



OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

BOARD MEETING AGENDA

Monday March 29, 2021 9:00 A.M.	PERS 11410 SW 68th Parkway Tigard, OR
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	ITEM	PRESENTER
A. Administration		
1.	February 1, 2021 Board Meeting Minutes	SHENOY
2.	Board Governance Assignments <i>(postponed to June 4, 2021)</i>	
3.	Director's Report	OLINECK
	a. Forward-Looking Calendar	
	b. OPERF Investment Report	
	c. Budget Execution Report	
4.	Oregon Investment Council Performance Review	KIM
5.	Oregon Savings Growth Plan Update	SMITH
B. Administrative Rulemaking		
1.	Adoption of Salary and Contribution Limits	VAUGHN
C. Action and Discussion Items		
1.	Legislative Update	CASE
2.	SB 1049 Implementation Update	ELLEDGE-RHODES
3.	Final 2020 Earnings Crediting and Reserving	HORSFORD, MARBLE
4.	Preparatory Discussion for Upcoming Experience Study	MILLIMAN

PERS Board members will be attending this meeting remotely. The public will not be able to attend the meeting in person. Visit <https://www.oregon.gov/pers/Pages/Board/PERS-Board-Information.aspx> for listening options. This meeting will be recorded. An audio recording of the meeting will be available on the PERS website following the meeting.

*Public testimony will be taken on action items at the Chair's discretion.
 Please submit written testimony to PERS.Board@state.or.us (three days in advance of the meeting is preferred.)*

<http://www.oregon.gov/PERS/>

2021 Meetings: June 4, July 23*, October 1, December 3*
 *Audit Committee planned for post-Board meeting

Administration

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OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM BOARD MEETING MINUTES

February 1, 2021

Board members present:

Chair Sadhana Shenoy, Vice Chair Lawrence Furnstahl, Jardon Jaramillo, Stephen Buckley, and Steve Demarest attended virtually.

Staff present:

Amanda Marble, Anne Marie Vu, April Chapman, Chris Geier, Christa Harrison, Daniel Rivas, Elizabeth Rossman, Heather Case, Greg Gabriel, Jake Winship, Janice Richards, Jason Stanley, Katie Brogan, Katie Davis, Kevin Olineck, MaryMichelle Sosne, Matt Graves, Melanie Chandler, Michiru Farney, Neil Jones, Phuongnam Tran, Richard Horsford, Susie Bodman, Sam Paris, Shawn Dempewolf, Stephanie Vaughn, and Yvette Elledge-Rhodes attended virtually.

Others present:

Matt Larrabee, Scott Preppernau, Adam Rees, Alan DeBoer, Amy Lieuallen, Antoinette Markley, Aruna Masih, Cari Pickett, Carol Samuels, Cindi Peterson, Claire Havener, Cynthia Trumpower, Deborah Tremblay, Dianne Hendrix, Gay Lynn Bath, Jeff Gudman, John Scanlan, Karl Koenig, Kathleen Suiter, Katie Kicza, Kellie Jones, Lisa Rehms, Nancy Brewer, Nate Carter, Prima Bohall, Robert Burket, Ronald Vaught, Shannon Haas, Tahni Fagerberg, Tracey Monroe, Trudy Vidal, Wendy Stefani

Chair Shenoy called the meeting to order at 9:00 a.m.

ADMINISTRATION

A.1. MEETING MINUTES OF DECEMBER 4, 2020

Board Member Jaramillo moved to approve the minutes as presented from the December 4, 2020 PERS Board meeting. Vice Chair Furnstahl seconded the approval of the minutes. The motion passed unanimously.

A.2. DIRECTOR'S REPORT

Director Kevin Olineck presented the Director's Report. The Director's Report contains information on other activities that the organization is working on that do not appear on the agenda. PERS continues to support teleworking while continuing to meet the needs of members. Olineck highlighted the BoardSmart board training program and the agencies all-staff meeting series held in November and December.

Olineck presented the forward looking calendar. The dates for the 2021 meetings are included on the calendar with a scheduled start time of 9:00 a.m. The joint meeting with the PERS Board and the Oregon Investment Council will be held June 2, 2021. Audit Committee dates are also listed.

The Oregon Public Employees Retirement Fund (OPERF) returns, for the period ending December 31, 2020 were 7.66%.

Operating expenditures for November, preliminary expenditures for December, and preliminary expenditures for January are \$4,296,735, \$4,069,876, and \$6,464,771 respectively. At this time, the agency's projected variance is \$6,574,362.

On December 11, 2020, the Oregon Legislative Emergency Board approved funding for state employee compensation and benefits adjustments. The adjustments resulted in an increase of \$3,784,145 to the PERS operating budget and \$474,183 to the SB 1049 operating budget.

Jason Stanley, Chief Compliance Audit and Risk Officer, presented the transactions of PERS Director Kevin Olineck for the period of July 1, 2019, through June 30, 2020 (Item A.2.d.). This is an annual report required by the Oregon Accounting Manual. There were no unusual or inappropriate transactions.

Board Member Demarest moved to approve and delegate the Director's expenses to the PERS Deputy Director or the PERS Chief Compliance Audit and Risk Officer. Vice Chair Furnstahl seconded. The motion passed unanimously.

ADMINISTRATIVE RULEMAKING

Stephanie Vaughn, Policy Analysis and Compliance Section Manager, presented.

B.1. NOTICE OF SALARY AND CONTRIBUTION LIMITS

Vaughn presented Notice of Rulemaking for Salary and Contribution Limits Rules: *OAR 459-005-0525*, Ceiling on Compensation for Purposes of Contributions and Benefits, *OAR 459-005-0545*, Annual Addition Limitation, *OAR 459-080-0400*, Employee Pension Stability Account (EPSA) and *OAR 459-080-0500*, Limitation on Contributions. No rulemaking hearing will be held because the PERS building is closed to the public. The public comment period ends March 8, 2021, at 5:00 p.m.

No board action was required.

B.2. ADOPTION OF EMPLOYER CONTRIBUTION RATE

Vaughn presented Adoption of Employer Contribution Rate Rules: *OAR 459-009-0098*, Employer Contribution Rate, *OAR 459-009-0070*, Actuarial Pooling of Employer Liability, *OAR 459-017-0060*, Reemployment of Retired Members and *OAR 459-075-0300*, Reemployment of a Retired Member of the OPSRP Pension Program.

No rulemaking hearing was held because the PERS building is closed to the public. The public comment period ended January 4, 2021, at 5:00 p.m. No public comment was received.

Board Member Demarest moved to adopt the Employer Contribution Rate rules, as presented. Board Member Jaramillo seconded. The motion passed unanimously.

B.3. ADOPTION OF CONFIDENTIALITY OF MEMBER RECORDS

Vaughn presented adoption of Confidentiality of Member's Records Rule: *OAR 459-060-0020*, Confidentiality of Member Records.

No rulemaking hearing was held because the PERS building is closed to the public. The public comment period ended January 4, 2021, at 5:00 p.m. No public comment was received.

Board Member Buckley moved to adopt the Confidentiality of Member Records rule, as presented. Vice Chair Furnstahl seconded. The motion passed unanimously.

B.4. ADOPTION OF PAYMENT OF DEATH BENEFITS

Vaughn presented adoption of Designation of Beneficiary at Retirement and Survivor Benefits Rule: *OAR 459-014-0050*, Designation of Beneficiary at Retirement and Survivor Benefits.

No rulemaking hearing was held because the PERS building is closed to the public. The public comment period ended January 4, 2021, at 5:00 p.m. No public comment was received.

Board Member Buckley moved to adopt the Designation of Beneficiary at Retirement and Survivor Benefits rule, as presented. Board Member Jaramillo seconded. The motion passed unanimously.

ACTION AND DISCUSSION ITEMS

C.1. LEGISLATIVE PREVIEW/UPDATE

Heather Case, Senior Policy Advisor, presented.

Case provided an update on December legislative days, the third special session of 2020, and the 2021 legislative concepts filed by PERS. An update on the 2021 legislative session and reporting requirements for the session were provided. An update will be provided at the March 29, 2021 PERS Board meeting.

No board action was required.

C.2. SB 1566 REPORTING REQUIREMENTS

MaryMichelle Sosne, Actuarial Business Specialist presented.

As required by Senate Bill 1566(2018), PERS filed a report with the Legislative Fiscal Office and the Joint Committee on Ways and Means, providing the status of the Employer Incentive Fund, the School Districts Unfunded Liability Fund, and the Unfunded Actuarial Liability Resolution Program as of December 2020.

No board action was required.

