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December 2021

State Judiciary/2099
Oregon Public Employees Retirement System

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2020. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2023 through June 30, 2025 will be calculated in the December 31, 2021 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2020, including Senate Bill 111 and House Bill 2906 which were enacted in June 2021. The full development of the valuation results for the Retiree Health Insurance Account (RHIA) and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. The State Judiciary does not participate in the OPSRP or IAP Plans.

If you have any questions about this report, please contact actuarial.services@pers.oregon.gov.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/Financials/Actuarial-Financial-Information.aspx.

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State Judiciary/2099

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations) and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in October 2021.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2023 to June 2025 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendices of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the Code of Professional Conduct and Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States published by the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT DECEMBER 31, 2020

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

State Judiciary -- #2099

December 2021

CONTENTS

Executive Summary

Milliman has prepared this report for State Judiciary to:

- Provide summary December 31, 2020 valuation results for the Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA),
- Provide advisory information calculated as of December 31, 2020 on estimated employer-specific contribution rates effective July 1, 2023 through June 30, 2025, and
- Provide employer-specific valuation results on assets and liabilities as of December 31, 2020.

This report summarizes the valuation results for the RHIA and RHIPA. The full development of these results can be found in the December 31, 2020 system-wide actuarial valuation report. This report develops employer-specific pension rates and applies the results from the system-wide valuation to State Judiciary. In the system-wide actuarial valuation report, pension valuation results for the State Judiciary are included in the Tier 1/Tier 2 valuation results for Independent Employers.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2020.

Advisory 2023 - 2025 Employer Rates Calculated as of December 31, 2020 for State Judiciary

Pension	
Employer normal cost rate	20.04%
UAL rate [1]	9.46%
Employer pension contribution rate	29.50%
Member pension contribution rate	7.00%
Total pension contribution rate	**36.50%**
Retiree Healthcare	
Normal cost rate	0.14%
UAL rate	(0.14%)
Total retiree healthcare rate	**0.00%**
Total contribution rate	**36.50%**

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 UAL Contribution Rates for the July 2023 to June 2025 Biennium

The rate collar limits changes in the UAL Rate for the rate pool, but does not limit changes in rates for individual employers related to side accounts and does not limit the change in the normal cost rate. The table below shows the possible minimum and maximum UAL Rates first effective as of July 1, 2023. The collar width, which in general is the amount the UAL Rate could increase or decrease from the current UAL Rate being paid, is 4% of pay or (if greater) one-third of the difference between the collared and uncollared UAL rates at the last rate-setting valuation. However, the UAL Rate is only allowed to decrease by the full collar width if the employer's funded status (excluding side accounts) is greater than or equal to 90%. The UAL Rate is not allowed to decrease at all if funded status is below 87%, and the allowable decrease is phased in for funded status levels from 87% to 90%.

For comparison, the employer's funded status as of December 31, 2020 is 74%.

2021-2023 Biennium	2023-2025 Biennium	
	9.32%	**<<<No higher than this**
4.77%	4.77%	**<<<No lower than this if December 31, 2021 funded status is 87% or lower**
	0.22%	**<<<No lower than this if December 31, 2021 funded status is 90% or higher**

Normal Cost Rates

As seen on the prior page, the other large rate component is the normal cost rate. The normal cost rate represents the projected cost of benefits earned by current year service.

The normal cost rate in any biennium is driven by the active member demographics of the experience pooling groups in which the employer's members participate. The active member census as of December 31, 2021 will be used to calculate the adopted 2023 - 2025 biennium normal cost rate and may vary significantly from the active member census used in this advisory valuation.

