

**Board of Governors
PENSION & BENEFITS COMMITTEE
Friday 13 December 2019
9:30 a.m. to 12:00 noon
NH 3318**

OPEN SESSION		ACTION
9:30	1. Approval of the 15 November 2019 Minutes (Open Session)* and Business Arising	Decision
	2. Execution Against the Work Plan* [Grivicic]	Information
	3. Update on Government Pension Plan Initiatives [Shapira]	Information
9:40	4. Maximum Pension Limits and CAPs – RPP and PPP* [Sue McGrath]	Information
9:50	5. Pension Risk Management Dashboard as of September 30, 2019* [Byron]	Information
10:10	6. Investment Fund Performance Reports from Aon – Q3 2019* [Huber]	Information
10:20	7. Discussion re: Pension Information Sessions [Shapira/Byron]	Information
10:30	8. Update re: Holistic Benefits Working Group	Information
10:40	9. Other Business	
	a. Memo: Pension Investment Committee – Update*	Information
	b. Employee Group Appointments to Pension Investment Committee [Jha]	Information
CONFIDENTIAL SESSION		
	10. Approval of the 15 November 2019 Minutes (Confidential)+ and Business Arising	Decision
Next Meeting: Friday 17 January 2020, 9:30 a.m. – 12:00 noon in NH 3318		

*attached
** to be distributed
+ distributed separately

6 December 2019

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

University of Waterloo
Board of Governors
PENSION & BENEFITS COMMITTEE
Minutes of the 15 November 2019 Meeting
[in agenda order]

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

Absent: Marilyn Thompson*
*regrets

Consultant: Linda Byron, Allan Shapira

Resources: Sarah Hadley, Lee Hornberger

Organization of Meeting: At the request of chair Peter Barr, Jim Rush took the chair for this meeting, and Mike Grivicic acted as secretary. The secretary advised that a quorum was present.

1. APPROVAL OF THE 18 OCTOBER 2019 MINUTES (OPEN SESSION) AND BUSINESS ARISING

A motion was heard to approve the minutes. Jha and Huber. Carried. There was no business arising.

2. EXECUTION AGAINST THE WORK PLAN

This item was received for information.

3. UPDATE ON GOVERNMENT PENSION PLAN INITIATIVES

Shapira observed the recent passage of Bill 124, with no provisions included for so-called “double dipping”. He noted that an inaugural board chair for the University Pension Plan is to be appointed in the next few weeks.

4. EXTENDED HEALTH AND DENTAL BENEFITS – INDEXATION OF MAXIMA EFFECTIVE JANUARY 1, 2020

Hornberger provided an overview of the materials distributed, highlighting the cost of indexing health and dental benefits as well as retiree life insurance, and noting that the general approach is to recommend a change in increments of \$100. A motion was heard to approve indexing of health and dental benefits maxima effective 1 January 2020 as described in the report. Bleaney and Kibble. Carried. A motion was heard to approve indexation of retiree life insurance coverage effective 1 January 2020 as described in the report. Jha and Mary Thompson. Carried.

5. EMPLOYEE AND FAMILY ASSISTANCE PROGRAM – UTILIZATION REPORT

Hornberger spoke to the material distributed: origin and cost of these services; vendor confirmed for next two years, along with maintenance of current fee levels; services on offer; breakdown of usage. Members discussed: most individuals’ usage averages 2-3 sessions, with some cases running more than that; significant positive feedback has been received on the services overall, though some employees have observed that the change from Counselling Services in 2016 has been a net negative; content and summaries of surveys can be obtained via EAP Committee; no identity management is in use for services provided online.

6. ANNUAL REVIEW OF STATEMENT OF INVESTMENT POLICIES AND PROCEDURES

Huber observed: requirement to review annually; rates of return in SIPP are not identical as those utilized for the actuarial valuation, and are not required to be; Aon has suggested that the SIPP could implement a return range, and this could be done in the coming year; Aon has recently reviewed the SIPP with respect to requirements under regulations and no changes are recommended at this time; could potentially include notation of the UN PRI signatory status in SIPP once this is achieved. Shapira noted that the asset mix can change with market conditions, thus impacting the rate of return at any point in time. A motion was heard to affirm the committee’s review of the SIPP for 2019, with no revisions. Bleaney and Vetzal. Carried. The SIPP and issues noted in discussion may come forward again in the new year.

7. EMPLOYEE REPRESENTATIVES APPOINTED TO PENSION INVESTMENT COMMITTEE

Jha indicated that employee constituency groups are working to select their members for this committee, and information on this will likely come to the December meeting. A short update report was requested regarding the committee's overall progress in filling its membership, as well as prospective next steps.

8. UPDATED PRESENTATION FOR PENSION INFORMATION SESSIONS

Shapira provided a revised PowerPoint, following up with amendments noted from the previous meeting. Members discussed: communications should be crafted with care so as to not cause unwarranted concern among the community; helpful to add high-level summary slides to the presentation, and to accentuate the goal of promoting the plan's sustainability; sessions would best be held in December once classes are completed; should be careful to guide conversation that is germane to the plan design and to avoid non-related subjects; presentation is predicated on a static investment paradigm; should be ready to answer why other comparator universities' plans have proceeded to change their contribution rates before Waterloo has considered this step.

9. UPDATE RE: HOLISTIC BENEFITS WORKING GROUP

Hornberger observed that the survey went out in October, and response rate appears to be good. Data analysis will occur in the coming weeks, and focus groups will be considered for some time in 2020.

10. OTHER BUSINESS

Vetzal inquired as to the progress on supplying the benefits benchmarking material, from the October meeting. The secretary will liaise with Aon on this and will reply to the members in question.

Members observed that future agenda item (c) ought to be removed, given the activity around pension plan design.

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

NEXT MEETING

The next meeting is scheduled for Friday 13 December 2019, 9:30 a.m. – 12:00 noon in NH 3318

3 December 2019

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)	14 Dec 2018	18 Jan 2019	22 Feb 2019	8 Mar 2019	16 May 2019	14 June 2019	20 Sept 2019	18 Oct 2019	15 Nov 2019	13 Dec 2019
Approval of Actuarial Valuation Assumptions	Annual (Jan)		✓								
Investment Status of PPP	Annual (Jan)		✓								
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	14 Dec 2018	18 Jan 2019	22 Feb 2019	8 Mar 2019	16 May 2019	14 June 2019	20 Sept 2019	18 Oct 2019	15 Nov 2019	13 Dec 2019
Benefits Utilization Report	Annual (June)						✓				
Annual review re: benefits added/removed from insured plans in the market	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 in 2017 and 2018											

Maximum Pension Limits and CAPs

Registered Pension Plan (RPP) and Payroll Pension Plan (PPP)

The Income Tax Act (ITA) governs the maximum pension payable from the Registered Pension Plan (RPP). Each year, the limit is adjusted based on the Average Industrial Wage (AIW) increase. The plan text for the Payroll Pension Plan (PPP) states that the maximum pension payable from the PPP is also adjusted each year by the AIW increase.

The following table shows the pension limits for 2019 and the change to these limits effective January 1, 2020:

Plan	2019 Limits		2020 Limits	
	Maximum annual pension per year of pensionable service	Final Average Earnings at Threshold	Maximum annual pension per year of pensionable service	Final Average Earnings at Threshold
RPP	\$3,025.56	\$167,904	\$3,092.22*	\$171,543
PPP	\$3,400 CAP reached	\$186,626	\$3,400	\$186,932

* AIW increase is 2.203% (difference in the RPP limit for 2020 over 2019).

In addition to the RPP and PPP maximum pension limits, both plan texts include a fixed dollar cap. Each year the new maximum pension limits are restricted not to exceed the respective CAP. The CAPs are as follows:

Plan	Current CAPs	
	Maximum annual pension per year of pensionable service	Final Average Earnings at Threshold (estimate)
RPP	\$3,200	\$177,000
PPP	\$3,400	\$186,932

These CAPs have an impact on the valuation of the liability associated with each plan. In 2019, the PPP maximum pension limit was restricted to the PPP CAP.

Projection of when RPP Limit will reach current \$3200 CAP or revised \$3400 CAP

AIW	2.25%		2.50%		2.75%	
Year	RPP	PPP	RPP	PPP	RPP	PPP
2020	3,092.22	3,400.00	3,092.22	3,400.00	3,092.22	3,400.00
2021	3,161.79		3,169.53		3,177.26	
2022*	3,232.94		3,248.76		3,264.63	
2023	3,305.68		3,329.98		3,354.41	
2024	3,380.05		3,400.00		3,400.00	
2025	3,400.00					

*3200 CAP reached in 2022 if AIW is between 1.72% and 3.49%.

