UNFUNDED ACTUARIAL LIABILITY RESOLUTION PROGRAM

Guide to Understanding Your Valuation

Independent employers

The purpose of this guide, created as part of PERS' Unfunded Actuarial Liability (UAL) Resolution Program, is to help employers identify and understand the most important information in your actuarial valuation.

OREGON PERS
PUBLIC EMPLOYEES RETIREMENT SYSTEM

Revised: April 7, 2022

Disclaimer

This guide is for employer educational purposes only and is not intended to provide legal or financial advice. If there is any conflict between this guide and federal law, Oregon law, or administrative rules, the laws and rules shall prevail.

In addition, as this guide aims to explain PERS employer rate information in as simple terms as possible, some actuarial information is simplified and may not apply to all situations or employers.

Assistance

If you have any questions or concerns about your specific scenario, email Actuarial.Services@pers.state.or.us.

About this guide

This guide includes snapshots of actual pages from a sample employer valuation created by actuaries at Milliman. Information on the page is called out with letters (e.g., A) that correspond to explanations on the facing page. To keep pages together, the document is laid out in spreads (i.e., two pages displayed side by side). Occasionally this results in blank spaces.

Terms that are cherry-red colored are defined in the glossary at the end of this guide. You may also hover over the term to see its definition.

Links to pages on the PERS website are included throughout to enable you to dive deeper into certain topics.

This guide is one of a series. To see the other guides, go to the Employer Rate Relief Programs section of the PERS website.

GUIDE TO UNDERSTANDING YOUR VALUATION

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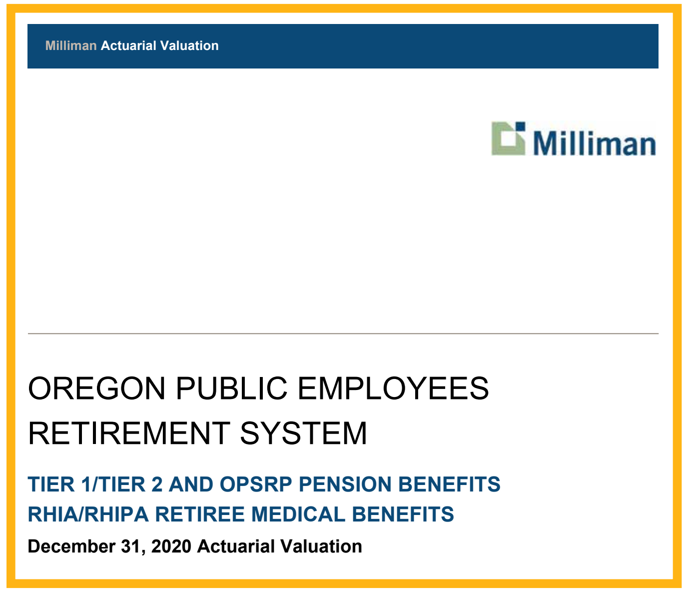
Introduction

Every even-numbered year, PERS publishes a system-wide valuation report in addition to **actuarial valuation** reports for every PERS-participating employer. These reports are calculated and created by PERS' consulting **actuary** based on information gathered the previous (odd) year. You can download your actuarial valuation report from the PERS website.



Milliman Actuarial Valuation

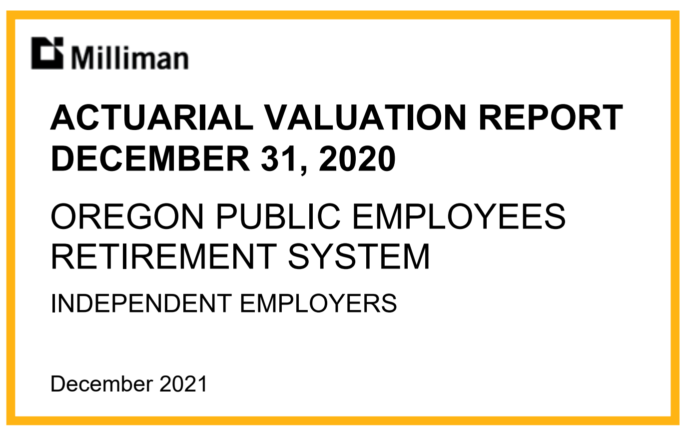
Milliman

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

TIER 1/TIER 2 AND OPSRP PENSION BENEFITS
RHIA/RHIPA RETIREE MEDICAL BENEFITS

December 31, 2020 Actuarial Valuation

Image 1: System-wide valuation report



Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2020

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

December 2021

Image 2: Employer valuation report

The system-wide valuation report overviews the financial health of the PERS system and presents actuarial estimates of the system-wide liabilities and expenses of PERS, including pension benefits and retiree medical benefits.

