5.93	5.66	5.54	5.16	5.26	5.12	4.88	4.46	5.98
Value Added	3.24	7.49	-5.20	3.52	1.03	3.35	5.36	4.84	2.83	0.15
Canadian Equities³										
TD Emerald Canadian Equity Index ⁴	5.60 (37)	22.76 (33)	-8.85 (52)	9.05 (53)	20.98 (36)	-8.27 (82)	10.54 (57)	12.95 (95)	7.16 (81)	-8.66 (49)
S&P/TSX Composite Index	5.60 (37)	22.88 (31)	-8.89 (52)	9.10 (51)	21.08 (35)	-8.32 (82)	10.55 (57)	12.99 (95)	7.19 (81)	-8.71 (49)
Value Added	0.00	-0.12	0.04	-0.05	-0.10	0.05	-0.01	-0.04	-0.03	0.05
Sionna ⁵	-2.64 (91)	18.57 (81)	-9.80 (67)	10.53 (23)	25.49 (16)	-7.36 (72)	8.15 (77)	15.69 (83)	9.21 (60)	-4.76 (28)
S&P/TSX Composite	5.60 (37)	22.88 (31)	-8.89 (52)	9.10 (51)	21.08 (35)	-8.32 (82)	10.55 (57)	12.99 (95)	7.19 (81)	-8.71 (49)
Value Added	-8.24	-4.31	-0.91	1.43	4.41	0.96	-2.40	2.70	2.02	3.95
Global Equities⁶										
MSCI World Index (Net) (CAD)	13.86 (46)	21.35 (40)	-0.59 (41)	14.35 (64)	3.80 (44)	18.94 (54)	14.37 (46)	35.14 (54)	13.31 (64)	-3.22 (51)
Value Added	-4.23	-2.25	4.37	1.35	2.72	-0.50	-3.82	-3.90	0.42	1.67
Walter Scott ⁵	18.18 (29)	23.65 (26)	7.99 (4)	17.87 (38)	3.44 (47)	21.49 (34)	13.70 (54)	27.92 (86)	16.83 (25)	0.02 (31)
MSCI World Index (Net) (CAD)	13.86 (46)	21.35 (40)	-0.59 (41)	14.35 (64)	3.80 (44)	18.94 (54)	14.37 (46)	35.14 (54)	13.31 (64)	-3.22 (51)
Value Added	4.32	2.30	8.58	3.52	-0.36	2.55	-0.67	-7.22	3.52	3.24
U.S. Equities										
TD Emerald U.S. Pooled Fund ⁷	16.27 (46)	24.76 (41)	4.20 (45)	13.72 (49)	8.06 (41)	21.55 (46)	-	-	-	-
S&P 500 (CAD)	16.32 (46)	24.84 (41)	4.23 (44)	13.83 (49)	8.09 (41)	21.59 (46)	23.93 (34)	41.27 (68)	13.43 (47)	4.64 (41)
Value Added	-0.05	-0.08	-0.03	-0.11	-0.03	-0.04	-	-	-	-
International Equities										
TD Emerald International Equity Index ⁷	5.97 (58)	15.88 (59)	-5.84 (38)	16.83 (68)	-2.43 (57)	19.06 (69)	3.83 (65)	31.12 (61)	14.90 (70)	-9.82 (58)
MSCI EAFE (Net)	5.92 (58)	15.85 (60)	-6.03 (40)	16.82 (68)	-2.49 (58)	18.95 (71)	3.67 (69)	31.02 (62)	14.72 (70)	-9.97 (60)
Value Added	0.05	0.03	0.19	0.01	0.06	0.11	0.16	0.10	0.18	0.15

¹Parentheses contain percentile rankings. (1st percentile is the best performing). All returns are reported gross of fees.

² CPI+3.6% benchmark has been implemented retrospectively since 1 November 2018. From 1 January 2017 to 31 October 2018, CPI+3.5% benchmark was used. From 1 January 2016 to 31 December 2016, CPI + 3.7% benchmark was used. From 1 January 2014 to 31 December 2016, CPI+3.75% benchmark was used. Prior to 1 January 2014, CPI+3.85% benchmark was used.

³There was no exposure to Canadian Equities from January 2012 to April 2012.

⁴TD Emerald Canadian Equity Index added July 2020. Returns prior to these dates are presentative only.

⁵Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁶The global equities return prior to August 2018 includes Trilogy.

⁷In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

⁸The Currency Overlay was discontinued on 20 November 2017.