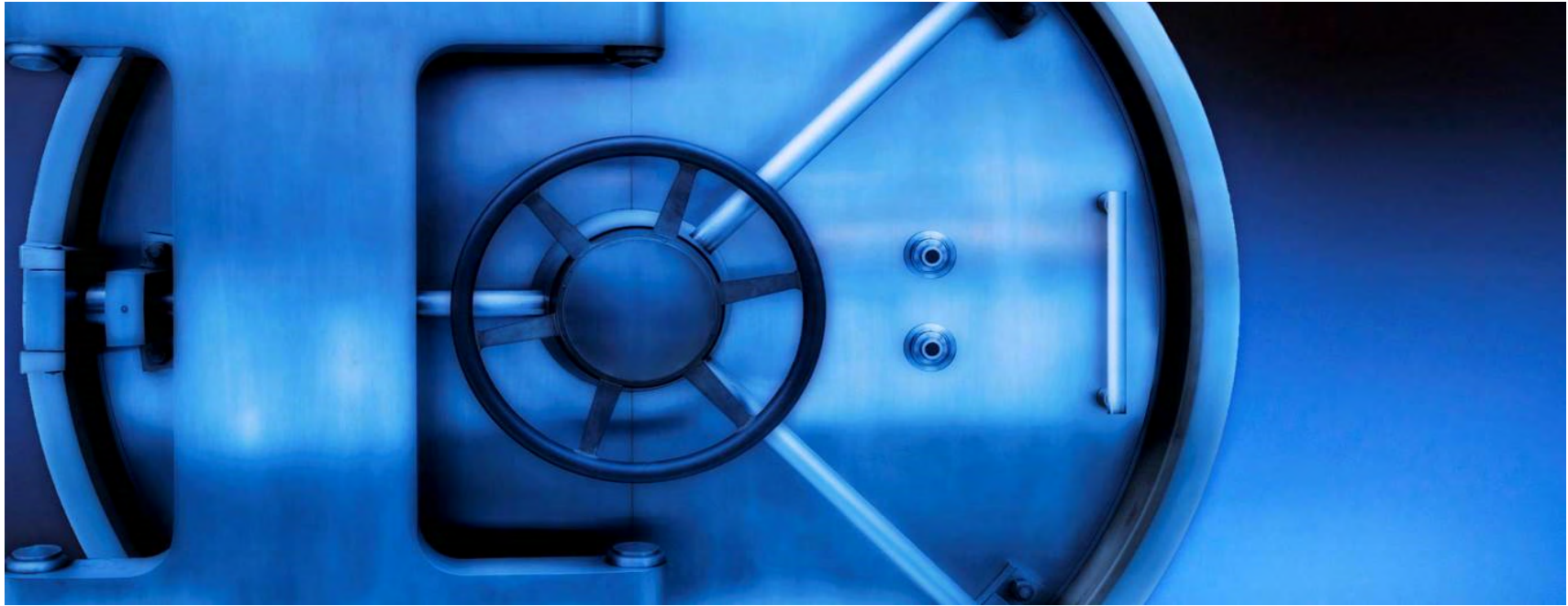
Contribution Limit
Registered Pension Plan (RPP)

The ITA also limits annual member contributions, and this limit adjusts annually based on the AIW increase. The following table highlights the member contribution limit change effective January 1, 2020:

2019 Contribution Limit		2020 Contribution Limit	
<i>Maximum annual contribution</i>	<i>Annual earnings at threshold</i>	<i>Maximum annual contribution</i>	<i>Annual earnings at threshold</i>
\$19,641	\$224,511	\$20,061	\$229,346*

* Based on current contribution rates (6.25/8.95/9.95). If rates increase May 1/20 to 6.95/9.95, maximum annual contribution will be reached at annual earnings of approximately \$222,700.

Action Required: None



Pension Risk Management Dashboard

University of Waterloo
As of September 30, 2019

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

About This Material

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

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

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

Solvency Basis – This liability is calculated using assumptions determined in accordance with the Canadian Institute of Actuaries Annuity Purchase guidance and Commuted Value standards in effect at each measurement date shown in this report. A summary of these assumptions is included on page 13.

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

On both bases the following information is shown:

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

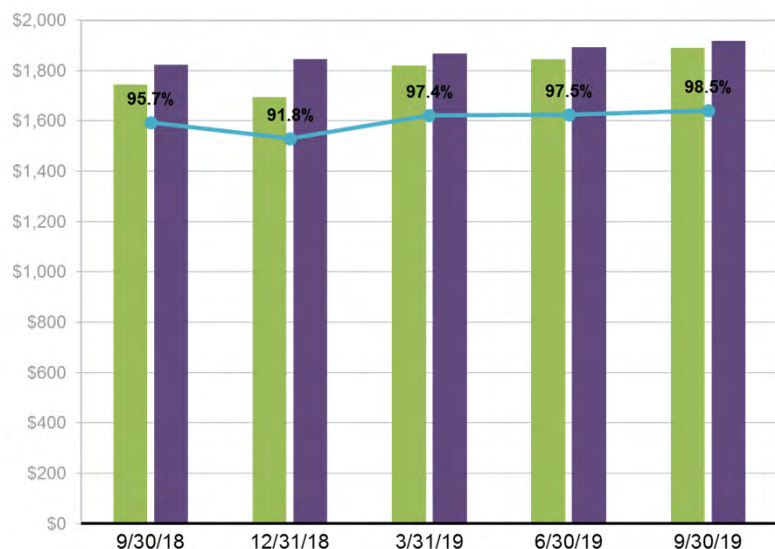
For the Risk-Free Benchmark Basis, the following information is also shown:

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

Executive Summary – Going Concern

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

Funded Status



Highlights for the Quarter-Ending 9/30/19

The plans' funded ratio increased to 98.5% at 9/30/19. This result was primarily due to the combined effects of:

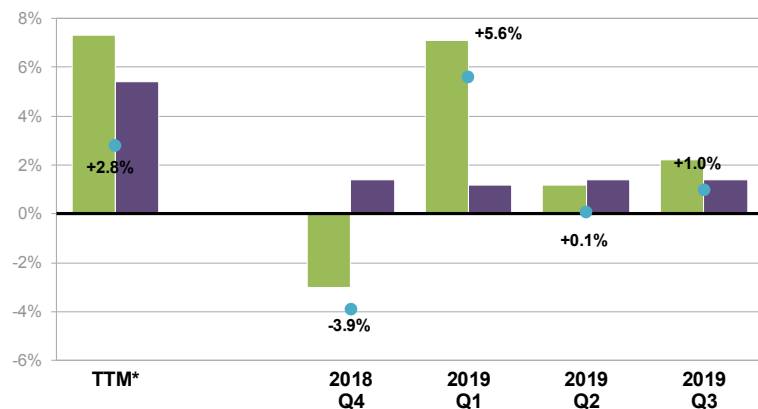
- Asset performance exceeding expectations, offset by
- Contributions of \$24.2 million which exceeded new benefit accruals.

	9/30/18	12/31/18	3/31/19	6/30/19	9/30/19
Market Value of Assets	\$ 1,744.7	\$ 1,694.3	\$ 1,819.1	\$ 1,845.5	\$ 1,889.0
Going Concern Liability	1,822.2 ¹	1,845.1 ¹	1,866.8 ²	1,892.6 ²	1,917.1 ²
Surplus/(Deficit)	\$ (77.5)	\$ (150.8)	\$ (47.7)	\$ (47.1)	\$ (28.1)
Periodic Contributions	22.8	\$ 23.3	\$ 22.3	\$ 23.6	\$ 24.2
Effective Interest Rate	5.60%	5.60%	5.70%	5.70%	5.70%
Funded Ratio (Market):	95.7%	91.8%	97.4%	97.5%	98.5%
Asset Duration:	2.0	2.0	2.0	2.0	2.0
Going Concern Liability Duration:	14.1	14.1	13.9	13.9	13.9

¹After application of the Provision for Adverse Deviation ("PFAD") at 6.95%

²After application of the Provision for Adverse Deviation ("PFAD") at 8.50%

Asset-Liability Return



Asset Liability Return for Quarter-Ending 9/30/19

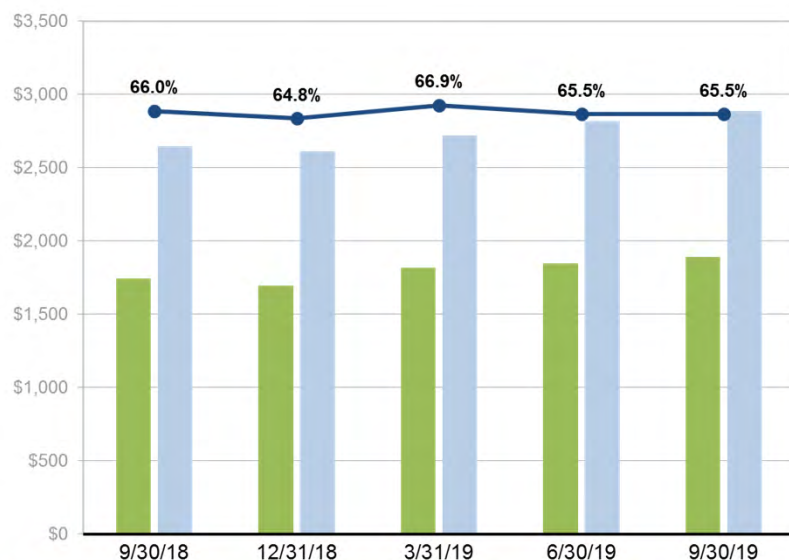
Assets returned 2.2% during the quarter while liabilities returned 1.4%, resulting in a funded status increase of 1.0%.