It also provides information on system-wide average employer contribution rates and employer rates by pool.

Employer valuation reports are informational supplements to the system-wide report. They provide details on employers' contribution rates and the data used to calculate the rates.

Valuation reports are grouped by pool:

1. State and Local Government Rate Pool employers.
2. School District Rate Pool employers.
3. Independent employers.

To learn more

If you have questions about any of the information in this guide or about your agency's particular situation, contact Actuarial Services.

Roles and responsibilities

The Oregon Legislature sets PERS' benefit design

The Oregon Legislature is the "plan sponsor" for PERS, the system, and has the sole authority to determine the benefit structure for public employees.

When making legislative changes to PERS, legislators look to their constituents, lobbyists, and other stakeholders to provide them with information about upcoming bills during a legislative session.

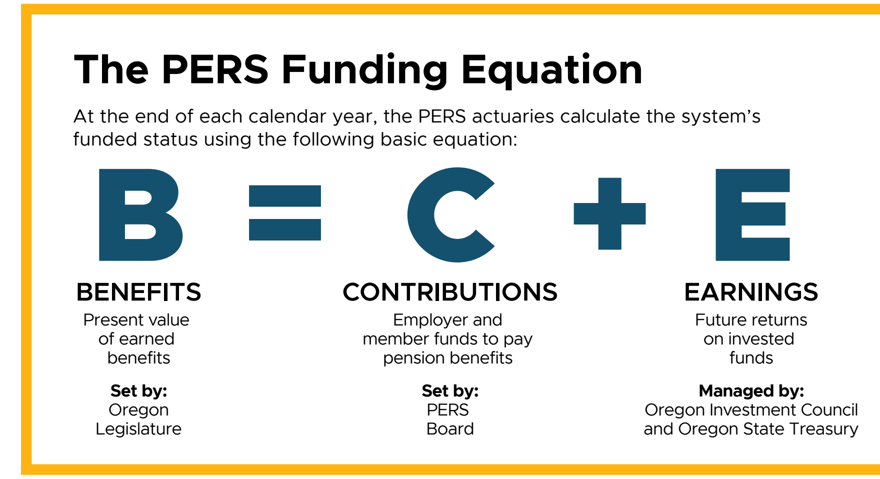


Image 3: How PERS is funded

To read about recent legislation affecting PERS, visit the PERS Employers Senate Bill 1049 webpage.

PERS administers the system

PERS, the agency, administers the retirement system (aka the plan) for employers in accordance with legislation handed down from the Oregon Legislature. In doing so, PERS also complies with state and federal laws.

PERS collects employer contributions, which are deposited into the PERS Trust, and sends retirees their pension and IAP checks. PERS provides information (through oregon.gov/pers) and web-based tools (i.e., OMS and EDX) that enable members and employers to manage their plans.

Oregon State Treasury and Oregon Investment Council invest the money

The Oregon State Treasury and Oregon Investment Council invest the money in the Oregon PERS Fund to get the greatest return without incurring excessive risk. To learn more about how the PERS Fund is invested, go to the PERS Fund/Investments webpage.

Employers fund the system

Employers pay for the retirement benefits of their present and future retirees. To understand how your contribution rate is calculated, see the *Guide to Understanding Your Rate*.

Employer Contribution Rates

Independent employers valuation

Your Independent employer actuarial valuation is a document containing about 30 pages; however, most of the essential information you need is on 8 to 10 pages, depending on your individual rates. This section highlights the most essential pages of this valuation to ensure you are fully optimizing available data for budgeting and forecasting purposes.

You can download your actuarial valuation report from the PERS website.

Key sections in the valuation

To pull out the most useful information from your valuation report, focus on the sections called out in the valuation table of contents below. The circled letters correspond to sections of the sample page shown at right.

A	**Executive Summary:** This section provides all of your basic information: your employer rates, your funded status, and the data that was used to determine most of these rates.
B	**Principal Valuation Results and employer-specific calculations:** These pages give details on how your employer-specific rate was calculated.
C	**Data:** These pages give specific information about your members through the previous calendar year. We won't go over these pages in detail in this guide.
D	**Brief Summary sections:** These sections include a brief summary of the changes to actuarial methods and/or assumptions and any plan changes that may have affected your rate.

