OREGON PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM

Preliminary Changes to Actuarial Methods and Assumptions

November, 2021

Kevin Olineck, Director

Agenda

- Statutory Requirement to Report
- Board Guiding Principles
- Economic Assumptions (non-investment)
- Assumed Rate of Return
- Rate Collaring
- Amortization Periods
- Actuarial Impact
- Appendix – Detailed Changes

Statutory Requirement to Report

This report is provided in accordance with Section 57 of Senate Bill 1049 (2019) (Chapter 355, 2019 Oregon Laws), which requires PERS to submit this report to the Joint Interim Committee on Ways and Means at least 30 days prior to the final adoption of actuarial methods and assumptions.

Preliminary adoption took place at the July 23, 2021 PERS Board meeting.

Report submitted to Joint Interim Committee on Ways and Means on August 18, 2021.

Final adoption took place at the October 1, 2021 PERS Board meeting.

Board Guiding Principles

The PERS Board attempts, when adopting actuarial methods and assumptions, to balance the following Board's guiding principles within its Funding Policy:

- Transparent
- Predictable and Stable Rates
- Protect Funded Status
- Equitable Across Generations
- Actuarially Sound
- GASB Compliant

Economic Assumptions

	12/31/2019 Valuation Assumptions	12/31/2020 Valuation Proposed* Assumptions
Inflation	2.5%	2.4% or lower
Real Wage Growth	1.0%	1.0%
System Payroll Growth	3.5%	3.4% or lower
Administrative Expenses	$40.5 million	$59 million

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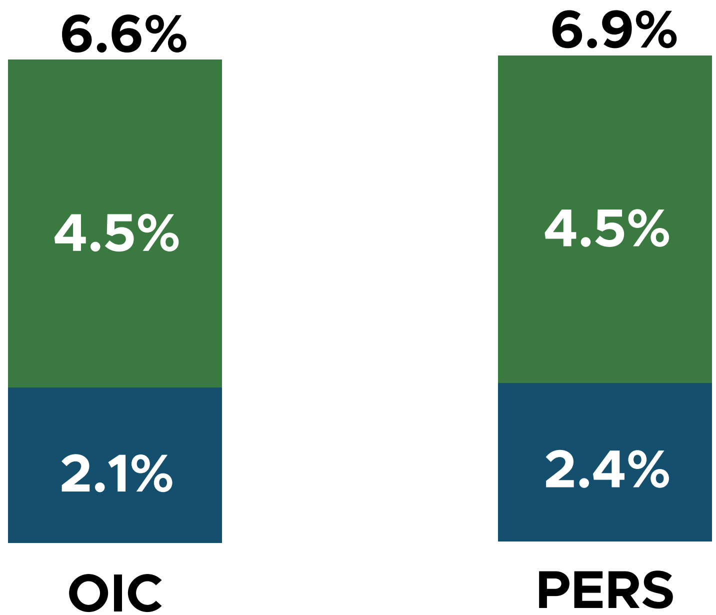
Assumed Rate of Return

Building Block Approach (real return + inflation)



The OIC, working with their consultants, estimates a long-term average future nominal return of 6.6% under the proposed allocation over the next 20 years