Periodic Return/Change	Cumulative	12/31/18	3/31/19	6/30/19	9/30/19
Market Value of Assets Return	7.3%	-3.0%	7.1%	1.2%	2.2%
Going Concern Return	5.4%	1.4%	1.2%	1.4%	1.4%
Funded Ratio Change ²	2.8%	-3.9%	5.6%	0.1%	1.0%

Executive Summary – Risk-Free Benchmark

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

Funded Status



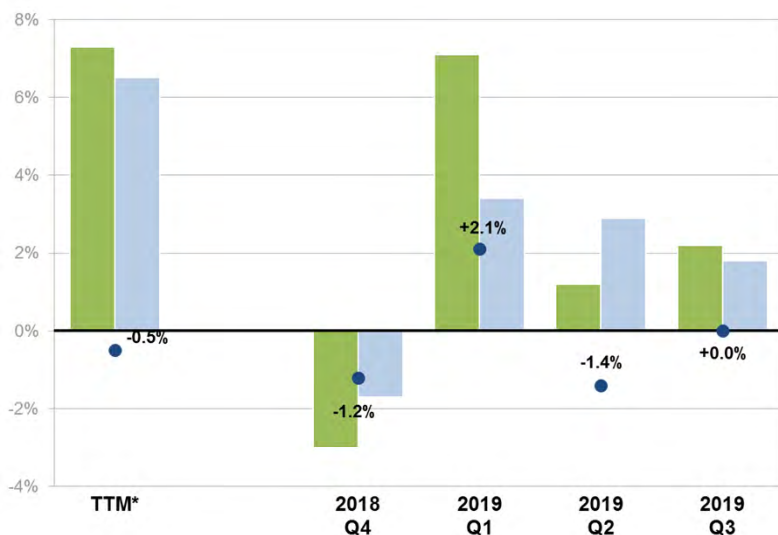
Highlights for the Quarter-Ending 9/30/19

The plans' funded ratio remained at 65.5% at 9/30/19. This result was primarily due to the combined effects of:

- Asset performance exceeding expectations,
- New benefit accruals which exceeded contributions of \$24.2 million, and
- An increase in liabilities due to a decrease in risk-free rates.

	9/30/18	12/31/18	3/31/19	6/30/19	9/30/19
Market Value of Assets	\$ 1,744.7	\$ 1,694.3	\$ 1,819.1	\$ 1,845.5	\$ 1,889.0
Risk-Free Liability	2,643.8	2,612.9	2,718.4	2,816.0	2,884.0
Surplus/(Deficit)	\$ (899.1)	\$ (918.6)	\$ (899.3)	\$ (970.5)	\$ (995.0)
Periodic Contributions	22.8	\$ 23.3	\$ 22.3	\$ 23.6	\$ 24.2
Discount Rate	1.07%	1.18%	0.86%	0.74%	0.68%
Funded Ratio:					
Assets/Risk-Free Liability	66.0%	64.8%	66.9%	65.5%	65.5%
Asset Duration:					
Risk-Free Liability	2.0	2.0	2.0	2.0	2.0
Duration:	19.0	19.0	18.9	18.9	18.9

Asset-Liability Return



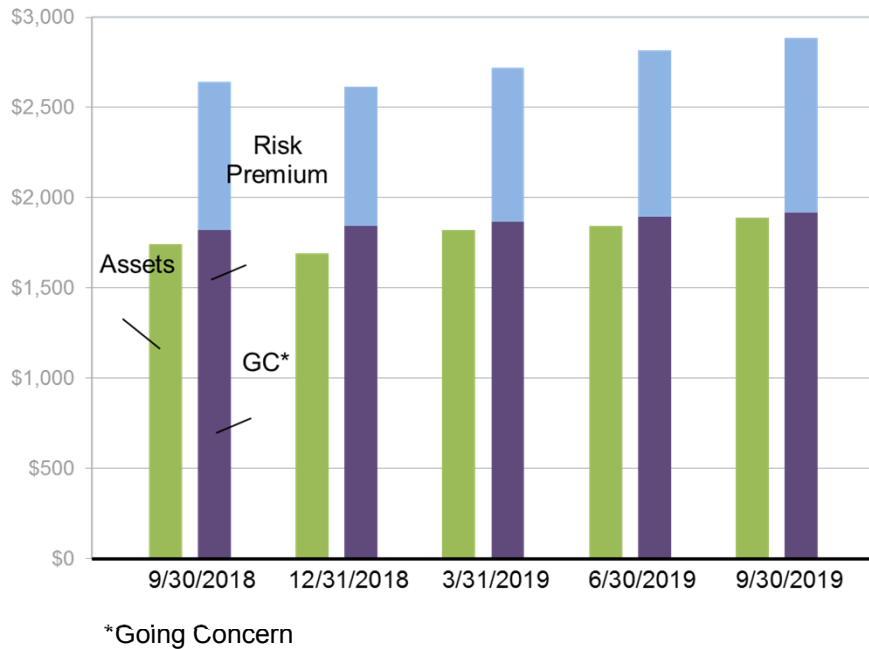
Asset Liability Return for Quarter-Ending 9/30/19

Assets returned 2.2% during the quarter while liabilities returned 1.8%, resulting in a funded status that remained level.

Periodic Return/Change	Cumulative	12/31/18	3/31/19	6/30/19	9/30/19
Market Value of Assets Return	7.3%	-3.0%	7.1%	1.2%	2.2%
Risk-Free Liability: Return	6.5%	-1.7%	3.4%	2.9%	1.8%
Funded Ratio Change	-0.5%	-1.2%	2.1%	-1.4%	0.0%

Reconciliation of Risk-Free Benchmark and Going Concern Funded Status

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



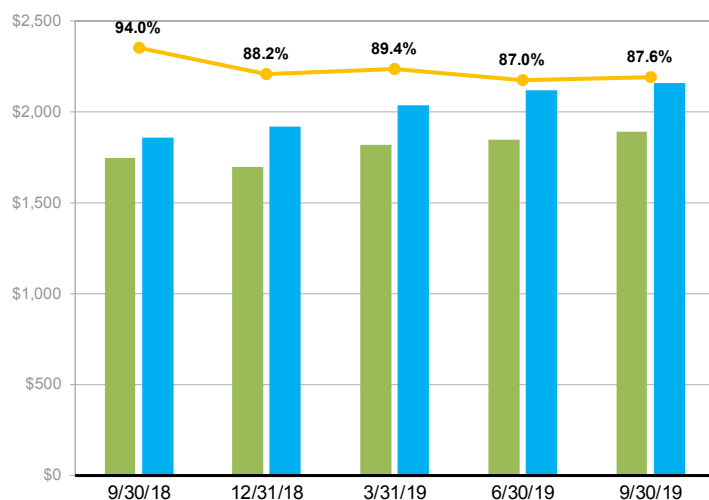
	9/30/18	12/31/18	3/31/19	6/30/19	9/30/19
Market Value of Assets	\$ 1,744.7	\$ 1,694.3	\$ 1,819.1	\$ 1,845.5	\$ 1,889.0
Going Concern Liability	\$ 1,822.2	\$ 1,845.1	\$ 1,866.8	\$ 1,892.6	\$ 1,917.1
Risk Premium	821.6	767.8	851.6	923.4	966.9
Risk-Free Liability	\$ 2,643.8	\$ 2,612.9	\$ 2,718.4	\$ 2,816.0	\$ 2,884.0

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

Executive Summary - Solvency

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

Funded Status



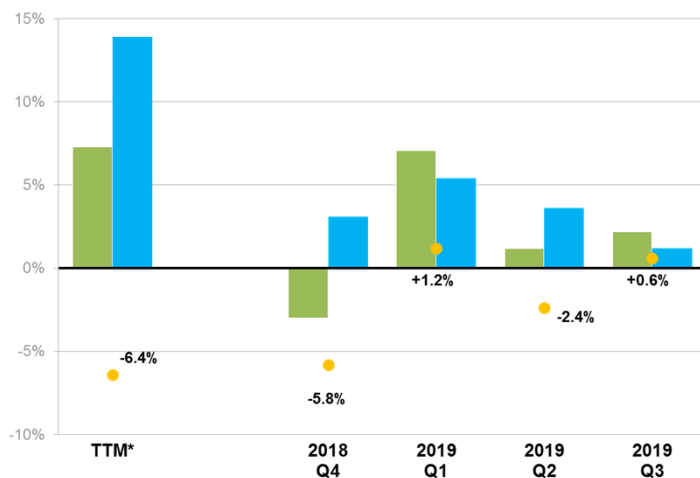
Highlights for the Quarter-Ending 9/30/19

The plans' funded ratio increased to 87.6% at 9/30/19. This result was primarily due to the combined effects of:

- Asset performance exceeding expectations,
- Contributions of \$24.2 million, and
- A slight increase in effective interest rate.