Each biennium's normal cost rate is also sensitive to the investment return assumption, or assumed rate, adopted by the PERS Board for the valuation. The lower the assumed rate, the higher the normal cost rate. The 2023 - 2025 biennium's normal cost rate will be based on a 6.90% assumed rate adopted by the PERS Board during 2021, which is a decrease from the 7.20% assumed rate used in calculating the 2021 - 2023 normal cost rate. To illustrate the sensitivity of the assumption, the decrease in the assumed rate increased system-average normal cost rates by approximately 1.15% of payroll for Tier 1/Tier 2.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68 (GASB 68), which replaced Statement No. 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2015	$227,733,468	$269,239,976	$41,506,508	85%	$23,602,940	176%
12/31/2016	230,602,015	285,616,344	55,014,329	81%	23,539,629	234%
12/31/2017	262,639,343	304,198,922	41,559,579	86%	23,894,906	174%
12/31/2018	242,406,445	317,657,820	75,251,374	76%	25,010,239	301%
12/31/2019	255,321,589	327,246,147	71,924,558	78%	25,861,231	278%
12/31/2020	261,773,802	351,666,937	89,893,135	74%	28,438,338	316%

Executive Summary

Accounting Information (continued)

Retiree Healthcare

In June 2015, the GASB issued Statement No. 75 (GASB 75), which replaces Statement No. 45 and governs employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting the Retiree Health Insurance Account (RHIA) and Retiree Health Insurance Premium Account (RHIPA) under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods, or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

State Judiciary

	Actuarial Valuation as of	
	December 31, 2020	**December 31, 2019**
Total normal cost	$7,689,196	$6,892,392
Valuation payroll	28,438,338	25,861,231
Total normal cost rate (includes member contributions)	27.04%	26.65%
Actuarial accrued liability	$351,666,937	$327,246,147
Actuarial asset value	261,773,802	255,321,589
Unfunded actuarial accrued liability	89,893,135	71,924,558
Funded status	74%	78%
Combined valuation payroll	$28,438,338	$25,861,231
UAL as a percentage of payroll	316%	278%
UAL rate (includes Multnomah Fire District #10)	9.46%	4.91%
Allocated pooled RHIA UAL	(653,184)	(538,695)
Allocated pooled RHIPA UAL	(119,581)	55,232
Active members[1]	186	188
Dormant members	19	16
Retirees and beneficiaries	277	272

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2020**	**December 31, 2019**
Normal cost	$1.7	$1.9
Tier 1 / Tier 2 valuation payroll	3,687.3	3,873.9
Normal cost rate	0.05%	0.05%
Actuarial accrued liability	$383.6	$403.9
Actuarial asset value	660.2	644.1
Unfunded actuarial accrued liability	(276.6)	(240.3)
Funded status	172%	159%
Combined valuation payroll	$12,042.7	$11,533.7
UAL as a percentage of payroll	(2%)	(2%)
UAL rate	0.00%	0.00%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2020**	**December 31, 2019**
Normal cost	$1.0	$1.2
Tier 1 / Tier 2 valuation payroll	1,091.8	1,120.6
Normal cost rate	0.09%	0.11%
Actuarial accrued liability	$48.0	$59.3
Actuarial asset value	63.6	51.9
Unfunded actuarial accrued liability	(15.6)	7.4
Funded status	133%	87%
Combined valuation payroll	$3,712.6	$3,479.8
UAL as a percentage of payroll	0%	0%
UAL rate	(0.09%)	0.17%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Pension Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Pension Assets

	December 31, 2020	December 31, 2019
1. Member reserves	$28,943,276	$29,823,214
2. Employer reserves	148,898,816	135,922,765
3. Benefits in force reserve	83,931,710	89,575,609
4. Total market value of assets ***(1. + 2. + 3.)***	**$261,773,802**	**$255,321,589**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Pension Assets

		December 31, 2019 to December 31, 2020
1.	Market value of assets at beginning of year	$255,321,589
2.	Regular employer and member contributions	8,583,994
3.	Benefit payments and expenses	(21,108,862)
4.	Adjustments [1]	947,329
5.	Interest credited	18,029,752
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$261,773,802**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Pension Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits. Amounts shown below include assumed administrative expenses, which are allocated pro-rata based on normal cost.

Summary of Normal Cost

	December 31, 2020	December 31, 2019
Total Normal Cost	$7,689,196	$6,892,392

Change in Total Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2020.