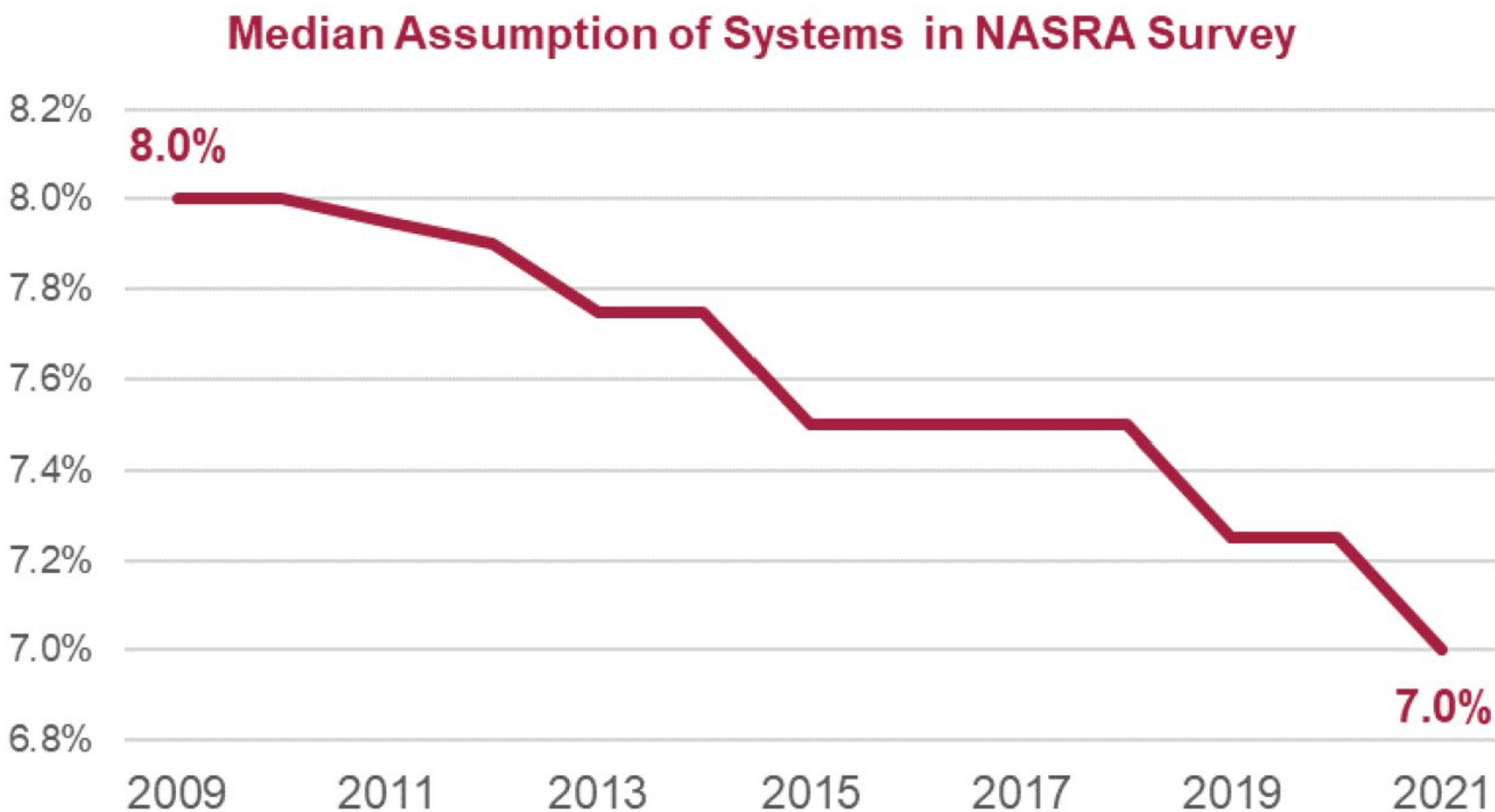
The 6.6% OIC outlook has two building blocks: 4.5% real return and 2.1% inflation

Social Security's intermediate assumptions outlook for long-term inflation is 2.4%

The PERS Board combined building blocks: a 4.5% real return outlook plus a 2.4% inflation outlook which results in a 6.9% outlook for nominal return

Assumed Rate of Return

Comparison to other Plans

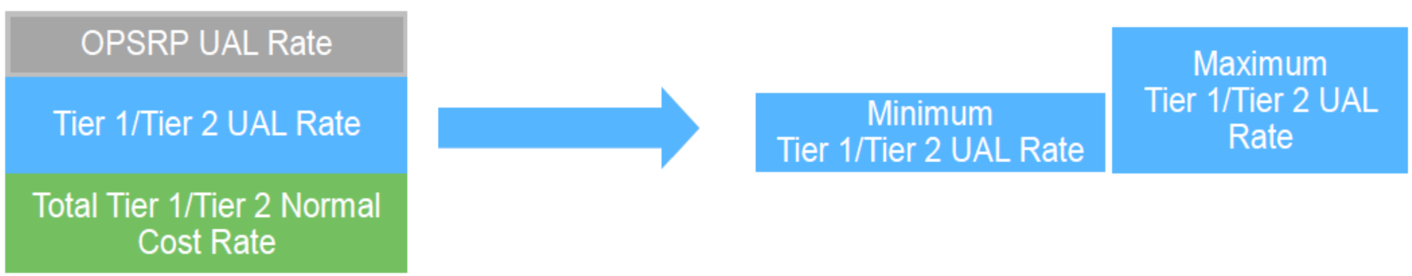


Source: NASRA (May 2021)

Rate Collar Change

- Rate collar focuses on the biennium-to-biennium change in the UAL Rate component
  - Normal Cost Rate component is always paid in full and is not subject to a rate collar limitation
- The maximum biennium to biennium change in UAL Rate permitted by the rate collar is:
  - **SLGRP and School District Pools Tier 1/Tier 2 UAL Rates**: 3% of pay
  - **OPSRP UAL rate**: 1% of pay
  - **Tier 1/Tier 2 UAL Rates of Independent Employers**: greater of 4% of pay or 1/3rd of the difference between the collared and uncollared Tier 1/Tier 2 UAL Rate~~s~~ at the last rate-setting valuation
- UAL Rate is not allowed to decrease at all unless funded status excluding side accounts is at least 87%, and a full collar width decrease is not allowed unless funded status is at least 90%

Illustration of Rate Collar for Tier 1/Tier 2 UAL Rate



Pension Rate in Current Biennium

Potential Pension Rate in Next Biennium

Amortization Periods

PERS Board uses a level percent of pay with layered fixed periods methodology to amortize Unfunded Actuarial Liabilities.