	9/30/18	12/31/18	3/31/19	6/30/19	9/30/19
Market Value of Assets	\$ 1,744.7	\$ 1,694.3	\$ 1,819.1	\$ 1,845.5	\$ 1,889.0
Solvency Liability	1,856.2	1,920.9	2,035.6	2,120.6	2,157.5
Surplus/(Deficit)	\$ (111.5)	\$ (226.6)	\$ (216.5)	\$ (275.1)	\$ (268.5)
Periodic Contributions	22.8	\$ 23.3	\$ 22.3	\$ 23.6	\$ 24.2
Effective Interest Rate	3.33%	3.19%	2.90%	2.71%	2.72%
Funded Ratio: Assets/Solvency Liability	94.0%	88.2%	89.4%	87.0%	87.6%
Assets Duration: Solvency Liability Duration:	2.0	2.0	2.0	2.0	2.0
	14.4	14.4	14.1	14.1	14.1

Asset-Liability Return



Asset Liability Return for Quarter-Ending 9/30/19

Assets returned 2.2% during the quarter while liabilities returned 1.2%, resulting in a funded status increase of 0.6%.

Periodic Return/Change	Cumulative	12/31/18	3/31/19	6/30/19	9/30/19
Market Value of Assets Return	7.3%	-3.0%	7.1%	1.2%	2.2%
Solvency Liability Return	13.9%	3.1%	5.4%	3.6%	1.2%
Funded Ratio Change	-6.4%	-5.8%	1.2%	-2.4%	0.6%

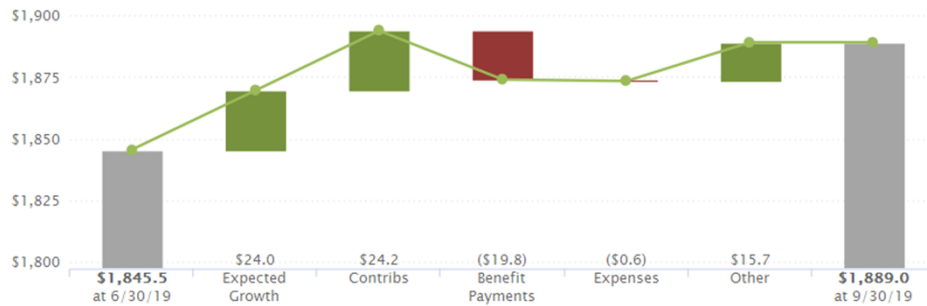


Appendix

Asset-Liability Performance Attribution - Going Concern

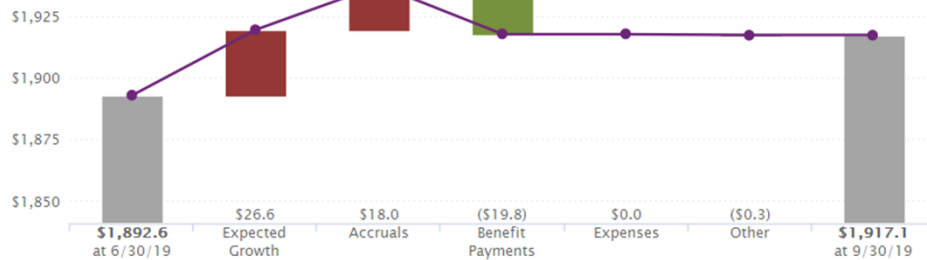
Values in \$1,000,000 (CAD)

Assets



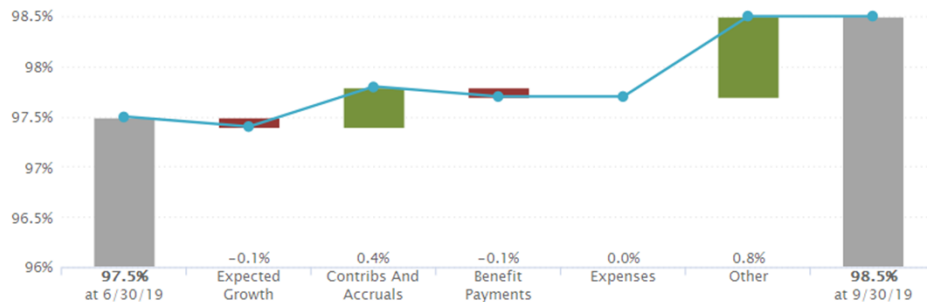
- Assets returned 2.2% during this quarter, as opposed to an expected growth assumption of about 1.3% per quarter.
- The fixed income assets gained value due to a decrease in the underlying risk-free rates, partially offset by widening credit spreads.
- \$24.2 million in contributions were made during the quarter and the trust paid \$19.8 million in benefits to the participants.
- “Other” includes the impact of active management, and differences between benchmark and actual investment allocations.

Liabilities



- Liabilities as of 9/30/19 are based on 5.70%.
- Liabilities were expected to grow by \$26.6 million due to interest cost during the quarter.
- New benefit accruals increased the liability by \$18.0 million during the quarter.
- Plan liabilities decreased by \$19.8 million during the quarter as benefits were paid.

Funded Ratio

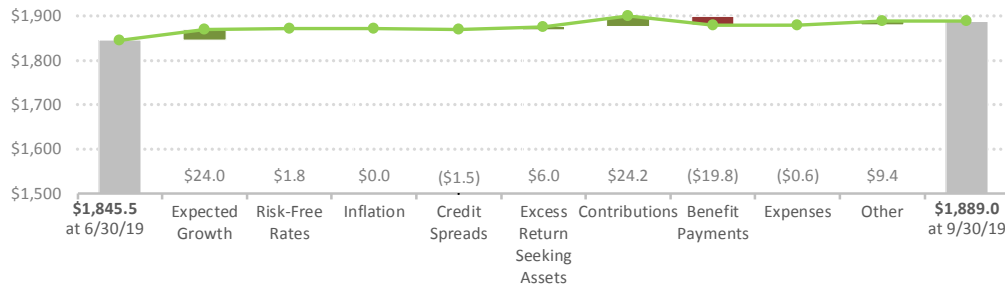


- Assets returned 2.2% during the quarter while liabilities returned 1.4%, resulting in a funded status increase of 1.0%.
- Contributions exceeded benefit accruals during the quarter, resulting in a net increase of 0.4% in the funded status.

Asset-Liability Performance Attribution – Risk Free

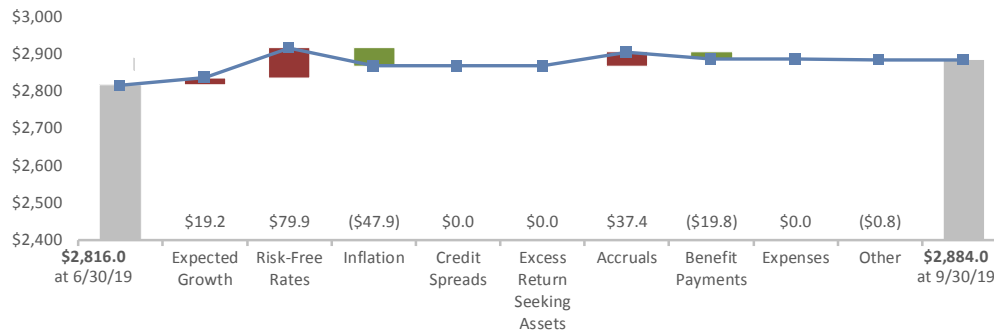
Values in \$1,000,000 (CAD)

Assets



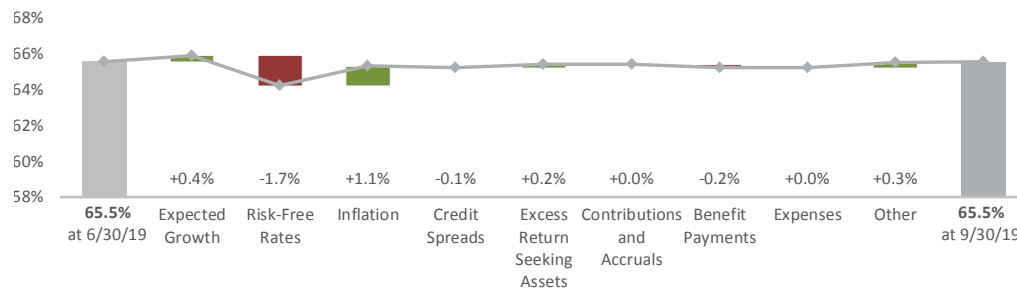
- Assets returned 2.2% during this quarter.
- The fixed income assets gained value due to a decrease in the underlying risk-free rates, partially offset by widening credit spreads.
- The plans' return-seeking assets (Alternatives and International Equities) performed better than expected during this quarter.
- \$24.2 million in contributions were made during the quarter and the trust paid \$19.8 million in benefits to the participants.
- "Other" includes the impact of active management, and differences between benchmark and actual investment allocations.