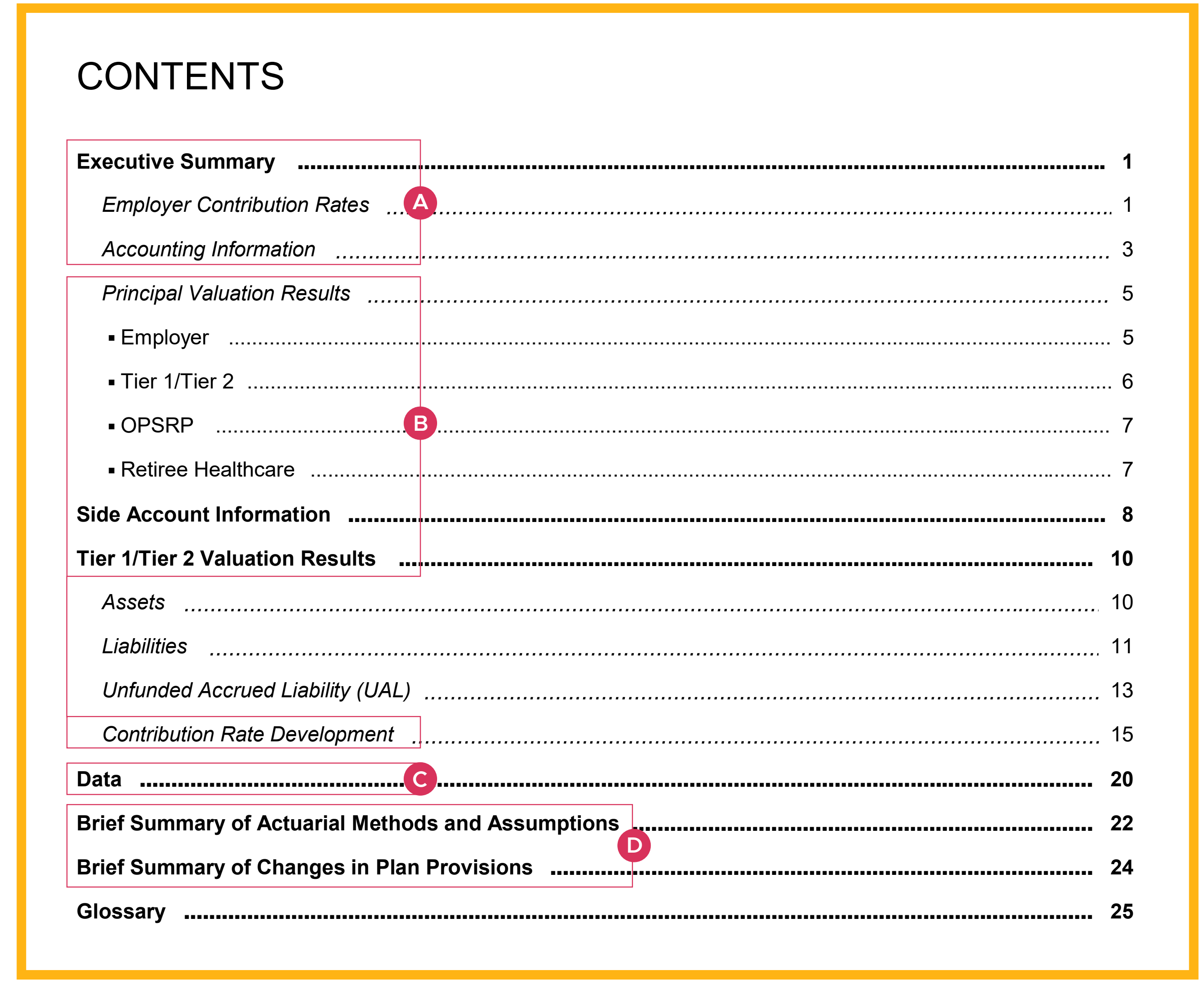

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Image 4: Valuation contents

Executive Summary

Employer Contribution Rates

This page details the individual rates that make up your total net **contribution rate**. In the valuation, there are separate pages that explain the rate calculations for the normal cost rate and side account rate calculations because they are employer-specific and based on your payroll and specific amortization factor.

The calculations for the Tier One/Tier Two UAL rate, OPSRP UAL rate, **Member Redirect offset**, and retiree healthcare rates are available in the system-wide valuation.

A	The development of your Tier One/Tier Two normal cost and UAL rates is covered in detail in later pages of the valuation and this guide; this page of the valuation is intended to provide a high-level summary of all of your rates.
B	All employers pay the same OPSRP normal cost and UAL rates because OPSRP is a pool. Although you are an independent employer, employers do not have a choice in joining the OSPRP Pool.
C	Retiree Healthcare is also a pool. All employers with Tier One/Tier Two payroll pay the same RHIA normal cost.
D	RHIA is currently funded at more than 100%. That is why there is no UAL rate assigned. If RHIA did have a UAL, that would be charged to OPSRP payroll as well. UAL is charged across all payrolls, which you can see with the OPSRP and Tier One/Tier Two UAL rate.
E	The fine print: 1. As part of 2003 legislation, the UAL for Multnomah Fire District #10 was allocated to all Tier One/Tier Two employers. Some employers are mandated to pay slightly more than others, but the total amount for most employers is 0.14%. 2. An employer's net rate cannot be 0%. To prevent this, offsets or surpluses cannot be applied to the retiree healthcare rate. In the event that RHIA has a 0% normal cost rate, contribution rates will be adjusted to prevent a 0% contribution rate. 3. The Member Redirect offset will reduce your normal cost rate. In this employer example, the new Tier One/Tier Two normal cost rate will be 13.32%, the new OPSRP General Service normal cost rate will be 7.94%, and the OPSRP Police and Fire normal cost rate will be 12.30%.