C.3. SB 1049 IMPLEMENTATION UPDATE

Yvette Elledge-Rhodes, Deputy Director, presented.

Elledge-Rhodes reviewed the ongoing activities of the five individual projects that make up the SB 1049 Implementation Program. She highlighted program activities that have been completed, or are in process, since the last board meeting. PERS staff will continue to update the board as project implementation continues throughout the next year.

The SB 1049 program is in red status due to the Member Redirect project going beyond the end of the biennium. Three of the individual projects are in yellow status and two are in green status.

No board action was required.

C.4. PRELIMINARY 2020 EARNINGS CREDITING AND RESERVING

Richard Horsford, Chief Financial Officer, and Amanda Marble, Financial Reporting Manager, presented the preliminary rates for 2020.

Board Member Demarest moved to adopt the preliminary crediting of earnings as presented for calendar year 2020, subject to final adoption at the March 29, 2021 PERS Board meeting. Vice Chair Furnstahl seconded. The motion passed unanimously.

Staff will prepare and present the required report to the Joint Legislative Committee on Ways and Means. Any comments received from the committee will be presented to the board, prior to the final crediting decision, at its meeting on March 29, 2021.

C.5. VERBAL UPDATE REFLECTING ON EARNINGS THROUGH DECEMBER 31, 2020

Scott Preppernau and Matt Larrabee of Milliman presented a preliminary estimate of system-wide December 31, 2020 results, updated with year-end 2020 returns published by Oregon State Treasury.

Chair Shenoy adjourned the PERS Board meeting at 10:03 a.m.

Respectfully submitted,



Kevin Olineck, Director

Administration

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Director's Report

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

Kevin Olineck, Director



Overview

This Director's Report tries to encapsulate, at a high level, noteworthy changes that have taken place since the last board meeting, while also highlighting staff accomplishments.

Ongoing efforts

Senate Bill 1049 (SB 1049) Work continues on implementing elements of all five projects associated with SB 1049. More detailed SB 1049 implementation reports on the overall program and projects will be provided in the board packet.

COVID-19 Response I am very proud of the collaborative efforts shown by all areas of the agency in responding to this situation. I am particularly proud of the fact that, operationally, PERS continues to provide our regular services with minimal interruption to normal service



PERS gave its initial budget presentations before the Joint Committee on Ways and Means, General Subcommittee in late February and early March.

levels. Per the Sector Level Risk Guidance established by the Governor, effective December 3, 2020, PERS staff continue to telecommute to the greatest extent possible to reduce overall risk to staff.

Highlights

I want to continue to highlight where PERS staff have not only made great progress with standard operational undertakings, but also made significant progress on strategic initiatives. What follows in this section are accomplishments that deserve to be mentioned, with staff publicly acknowledged for their efforts.

Agency initiatives and accomplishments

Presentations to the Joint Committee on Ways and Means, General Subcommittee PERS initial budget presentations took place over three days in late February and early March. The first day's presentation was a system overview, while the second was both an agency overview and an in-depth look at our overall structure, work, and budgetary requirements.

The following were the three primary budgetary themes discussed:

1. Continue efforts to fully implement SB 1049 (2019).
2. Begin building out a system modernization road map, as well as initial implementation efforts focused on member interactions.

- Maintain current service levels to ensure progress towards our Strategic Plan objectives and goals.

On day three, PERS provided a report on Preliminary Earnings and Crediting as well as an update on Senate Bill 1566 reporting, which focused on the Employer Incentive Fund and the School District Unfunded Liability Fund.

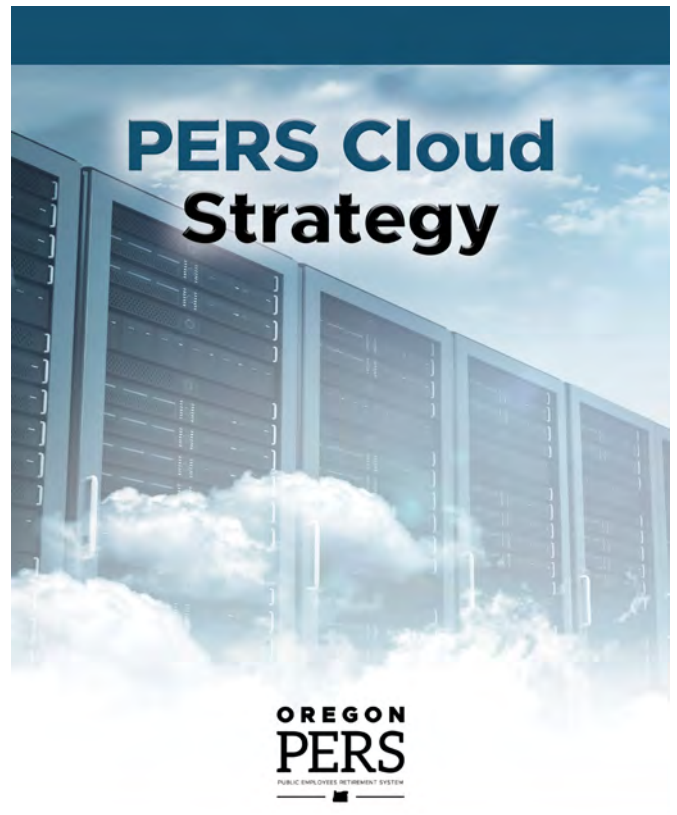
Overall, the committee members were engaged as they sought to better understand both PERS the System, as well as PERS the Agency. While Richard Horsford and I were the primary presenters, I'd like to acknowledge the efforts of staff, particularly our Budget Officer, Greg Gabriel, in working to put together our Agency Request Budget submission and for building out much of the information presented. It truly was a team effort to ensure the PERS budget story was told in a professional manner.

PERS Cloud Strategy Late last year, the Department of Administrative Services' (DAS) Enterprise Information Services (EIS) division released a strategic document titled "Cloud Forward: A Framework for Embracing the Cloud in Oregon."

This strategy sets out an important component of the State of Oregon's overall technology plan. The essence of this framework is that, on a go-forward basis, cloud-based solutions, whereby things are stored on Internet servers, will be the first and preferred option for all new information technology (IT) investments. DAS EIS would like agencies to understand the need for this this new direction and begin taking steps to become more cloud based over the next five years.

PERS is fortunate because our Information Services Division (ISD) is forward thinking. We have not only developed a PERS-specific strategic document, "PERS Cloud Strategy," in alignment with the EIS approach, but ISD has also already begun our journey to the Cloud on a few different fronts.

ISD has established PERS' own Microsoft Azure Cloud tenant (a tenant is a group of users who share common accesses with specific privileges to the software



The agency has developed its own cloud strategy document that is in alignment with the Department of Administrative Services.

instance). Microsoft Azure, part of the Microsoft 365 suite, is a public cloud-computing platform, with one of its solutions being a Platform-as-a-Service (PAAS) framework, which allows for a scalable architecture. This scalable architecture will allow us to scale up to meet increased workloads. ISD has been working to build out our backup data and warm site capabilities using the Azure Cloud. While we are working through challenges with expanding our pipeline capacity, the underlying cloud technology works and it will provide the needed data back up and system redundancy we require, as an agency, going into the future.

As part of the Senate Bill 1049 Program, we are building out a new Employer Rate Projection Tool (ERPT) and we recently received permission to host this tool on our Azure tenant. We also received approval to build out the IAP Balance Comparison Tool using the Power Platform solution which is also hosted on the Azure Cloud. This is

an enterprise-grade platform which provides agility to fulfill this business need without overhauling the entire IAP administration using multiple, disparate tools.

All of these projects will provide PERS' ISD an opportunity to gain hands-on experience in deploying applications to the Cloud, and learn how to manage and monitor applications in a shared environment.

These initial forays into cloud-based technologies will position PERS to move into the future and embrace new opportunities and possibilities. This also aligns well with our improvement plans, as our requested 2021-2023 budget includes funds to begin our modernization journey.



PERS is in the middle of completing a critical database upgrade that will include many features and services the agency needs to successfully manage its data.

SQL Server Upgrade PERS is in the process of completing a critical database upgrade from SQL2014 to SQL2017, which impacts the data on 45 servers. In this case, a database is a server that stores only member or other key PERS data that is then used by applications that are stored on application servers. This upgrade brings many features and critical services PERS needs to successfully manage data and stay current with application requirements.