Liabilities



- Liabilities were expected to grow by \$19.2 million due to interest cost during the quarter.
- New benefit accruals increased the liability by \$37.4 million during the quarter.
- Risk-free rates decreased resulting in an increase in liabilities of \$79.9 million.
- Expected inflation rates decreased resulting in a decrease in liabilities of \$47.9 million.
- Plan liabilities decreased by \$19.8 million during the quarter as benefits were paid.

Funded Ratio

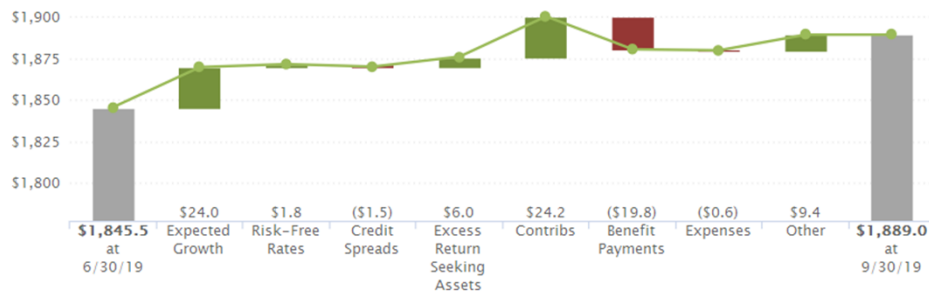


- The difference in exposure to risk-free rates between assets and liabilities combined with changes in risk-free rates resulted in a decrease in funded status of 1.7%.
- Changes in credit spreads resulted in a decrease in funded status of 0.1%.
- Decrease in inflation expectations resulted in an increase in funded status of 1.1%.

Asset-Liability Performance Attribution – Solvency

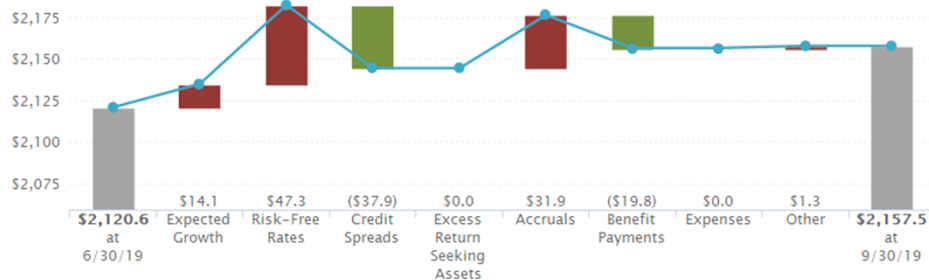
Values in \$1,000,000 (CAD)

Assets



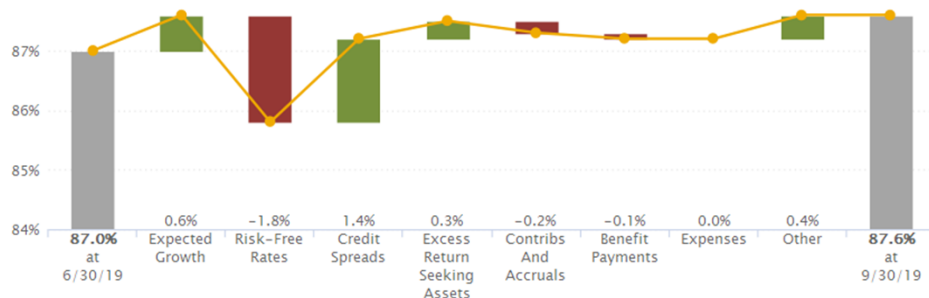
- Assets returned 2.2% during this quarter, as opposed to an expected growth assumption of about 1.3% per quarter.
- The fixed income assets gained value due to a decrease in the underlying risk-free rates, partially offset by widening credit spreads.
- The plans' return-seeking assets (Alternatives and International Equities) performed better than expected during the quarter.
- \$24.2 million in contributions were made during the quarter and the trust paid \$19.8 million in benefits to the participants.
- "Other" includes the impact of active management, and differences between benchmark and actual investment allocations.

Liabilities



- Liabilities were expected to grow by \$14.1 million due to interest cost during the quarter.
- Risk-free rates decreased, and credit spreads were widened, resulting in a net increase of \$9.4 million (\$47.3 million - \$37.9 million).
- New benefit accruals increased the liability by \$31.9 million during the quarter.
- Plan liabilities decreased by \$19.8 million during the quarter as benefits were paid.

Funded Ratio



- The difference in exposure to risk-free rates between assets and liabilities combined with changes in risk-free rates resulted in a decrease in funded status of 1.8%.
- The difference in exposure to credit spreads between assets and liabilities combined with changes in credit spreads resulted in an increase in funded status of 1.4%.
- Benefit accruals exceeded contributions during the quarter, resulting in a net decrease of 0.2% in the funded status.

Plan Provisions & Membership Data

Same as in the Actuarial Valuation Results as of January 1, 2019 presentation to the Pension and Benefits Committee Meeting dated March 8, 2019

Actuarial Methods & Assumptions

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

	9/30/18	12/31/18	3/31/19	6/30/19	9/30/19
Going Concern					
Discount Rate	5.60%	5.60%	5.70%	5.70%	5.70%
Inflation	2.00%	2.00%	2.00%	2.00%	2.00%
PfAD	6.95%	6.95%	8.50%	8.50%	8.50%*
Risk-Free Benchmark					
Discount Rate	1.07%	1.18%	0.86%	0.74%	0.68%
Solvency					
Annuity Purchase Interest Rate	3.33%	3.23%	2.93%	2.76%	2.81%
Effective Date of Annuity Purchase Guidance Used	9/30/18	12/31/18	3/31/19	6/30/19	9/30/19
Lump Sum Value Interest Rate (Years 1-10) ¹	3.30%	2.80%	2.40%	2.30%	2.30%
Lump Sum Value Interest Rate (Years 10+) ¹	3.40%	3.20%	2.90%	2.80%	2.60%
Mortality ²	CPM2014	CPM2014	CPM2014	CPM2014	CPM2014
Underlying Canadian Reference Data					
CANSIM v39054 (7 Year)	2.36%	1.90%	1.55%	1.41%	1.38%
CANSIM v39056 (30 Year Long Term)	2.41%	2.18%	1.90%	1.68%	1.53%
CANSIM v39057 (30 Year Real Return)	0.67%	0.78%	0.46%	0.34%	0.28%
CANSIM v39062 (Over 10 Years)	2.43%	2.13%	1.83%	1.66%	1.51%

* PfAD would be 9.25% if calculated on September 30, 2019.

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

² With improvement scale MI-2017 for Going Concern and Risk Free and CPM-B for Solvency (from 6/30/2018 onwards).

All other assumptions and methods are the same as those shown in the Actuarial Valuation Results as of January 1, 2019 presentation to the Pension and Benefits Committee Meeting dated March 8, 2019. For the Risk-Free Benchmark basis, all other assumptions and methods are the same as those used for the Going Concern basis.

Actuarial Attestation

This document is intended to provide to the University of Waterloo a summary of the performance of the Pension Plan as of September 30, 2019.

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

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

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

November 2019

University of Waterloo
As of September 30, 2019

Asset Allocation and Benchmarking

Asset Class	09/30/19
Alternatives	
■ MSCI USA REIT Index	3.5%
■ MSCI USA Infrastructure Index	5.9%
Fixed Income	
■ FTSE TMX Universe Bond Index	47.1%
Equities	
■ MSCI World Index	37.6%
■ S&P TSX	5.9%
Total	100.0%

Glossary of Terms

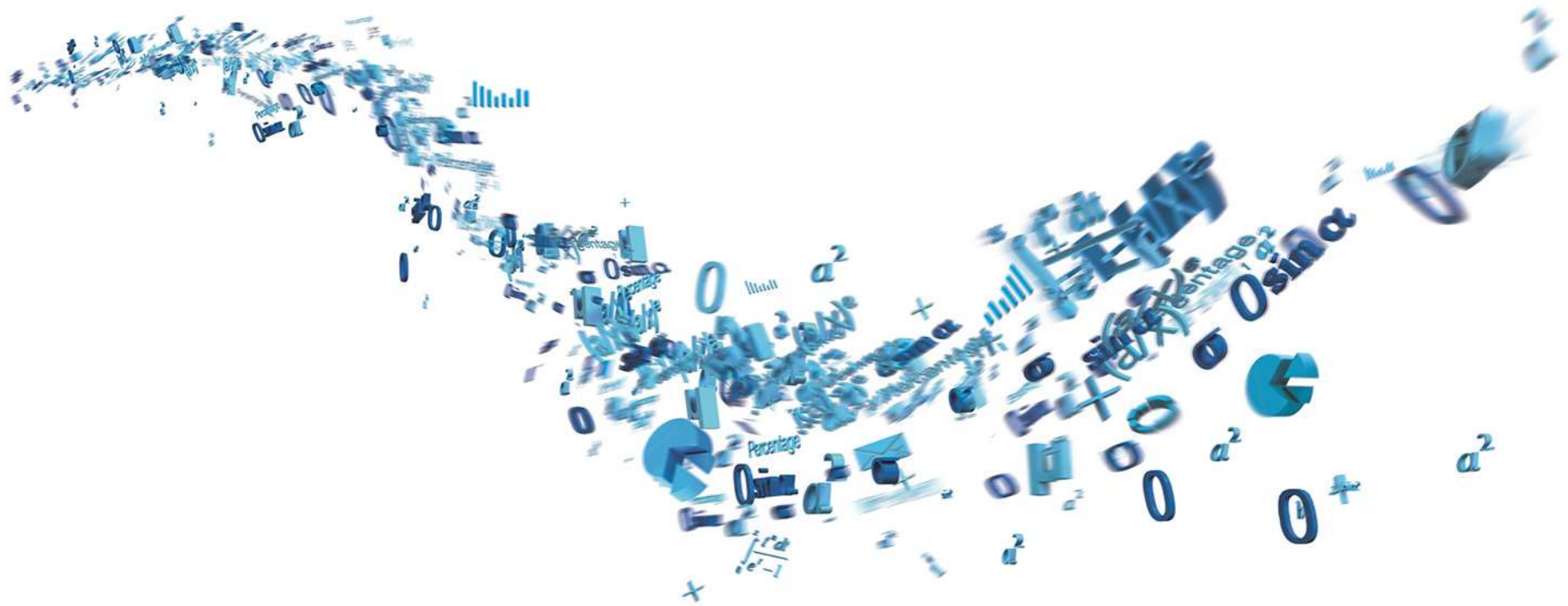
■ Funded Status and Asset-Liability Return