Employer Rates Effective July 1, 2021

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.89%	8.64%	13.00%
Tier 1/Tier 2 UAL rate[1]	11.63%	11.63%	11.63%
OPSRP UAL rate	1.69%	1.69%	1.69%
Side account rate relief[2]	0.00%	0.00%	0.00%
Member redirect offset[3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**26.76%**	**21.26%**	**25.62%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**26.81%**	**21.26%**	**25.62%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members, and OPSRP police and fire members.

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

[2] *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

[3] *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) will offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Image 5: Rates

Employer Contribution Rates — Range of Potential Rates

Important for budgeting and forecasting.

The Range of Potential Tier One/Tier Two Total Pension Contribution Rates section indicates the pool's minimum and maximum rates for 2023–2025 under various funding scenarios. In December of each year, the PERS actuary provides a financial modeling presentation that projects where they think the system will be, including funded status.

Once the projected funded status for 2023 is known, you can enter these rates into your rate-projection tool or the PERS Employer Rate-Projection Tool to anticipate the effect they will have on future budgets.

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 68%.

2021-2023 Biennium	2023-2025 Biennium	
	15.49%	**<<<No higher than this**
11.49%	11.49%	**<<<No lower than this if December 31, 2021 funded status is 87% or lower**
	7.49%	**<<<No lower than this if December 31, 2021 funded status is 90% or higher**

Image 6: Range of rates

Principal Valuation Results

This page summarizes your valuation results. The following six sections provide the most important information.

	Actuarial Valuation as of	
	December 31, 2019	**December 31, 2018**
T1/T2 UAL A	$67,987,756	$74,253,838
Allocated pooled OPSRP UAL B	9,203,747	9,552,580
Side account C	14,502,894	9,416,790
Net unfunded pension actuarial accrued liability D	62,688,609	74,389,628
Combined valuation payroll E	55,985,391	52,904,151
Net pension UAL as a percentage of payroll	112%	141%
Calculated side account rate relief	(3.10%)	(2.34%)
Allocated pooled RHIA UAL F	($1,166,188)	($775,458)

A — This represents your Tier One/Tier Two unfunded actuarial liability (**UAL**). The details of this calculation are located on page 13 of your valuation (page 18 in PDF).

B — OPSRP is a pool in which all employers participate. Employers are allocated a percentage of the pool's UAL based on their **combined valuation payroll**. This does not change your OPSRP rate .

C — If you have a side account, that total amount will be listed here.

D — Your net **unfunded pension actuarial accrued liability** is the result of adding your Tier One/Tier Two and OPSRP UALs and subtracting your side account (if applicable).

E — Combined valuation payroll is not the same as your **subject salary**, but it is based on your reported salary through the end of the calendar year. Combined valuation payroll is the projected payroll for the year following the valuation date (in this case, 2020). It is calculated using actuarial assumptions of wage and salary growth as well as demographic assumptions. Actual **experience** will be adjusted in the subsequent valuations.

This is the single greatest factor employers can control. While the actual amount is a projection, if you have a significant change in your payroll, it will affect the calculation for many of your individually calculated rates such as **normal cost** and your side account rate offset. Your combined valuation payroll also determines how much of each pool's UAL is allocated to you.

F — As with Tier One/Tier Two UAL and OPSRP, this is the allocated portion of the RHIA pool's UAL based on your combined valuation payroll. It is negative because the pool is currently fully funded. It is not factored into your net pension UAL.

Image 7: Principal valuation results

Weighted Average Tier One/Tier Two Normal Cost

Normal cost represents the amount that employers would need to contribute each year to fund plan benefits if there were no UAL.

Weighted normal cost means your Tier One/Tier Two rate is calculated and influenced by the Tier One/Tier Two payroll you actually have. To determine your rate, divide your normal cost amount by your total payroll for that classification.

If you don't have any Tier One/Tier Two payroll, the system-average rates will be input and this page will be blank. PERS will always enter rates for all payroll types, even if you don't currently have any of that classification on your payroll, just in case you do hire someone of that classification during the biennium.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification. Normal cost rates shown below are before any offset for redirected member contributions under Senate Bill 1049.