Key Benefits:

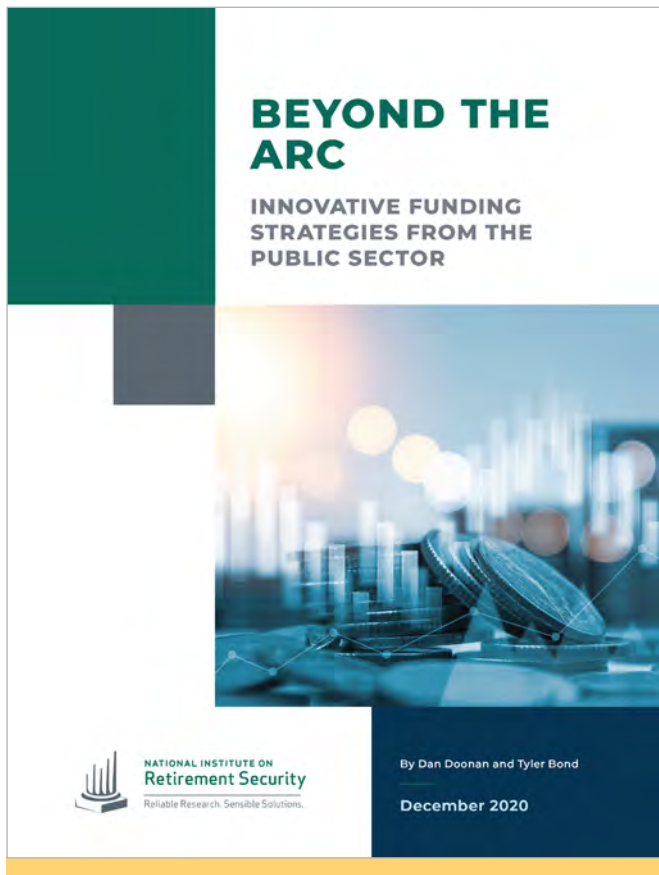
- Vendor Support – “Mainstream” support for SQL2014, which includes patching and bug fixes, ended in 2019, while SQL2017 runs through 2022.

- Cost Management – Microsoft does offer extended support for products, however, the costs continue to rise annually to encourage companies to move to modern products. Staying up to date with products decreases overall support costs.
- Application support – As applications are patched and/or upgraded they will require current versions of SQL2016 or SQL2017 to maintain product support.
- Improved Features and Supportability –
 - Benefits for Business: SQL2017 provides many new technical features including improved Adaptive Query Processing (APQ) which will decrease long-running batch times impacting business users.
 - Benefits for support team: Additional features include, but are not limited to, improved diagnostic and troubleshooting tools to help identify and resolve issues for our small team of Database Administrators (DBAs).
 - SQL Virtual Machine (VM) in Azure
 - Machine Learning (ML) support
 - Automatic database tuning
 - Dynamic database management views/functions
 - More robust Business Intelligence capabilities

Oregon Government Finance Officers Association

Presentation (OGFOA) Yvette Elledge-Rhodes, Jake Winship, Mary-Michelle Sosne, and Alison Burman presented at the OGFOA Spring 2021 Conference on March 8. Their presentation was focused on the following:

- Helping public employer finance officers gain awareness of the 2020 investment performance and the impact to employer rates.
- Updating employers on the implementation of Senate Bill 1049, including information about the Unfunded Actuarial Liability (UAL) Resolution Program.
- Presenting an overview of the changes and challenges to the employer invoicing and statement process because of SB 1049.



PERS was featured in a NIRS research paper titled “Beyond the ARC” that discussed how PERS makes use of Employer Side Accounts as part of our overall funding.

National Institute on Retirement Security (NIRS)

Presentation In December, PERS was featured in a NIRS research paper titled “[Beyond the ARC](#)” that discussed how PERS makes use of Employer Side Accounts as part of our overall funding. Due to interest garnered when the document was released, PERS was asked to be a part of a panel with Kentucky Retirement Systems and MainePERS at the upcoming the NIRS Conference in April to provide further information regarding different funding approaches. MaryMichelle Sosne, our Actuarial Business Specialist, will be our panel participant.

OPERF Relative Ranking Pensions & Investments magazine’s annual ranking shows PERS as the 24th overall largest pension plan and 18th largest public sector plan in the United States, based on Assets Under Management (total assets that include the DB, IAP and OSGP assets). Our ranking went down four places overall and one place for public sector plans from the prior year.

Employee Recognition – Team of the Year Award

The Employee Recognition Work Group, led by Yvette Elledge-Rhodes, has been engaged in ensuring that there are more opportunities for formal, as well as informal, staff recognition.

The work group and the Executive Leadership Team have recognized that 2020 was a rough year, and that we made it through all the disruption because of staff members’ hard work and perseverance.

In February, the first PERS Team Award was launched with all managers receiving an invitation to nominate their team with the following writing prompt: “In spite of the disruption and obstacles caused by the global pandemic, how did your team survive — and even excel in 2020 — better than any other team at PERS?” Managers and their teams were encouraged to come together to tell how their team went above and beyond in supporting PERS efforts.

Our first ever Team-of-the-Year award went to the Member Information Center (MIC) for its excellence in delivering services to the agency, members, employers, customers, and stakeholders during 2020. Honorable Mention went to the Specialty Qualifications team and the Data Integrity Group.

We had 15 teams submit nominations for Team of the Year. Nominees all explained how they were able to not only survive, but excel, in a pandemic year better than any other team at PERS. It was a tough competition, but MIC eventually rose to the top.

This 30-member member support team was able to ensure that the most accurate and timely information was provided in any circumstance, and made every effort to ensure each member interaction was polite, friendly, and professional.

The team’s motto is “Teamwork makes the dream work.” As one team member put it in the nomination letter, “[The MIC] has been a wonderful and supportive section to work with since I started. ... Even through the most unpredictable times, the MIC actually experienced

growth that unified the team even more. The leadership of the management staff, the support of Team One Follow Up, and the like-minded goals of the call agents, has proven that the intent to function as a team is very important to each of us at MIC.”

This award was an opportunity to celebrate each entering team’s hard work, collaboration, creativity, and success and to recognize exceptional efforts.

Governor’s Food Drive – Gone Virtual PERS staff once again participated in the annual Governor’s State Food Drive, though in a very different manner from previous years. Typically, staff participate via in-house events, raffles, and auctions as well as with both food and monetary donations. This year, however, due to COVID restrictions, participation was more limited to making donations online via our HR system, participating in a virtual walkathon, trivia challenge, talent show, and the creation of a PERS cookbook.

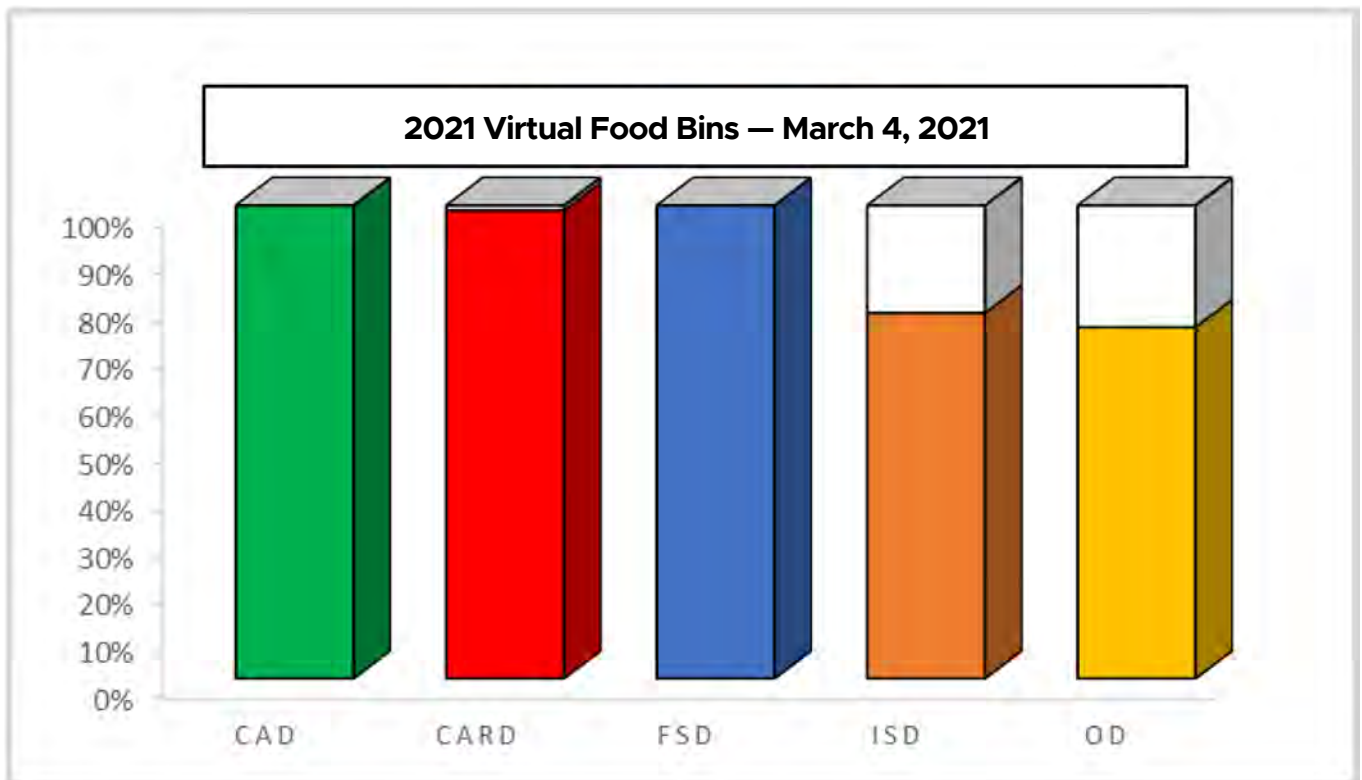
For 2021 we had a goal of giving at least 100 meals per

staff member at PERS — over 40,000 meals. Here are the final results:

In the end, PERS employees raised \$13,696 and provided 41,088 meals, representing about 97% of the agency’s goal of 42,500 meals.