- **Liability Return** reflects the growth in liability due solely to interest rate movements and excludes the impact of Accruals and Benefit Payments.

■ Asset Liability Performance Attribution

- **Expected Growth** reflects assets growing at the expected annual return and liabilities increasing at the interest rate¹.
- **Risk-Free Rates** splits out the expected movement in assets and liabilities based on movements in federal bond yields.
- **Inflation** splits out the expected movement in assets and liabilities based on movements in implied inflation, determined based on real and nominal federal bond yields.
- **Credit Spreads** splits out the expected movements in corporate and provincial bond yields in excess of federal bond yields.
- **Excess Return-Seeking Assets** defines the movement in the Return-Seeking assets based on benchmark returns in excess of expectations. The expectations are defined by the long-term capital market assumptions of the plan and are reflected in "expected growth".
- **Benefit Payments** displays the expected decrease in assets and liabilities due to benefit payments during the period.
- **Contributions/Accruals** displays the expected increase in assets and liabilities due to employer contributions and new benefit accruals, respectively.
- **Other** includes fixed income returns due to coupons and other active management effects, from the asset perspective. From a liability perspective, this bucket includes all liability changes not explained by financial movements during the period.

¹ On the Risk Free basis, the expected growth of liabilities is based on the net interest rate, and the expected growth due to inflation is included in the benefit accrual.



University of Waterloo Pension Plan | Quarterly Period Ending 30 September 2019

Detailed Investment Review

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

Executive Summary

Performance Summary¹

As of 30 September 2019

	Allocation		Performance (%)								
	Market Value (\$000)	%	1 Quarter	Year To Date	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years	
Total Fund	1,889,044	100.0	2.14	10.58	7.17	7.21	6.89	7.48	7.66	7.89	
CPI+3.6% ²			0.81	4.84	5.54	5.72	5.55	5.41	5.26	5.40	
Value Added			1.33	5.74	1.63	1.49	1.34	2.07	2.40	2.49	
Canadian Equities³											
Sionna ⁴	111,935	5.9	2.16 (69)	16.68 (65)	4.50 (67)	5.18 (68)	7.79 (37)	10.46 (8)	5.87 (49)	7.86 (65)	
S&P/TSX Composite			2.48 (56)	19.11 (32)	7.06 (37)	6.47 (42)	7.37 (49)	9.04 (50)	5.31 (64)	6.97 (78)	
Value Added			-0.32	-2.43	-2.56	-1.29	0.42	1.42	0.56	0.89	
Global Equities⁵											
MSCI World Index (Net) (CAD)	465,234	24.6	1.05 (56)	11.42 (64)	4.85 (41)	10.65 (29)	12.18 (24)	11.58 (24)	11.91 (38)	11.71 (53)	
Value Added			-0.70	-2.68	0.57	1.13	1.71	1.43	1.03	0.39	
Oldfield ⁴	152,186	8.1	-0.70 (87)	2.98 (99)	-1.34 (81)	3.93 (85)	8.56 (69)	8.94 (68)	8.92 (80)	10.42 (77)	
MSCI World Index (Net) (CAD)			1.75 (32)	14.10 (39)	4.28 (46)	9.52 (38)	10.47 (40)	10.15 (44)	10.88 (53)	11.32 (64)	
Value Added			-2.45	-11.12	-5.62	-5.59	-1.91	-1.21	-1.96	-0.90	
Walter Scott ⁴	312,829	16.6	1.90 (30)	16.58 (18)	8.62 (20)	15.81 (6)	14.38 (10)	13.79 (9)	14.29 (13)	13.18 (23)	
MSCI World Index (Net) (CAD)			1.75 (32)	14.10 (39)	4.28 (46)	9.52 (38)	10.47 (40)	10.15 (44)	10.88 (53)	11.32 (64)	
Value Added			0.15	2.48	4.34	6.29	3.91	3.64	3.41	1.86	
U.S. Equities											
TD Emerald U.S. Pooled Fund ⁶	150,346	8.0	3.03 (40)	16.81 (43)	6.78 (39)	14.03 (41)	13.62 (42)	13.48 (36)	14.61 (40)	-	
S&P 500			2.93 (42)	16.96 (42)	6.77 (39)	14.09 (41)	13.66 (42)	13.55 (35)	14.65 (40)	15.64 (46)	
Value Added			0.10	-0.15	0.01	-0.06	-0.04	-0.07	-0.04	-	
International Equities											
TD Emerald International Equity Index ⁶	94,074	5.0	0.25 (44)	9.40 (55)	1.18 (42)	3.71 (44)	6.83 (48)	6.22 (53)	6.92 (68)	7.24 (83)	
MSCI EAFE (Net)			0.13 (48)	9.44 (54)	1.04 (42)	3.60 (44)	6.73 (50)	6.16 (55)	6.83 (69)	7.13 (85)	
Value Added			0.12	-0.04	0.14	0.11	0.10	0.06	0.09	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.

⁴Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁵The global equities return prior to August 2018 includes Trilogy.

⁶In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

⁷The Currency Overlay was discontinued on 20 November 2017.

Performance Summary¹

As of 30 September 2019

	Allocation		Performance (%)									
	Market Value (\$000)	%	1 Quarter	Year To Date	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years		
Fixed Income												
TDAM Universe Bond Index	341,163	18.1	1.19 (58)	7.68 (67)	9.65 (50)	5.55 (70)	2.59 (89)	3.49 (87)	3.84 (80)	4.30 (91)		
FTSE Canada Universe Bond			1.19 (58)	7.79 (55)	9.69 (42)	5.60 (68)	2.66 (82)	3.56 (84)	3.91 (68)	4.38 (88)		
Value Added			0.00	-0.11	-0.04	-0.05	-0.07	-0.07	-0.07	-0.08		
TDAM Active Short Term Corporate	342,049	18.1	0.36	4.09	5.08	3.16	2.21	2.48	-	-		
FTSE Canada Short Term Corporate Bond			0.36	4.01	5.06	3.16	2.23	2.44	2.56	3.20		
Value Added			0.00	0.08	0.02	0.00	-0.02	0.04	-	-		
Alternatives												
XRE ETF (Real Estate)	65,997	3.5	8.40	23.10	19.13	17.21	12.67	12.60	9.94	-		
BIP.UN (Infrastructure)	110,592	5.9	18.09	45.04	34.30	16.02	18.49	25.30	24.10	-		
Operating Account												
	207,643	11.0										
Currency Overlay Effect (Historical)⁷												
Value Added			0.00	0.00	0.00	-0.20	-0.09	0.00	-0.32	-0.20		

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.

⁴Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁵The global equities return prior to August 2018 includes Trilogy.

⁶In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

⁷The Currency Overlay was discontinued on 20 November 2017.