Development of Tier 1/Tier 2 Total Normal Cost Rate

	December 31, 2019			December 31, 2018		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$638,442	$2,741,104	23.29%	$835,334	$3,703,659	22.55%
Tier 1 General Service	216,922	1,469,128	14.77%	245,366	1,721,168	14.26%
Tier 2 Police & Fire	1,364,079	7,017,796	19.44%	1,377,944	7,178,631	19.20%
Tier 2 General Service	668,122	5,608,091	11.91%	676,850	5,624,903	12.03%
Total	**$2,887,565**	**$16,836,119**	**17.15%**	**$3,135,494**	**$18,228,361**	**17.20%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost rate of all independent employers as calculated in the system-wide actuarial valuation report.

Image 8: Normal cost rate

Side Account Information

Valuations are the only time you are given an accurate update on your side accounts.

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	A New	Continuing	Total
1. Side account as of December 31, 2019	**N/A**	**$3,360,859**	**$3,360,859**
2. Deposits made during 2020		1,250,000	1,250,000
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2020		B (133,522)	(133,522)
5. Side account earnings during 2020		258,480	258,480
6. Side account as of December 31, 2020 ***(1. + 2. + 3. + 4. + 5.)***		**$4,735,316**	C **$4,735,316**

A	The New column lists any new side accounts added during the valuation year. The Continuing column lists existing side accounts. In the event that an employer has activity in both the New and Current columns, the total will be listed in the Total column.
B	The amount transferred to your employer reserves was used to offset your rates in the past year.
C	The total side account is the side account balance that was used to calculate your side account rate.

Image 9: Side accounts

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Development of Side Account Rate

Using the reconciliation information from the prior page along with your combined valuation payroll, the actuary displays the information used to develop your side account rate offset here. If you have more than one side account, you will see the balance for each side account. The amortization factor and the individually calculated rate for each side account will also be provided.

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the default fixed period ends 18 years after the first rate-setting valuation following its creation, though employers can select a shorter period under certain specified circumstances. For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

	December 31, 2019			December 31, 2018		
	Combined valuation payroll		$55,985,391 A	Combined valuation payroll		$52,904,151
	Side account balance	**Amortization factor**	**Side account rate**	**Side account balance**	**Amortization factor**	**Side account rate**
1.	$9,088,321	6.875	(2.36%)	$9,416,790	7.606	(2.34%)
2.	5,414,573	13.151	(0.74%)	0		0.00%
3.	0		0.00%	0		0.00%
4.	0		0.00%	0		0.00%
5.	0		0.00%	0		0.00%
Total	**$14,502,894**		**(3.10%)** B	**$9,416,790**		**(2.34%)**

A	The actuary provides data for the year that they used for the current valuation and the prior valuation. You should use this data for a quick comparison to determine why your rate may be higher or lower than expected. In this scenario, the employer has had an increase in payroll, which will lead to a reduced side account balance. However, with the addition of a second side account, the side account rate offset overall is increased.
B	This is your projected rate for the next biennium. Side account rate offset = side account amount ÷ combined valuation payroll ÷ amortization factor. If you have multiple side accounts, your side account rates are added together to determine your total rate offset.

Image 10: Side account rate

Tier One/Tier Two Valuation Results

This section details how the actuary calculated your Tier One/Tier Two rate.

Contribution Rate Development

Employer Contribution Rate Summary (Pre-Rate Collar)

This rate reflects the contribution rate required to pay for projected Tier One/Tier Two normal cost rates and UAL rates without the **rate collar**. If an employer were assigned these rates, they would be paying the actual amount required for their normal costs and their UAL obligations.

Employers can always opt to pay the uncollared rate or a rate higher than the amount shown on their employer contribution rates summary.

It is important to understand your rates before and after your rate collar to understand the adjustment the collar is having to your rates. The full development of these rates is listed on pages 16 through 19 of your valuation.

A	Normal cost ÷ Tier One/Tier Two valuation payroll = normal cost rate. The normal cost calculation is also included separately in your valuation.
B	Your total Tier One/Tier Two UAL rate (pre-rate collar) is determined by dividing next year's Tier One/Tier Two UAL payment by the combined valuation payroll. Because it also includes the Multnomah Fire District #10 rate, add that number as well when comparing to the results on page 1 (PDF p. 6) of your valuation.