To make this year’s all-virtual drive fun, and to inspire some healthy interdivisional competition, PERS’ Food Drive Work Group set up virtual “food bins” so that each division could track their progress toward the goal of 100 meals per staff member. Here is where each division stood at the end of the drive:

Central Administration	100%	(\$2,480)
Compliance, Audit, and Risk	99%	(\$784)
Financial Services	100%	(\$2,728)
Information Services	77%	(\$2,278)
Operations	74%	(\$6,230)



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PERS Board Meeting Forward-Looking Calendar

Wednesday, June 2, 2021, (Joint Meeting with Oregon Investment Council at Treasury)

(PERS Board will be joining the second half of the regular OIC Board meeting 9:00 a.m.-1:00 p.m.)

Friday, June 4, 2021

Board Scorecard Report on Agency Performance Measures
Propose Board Meeting Dates for Next Year
Annual Report of Board Member Training Activities
Legislative Update
Retiree Health Insurance Plan Renewals and Rates
PERS Health Insurance Plan Report Out
Overview of Actuarial Methods and Economic Assumptions

Friday, July 23, 2021*

CEM Benchmarking Results
Director's Performance Evaluation – Comments from Chair
Legislative Session Review
Member and Employer Survey Results
Preliminary Adoption of Valuation Methods and Assumptions Including Assumed Rate of Return
Preliminary Adoption of Assumed Rate OAR

Friday, October 1, 2021

Strategic Plan Overview
Legislative Update / Legislative Concepts
Member and Employer Survey Results
Final Adoption of Valuation Methods and Assumptions Including Assumed Rate of Return
Valuation Results – Advisory Employer Rates
Final Adoption of Assumed Rate OAR

Friday, December 3, 2021*

Board Governance Assignments
Board Scorecard Report on Agency Performance Measures
Strategic Plan Approval
Valuation Update and Financial Modeling Results
Adoption of Actuarial Equivalency Factor Tables

**Audit Committee planned for post-board meeting*

Proposed 2022 Meeting Dates

9:00 a.m. Start Times

- Monday, January 31, 2022
- Monday, March 28, 2022*
- Friday, May 27, 2022
- Friday, July 22, 2022*
- Friday, September 30, 2022
- Friday, December 2, 2022*

** Proposed Audit Committee Meetings*

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Returns for periods ending JAN-2021

Oregon Public Employees Retirement Fund

OPERF	Regular Account				Historical Performance (Annual Percentage)							
	Policy ¹	Target ¹	\$ Thousands ²	Actual	Year-To-Date ³	1 YEAR	2 YEARS	3 YEARS	4 YEARS	5 YEARS	7 YEARS	10 YEARS
Public Equity	27.5-37.5%	32.5%	\$ 25,551,092	31.2%	0.53	15.22	14.47	6.51	11.38	13.21	9.00	9.05
Private Equity	13.5-21.5%	17.5%	\$ 18,892,790	23.0%	0.40	12.75	12.32	14.01	14.94	13.12	12.66	13.02
Total Equity	45.0-55.0%	50.0%	\$ 44,443,882	54.2%								
Opportunity Portfolio	0-5%	0%	\$ 1,732,171	2.1%	1.05	10.13	9.33	8.25	7.92	7.94	7.45	8.29
Total Fixed	15-25%	20.0%	\$ 16,640,506	20.3%	(0.66)	4.96	7.22	5.57	4.78	4.49	3.67	4.29
Risk Parity	0.0-2.5%	2.5%	\$ 2,026,844	2.5%	1.28							
Real Estate	9.5-15.5%	12.5%	\$ 8,734,984	10.7%	0.18	2.94	4.72	6.07	6.97	7.43	8.54	9.98
Alternative Investments	7.5-17.5%	15.0%	\$ 8,406,463	10.3%	0.86	(4.84)	(3.63)	(3.25)	(0.48)	0.93	0.67	
Cash w/Overlay	0-3%	0%	\$ (5,284)	0.0%	0.04	1.31	2.23	2.28	2.04	1.86	1.48	1.27
TOTAL OPERF Regular Account		100.0%	\$ 81,979,566	100.0%	0.31	8.20	9.10	6.58	8.88	9.38	7.78	8.37
OPERF Policy Benchmark					0.49	12.23	12.06	8.31	10.46	10.95	9.03	9.30
Value Added					(0.18)	(4.03)	(2.96)	(1.73)	(1.58)	(1.57)	(1.25)	(0.93)

Target Date Funds

3,037,810

TOTAL OPERF Variable Account

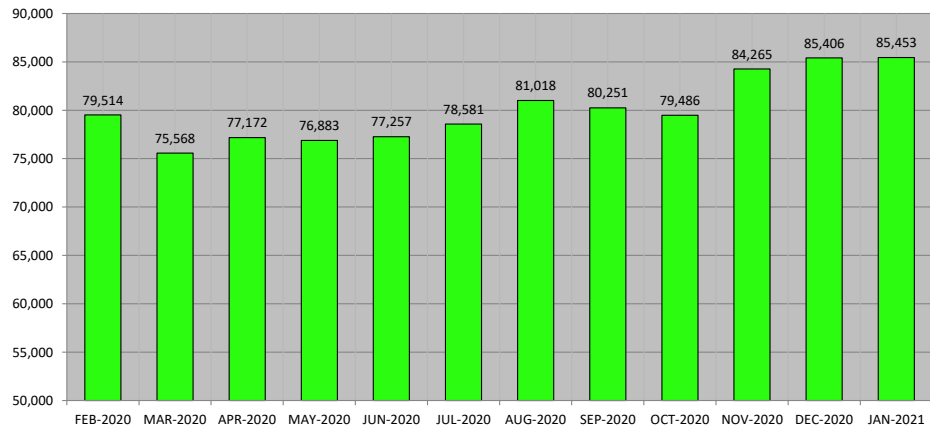
\$ 435,698

(0.15)	17.92	16.79	8.11	12.69	13.93	9.71	9.30
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Asset Class Benchmarks:

Russell 3000	(0.44)	20.48	20.51	12.38	15.45	16.68	13.21	13.50
OREGON MSCI ACWI EX US IMI NET	0.16	14.44	12.17	3.04	9.24	10.59	5.70	4.99
MSCI ACWI IMI NET	(0.18)	17.60	16.44	7.75	12.31	13.57	9.34	8.92
RUSSELL 3000+300 BPS QTR LAG	2.65	17.80	16.32	15.09	17.50	17.68	15.87	17.16
OREGON CUSTOM FI BENCHMARK	(0.51)	4.76	6.86	5.35	4.53	4.07	3.32	3.79
OREGON CUSTOM REAL ESTATE BENCHMARK	0.36	0.46	2.49	4.16	4.95	5.73	7.58	9.08
CPI +4%	0.75	5.45	6.01	5.88	5.94	6.07	5.67	5.80
91 Day Treasury Bill	0.01	0.54	1.38	1.57	1.41	1.20	0.87	0.64

Total OPERF NAV
(includes Variable Fund assets)
One year ending JAN-2021
(\$ in Millions)



¹OIC Policy revised April 2019.

²Includes impact of cash overlay management.

³For mandates beginning after January 1 (or with lagged performance), YTD numbers are "N/A". Performance is reflected in Total OPERF. YTD is not annualized.