Rolling Year Performance¹

As of 30 September

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Total Fund	7.17	7.25	6.25	9.29	8.35	11.25	7.00	8.78	6.11	7.60
CPI+3.6% ²	5.54	5.90	5.21	4.99	4.67	5.70	4.70	4.80	6.88	5.59
Value Added	1.63	1.35	1.04	4.30	3.68	5.55	2.30	3.98	-0.77	2.01
Canadian Equities³										
Sionna ⁴	4.50 (67)	5.86 (55)	13.20 (13)	18.87 (8)	-10.65 (84)	17.46 (91)	11.45 (65)	11.76 (45)	-1.62 (32)	11.31 (51)
S&P/TSX Composite	7.06 (37)	5.87 (54)	9.18 (52)	14.21 (49)	-8.38 (71)	20.38 (55)	7.12 (95)	9.17 (84)	-3.55 (47)	11.60 (47)
Value Added	-2.56	-0.01	4.02	4.66	-2.27	-2.92	4.33	2.59	1.93	-0.29
Global Equities⁵										
MSCI World Index (Net) (CAD)	4.85 (41)	16.78 (20)	15.29 (36)	9.81 (45)	13.25 (65)	17.07 (88)	25.75 (56)	13.21 (70)	-0.70 (35)	4.21 (53)
Value Added	4.28 (46)	15.02 (33)	12.39 (63)	9.20 (51)	13.83 (61)	21.95 (40)	25.65 (56)	14.77 (54)	-2.82 (58)	2.06 (79)
Value Added	0.57	1.76	2.90	0.61	-0.58	-4.88	0.10	-1.56	2.12	2.15
Oldfield⁴										
MSCI World Index (Net) (CAD)	-1.34 (81)	9.48 (74)	18.43 (14)	10.10 (43)	8.83 (84)	13.57 (97)	26.60 (50)	4.85 (98)	4.68 (10)	11.35 (13)
Value Added	4.28 (46)	15.02 (33)	12.39 (63)	9.20 (51)	13.83 (61)	21.95 (40)	25.65 (56)	14.77 (54)	-2.82 (58)	2.06 (79)
Value Added	-5.62	-5.54	6.04	0.90	-5.00	-8.38	0.95	-9.92	7.50	9.29
Walter Scott⁴										
MSCI World Index (Net) (CAD)	8.62 (20)	23.47 (4)	11.59 (69)	12.02 (23)	16.33 (39)	18.09 (81)	24.68 (63)	14.84 (54)	-0.16 (31)	4.76 (49)
Value Added	4.28 (46)	15.02 (33)	12.39 (63)	9.20 (51)	13.83 (61)	21.95 (40)	25.65 (56)	14.77 (54)	-2.82 (58)	2.06 (79)
Value Added	4.34	8.45	-0.80	2.82	2.50	-3.86	-0.97	0.07	2.66	2.70
U.S. Equities										
TD Emerald U.S. Pooled Fund ⁶	6.78 (39)	21.79 (43)	12.79 (55)	13.06 (25)	19.23 (55)	-	-	-	-	-
S&P 500	6.77 (39)	21.91 (43)	12.82 (55)	13.19 (24)	19.20 (56)	30.15 (33)	24.74 (75)	22.89 (37)	2.76 (48)	5.32 (53)
Value Added	0.01	-0.12	-0.03	-0.13	0.03	-	-	-	-	-
International Equities										
TD Emerald International Equity Index ⁶	1.18 (42)	6.31 (46)	13.35 (62)	4.42 (64)	9.75 (75)	13.50 (69)	29.39 (48)	7.61 (80)	-7.77 (63)	-1.23 (83)
MSCI EAFE (Net)	1.04 (42)	6.23 (47)	13.29 (62)	4.45 (64)	9.55 (76)	13.32 (71)	29.37 (48)	7.37 (81)	-7.91 (64)	-1.27 (84)
Value Added	0.14	0.08	0.06	-0.03	0.20	0.18	0.02	0.24	0.14	0.04

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.

⁴Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁵The global equities return prior to August 2018 includes Trilogy.

⁶In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

⁷The Currency Overlay was discontinued on 20 November 2017.

Executive Summary

Rolling Year Performance¹

As of 30 September

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Fixed Income										
TDAM Universe Bond Index	9.65 (50)	1.62 (83)	-3.09 (96)	6.22 (79)	5.27 (39)	6.25 (70)	-1.44 (90)	5.31 (91)	6.80 (20)	7.13 (88)
FTSE TMX Canada Bond Universe	9.69 (42)	1.66 (76)	-2.97 (90)	6.31 (76)	5.29 (38)	6.34 (66)	-1.28 (80)	5.45 (89)	6.66 (28)	7.33 (86)
Value Added	-0.04	-0.04	-0.12	-0.09	-0.02	-0.09	-0.16	-0.14	0.14	-0.20
TDAM Active Short Term Corporate	5.08	1.27	0.32	3.30	-	-	-	-	-	-
FTSE Canada Short Term Corporate Bond	5.06	1.29	0.41	3.06	3.03	3.68	2.01	4.02	3.87	5.65
Value Added	0.02	-0.02	-0.09	0.24	-	-	-	-	-	-
Alternatives										
XRE ETF (Real Estate)	19.13	15.32	4.10	12.38	-0.07	11.76	-9.52	-	-	-
BIP.UN (Infrastructure)	34.30	0.22	23.60	48.17	19.43	13.98	16.37	-	-	-

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.

⁴Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁵The global equities return prior to August 2018 includes Trilogy.

⁶In November 2016, TD Emerald U.S. pooled and International Index funds were added. Returns prior to these dates are representative only.

⁷The Currency Overlay was discontinued on 20 November 2017.

Performance Summary (Net of Fees)¹

As of 30 September 2019

	Performance (%)							
	1 Quarter	Year To Date	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Total Fund	2.08	10.41	6.88	6.92	6.58	7.18	7.36	7.61
CPI+3.6% ²	0.81	4.84	5.54	5.72	5.55	5.41	5.26	5.40
Value Added	1.27	5.57	1.34	1.20	1.03	1.77	2.10	2.21
Canadian Equities³								
Sionna ⁴	2.07	16.38	4.13	4.80	7.40	10.06	5.48	7.43
S&P/TSX Composite	2.48	19.11	7.06	6.47	7.37	9.04	5.31	6.97
Value Added	-0.41	-2.73	-2.93	-1.67	0.03	1.02	0.17	0.46
Global Equities⁵								
MSCI World Index (Net) (CAD)	1.75	14.10	4.28	9.52	10.47	10.15	10.88	11.32
Value Added	-0.87	-3.24	-0.15	0.44	1.00	0.72	0.34	-0.32
Oldfield ⁴	-0.93	2.36	-2.12	3.14	7.74	8.16	8.13	9.61
MSCI World Index (Net) (CAD)	1.75	14.10	4.28	9.52	10.47	10.15	10.88	11.32
Value Added	-2.68	-11.74	-6.40	-6.38	-2.73	-1.99	-2.75	-1.71
Walter Scott ⁴	1.74	16.03	7.91	15.04	13.61	13.00	13.50	12.36
MSCI World Index (Net) (CAD)	1.75	14.10	4.28	9.52	10.47	10.15	10.88	11.32
Value Added	-0.01	1.93	3.63	5.52	3.14	2.85	2.62	1.04
U.S. Equities								
TD Emerald Pooled U.S. Fund ⁶	3.03	16.79	6.74	14.00	13.58	13.44	14.57	-
S&P 500	2.93	16.96	6.77	14.09	13.66	13.55	14.65	15.64
Value Added	0.10	-0.17	-0.03	-0.09	-0.08	-0.11	-0.08	-
International Equities								
TD Emerald International Equity Index ⁶	0.24	9.39	1.16	3.68	6.80	6.19	6.89	7.20
MSCI EAFE (Net)	0.13	9.44	1.04	3.60	6.73	6.16	6.83	7.13
Value Added	0.11	-0.05	0.12	0.08	0.07	0.03	0.06	0.07

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.

⁴Returns for Sionna before May 2012, Oldfield before July 2011, Trilog before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁵The global equities return prior to August 2018 includes Trilog.

⁶In 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 30 September 2019

	Performance (%)							
	1 Quarter	Year To Date	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Fixed Income								
TDAM Universe Bond Index	1.18	7.66	9.62	5.51	2.54	3.44	3.79	4.26
FTSE Canada Universe Bond	1.19	7.79	9.69	5.60	2.66	3.56	3.91	4.38
Value Added	-0.01	-0.13	-0.07	-0.09	-0.12	-0.12	-0.12	-0.12
TDAM Active Short Term Corporate	0.33	4.03	5.00	3.07	2.11	2.38	-	-
FTSE Canada Short Term Corporate Bond	0.36	4.01	5.06	3.16	2.23	2.44	2.56	3.20
Value Added	-0.03	0.02	-0.06	-0.09	-0.12	-0.06	-	-

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.

⁴Returns for Sionna before May 2012, Oldfield before July 2011, Trilogy before April 2008 and Walter Scott before July 2009 are based on composite returns.

⁵The global equities return prior to August 2018 includes Trilogy.

⁶In 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 30 September 2019

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	3.49%	FTSE Canada Bond Universe	3.56%	-0.07%	+/-0.06%	3.5% to 3.62%	No	0.028%
TD Emerald U.S. Pooled Fund ¹	n/a	S&P 500	13.55%	n/a	+/-0.08%	13.47% to 13.63%	n/a	0.028%
TD Emerald International Equity Index ¹	n/a	MSCI EAFE (Net)	6.16%	n/a	+/-0.20%	5.96% to 6.36%	n/a	0.028%
Active Mandates:								
Sionna - Canadian Equities	10.46%	S&P/TSX Composite	9.04%	1.42%	+1.0%	10.04%	Yes	0.342%
Oldfield - Global Equities	8.94%	MSCI World (Net)	10.15%	-1.21%	+2.0%	12.15%	No	0.750%
Walter Scott - Global Equities	13.79%	MSCI World (Net)	10.15%	3.64%	+2.0%	12.15%	Yes	0.644%
TDAM Short Term Corporate Bonds	2.48%	FTSE Canada Short Term Corporate	2.44%	0.04%	+0.5%	2.94%	No	0.099%
Total Fund	7.48%	CPI + 3.6% ²	5.41%	2.07%			Yes	0.217%

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

Holistic Benefits Survey – A Selection of Initial Observations from Survey Results

Updated: 2019-12-04

Below is a selection of data and observations from the results of the October 2019 benefits survey, to augment the regular updates given by the group to the Pension & Benefits Committee. The working group acknowledges that the observations here do not form a full and complete picture of the results, and that further work and interpretation is planned for the working group before being able to make specific recommendations to the P&B Committee.