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Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

		July 1, 2021 Rates calculated as of December 31, 2019	**Advisory July 1, 2021 Rates calculated as of December 31, 2018**
1. Tier 1/Tier 2 pension contribution rates			
a. Tier 1/Tier 2 pension normal cost rate	A	16.80%	17.20%
b. Tier 1/Tier 2 UAL rate		13.79%	16.66%
c. Multnomah Fire District #10 rate		0.14%	0.14%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	B	30.73%	34.00%

Image 11: Contribution rate pre–rate collar

Adjustments Due to Rate Collar and Minimum Rate Requirements

The collar width for The Tier One/Tier Two 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 One/Tier Two UAL rate will always be at least 0% of payroll if the employer's funded status is less than 100%.

The UAL rate may not decrease if the system's funded status (excluding side accounts) is 87% or lower. It may decrease by the full collar width if funded status is 90% or greater. .

A	Size of rate collar: The size of the rate collar 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.
B	The funded status can affect the rate collar. This is an example of the one-third rule and sets the size of the collar.
C	The minimum UAL rate is the current rate unless the funded ratio is greater than 90%. The maximum Tier One/Tier Two UAL rate is the current UAL rate minus the size of the rate collar.
D	This is the new UAL rate (before RHIA).

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	7.75%
A	2. Size of rate collar	
	a. Impact of rate collar, prior rate-setting valuation	0.00%
	b. Size of rate collar *(maximum of 4% or absolute value of [a. / 3])*	4.00%
	c. Funded percentage	75%
B	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.)	7.75%
	4. Advisory July 1, 2023 maximum Tier 1/Tier 2 UAL Rate (1. + 2.b., but not less *than 0% if 2.c. < 100%)*	11.75%
	5. Advisory July 1, 2023 Tier 1/Tier 2 UAL Rate, before collar	9.57%
C	6. Net adjustment due to rate collar *(3. – 5., but not < 0, or 4. – 5., but not > 0)*	0.00%
D	7. Advisory July 1, 2023 Tier 1/Tier 2 UAL Rate, after collar *(5. + 6.)*	9.57%

Image 12: Rate collar adjustments

Employer Contribution Rate Summary (Post-Rate Collar)

These are the rates you will pay following the rate collar. You should be aware of any adjustment caused by the rate collar and the potential affect this can have on your rates for each rate-setting period. Remember, you can choose to pay higher rates than the ones listed below.

Any net adjustment caused by the rate collar will be applied to the Tier One/Tier Two UAL rate only.

A	In this example, the net adjustment from the rate collar reduced the UAL rate by –2.46%, or from the original 13.79% to 11.33%. This is shown on the prior page in items 8 through 10.
B	The pre-rate collar net employer pension contribution rate was 30.73%. After the rate collar, the net employer pension contribution rate is 28.27%.

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Tier 1/Tier 2 Employer 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 and the 6 percent of payroll minimum employer contribution rate.

	July 1, 2021 Rates calculated as of December 31, 2019	Advisory July 1, 2021 Rates calculated as of December 31, 2018
1. Tier 1/Tier 2 pension contribution rates		
a. Tier 1/Tier 2 pension normal cost rate	16.80%	17.20%
b. Tier 1/Tier 2 UAL rate	11.33% A	10.93%
c. Multnomah Fire District #10 rate	0.14%	0.14%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.95%)*	28.27% B	28.27%

Image 13: Contribution rate post–rate collar

Brief Summary

Actuarial Methods and Assumptions

This page provides the PERS Board-approved methods and assumptions that the actuaries used to develop employer contribution rates. The Board reviews these methods and assumptions every even-numbered year, during which time any changes will be incorporated and modeled in the advisory valuation before they are implemented in the rate-setting valuation.

A	The **amortization** periods are different for Tier One/Tier Two, OPSRP, and Retiree Healthcare UALs. That makes a big difference when incorporating legislative changes or changes that fall outside of actuarial assumptions. For example, if there is a significant salary increase across all payrolls, OPSRP may see more of that increase in their rates because they are only amortized over 16 years. However, they will also resolve that increase over a shorter period of time and have less legacy debt.
B	The biggest factor affecting the economic assumptions is the net investment of return and interest crediting.

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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. A 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 B

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.

Image 14: Brief summary of methods

Changes

This section reviews any changes made since the last valuation. The actuary provides a succinct description of what has been incorporated or where you can find the last major changes. As always, if you need help finding any of this information or interpreting it, you can always contact PERS Actuarial Services.

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.

Image 15: Brief summary of changes

Talking Points

Causes of rate change

- Remember that the biggest factor an employer controls is the combined valuation payroll. If there is a significant change in your rate, compare the combined valuation payroll in the last rate-setting valuation to the one in the most recent rate-setting valuation. The actuary accounts for 3.4% wage inflation per year.
- Determine if there was or is now a rate collar applied to the rate.