	Before Changes	After Changes	Net Change
Total Normal Cost	$6,772,361	$7,689,196	$916,835

Pension Valuation Results

Liabilities (continued)

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

	December 31, 2020	December 31, 2019
Active Members	$90,000,382	$81,057,367
Dormant Members	7,462,569	5,060,644
Retired Members and Beneficiaries	254,203,986	241,128,136
Total Actuarial Accrued Liability	**$351,666,937**	**$327,246,147**

Change in Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2020.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$342,048,974	$351,666,937	$9,617,963

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2020	December 31, 2019
1. Actuarial accrued liability	$351,666,937	$327,246,147
2. Actuarial value of assets	261,773,802	255,321,589
3. Unfunded accrued liability *(1. – 2.)*	89,893,135	71,924,558
4. Funded percentage *(2. ÷ 1.)*	74%	78%
5. Combined valuation payroll	$28,438,338	$25,861,231
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	316%	278%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, the PERS Board established a policy to amortize the Tier 1/Tier 2 UAL over a 20-year period, with each subsequent odd-year valuation establishing a new 20-year closed-period amortization schedule for new Tier 1/Tier 2 UAL amounts based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. As part of Senate Bill 1049, passed in 2019, the Legislature directed the PERS Board to enact a one-time re-amortization of Tier 1/Tier 2 UAL over 22 years. This means that, effective with the December 31, 2019 rate-setting valuation, the entire unamortized Tier 1/Tier 2 UAL for each rate pool and independent employer was re-amortized over a 22-year period as a level percentage of projected future payroll. For the December 31, 2021 and subsequent odd-year valuations, the PERS Board again has authority to set the amortization schedule. In the 2020 Experience Study, the PERS Board confirmed the policy of 20-year closed-period amortization schedules for Tier 1/Tier 2 UAL going forward. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2021, with the estimate based on experience through the end of 2020.

Amortization Base	UAL December 31, 2019	Payment	Interest	UAL December 31, 2020	Next Year's Payment
December 31, 2019	$71,924,558	$4,761,324	$4,995,838	$72,159,072	$4,843,216
December 31, 2020	N/A	N/A	N/A	$17,734,063	$1,231,532
Total				**$89,893,135**	**$6,074,748**

Pension Valuation Results

Unfunded Accrued Liability (UAL) (continued)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2019	$327,246,147
b. Total normal cost at December 31, 2019 (excluding assumed expenses)	6,504,892
c. Benefit payments during 2020	(20,912,820)
d. Interest at 7.20% to December 31, 2020	23,043,037
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	335,881,256
f. Change in actuarial accrued liability due to assumption, method, and plan changes	9,617,963
g. Expected actuarial accrued liability at December 31, 2020 *(e. + f.)*	345,499,219
2. Actuarial accrued liability at December 31, 2020	351,666,937
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(6,167,718)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2019	255,321,589
b. Contributions for 2020[1]	8,583,994
c. Benefit payments and expenses during 2020	(21,108,862)
d. Interest at 7.20% to December 31, 2020	17,932,259
e. Expected actuarial value of assets at December 31, 2020 *(a. + b. + c. + d.)*	260,728,980
5. Actuarial value of assets at December 31, 2020	261,773,802
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,044,821
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($5,122,897)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2019 is provided below.

1. UAL at December 31, 2019	**$71,924,558**
2. Expected increase	3,227,717
3. Liability (gain)/loss	6,167,718
4. Asset (gain)/loss	(1,044,821)
5. Change due to changes in assumptions, methods, and plan provisions	9,617,963
6. UAL at December 31, 2020 ***(1. + 2. + 3. + 4. + 5.)***	**$89,893,135**

[1] *Excludes contributions for Multnomah Fire District.*

Pension Valuation Results

Contribution Rate Development

Normal Cost Rate

For State Judiciary, the total normal cost calculated previously is divided by projected payroll to determine a total normal cost rate. The member contribution rate is subtracted from the total normal cost rate to determine the employer normal cost rate. The table below shows the development of the rate.

Development of Normal Cost Rate

	December 31, 2020			December 31, 2019		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**NormalC ost Rate**
Total normal cost	$7,689,196	$28,438,338	27.04%	$6,892,392	$25,861,231	26.65%
Member contribution rate			(7.00%)			(7.00%)
Employer normal cost rate			20.04%			19.65%

Pension Valuation Results

Contribution Rate Development (continued)

Development of UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2020	December 31, 2019
1. Total UAL	$89,893,135	$71,924,558
2. Next year's UAL payment	6,074,748	4,761,324
3. Combined valuation payroll	28,438,338	25,861,231
4. UAL rate *(2. ÷ 3)*	21.36%	18.41%

Pension Valuation Results

Contribution Rate Development (continued)

Pension Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate.