Returns for periods ending FEB-2021

Oregon Public Employees Retirement Fund

OPERF	Regular Account				Historical Performance (Annual Percentage)							
	Policy ¹	Target ¹	\$ Thousands ²	Actual	Year-To-Date ³	1 YEAR	2 YEARS	3 YEARS	4 YEARS	5 YEARS	7 YEARS	10 YEARS
Public Equity	27.5-37.5%	32.5%	\$ 26,373,540	31.6%	4.00	30.32	14.92	9.18	11.65	14.04	8.78	9.09
Private Equity	13.5-21.5%	17.5%	\$ 19,800,002	23.7%	5.17	16.95	15.61	15.24	16.29	14.18	13.41	13.55
Total Equity	45.0-55.0%	50.0%	\$ 46,173,542	55.4%								
Opportunity Portfolio	0-5%	0%	\$ 1,804,087	2.2%	2.95	11.12	9.39	8.75	8.28	8.81	7.27	8.25
Total Fixed	15-25%	20.0%	\$ 16,548,052	19.8%	(2.23)	1.82	6.25	5.26	4.19	4.13	3.34	4.05
Risk Parity	0.0-2.5%	2.5%	\$ 1,999,308	2.4%	(0.10)							
Real Estate	9.5-15.5%	12.5%	\$ 8,738,545	10.5%	1.40	2.47	4.99	6.10	7.10	7.68	8.59	10.03
Alternative Investments	7.5-17.5%	15.0%	\$ 8,119,127	9.7%	1.87	(3.01)	(2.91)	(3.50)	(0.28)	0.97	0.68	
Cash w/Overlay	0-3%	0%	\$ 38,229	0.0%	0.05	1.05	2.10	2.27	2.00	1.86	1.47	1.26
TOTAL OPERF Regular Account		100.0%	\$ 83,420,890	100.0%	2.43	13.05	9.79	7.77	9.12	9.85	7.74	8.42
OPERF Policy Benchmark					1.82	16.06	12.63	9.25	10.48	11.29	8.91	9.29
Value Added					0.61	(3.01)	(2.84)	(1.48)	(1.35)	(1.44)	(1.16)	(0.86)

Target Date Funds

3,060,549

TOTAL OPERF Variable Account

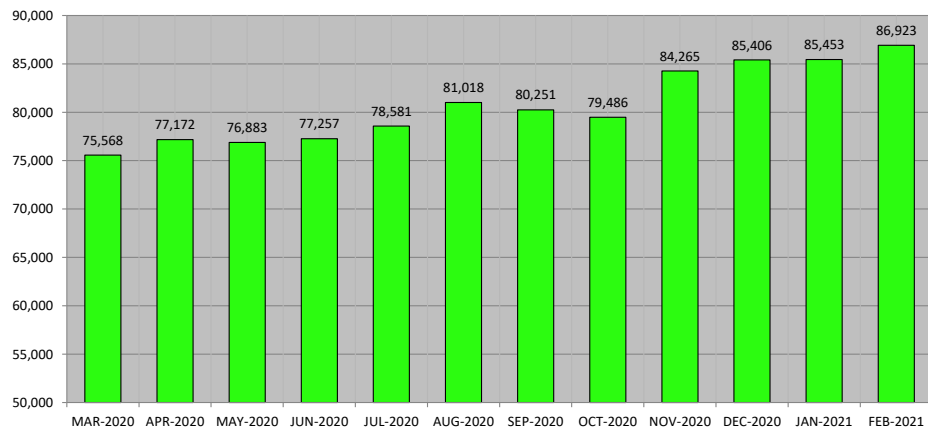
\$ 441,349

2.56	31.67	16.73	10.62	12.67	14.65	9.39	9.27
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Asset Class Benchmarks:

Russell 3000	2.67	35.33	20.28	14.97	15.28	17.41	12.96	13.44
OREGON MSCI ACWI EX US IMI NET	2.37	27.24	12.30	5.44	9.36	11.29	5.28	4.96
MSCI ACWI IMI NET	2.48	31.49	16.38	10.25	12.29	14.29	9.01	8.89
RUSSELL 3000+300 BPS QTR LAG	5.37	17.17	20.76	15.22	18.27	18.29	16.30	17.47
OREGON CUSTOM FI BENCHMARK	(1.75)	1.85	6.11	5.17	4.04	3.75	3.08	3.64
OREGON CUSTOM REAL ESTATE BENCHMARK	0.73	0.40	2.42	4.08	5.05	5.80	7.64	9.12
CPI +4%	1.63	5.74	6.08	5.91	6.01	6.17	5.70	5.81
91 Day Treasury Bill	0.02	0.40	1.29	1.54	1.40	1.20	0.87	0.63

Total OPERF NAV
(includes Variable Fund assets)
One year ending FEB-2021
(\$ in Millions)



¹OIC Policy revised April 2019.

²Includes impact of cash overlay management.

³For mandates beginning after January 1 (or with lagged performance), YTD numbers are "N/A". Performance is reflected in Total OPERF. YTD is not annualized.

Administration

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4. Oregon Investment Council Performance Review
5. Oregon Savings Growth Plan Update



Oregon

Kate Brown, Governor

Public Employees Retirement System

Headquarters:
11410 S.W. 68th Parkway, Tigard, OR
Mailing Address:
P.O. Box 23700
Tigard, OR 97281-3700
888-320-7377
TTY (503) 603-7766
www.oregon.gov/pers

March 29, 2021

TO: Members of the PERS Board
FROM: Gregory R. Gabriel, Budget Officer
SUBJECT: March 2021 Budget Report

2019-21 OPERATING BUDGET

Operating expenditures for January, preliminary expenditures for February, and preliminary expenditures for March are \$4,081,007, \$3,929,082, and \$4,973,416 respectively. Final expenditures for March will close in the Statewide Financial Management System (SFMS) on April 16 and will be included in the June 2021 report to the board.

- Through March 7, 2021, the agency has expended a total of \$87,087,681, or 74.8% of PERS' legislatively approved operations budget of \$116,441,606.
- At this time, the agency's projected variance is \$6,690,978.
- SB 1049 expenditures for January, preliminary expenditures for February, and preliminary expenditures for March are \$1,020,225, \$1,297,791, and \$964,978 respectively. As of March 7, the agency has expended \$19,850,466 of the legislatively approved budget of \$29,033,897.

2019-21 NON-LIMITED BUDGET

The adopted budget includes \$12,504,627,192 in total estimated non-limited expenditures. Non-limited expenditures include benefit payments, health insurance premiums, and third-party administration payments for both the PERS Health Insurance Program (PHIP) and the Individual Account Program (IAP).

- Non-Limited expenditures through March 7, 2021 are \$9,266,962,338.

A.3.c. Attachment – 2019-21, SB1049 Agency-wide Budget Execution Summary Analysis

PERS Monthly Budget Report

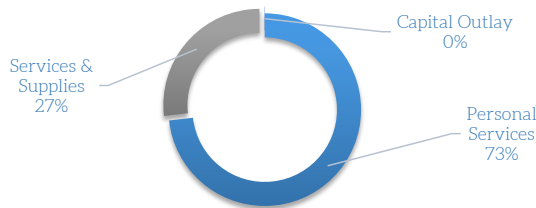
2019-21 Agency-wide Budget Execution
Preliminary Summary for the Month of March 2021

Limited - Operating Budget

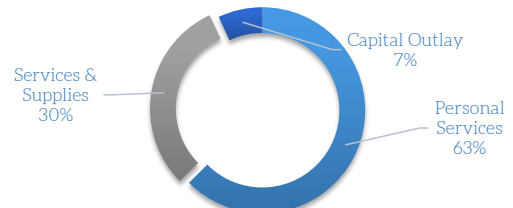
2019-21 Biennial Summary

Category	Actual Exp. To Date	Projected Expenditures	Total Est. Expenditures	2019-21 LAB	Variance
Personal Services	63,754,844	14,180,493	77,935,337	81,510,947	3,575,610
Services & Supplies	23,291,752	6,910,017	30,201,769	32,757,328	2,555,559
Capital Outlay	41,085	1,572,436	1,613,521	2,173,331	559,810
Total	87,087,681	22,662,947	109,750,628	116,441,606	6,690,978

Actual Expenditures



Projected Expenditures



Monthly Summary

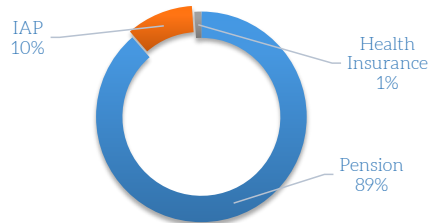
Category	Actual Exp.	Projections	Variance	Avg. Monthly Actual Exp.	Avg. Monthly Projected Exp.
Personal Services	3,390,665	3,513,643	122,978	3,112,106	3,465,769
Services & Supplies	1,582,751	1,615,052	32,301	1,126,947	1,464,410
Capital Outlay	0	0	0	5,150	165,598
Total	4,973,416	5,128,696	155,280	4,244,203	5,095,778