For additional explanations of changes in the system rates:

- System-Wide Valuation Report: Click on the latest year and then the document called “System-Wide [year] Valuation Report.”
- Actuary presentations to the PERS Board: Click on a meeting date to open the packet, which includes the actuary’s presentation of the valuation report.
- Employer Rate Summary: This website documents the changes that occurred since the last rate-setting valuation, including legislative changes.

Financial Modeling presentation

For more explanations about changes in system rates, refer to the *Guide to Financial Modeling* available on the UAL Resolution Program webpage.

The guide provides explanations of the latest financial modeling information, as presented by the PERS actuary to the PERS Board at the end of each year. The guide explains how current assumptions and projections will affect the unfunded actuarial liability (UAL), base and net rates, and funded status over a long period of time.

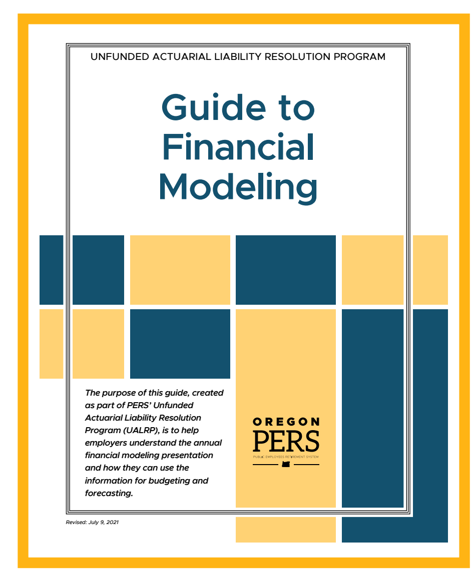

Image 16: Guide to Financial Modeling

Using the Employer Rate Projection Tool (ERPT)

Using the information shared in this guide, consider using the PERS Employer Rate Projection Tool to forecast your future contributions.

We encourage you to use the User Guide and the Employer Rate Projection Tool to enhance your current budget and forecasting tools and better manage your contribution rates over time. Of course, we cannot provide any budget advice nor guarantee any actuarial outcome; however, we are pleased to provide greater detail to empower you and your boards to make more informed decisions.

OREGON PERS

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Employer Rate Projection Tool User Guide

Introduction

PERS provides the Employer Rate Projection Tool (ERPT) to enable employers to project future contributions and estimate the effect that a new side account may have on their rates. Employers can use this information to estimate their future contributions for budgeting and forecasting purposes.

The tool works by pre-filling current contribution rates and payroll data to generate a projection of up to 10 biennia of employer contributions. The tool will also generate an estimated contribution reduction for a new side account based on the side account deposit amount you specify.

Image 17: ERPT User Guide

PERS resources

- 2021–23 employer contribution rates
- Actuarial & Financial Information webpage
- Employer actuarial valuations
- *Guide to Understanding Your Rate*
- Senate Bill 1049 (2019) – Information and Implementation for PERS Employers webpage
- Side Accounts webpage
- System-Wide 2020 Valuation Report

Glossary of actuarial terms

Actuarial accrued liability

Accrued liabilities are the present value of either promised pension benefits or pension obligations. Every year, the PERS plan's actuary calculates the total value of liabilities that have accrued and uses this figure to determine the plan's unfunded liability.

Actuarial valuation

An actuarial valuation is an appraisal of a pension fund's assets and liabilities. A consulting actuary calculates the valuation using assumptions about future economic and demographic conditions to determine the funded status of a pension plan.

Actuary

An actuary uses math, statistics, and financial theory to study uncertain future events, especially those of concern to insurance and pension programs.

Advisory rate

In the fall of odd-numbered years, the PERS actuary produces advisory employer contribution rates for all employers for the upcoming biennium. These rates represent actual experience but will not affect your rate.

Amortize/amortization

Amortization is an accounting technique used to spread costs over time that could compromise current cash flow, like a mortgage on a house.

Assets

Your assets are the money going into your pension, such as your employer contributions and earnings on investments.

Assumed rate

The assumed rate is the rate of investment return (including inflation) that the PERS Fund's regular account is expected to earn over the long term.

The PERS Board decides the assumed rate based on:

- The long-term projection of investment returns based on the asset allocations of the Oregon Investment Council and the related capital market expectations.
- PERS' actuary's independent analysis of the projected returns from that asset allocation over a long-term investment horizon.

The current assumed rate is 6.9%, which has been in effect since January 1, 2022. The assumed rate is reviewed, adopted, and incorporated into Oregon Administrative Rule by the PERS Board every two years as part of the system's Experience Study.

Combined valuation payroll

Projected payroll as calculated by the PERS consulting actuary for the calendar year following the valuation date for Tier One, Tier Two, and OPSRP active members. This payroll is used to calculate UAL rates and is based on the actual payroll reported by the employer.

