

**Board of Governors
PENSION & BENEFITS COMMITTEE
Friday 14 January 2022
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 Diana Goncalves, d3goncalves@uwaterloo.ca**

OPEN SESSION		ACTION
9:30	1. Approval of the 10 December 2021 Minutes (Open Session)* and Business Arising	Decision
9:35	2. Execution Against the Work Plan* [Wickens]	Information
9:40	3. Update on Government Pension Plan Initiatives [Aon]	Information
9:45	4. Approval of the Actuarial Valuation Assumptions* [Aon]	Decision
CONFIDENTIAL SESSION		
10:35	5. Approval of the 10 December 2021 Minutes (Confidential Session)+ and Business Arising	Decision
10:40	<u>Next Meeting:</u> Friday 18 February 2022, 9:30 a.m. – 12:00 noon	Discussion/Decision

*attached
** to be distributed
+ distributed separately

10 January 2022

Rebecca Wickens
Associate University Secretary

Please convey regrets to Diana Goncalves at d3goncalves@uwaterloo.ca

Future Agenda Items

- a. Pension Contribution for Members on LTD
- b. Level of LTD coverage vs. practical requirements
- c. EFAB Report Data Requirements
- d. Presentation re: the UPP
- e. Communication Plan re: Handling of Member Questions/Feedback

University of Waterloo
Board of Governors
PENSION & BENEFITS COMMITTEE
Minutes of the 10 December 2021 Meeting
[in agenda order]

Present: Peter Barr, Terrence Birmingham, Sara Cressman, Michael Herz, Dennis Huber, Ranjini Jha, David Taylor, Marilyn Thompson, Ken Vetzal, Rebecca Wickens (secretary)

Regrets: Tony Giovinazzo, David Saunders

Guests/Resources: Linda Byron, Diana Goncalves, Sarah Hadley, Lee Hornberger, Sheryl Kennedy, Sue McGrath, Daniel Miller, Allan Shapira, Tyler Wendland

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

OPEN SESSION

1. APPROVAL OF THE 19 NOVEMBER 2021 MINUTES (OPEN SESSION) AND BUSINESS ARISING

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

2. EXECUTION AGAINST THE WORK PLAN

This item was received for information.

3. UPDATE ON GOVERNMENT PENSION PLAN INITIATIVES

Members heard: there are no government initiatives to report; the University Pension Plan (UPP) is developing a campaign to talk to universities that are not in the UPP. There was general agreement to invite UPP representatives to speak to committee in 2022.

4. REPORT FROM PENSION INVESTMENT COMMITTEE

Statement of Investment Policies and Procedures (SIPP), Fund Implementation Procedures (FIP). Kennedy introduced the agenda item, highlighting the process followed, the rationale for separating the policy and procedures contained in the current SIPP into the separate SIPP and FIP, and the proposal that the responsibility for the FIP be delegated to P+B. Jha took members through a presentation providing more detail on the proposed changes, including: comparisons to other institutions; drivers for shifting away from value investing; revised investment philosophy and guiding principles; asset allocation and more detail on the asset classes; performance net of fees; the aspects of the policy that remain unchanged; the progress with respect to the responsible investment policy and next steps. Taylor requested a clarifying amendment to Section 1.a.vi of the FIP and forwarded the suggested wording to staff. Subject to that amendment, there were motions to recommend that:

1. the Board of Governors approve the attached Statement of Investment Policies and Procedures and Fund Implementation Procedures effective as of the date of approval by the Board of Governors. Jha and Huber. Carried.
2. the Board delegate oversight for the FIP to P+B, including the responsibility to review and approve any recommended changes to the FIP in accordance with the terms thereof and the governing documents for P+B and PIC. Taylor and Jha. Carried.