Non-Limited Budget

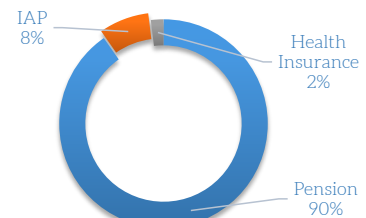
2019-21 Biennial Summary

Programs	Actual Exp To Date	Projected Expenditures	Total Est. Expenditures	Non-Limited LAB	Variance
Pension	8,212,150,549	2,187,015,219	10,399,165,768	10,347,780,673	(51,385,095)
IAP	954,760,405	187,804,715	1,142,565,120	1,423,365,167	280,800,047
Health Insurance	100,051,384	47,091,054	147,142,437	733,481,352	586,338,915
Total	9,266,962,338	2,421,910,987	11,688,873,325	12,504,627,192	815,753,867

Actual Expenditures



Projected Expenditures



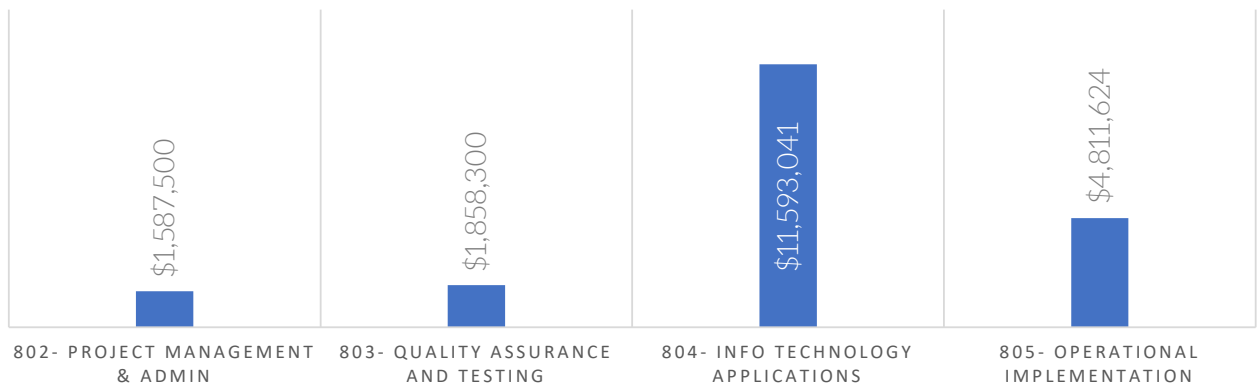
SB 1049 Budget Report

Preliminary Summary Budget Analysis for the Month of March 2021

Biennial Summary

Category	Actual Exp. To Date	Projected Expenditures	Total Est. Expend.	2019-21 LAB	Variance
Personal Services	3,187,117	1,306,637	4,493,754	6,120,680	1,626,926
Services & Supplies	16,266,380	4,778,697	21,045,077	22,913,217	1,868,140
Capital Outlay	396,969		396,969		(396,969)
Total	19,850,466	6,085,334	25,935,800	29,033,897	3,098,097

EXPENDITURES BY PACKAGE



EXPENDITURES BY PROJECT



Administration

1. February 1, 2021 Board Meeting Minutes
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4. Oregon Investment Council Performance Review
5. Oregon Savings Growth Plan Update

March 28, 2021

PERS Board Presentation

Rex T. Kim, Chief Investment Officer
Oregon State Treasury



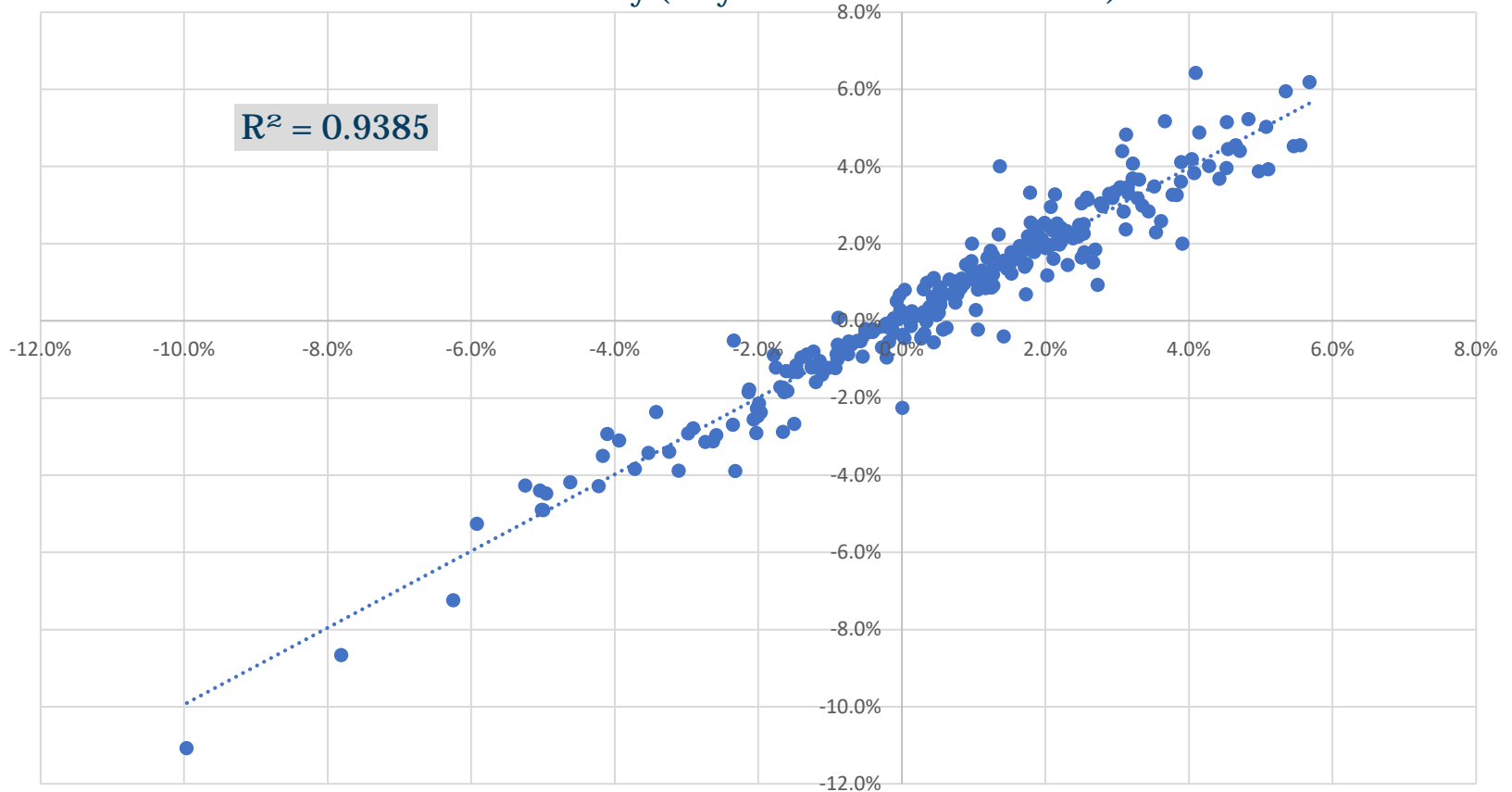
OREGON
STATE
TREASURY

Agenda

- 2020 Performance
 - Asset Allocation
 - Implementation
- Looking Forward

Asset Allocation: Drives Returns and Risk

OPERF vs Policy (July 1997 to December 2020)