Tier 1 &Tier 2:

- Re-amortized over 22 years as of December 31, 2019 per SB 1049
- Reverted back to 20 years as per ongoing Board policy

OPSRP:

- Continue with 16 year amortization period

RHIA/RHIPA:

- Continue with 10 Year amortization period. When funded status is over 100% at a rate-setting valuation, amortize the actuarial surplus over Tier 1/Tier 2 payroll using a rolling 20-year amortization basis. Allow the resulting negative UAL Rate to offset the normal cost for the program, but not below 0.0%.

Actuarial Impact – Liabilities

12/31/2020 Accrued Liability	Assumed Return 7.2%	Assumed Return 6.9%
Current assumptions	$91.8 B	
Salary, Sick Leave, Vacation	$0.4 B	
Other Demographic Assumptions	$0.1 B	
Revised assumptions (before assumed return)	$92.4 B	$92.4 B
Assumed return	$0.0 B	$2.9 B
Revised assumptions	$92.4 B	$95.3 B

Senate Bill 111 (2021) increased spousal death benefit for members who die while retirement eligible and either actively employed or recently terminated. This increased death benefit provided led to $0.1 -$0.2 billion of the $0.4 billion increase shown above. **Numbers shown may not add due to rounding*

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Actuarial Impact – Contribution Rates

	Assumed Return 7.2%		Assumed Return 6.9%	
	UAL	Normal Cost	UAL	Normal Cost
Salary/sick lv/vaca	0.2%	0.4%	0.2%	0.4%
Other assumptions	(0.1%)	0.0%	(0.1%)	0.0%
Assumed return	0.0%	0.0%	1.4%	0.8%
Total	**0.1%**	**0.4%**	**1.5%**	**1.2%**
Combined Total	**0.4%**		**2.7%**	

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Thank You

Appendix

Economic Assumptions and Statements from Milliman, PERS Consulting Actuary:

- Reduce the long-term inflation assumption from the current 2.50% to **2.40% or lower**.
- Reduce the system payroll growth assumption from the current 3.50% to **3.40% or lower**, paralleling the change in inflation.
- Milliman Opinion Statement: In our professional opinion, the current investment return assumption of 7.20% per year should be lowered **at least 0.20%**, based on an analysis of PERS's current target asset allocation using several capital market outlook models. In addition, we recommend the PERS Board consider reducing the assumption further to more closely reflect the current range of outlooks. The median annualized geometric return for the 20-year outlook developed by the Oregon State Treasury staff in collaboration with Oregon Investment Council advisors Meketa and Aon was **6.6%**, with an underlying inflation assumption of 2.1%. Using the implied 4.5% real return from that model along with a 2.40% inflation assumption based on Social Security's outlook would produce an expected return of **6.9%**. The median annualized geometric return for a 20-year time horizon based on Milliman's December 31, 2020 capital market outlook real return and a 2.40% underlying inflation assumption was 6.27%.
- Update the assumption for future administrative expenses and use a combined assumption amount for the Tier 1/Tier 2 and OPSRP programs.
- Update the RHIPA health cost trend (i.e., healthcare cost inflation) assumption.

Appendix

Demographic Assumptions from Milliman, PERS Consulting Actuary

- Adjust the base mortality table assumption for School District males and make a routine update to the mortality improvement scale for all groups, based on 60-year unisex average Social Security experience.
- Adjust retirement rates for certain member categories and service bands to more closely align with recent and expected future experience and increase the age of 100% likelihood of assumed retirement by five years for all groups; reduce the percentage of future retirees assumed to elect a partial lump sum; increase the percentage of members assumed to purchase credited service at retirement.
- Increase the merit component of the individual member salary increase assumption for all member categories based on observations of the last eight years of experience. The individual member salary increase assumption consists of the sum of inflation, real wage growth, and merit components, with the latter varying by member.
- Update pre-retirement termination of employment assumptions for one member category.
- Lower assumed rates of ordinary (non-duty) disability and general service duty disability incidence.
- Increase the Tier 1 unused vacation cash out assumption for three member categories.
- Increase the Tier 1/Tier 2 unused sick leave assumption for all member categories to reflect recently observed experience and to more heavily weight experience from higher liability retirees.
- Decrease the healthy and disabled likelihood of program participation assumptions for the RHIA retiree healthcare program.
- Decrease the RHIPA likelihood of program participation assumption for most service bands.

Appendix

Actuarial Methods as Recommended by Milliman, PERS Consulting Actuary

- Revise the parameters of the rate collar methodology to only restrict changes in the Unfunded Actuarial Liability (UAL) Rate contribution rate component and to narrow the width of allowable changes. Collar width will vary depending on the rate pool. No decrease in UAL Rate will be allowed unless a funded status threshold is met, using funded status excluding side accounts.
- Introduce a methodology for UAL Rate amortization in the RHIA or RHIPA programs when one or both are in an actuarial surplus position (over 100% funded). The methodology will create a UAL Rate credit that could partially or fully offset the Normal Cost Rate if the program is in actuarial surplus.
- Update the assumed system-average level of member redirect contributions to Tier 1/Tier 2 and OPSRP reflecting the projected effects of HB 2906, which was passed in June 2021.