Update on Q3 Performance and Other Committee Activities. Kennedy provided further updates on committee activities and pension fund performance including: more detail on the revisions to the RIP and plan to have legal counsel review the policy, in particular, for consistency with fiduciary duties and integration with other policy documents; the progress of a subcommittee of PIC with respect to reviewing potential new infrastructure investments; fund performance – the plan is fully funded, the fund outperformed the benchmark for one, four and ten year periods, but slightly underperformed for Q3 of 2021; the committee conducted its annual review of the global investment managers. Jha commented favorably on the collaborative process with respect to developing and reviewing the RIP, the performance of existing infrastructure investments in the fund, and the cautious approach being taken with respect to potential new infrastructure investments.

5. MAXIMUM PENSION LIMITS AND CAPS

McGrath spoke to the report, including: the operation of the caps; the amendment to the caps effective 1 January 2021; the increase for this year; projection of when the Income Tax Act (ITA) limit will reach the cap in the plan if it is not adjusted. Shapira commented on drivers for the sizable increase in the average industrial wage during the pandemic; the practice of reviewing and increasing the cap before the ITA limit exceeds it; the protection provided by the cap against irrational markets and regulatory interventions. McGrath spoke to the second section of the report on contribution rates and limits, and how the ITA limit on member contributions is adjusted annually.

6. COMMUTED VALUE – POTENTIAL ENHANCEMENTS TO MYPENSIONINFO

Members heard: the previous pension system allowed members to access a commuted value estimate for their pensions; the new system does not have this functionality so HR is performing these calculations for members; the volume of pension administration activities means that members sometimes need to wait for the calculation; following a request at the September 2021 meeting, HR looked at options for providing the functionality in the pension system. McGrath spoke to the options available as outlined in the report. Discussion included: there is support for adding this functionality and not restricting access for active members 55 and older; the system should include clear caveats about the information; the desire for the committee to vet the wording of the caveats; the preference to work within existing functionality of the system rather than pursue a custom option. There was a motion to approve HR pursuing option 2, amended so that participants age 55 years and older will not be blocked from accessing the information. Taylor and Vetzal. Carried.

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

NEXT MEETING

The next regular meeting is scheduled for Friday 14 January 2022, 9:30 a.m. – 12:00 noon.

4 January 2022

Rebecca M. Wickens
Associate University Secretary

Execution against Work Plan

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

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

Task	Frequency (Target month)	15 Jan 2021	11 Feb 2021	12 Mar 2021	14 May 2021	18 June 2021	10 Sept 2021	22 Oct 2021	19 Nov 2021	10 Dec 2021	14 Jan 2022
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	15 Jan 2021	11 Feb 2021	12 Mar 2021	14 May 2021	18 June 2021	10 Sept 2021	22 Oct 2021	19 Nov 2021	10 Dec 2021	14 Jan 2022
Benefits Utilization Report	Annual (June)					✓					
Annual review re: benefits added/removed from insured plans in the market	Annual (June)					✓					
Review of Committee Terms of Reference	Annual (June)					✓					
Indexing of Plan Maxima – Health, Dental, Retiree Life Insurance	Annual (Nov)								✓		
Employee and Family Assistance Program – report on utilization	Annual (Nov)								✓		
Maximum pension limits and caps adjustments, based on average industrial wage increase (AIW)	Annual (Dec)									✓	
Total Fund Overview	Quarterly			✓		✓	✓			✓	
Investment Manager Review	Semi-annually									✓	
Approval of the Statement of Investment Policies and Procedures (SIPP)	Annual									✓	
Annual Report to the Community	Annual		✓								
Actuarial Filing - Minimum every three years Most recent filings: 2017, 2018, 2020, 2021											



Actuarial Assumptions (Preliminary)