Contribution rate

An employer's contribution rate is the percentage of payroll you pay to PERS to fund the pension benefits of your employees. It does not include the 6% employee (member) Individual Account Program (IAP) contribution, even if you are paying it on your employees' behalf.

Experience

Experience refers to the actual financial performance of a plan over a year. To project the cost and liabilities of the pension plan, assumptions are made about all future events that could affect the amount and timing of the benefits to be paid and the assets to be accumulated. Each year, actual experience is compared against the projected experience, and to the extent there are differences, the future contribution requirement is adjusted.

Funded status

The actuarial value of assets expressed as a percentage of the accrued liability. In other words, how close an employer, pool, or the PERS system is to being able to pay all of the benefits it owes to past and current members. As of December 31, 2020, the system-wide PERS' funded status was 70.6% without side accounts and 75.9% with side accounts.

Each pool also has its own individual funded status:

	SLGRP	School Districts	Independents
Without side accounts	68.7%	72.6%	68.2%
With side accounts	74.2%	80.5%	69.9%

Geometric average return

This represents the rate of return on investment per year, averaged over a specified time period. For valuation purposes, this is the rate of return averaged over the 20-year amortization period.

Liability

For PERS' actuarial purposes, liabilities represent pension obligations, such as normal cost, benefit payments, demographic experience changes, and/or plan changes.

The employer contribution rates that the PERS actuary creates are all future based. The actuary takes data for a year that passed (e.g., 2019) and projects the correct rate to cover benefit needs 18 months in the future (e.g., 2021–2023). It does this by establishing actuarial assumptions, one of which is the assumed rate of 7.2% for salary wage growth. There will be variance year to year, but over a 20-year period the rates average out.

Member Redirect offset

This offset in employer rates is a result of the Member (IAP) Redirect program established by Senate Bill 1049. For all PERS members earning equal to or more than the salary requirement, Member Redirect takes a portion of their 6% IAP contribution and redirects it to a new Employee Pension Stability Account (EPSA). The funds in each member's EPSA will be used to help pay for their future pension benefits, which helps reduce employer rates.

Normal cost

The normal cost is the value of benefits for an employer's current members for the next year of service. If all current actuarial assumptions were met, the normal cost would be the only rate an employer would pay.

Your normal cost, divided by your applicable payroll, is your normal cost rate.

Rate collar

Rate collar is a method of stabilizing employer contribution rates by preventing sudden rate spikes and drops.

The current policy limits only the UAL rate. The collar width varies by pool.

For details, read "Rate-Collar Methodology Updated" in the August 2021 *Employer News*.

Subject salary

Subject salary is an employee's pay and value-added benefits that are included when calculating retirement benefits and that are subject to PERS contributions.

Transition liability/surplus

When an employer joins the SLGRP, a transition liability or surplus is calculated to ensure that each employer enters the pool on a comparable basis.

The transition liability or surplus for each employer is maintained separately from the Tier One/Tier Two UAL for the SLGRP.

UAL

Unfunded actuarial liability (UAL) is the difference between accrued assets (employer contributions and investment earnings) and accrued liabilities (the cost of pension benefits earned). If liabilities become larger than assets, that creates debt (i.e., a UAL) that must be paid.

UAL payments are divided equitably among pool members as a percentage added to each pool member's normal cost rate.

Appendix: Legislative changes directed by Senate Bill 1049

Senate Bill (SB) 1049, signed into law in 2019, made several adjustments to PERS to slow the increase in employer contribution rates. Employers will feel the initial impact of SB 1049 on employer rates for the 2021-23 biennium.

SB 1049 has three areas designed to reduce employer rates over time.

Amortization options

The UALRP also allows employers who make lump-sum payments of $10 million or more into side accounts two options to further reduce their rate:

1. A reduced amortization period of 6, 10, or 16 years instead of the standard 20 years.
2. A deferment of your rate-offset date beyond the standard rolling 12-month period.

Employer rate relief

The **Employer Incentive Fund** (EIF) and **School Districts Unfunded Liability Fund** (SDULF) programs took advantage of the existing side account program by offering matching funds to employers who established a new side account (EIF) or sought to establish a pool-wide side account (SDULF). A total of 89 employers received nearly $65 million in matching funds before the remaining funding was withdrawn to help rebalance the Oregon state budget in August 2020, temporarily stopping the programs.

UAL Resolution Program (UALRP)

The UALRP provides educational tools and resources, such as this guide, to support employers in creating funding plans to manage their funded status and contribution rates.

Learn more.

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CONTACT US

11410 SW 68th Parkway
Tigard, OR 97223
888-320-7377
https://www.oregon.gov/PERS