	Advisory July 1, 2023 Rates calculated as of December 31, 2020	July 1, 2021 Rates calculated as of December 31, 2019
1. Employer pension contribution rates		
a. Employer Normal Cost Rate	20.04%	19.65%
b. UAL rate	21.36%	18.41%
c. Multnomah Fire District #10 rate	0.14%	0.14%
d. Total employer pension rate *(a. + b. + c.)*	41.54%	38.20%
2. Member pension contribution rate	7.00%	7.00%
3. Total pension contribution rate	48.54%	45.20%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Decrease Restrictions

The UAL Rate for an employer is confined to a collared range based on the prior biennium's collared UAL Rate. For an independent employer, the collar width for the Tier 1/Tier 2 UAL Rate is the greater of 4% of payroll or one-third of the difference between the collared and uncollared UAL Rate at the prior rate-setting valuation. The maximum Tier 1/Tier 2 UAL Rate will always be at least 0.00% of payroll if the employer's funded status (excluding side accounts) is less than 100%. The PERS Board adopted restrictions on when the UAL Rate may decrease: the UAL Rate may not decrease if the funded status (excluding side accounts) is 87% or lower, while it may decrease by the full collar width if funded status is 90% or greater. The allowable decrease is phased in from 87% to 90% funded.

The table below shows the current Tier 1/Tier 2 UAL Rate for the period from July 1, 2021 through June 30, 2023, develops the maximum and minimum UAL Rates effective July 1, 2023 based on the collar, and determines the advisory collared Tier 1/Tier 2 UAL Rate.

1. Current Tier 1/Tier 2 UAL Rate	4.77%
2. Size of rate collar	
a. Impact of rate collar, prior rate-setting valuation	(13.64%)
b. Size of rate collar *(maximum of 4% or absolute value of [a. / 3])*	4.55%
c. Funded percentage	74%
d. Permissible decrease to UAL Rate *(If c. > 90%, b.; if c. < 87%, 0.00%; otherwise, graded between those rates)*	0.00%
3. Advisory July 1, 2023 minimum Tier 1/Tier 2 UAL Rate (1. – 2.d.)	4.77%
4. Advisory July 1, 2023 maximum Tier 1/Tier 2 UAL Rate (1. + 2.b., but not less *than 0% if 2.c. < 100%)*	9.32%
5. Advisory July 1, 2023 Tier 1/Tier 2 UAL Rate, before collar	21.36%
6. Net adjustment due to rate collar *(3. – 5., but not < 0, or 4. – 5., but not > 0)*	(12.04%)
7. Advisory July 1, 2023 Tier 1/Tier 2 UAL Rate, after collar *(5. + 6.)*	9.32%

Pension Valuation Results

Contribution Rate Development (continued)

Pension Contribution Rate Summary (Post Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar.

	Advisory July 1, 2023 Rates calculated as of December 31, 2020	July 1, 2021 Rates calculated as of December 31, 2019
1. Employer pension contribution rates		
a. Employer normal cost rate	20.04%	19.65%
b. UAL rate	9.32%	4.77%
c. Multnomah FD #10 rate	0.14%	0.14%
d. Total employer pension rate *(a. + b. + c., minimum 0.00%)*	29.50%	24.56%
2. Member pension contribution rate	7.00%	7.00%
3. Total pension contribution rate	36.50%	31.56%

Data

Demographic Information

State Judiciary Member Census

	December 31, 2020	December 31, 2019
Active Members[1]	186	188
Active Members with previous service segments with the employer	1	1
Dormant Members	19	16
Retired Members and Beneficiaries	277	272
Grand Total Number of Members	**483**	**477**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