University of Waterloo Pension & Benefits Committee Meeting

January 14, 2022

Posted with Permission of Aon

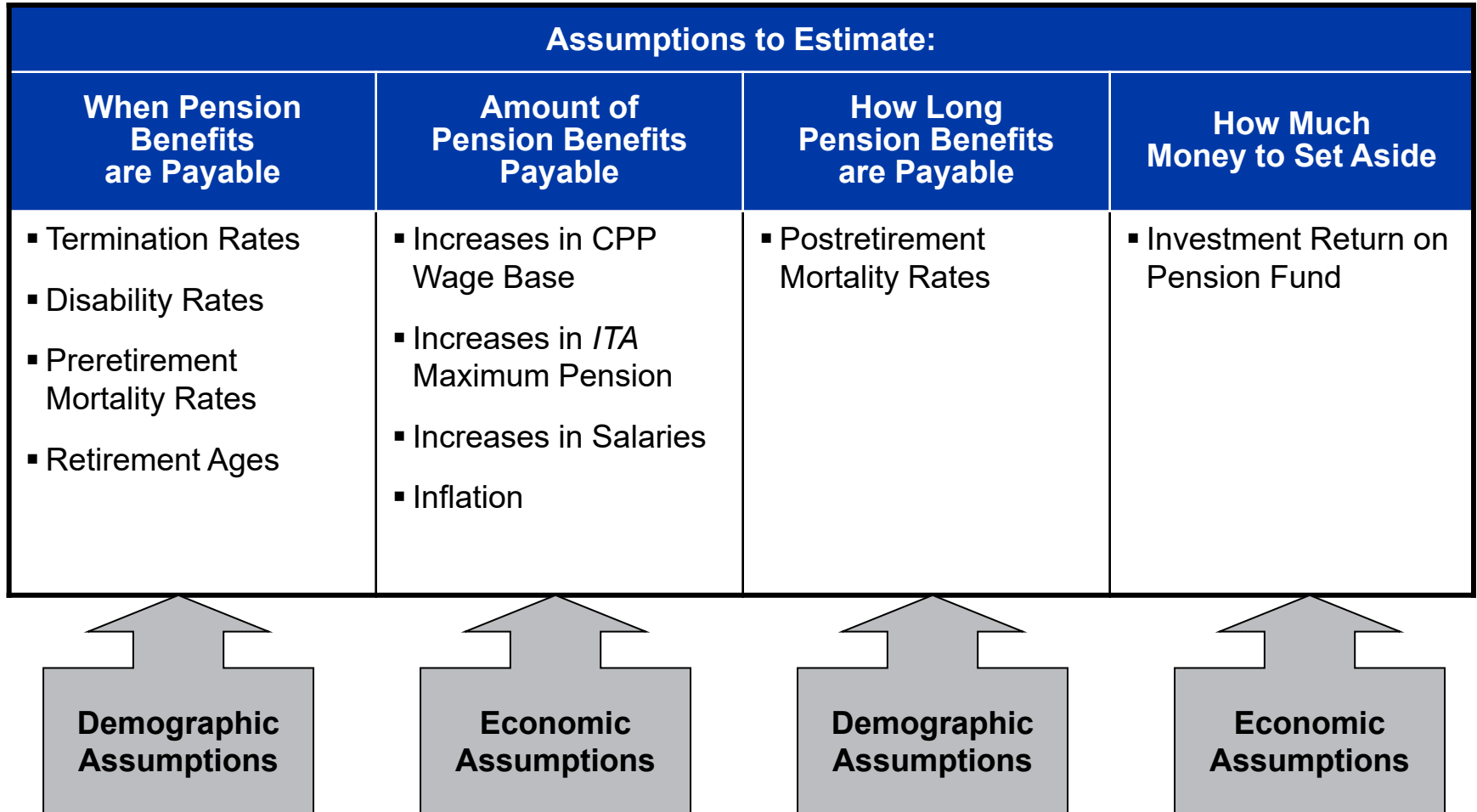
Prepared by Retirement & Investment



About This Material

- Review of actuarial assumptions for purposes of setting the actuarial assumptions to use for the January 1, 2022 actuarial valuation of the Registered Pension Plan (RPP) and Payroll Pension Plan (PPP)
- While not required to be filed it is expected that this January 1, 2022 actuarial valuation of the RPP will be filed with the pension regulators (Financial Services Regulatory Authority and Canada Revenue Agency)
- Under the funding rules which came into effect May 1, 2018 for Ontario-registered pension plans:
 - Going concern assumptions should be “best estimate”
 - An explicit provision for adverse deviation (PfAD) is added to the best estimate non-indexed going concern liabilities and normal cost
- These valuation results will include analysis on an increase in the RPP Hard-Dollar Cap:
 - No further benefits will accrue to active members in the PPP as the RPP Cap now exceeds the PPP Cap
 - Certain benefits for retired members will continue to be covered in the PPP