Asset Allocation: Market Portfolio

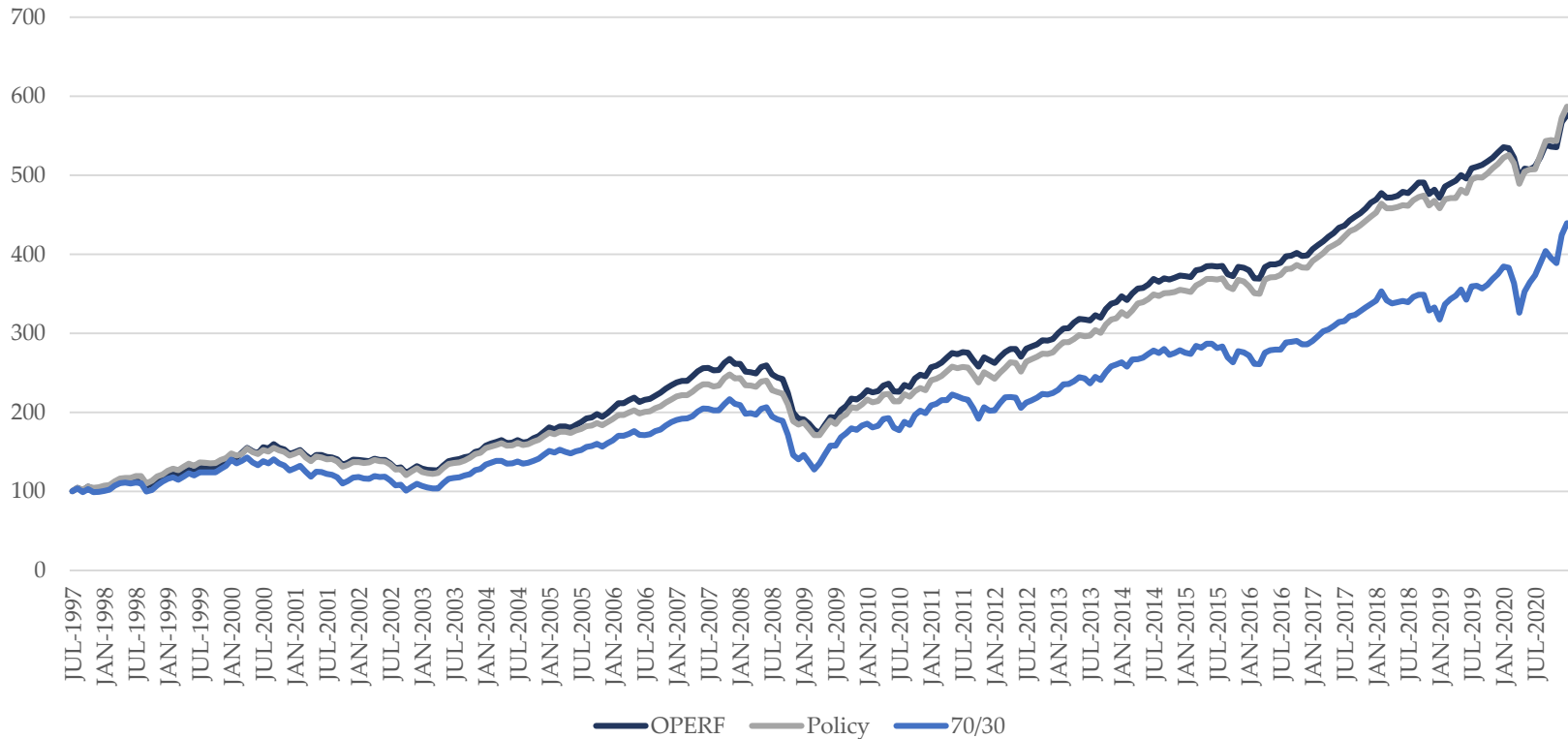


Asset Allocation: Market Portfolio



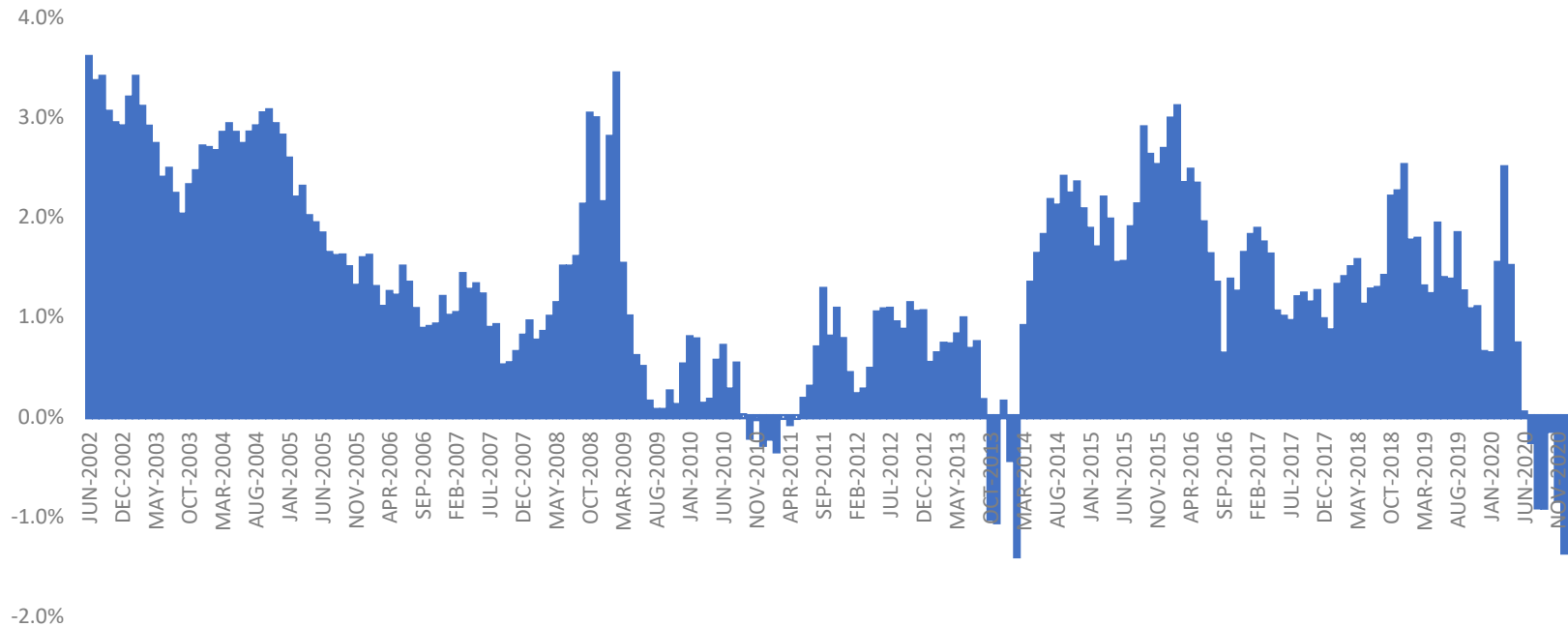
Asset Allocation: Market Portfolio

Growth \$100



Asset Allocation: Market Portfolio

OPERF vs 70/30: Rolling 5 Year Annualized Difference



OPERF Investment Performance (as of December 31, 2020)

Annualized Return	1-Year	3-Year	5-Year	7-Year	10-Year	20-Year
Russell 3000	20.89%	14.49%	15.43%	12.76%	13.79%	7.82%
S&P 500	18.40%	14.18%	15.22%	12.92%	13.89%	7.47%
Russell 2000	19.96%	10.25%	13.26%	9.34%	11.20%	8.74%
MSCI ACWI ex-US IMI	11.12%	4.83%	8.98%	5.03%	5.06%	5.64%
MSCI Emerging Markets	18.31%	6.17%	12.81%	6.17%	3.63%	9.71%
Bloomberg Barclays U.S. Aggregate	7.51%	5.34%	4.44%	4.09%	3.84%	4.83%
Fund Performance (Net of Fees)	1-Year	3-Year	5-Year	7-Year	10-Year	20-Year
OPERF (Ranking¹)	7.66% (88)	7.10% (77)	8.71% (68)	7.52% (50)	8.42% (19)	6.98% (1)
Domestic Equity	13.60%	10.52%	13.28%	10.65%	12.24%	7.29%
International Equity	13.47%	5.80%	10.06%	6.24%	6.43%	6.55%
Fixed Income	7.66%	5.51%	4.66%	3.90%	4.46%	5.75%
Private Equity	12.74%	13.96%	13.03%	12.60%	12.98%	10.82%
Real Estate	2.66%	5.95%	7.15%	8.51%	10.02%	9.49%

¹ Relative to Wilshire Trust Universe Comparison Service (TUCS) Public Funds > \$10 Billion peer group. Percentile rankings based on estimated gross returns for Fund and peer group.