State Judiciary Active Members as of December 31, 2020

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39	2									**2**
40-44	12	1	1	1						**15**
45-49	13	3		3	3					**22**
50-54	15	13	11	3	5	4				**51**
55-59	10	5	5	6	4	4				**34**
60-64	3	3	8	4	4	2	5			**29**
65-69	2	1	3	6	3	4	2	1	1	**23**
70-74	1	1	3		1	1	3			**10**
75+										
Total	**58**	**27**	**31**	**23**	**20**	**15**	**10**	**1**	**1**	**186**

Distribution of State Judiciary Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	2	1,037
45-49	1	5,923
50-54	3	2,723
55-59	2	2,945
60-64	6	4,080
65-69	3	1,260
70-74	1	356
75+	1	9,496
Total	19	3,167

Distribution of State Judiciary Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	3,386
60-64	14	7,285
65-69	47	6,855
70-74	82	7,397
75-79	56	7,020
80-84	31	6,080
85-89	23	6,112
90-94	18	5,683
95-99	4	3,747
100+		
Total	277	6,776

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2020 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10-year period. If a Retiree Healthcare program is over 100% funded the actuarial surplus is amortized over a rolling 20-year period over Tier 1/Tier 2 payroll. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which set actuarially determined contribution rates for the 2021-2023 biennium. Future Tier 1/Tier 2 gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to OPSRP and to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The UAL Rate contributon rate component is confined to a collared range based on the prior biennium's collared UAL Rate and a defined collar width. The UAL Rate is not allowed to decrease if the funded status of the rate pool or employer is 87% or lower. The rate collar does not limit the change in the normal cost rate or changes for individual employers related to side accounts.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Investment return	6.90% compounded annually on system assets.
Interest crediting	6.90% compounded annually on members' regular account balances. 6.90% compounded annually on members' variable account balances.
Inflation	2.40% per year.
Payroll Growth	3.40% per year.
Healthcare cost trend	Ranging from 5.9% in 2021 to 3.9% in 2074.
Administrative Expenses	$59 million per year is added to the total system normal cost and allocated between Tier 1/Tier 2 and OPSRP based on valuation payroll.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2019 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Allocation Procedures

- The rate collar methodology was revised to only restrict changes in the UAL Rate component and to narrow the width of allowable changes.
- The UAL Rate amortization methodologies for the RHIA and RHIPA programs were changed to allow a limited rate offset when a program is in an actuarial surplus position (over 100% funded).
- The assumed system-average level of member redirect contributions to Tier 1/Tier 2 and OPSRP was updated to reflect the projected effects of House Bill 2906.

Changes in Economic Assumptions

- The long-term inflation assumption was lowered from 2.50% to 2.40% and the system payroll growth assumption was lowered from 3.50% to 3.40%.
- The assumed average annual long-term investment return was lowered from 7.20% to 6.90%.
- Interest crediting on regular and variable member accounts was also lowered to 6.90%.
- Assumed administrative expenses were updated and changed to a combined assumption for both Tier 1/Tier 2 and OPSRP.

Changes in Demographic Assumptions

- The base mortality assumption was changed for School District males and an updated future mortality improvement projection scale was adopted for all groups.
- Termination, disability and retirement rates were updated for some groups to more closely match observed and anticipated future experience.
- Assumptions for merit increases, unused sick leave, and vacation pay were updated.
- The assumed healthcare cost trend rates for the RHIPA program as well as the participation assumptions for both RHIA and RHIPA were updated.

A complete summary of all assumptions used as part of the December 31, 2020 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report. The following changes made since the prior valuation were reflected in the December 31, 2020 actuarial valuation:

- Senate Bill 111, signed on June 1, 2021, increased the death benefit payable to a surviving spouse when a retirement-eligible member dies. Previously, the benefit was based on 50% of the actuarial equivalent value of the member's retirement benefit, but this was increased to 100% of the actuarial equivalent value.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement, rates of investment earnings, and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability/(Surplus)

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability/(Surplus)

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A contribution rate setting methodology that defines the maximum biennium-to-biennium change in the UAL contribution rate for a given experience-sharing pool.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions. The standard replaced GASB 27 for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions. The standard replaced GASB Statement 45 for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rates.

Transition Liability/(Surplus)

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool. The initial balance of liability or surplus is calculated at the time an employer joins the pool. That balance is then amortized over time via employer contribution rate charges (for a liability) or rate offsets (for a surplus).

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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