Actuarial Assumptions For Going Concern Valuation



Real Growth

Benefits

Pension Benefits Before Retirement

- CPP Wage Base increases
- ITA maximum pension increases
- Salary increases

Pension Benefits After Retirement

- Indexation

Inflation

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graph TD; Inflation[Inflation] --> BenefitsBefore[Pension Benefits Before Retirement]; Inflation --> BenefitsAfter[Pension Benefits After Retirement]; Inflation --> Assets[Investment Return on Various Assets Classes];
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Assets

Investment Return on Various Assets Classes

Since inflation drives both the pension benefits paid out and the funding made from investment return, it is the excess of interest rates and investment return over inflation, or “real return” and the excess of salary and government benefit increases over inflation that are the key factors.

Actuarial Assumptions For Going Concern Valuation— Economic Assumptions – Prior Valuation

Economic Assumptions	January 1, 2021 Valuation (Last Filed Valuation)
Increase in Consumer Price Index (CPI)	2.00% per year
Increase in Year's Maximum Pensionable Earnings under Canada Pension Plan	2.75% per year (CPI + 0.75%)
Increase in Income Tax Act Maximum Pension	\$3,245.56 in 2021; increased after 2021 at 2.75% per year up to a hard-dollar cap of \$3,400 which increases at 0.92% per year beginning in 2022
Increase in Salaries	3.00% per year for 3 years; 4.00% per year thereafter (CPI + 2.00% ¹)
Increase in Salaries (Disabled)	2.00% per year (CPI + 0.00%)
Interest Rate Used to Discount Liabilities	5.30% per year (CPI + 3.30%)
Interest Rate Used to Calculate 50% Rule	0.60% per year for 10 years ² ; 0.80% per year thereafter
Interest Rate for Crediting on Required Member Contributions	2.50% per year
Loading For Administrative Expenses	Explicit assumption of \$1,560,000 in 2021 added to current service cost
Provision for Adverse Deviation	9.00% of non-indexed liabilities and normal cost

¹ Reflects PTR/grid steps/merit

² 0.80% per year for 10 years: 1.30% per year thereafter for 75% indexed benefits in 2021

Actuarial Assumptions For Going Concern Valuation— Demographic Assumptions – Prior Valuation

Demographic Assumptions	January 1, 2021 Valuation	
Mortality Rates	2014 Canadian Pensioners Public Sector Mortality Table (“CPM2014 Public”) with Improvements Under Scale MI-2017	
Retirement Rates	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

Actuarial Assumptions For Going Concern Valuation— Demographic Assumptions – Prior Valuation

Demographic Assumptions	January 1, 2021 Valuation	
Termination Rates	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

Increase in Consumer Price Index (CPI)

- As of December 31, 2021, underlying inflation rate implicit in the market yield of Government of Canada real return bonds (-0.14%) and nominal bonds (1.68%) is 1.82%
- Bank of Canada target range for inflation extends from 1% to 3%; monetary policy aimed at the 2% target midpoint
- Assumption for increase in CPI has been set at 2.00% per year since the January 1, 2015 actuarial valuation; other economic assumptions build off of the inflation rate

Increase in Pensionable Earnings

- Increase in pensionable earnings of 3.00% per year for 3 years (2 years from 2022) and 4.00% per year thereafter based on:
 - Long term assumed across-the-board increase of 2.00% per year
 - Long term assumed 2.00% increment representing PTR/grid steps/merit across Faculty and Staff groups
 - Temporary lower rate of increase as a result of Bill 124

Discount Rate

- Based on expected investment return of UW pension fund reflecting long-term asset mix as stated in the draft SIPP
- For purposes of calculating expected investment return, the following long-term target asset mix has been used:

Canadian Equities:	5.0%
Non-Canadian Equities:	48.0%
Nominal Fixed Income:	25.0%
Real Estate:	10.0%
Infrastructure:	10.0%
Cash:	2.0%

Discount Rate (cont'd)

- For the 2021 actuarial valuation, the target asset mix generated an expected return of 5.30% per annum net of passive investment expenses and before other expenses:
 - This was based on the prior target asset mix
- For the 2022 actuarial valuation, the target asset mix in the draft SIPP generates an expected return of 5.50% per annum net of passive expenses and before other expenses:
 - These results are based on Aon's September 30, 2021 capital market assumptions and reflect the draft updated target asset mix
 - The prior target asset mix would yield a discount rate of 5.10% per annum

Expected Investment Returns on Various Asset Classes

Asset Class	30-Year Annualized Mean ¹ (Nominal Return)	Annual Standard Deviation
Inflation	2.0%	1.4%
Cash (91-Day Bills)	1.6%	2.1%
Universe Bonds	2.4%	6.6%
Canadian Equities	6.2%	16.5%
Global Equities	6.5%	14.8%
Listed Infrastructure	5.2%	14.1%
Direct Infrastructure	6.6%	14.5%
Global Listed Real Estate	5.2%	17.6%
Direct Real Estate	4.7%	15.0%

Note: Above returns determined at September 30, 2021

¹ Takes into effect the compounding for each underlying asset class

Expected Investment Returns For UW Pension Fund

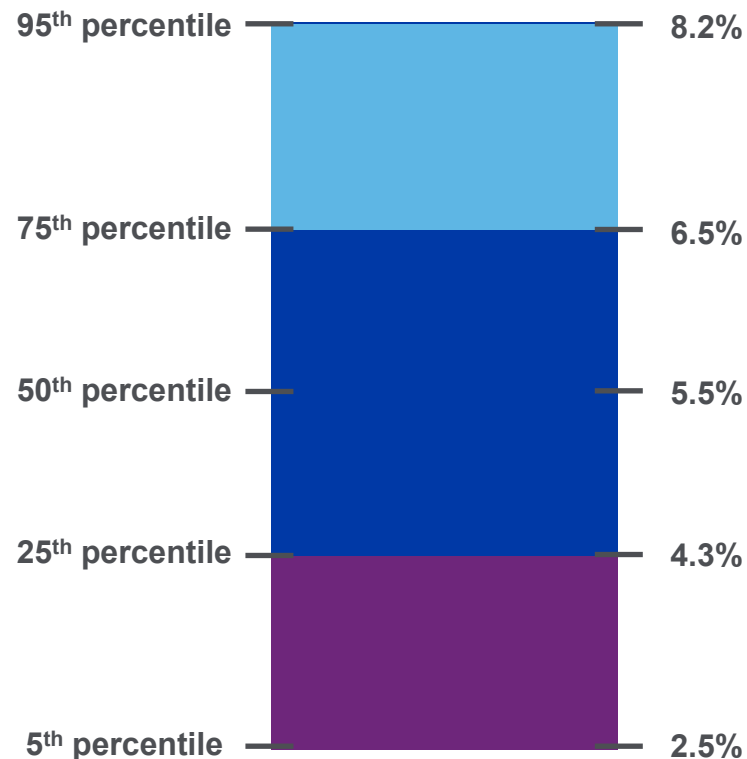
- Expected rate of return (net of passive investment fees) as of September 30, 2021 calculated based on the following target asset mix:

Asset Class	%
▪ Canadian Equities	5.0%
▪ Global Equities	48.0%
▪ Fixed Income	25.0%
▪ Cash	2.0%
▪ Infrastructure (Listed)	5.0%
▪ Infrastructure (Direct)	5.0%
▪ Real Estate (Listed)	5.0%
▪ Real Estate (Direct)	<u>5.0%</u>
	100.0%
Annual Expected Return	5.50%
Annual Standard Deviation (Asset Only)	9.33%
Annual Drawdown Risk 95% (Asset Only)	-14.02%

Expected Investment Returns For UW Pension Fund (cont'd)