Survey Distribution

Survey sent to 6640 potential respondents

- Email to 5096 Faculty & Staff
- Paper copies to 452 CUPE
- Email to 1092 Retirees
- Open link via Daily Bulletin

2630 total responses received (39.61% response rate of targeted groups)

- 2432 complete responses
- 197 partial responses

Desire for change – Active Eligible

- 76.97% of respondents indicated they were in favor of some form of change
- 33.08% of respondents indicated they would not be willing to pay more to fund changes, preferring reduction of coverage in other areas of the plan.
 - Alignment across all employee groups was low for this option: 48.65% of CUPE, compared to 21.91% of Faculty and 34.73% of Staff
- 41.50% of respondents indicated they would be willing to pay more to fund improvements
 - Alignment between CUPE and other employee groups was low for this option: 18.92% of CUPE, compared to 42.82% of Faculty and 43.84% of Staff

Desire for change – Active Temporary

- 89.47% of respondents indicated they were in favor of some form of change
- 36.09% of respondents indicated they would not be willing to pay more to fund changes, preferring reduction of coverage in other areas of the plan.
- 49.62% of respondents indicated they would be willing to pay more to fund improvements

Desire for change – Retiree Eligible

- 55.10% of respondents indicated they were in favor of some form of change with 31.53% indicating they would prefer the plan to remain as is.
- 19.75% of respondents indicated they would not be willing to pay more to fund changes, preferring reduction of coverage in other areas of the plan.
 - Alignment across former employee group was low for this option: 28.57% CUPE, 10.43% Faculty and 26.01% Staff
- 35.35% of respondents indicated they would be willing to pay more to fund improvements
 - Alignment across former employee group was low for this option: 28.57% CUPE, 41.74% Faculty and 33.53% Staff

Active vs. Retired Coverage (Active cohorts only)

- 54.53% of respondents stated they would prefer to keep balance as is
 - This option was very consistent across employee groups: 55.41% of CUPE, 53.90% of Faculty and 55.95% of Staff
- 24.41% of respondents stated they would prefer improved benefits after retirement and lower benefits during employment
 - Alignment between CUPE and other employee groups was low for this option: 17.57% of CUPE, compared with 26.70% of Faculty and 24.08% of Staff
- 11.28% of respondents indicated they would prefer improved benefits while working and lower benefits after retirement
 - Alignment between Faculty and other employee groups was low for this option: 6.30% of Faculty compared with 14.86% of CUPE and 11.97% of Staff

Desire for change summary

- Large majority of respondents (74.92%) indicated a desire for some form of change. Higher among active employees, both full-time and temporary (77.72%) compared to retirees (55.10%).
- More respondents were willing to pay more to fund improvements (41.17%) than not (31.58%), CUPE is an outlier with only 19.75% willing to pay more vs. 46.91% not
- Majority of respondents (54.53%) indicated preference that the Active vs. Retired coverage balance to remain as is.
- This question was only presented to active employee groups, and there was a high level of consistency within this response across those groups.

Priority Additions – Active Eligible

- 80.4% of respondents selected Add coverage for eye glasses and contact lenses and 68.51% of respondents selected Add coverage for eye exams. These selections were consistently the top two regardless of group.
- 54.97% of respondents selected Add dental coverage to the retiree plan
 - 48.65% of CUPE, 62.72% of Faculty and 58.91% of Staff
- 41.95% selected Removal of physician referral requirements for paramedical services and 32.67% selected Increase coverage for mental health providers. Both of these options were consistent by group.
- Notable outliers in the top 10 ranking by group:
 - CUPE respondents had Increase coverage for orthotics ranked as 5th highest in their group, which did not enter into the top 10 for other groups
 - Add a health savings account option is present in the top 10 overall as 33.98% of Staff and 52.63% of Other respondents selected the option, as opposed to 20.27% of CUPE and 22.92% of Faculty.

Priority Additions – Active Temporary

- 82.22% of respondents selected Add coverage for basic dental services
 - Only Faculty varied significantly at 66.67% Note: Faculty on temporary appointments receive dental coverage at a certain duration of service, temp staff do not.
- 80% selected Add coverage for eye glasses and contact lenses and 78.52% selected Add coverage for eye exams
 - Only Faculty varied significantly at 33.33%

Priority Additions – Retiree Eligible

- 73.42% selected Add coverage for basic dental services (exams, cleanings, fillings)
- 62.61 % selected Add coverage for eye glasses and contact lenses
- 49.05% selected Add coverage for major dental services (root canals, crowns, bridges)

Priority Additions – Summary

- Large majority of respondents (82.65%) selected Add coverage for eye glasses and contact lenses as a priority.
 - Most selected priority for Active-Eligible (80.40%), second most selected priority for Active-Temp (80.00%) and Retiree-eligible (63.61%)
- Basic dental coverage for those who don't have it already was a common across cohorts, with 61.84% of all respondents selecting a related option
 - Active-Eligible had Add dental coverage to retiree benefit plan as the third-most selected item, (54.97%)
 - Active-Temp (82.22%) and Retiree-Eligible (73.42%) groups had Add coverage for basic dental services as their most selected priority
- Neither of the above option varied significantly across employee groups.

Cost reduction options – Active Eligible

- Acceptable cost reduction options
 - 40.72% selected Require the use of generic drugs when available, consistent across groups.
 - 29.31% selected Add a new (or increase an existing) employee contribution made by payroll deduction
 - 17.57% of CUPE versus 34.36% of Faculty and 31.62% of Staff
 - 19.65% selected Require maintenance drugs (those taken regularly) to be ordered through a less expensive mail-order pharmacy.

- The above selections are consistent for Faculty and Staff, with lower response rates for CUPE. 35.14% of CUPE respondents selected No changes, ranking that item higher than the above 3 for the group.
- Least acceptable cost reduction option
 - 19.70% selected No changes, notably 82.43% of CUPE respondents selected this option, where Faculty and Staff both had 17.13% selecting this option
 - 17.95% selected Reduce or forego a future pay increase, with CUPE being an outlier at 2.70% selecting the option.

Cost reduction options – Active Temporary

- Acceptable cost reduction options
 - 47.41% selected Require the use of generic drugs when available
 - 27.41% selected Reduce basic (university paid) life insurance coverage
 - 26.67% selected Add a new (or increase existing) employee contribution made by payroll deduction
- Least acceptable cost reduction option
 - 19.26% selected Decrease coverage for paramedical services
 - 18.52% selected Reduce or forego a future pay increase

Cost reduction options – Retiree Eligible

- Acceptable cost reduction options
 - 44.94% selected Require the use of generic drugs when available
 - 23.10% selected Add a new (or increase existing) retiree premium requirement
 - 21.52% selected No changes
- Least acceptable cost reduction option
 - 21.84% selected Add a new (or increase existing) retiree premium requirement
 - 17.41% selected No changes

Cost reductions summary

- 52.20 % of all respondents selected Require the use of generic drugs when available, which was the top selection across all cohorts and groups with the exception of Retirees 8.86% selecting for 6th most selected item.
- 29.93% of all respondents selected some version of an additional or increased premium as an acceptable option
 - In the active-eligible cohort 17.57% of CUPE versus 34.36% of Faculty and 31.62% of Staff selected it as an acceptable option, only 6.44% overall in the cohort selected it as the least acceptable option
 - In the retiree-eligible cohort 23.10% selected it as an acceptable option, while 21.84% selected it as the least acceptable option.

To: Pension & Benefits Committee
From: Rebecca M. Wickens, Associate University Secretary
Date: 13 December 2019
Subject: Pension Investment Committee – Update

This is an update on progress to date with respect to populating the Pension Investment Committee.

Constituency	Voting /Non-voting	Status
Board of Governors Members (3)	Voting	A list of Board members with relevant experience is under consideration, taking into account the current membership and requirements of the terms of reference. Appointments are expected to occur in late 2019 or early 2020.
External Community Members (2)	Voting	Julie Cays Steve Elgee
Employees/Retirees (4)	Voting (2), Non-voting (2)	Ranjini Jha (faculty) Michael Herz (staff) Greg Macedo (CUPE) Phelim Boyle (Retiree)
Administrative Resources (2)	Non-voting	James Rush Dennis Huber

Depending on timing for Board appointments, I expect to be able to schedule an orientation and first meeting for January/February 2020.