Executive Summary

Rolling Year Performance¹

As of 31 December

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fixed Income										
TDAM Universe Bond Index	8.45 (95)	6.71 (81)	1.40 (67)	2.46 (74)	1.52 (93)	3.51 (48)	8.75 (46)	-1.35 (86)	3.46 (96)	9.72 (24)
FTSE TMX Canada Bond Universe	8.68 (91)	6.87 (68)	1.41 (65)	2.52 (73)	1.66 (88)	3.52 (47)	8.79 (42)	-1.19 (82)	3.60 (94)	9.67 (25)
Value Added	-0.23	-0.16	-0.01	-0.06	-0.14	-0.01	-0.04	-0.16	-0.14	0.05
TDAM Active Short Term Corporate										
TDAM Active Short Term Corporate	6.24	4.62	1.72	1.00	2.46	2.66	-	-	-	-
FTSE Canada Short Term Corporate Bond	6.32	4.55	1.81	1.03	2.29	2.74	3.57	2.40	3.93	4.75
Value Added	-0.08	0.07	-0.09	-0.03	0.17	-0.08	-	-	-	-
Alternatives										
XRE ETF (Real Estate)	-13.57	21.92	5.69	9.59	16.58	-4.82	9.45	-7.79	-	-
BIP.UN (Infrastructure)	17.87	44.88	-12.26	30.77	37.13	11.63	23.91	23.63	27.01	-

¹Parentheses contain percentile rankings. (1st percentile is the best performing). All returns are reported gross of fees.

² CPI+3.6% benchmark has been implemented retrospectively since 1 November 2018. From 1 January 2017 to 31 October 2018, CPI+3.5% benchmark was used. From 1 January 2016 to 31 December 2016, CPI + 3.7% benchmark was used. From 1 January 2014 to 31 December 2016, CPI+3.75% benchmark was used. Prior to 1 January 2014, CPI+3.85% benchmark was used.

³There was no exposure to Canadian Equities from January 2012 to April 2012.

⁴TD Emerald Canadian Equity Index added July 2020. Returns prior to these dates are presentative only.

⁵Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁶The global equities return prior to August 2018 includes Trilogy.

⁷In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

⁸The Currency Overlay was discontinued on 20 November 2017.

Executive Summary

Performance Summary (Net of Fees)¹

As of 31 December 2020

	Performance (%)							
	1 Quarter	2020	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Total Fund	5.36	7.42	7.42	10.26	6.78	7.26	6.99	7.57
CPI+3.6% ²	1.26	4.36	4.36	5.14	5.31	5.37	5.33	5.23
Value Added	4.10	3.06	3.06	5.12	1.47	1.89	1.66	2.34
Canadian Equities³								
TD Emerald Canadian Equity Index ⁴	8.95	5.60	5.60	13.86	5.72	6.54	9.29	5.74
S&P/TSX Composite Index	8.97	5.60	5.60	13.91	5.74	6.57	9.33	5.76
Value Added	-0.02	0.00	0.00	-0.05	-0.02	-0.03	-0.04	-0.02
Sionna ⁵	11.60	-2.98	-2.98	7.07	1.00	3.21	7.24	5.30
S&P/TSX Composite	8.97	5.60	5.60	13.91	5.74	6.57	9.33	5.76
Value Added	2.63	-8.58	-8.58	-6.84	-4.74	-3.36	-2.09	-0.46
Global Equities⁶								
MSCI World Index (Net) (CAD)	9.00	13.86	13.86	17.55	11.16	11.95	10.27	12.64
Value Added	0.00	-5.33	-5.33	-4.24	-1.37	-0.87	-0.26	-1.01
Walter Scott ⁵	9.01	17.43	17.43	20.12	15.67	16.01	13.21	13.98
MSCI World Index (Net) (CAD)	9.00	13.86	13.86	17.55	11.16	11.95	10.27	12.64
Value Added	0.01	3.57	3.57	2.57	4.51	4.06	2.94	1.34
U.S. Equities								
TD Emerald Pooled U.S. Fund ⁷	6.92	16.24	16.24	20.41	14.73	14.47	13.15	-
S&P 500 (CAD)	6.96	16.32	16.32	20.50	14.81	14.57	13.24	16.75
Value Added	-0.04	-0.08	-0.08	-0.09	-0.08	-0.10	-0.09	-
International Equities								
TD Emerald International Equity Index ⁷	10.65	5.95	5.95	10.79	4.94	7.78	5.65	8.24
MSCI EAFE (Net)	10.68	5.92	5.92	10.77	4.86	7.73	5.61	8.16
Value Added	-0.03	0.03	0.03	0.02	0.08	0.05	0.04	0.08

¹Parentheses contain percentile rankings. (1st percentile is the best performing). Reported net returns are based on estimated fees.