- The chart below provides the range of outcomes for 30-year rate of return based on the target asset mix of the University of Waterloo pension fund:

Annualized Rate of Return over a 30-Year Period (September 30, 2021)



Provision for Expenses

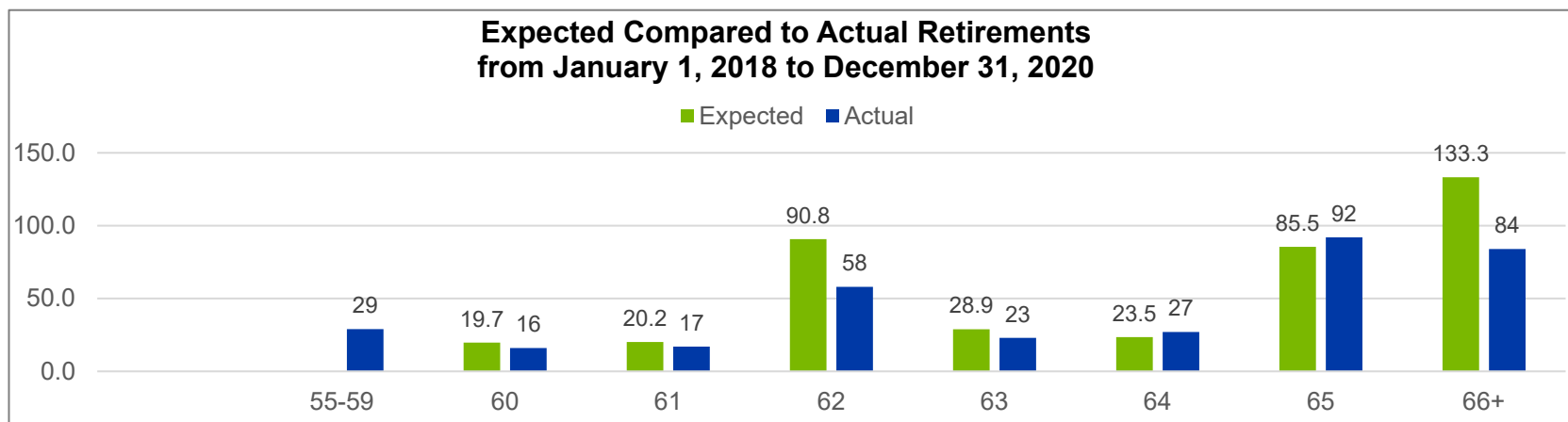
- An explicit provision of \$1,606,000 for administrative expenses will be added to the normal cost in 2022 (increase of 3% over 2021 expense provision)
- Prior to 2018, the administrative expenses were accounted for as an adjustment to the discount rate

Retirement Age Assumption

- Effective with the January 1, 2020 valuation, the valuation uses retirement rates which are based on historical retirement experience
- Prior to the January 1, 2020 valuation, a single point retirement age of 64 but no earlier than one year following the valuation date was used

Retirement Age Experience

- The following chart compares the actual retirements in the period January 1, 2018 to December 31, 2020 to the retirements that would have been expected during the period based on the assumed retirement rates adopted at the January 1, 2020 valuation:



Ages	Expected	Actual
55-59	0.0	29
60	19.7	16
61	20.2	17
62	90.8	58
63	28.9	23
64	23.5	27
65	85.5	92
66+	133.3	84

Mortality Rates

- Since January 1, 2020 the mortality table being used is 2014 Canadian Pensioners' Public Sector Mortality Table with Improvements Under Scale MI-2017
- Following table shows actual versus expected deaths for members of the RPP for 2013 through 2020:

	2013	2014	2015	2016	2017	2018	2019	2020	Total
Actual Deaths	53	57	51	57	53	62	61	74	468.0
Expected Deaths (2014 CPM Public Table with Improvements Under Scale MI-2017)	52.9	54.3	55.8	58.6	61.6	63.7	66.4	68.3	481.6

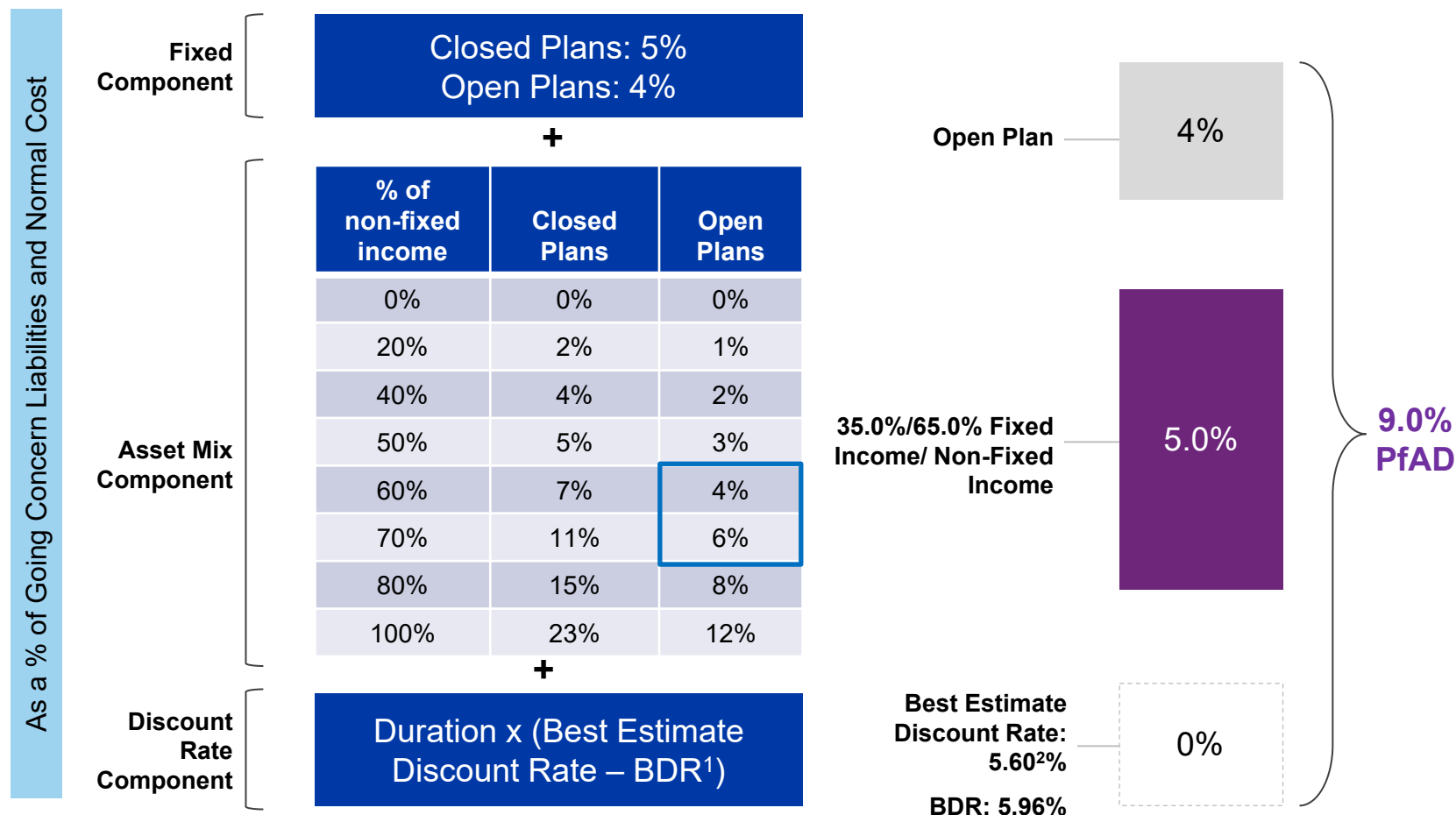
- Actual deaths over 8-year period (2013–2020) is 97% of expected deaths
- Mortality losses may result if demographic profile of pensioner deaths is different from expected

Provision for Adverse Deviation (PfAD)