² CPI+3.6% benchmark has been implemented retrospectively since 1 November 2018. From 1 January 2017 to 31 October 2018, CPI+3.5% benchmark was used. From 1 January 2016 to 31 December 2016, CPI + 3.7% benchmark was used. From 1 January 2014 to 31 December 2016, CPI+3.75% benchmark was used. Prior to 1 January 2014, CPI+3.85% benchmark was used.

³ There was no exposure to Canadian Equities from January 2012 to April 2012.

⁴ TD Emerald Canadian Equity Index added July 2020. Returns prior to these dates are representative only.

⁵ Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁶ The global equities return prior to August 2018 includes Trilogy.

⁷ In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

Performance Summary (Net of Fees)¹

As of 31 December 2020

	Performance (%)							
	1 Quarter	2020	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Fixed Income								
TDAM Universe Bond Index	0.58	8.44	8.44	7.56	5.46	4.67	4.03	4.37
FTSE Canada Universe Bond	0.63	8.68	8.68	7.77	5.61	4.83	4.19	4.49
Value Added	-0.05	-0.24	-0.24	-0.21	-0.15	-0.16	-0.16	-0.12
TDAM Active Short Term Corporate	1.10	6.14	6.14	5.34	4.08	3.27	3.09	-
FTSE Canada Short Term Corporate Bond	1.13	6.32	6.32	5.43	4.21	3.41	3.18	3.33
Value Added	-0.03	-0.18	-0.18	-0.09	-0.13	-0.14	-0.09	-

¹Parentheses contain percentile rankings. (1st percentile is the best performing). Reported net returns are based on estimated fees.

² CPI+3.6% benchmark has been implemented retrospectively since 1 November 2018. From 1 January 2017 to 31 October 2018, CPI+3.5% benchmark was used. From 1 January 2016 to 31 December 2016, CPI + 3.7% benchmark was used. From 1 January 2014 to 31 December 2016, CPI+3.75% benchmark was used. Prior to 1 January 2014, CPI+3.85% benchmark was used.

³There was no exposure to Canadian Equities from January 2012 to April 2012.

⁴TD Emerald Canadian Equity Index added July 2020. Returns prior to these dates are representative only.

⁵Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁶The global equities return prior to August 2018 includes Trilogy.

⁷In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

Performance Relative to Investment Policy Objectives

4-Year Performance vs. Market Index Benchmark

As at 31 December 2020

Manager	4-Year Manager Return	Market Index	4-Year Index Return	4-Year Tracking / Value Added	Target Objective	Performance Objective	Achieved Objective	IMF ³
Passive Mandates:								
TDAM - Universe Bond Index	4.72%	FTSE Canada Bond Universe	4.83%	-0.11%	+/-0.06%	4.77% to 4.89%	No	0.025%
TD Emerald U.S. Pooled Fund ¹	14.50%	S&P 500	14.57%	-0.07%	+/-0.08%	14.49% to 14.65%	Yes	0.025%
TD Emerald International Equity Index ¹	7.81%	MSCI EAFE (Net)	7.73%	0.08%	+/-0.20%	7.53% to 7.93%	Yes	0.025%
Active Mandates:								
Sionna - Canadian Equities	3.57%	S&P/TSX Composite	6.57%	-3.00%	+1.0%	7.57%	No	0.343%
Walter Scott - Global Equities	16.78%	MSCI World (Net)	11.95%	4.83%	+2.0%	13.95%	Yes	0.635%
TDAM Short Term Corporate Bonds	3.37%	FTSE Canada Short Term Corporate	3.41%	-0.04%	+0.5%	3.91%	No	0.097%
Total Fund ex. Currency Overlay	7.53%	CPI + 3.6% ²	5.37%	2.16%			Yes	0.165%

¹ Invested on 18 November 2016

² CPI + 3.6% benchmark has been implemented retrospectively since 1 November 2018. Prior to that, CPI + 3.5% benchmark was implemented since 1 January 2017. CPI + 3.7% benchmark was implemented since 1 January 2016, CPI + 3.75% benchmark was implemented since 1 January 2014 and CPI + 3.85% prior to that.

³ IMF: Investment management fees