	Target Asset Mix
Canadian Equities	15%
Global Equities	40%
Fixed Income / Cash	35%
Real Estate (REITs)	5%
Infrastructure (Listed)	5%

- The PfAD is based on the SIPP that is in effect on the valuation date
- Since the revised SIPP was not passed on that date the prior target asset mix is used for purposes of the PfAD
- Fixed Income Allocation for PfAD and BDR = 35%
- PfAD = Base component of 4% (open plan) plus asset-based component, plus a component related to the Benchmark Discount Rate (BDR)

Provision for Adverse Deviation (PfAD) (cont'd)



¹ Benchmark Discount Rate = V39056 Rate (1.68% at December 31, 2021) + 5% x % of Non-Fixed Income + 1.5% x % of Fixed Income + 0.5% for diversification

² Going concern discount rate before adjustment for passive investment fees

Preliminary Actuarial Assumptions For January 1, 2022 Going Concern Valuation—Economic Assumptions

Economic Assumptions	January 1, 2022 Valuation
Increase in Consumer Price Index (CPI)	2.00% per year
Increase in Year's Maximum Pensionable Earnings under Canada Pension Plan	2.75% per year (CPI + 0.75%)
Increase in Income Tax Act Maximum Pension	\$3,420.00 in 2022; increased after 2022 at 2.75% per year up to a hard-dollar cap of \$3,460.21 in 2022 which increases at 0.92% per year after 2022
Increase in Salaries	3.00% per year for 2 years; 4.00% per year thereafter (CPI + 2.00% ¹)
Increase in Salaries (Disabled)	2.00% per year (CPI + 0.00%)
Interest Rate Used to Discount Liabilities	5.50% per year (CPI + 3.50%)
Interest Rate Used to Calculate 50% Rule	0.70% per year for 10 years ² ; 1.00% per year thereafter
Interest Rate for Crediting on Required Member Contributions	2.00% per year
Loading For Administrative Expenses	Explicit assumption for \$1,606,000 in 2022 added to current service cost
Provision for Adverse Deviation	9.00% of non-indexed liabilities and normal cost

¹ Reflects PTR/grid steps/merit

² 1.00% per year for 10 years: 1.50% per year thereafter for 75% indexed benefits

Preliminary Actuarial Assumptions For Going Concern Valuation— Demographic Assumptions – January 1, 2022

Demographic Assumptions	January 1, 2022 Valuation	
Mortality Rates	2014 Canadian Pensioners Public Sector Mortality Table (“CPM2014 Public”) with Improvements Under Scale MI-2017	
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Preliminary Actuarial Assumptions For Going Concern Valuation— Demographic Assumptions – January 1, 2022

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	60	0.2
	65	0.0

Actuarial Assumptions For Solvency and Wind-Up Valuations

Assumptions	January 1, 2021 (Last Filed Valuation)	January 1, 2022
Retirement Ages	50% at unreduced age and 50% at age that results in highest commuted value	No change
Mortality Rates	CPM2014 Combined with Improvements Under Scale CPM-B	No change
Interest Rates— Solvency Valuation (Per Year)		
Active Members Age 55 and Over, Pensioners and Deferred Pensioners ¹	2.50%	2.86% ³
Active Members Under Age 55 ²	1.20% for 10 years; 2.80% thereafter	2.10% for 10 years; 3.10% thereafter
Interest Rates— Wind-Up Valuation (Per Year)		
Active Members Age 55 and Over, Pensioners and Deferred Pensioners ¹	-0.78% (100% indexed) 0.04% (75% indexed)	-0.64% (100% indexed) ³ 0.24% (75% indexed) ³
Active Members Under Age 55 ²	0.60% for 10 years; 0.80% thereafter (100% indexed) 0.80% for 10 years; 1.30% thereafter (75% indexed)	0.70% for 10 years; 1.00% thereafter (100% indexed) 1.00% for 10 years; 1.50% thereafter (75% indexed)

¹ Settled through annuity purchase

² Settled through commuted value

³ Depends on release of final guidance from Canadian Institute of Actuaries for January 1, 2022 actuarial valuations

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