Asset Allocation: Historical Perspective

	2008	2014	2020
Public Equity	46.0%	37.5%	32.5%
Private Equity	16.0%	20.0%	17.5%
Total Equity	62.0%	57.5%	50.0%
Opportunity Portfolio	0.0%	0.0%	0.0%
Fixed Income	27.0%	20.0%	20.0%
Risk Parity	0.0%	0.0%	2.5%
Real Estate	11.0%	12.5%	12.5%
Alternative Investments	0.0%	10.0%	15.0%
Cash	0.0%	0.0%	0.0%

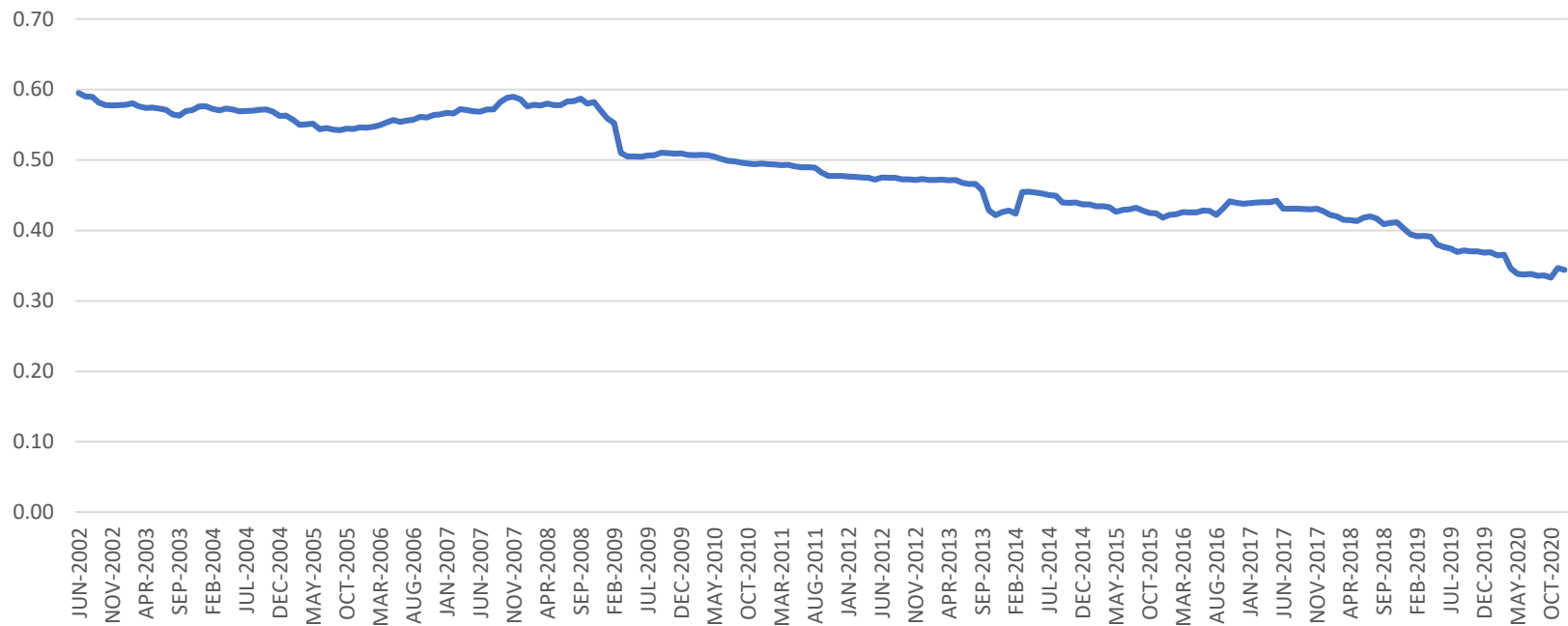
Asset Allocation: Historical Perspective

Changes since 2008:

- **Public Equity:** reduced strategic allocation, added low-volatility strategies
- **Fixed Income:** added a U.S. Treasury sleeve
- **Real Estate:** increased allocation Core
- **Alternatives (Real Assets):** added asset class
- **Alternatives (Diversifying Strategies):** added asset class
- **Risk Parity:** added asset class

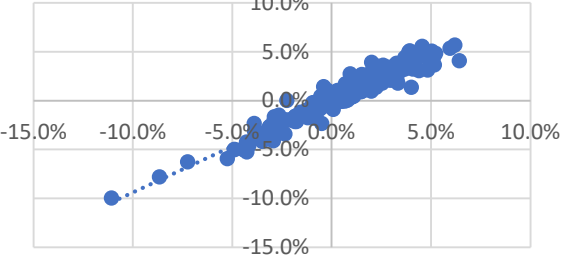
Asset Allocation: Historical Perspective

Rolling 5 Year Beta to MSCI ACWI

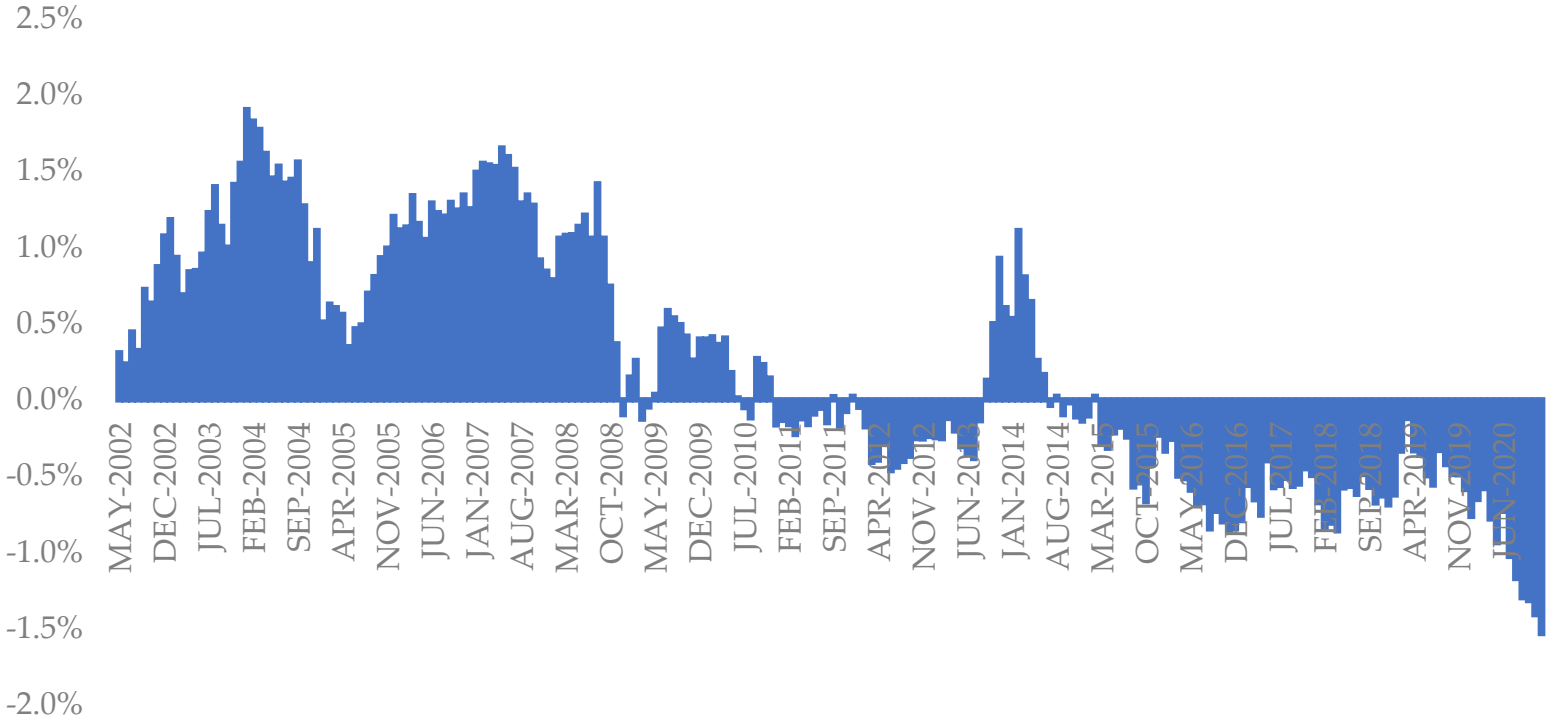


Implementation: Performance Deviations from Policy

OPERF vs Policy Benchmark
July 1997 to December 2020



5 Year Annualized Return Difference



Implementation: 2020

	vs Policy Benchmarks		
1/1/2020-12/31/2020			
Asset Classes	Asset Allocation	Manager Selection	Interaction
Total Public Equities w/Currency Overlay	-0.68%	-1.50%	0.19%
Fixed Income	-0.02%	0.08%	-0.01%
Risk Parity	-0.01%	-0.15%	0.04%
Cash w/Overlay	0.00%	0.00%	0.00%
Private Equity	-0.09%	-1.19%	-0.13%
Real Estate	0.16%	0.27%	-0.05%
Alternative Investments	0.22%	-1.20%	-0.04%
Opportunity Portfolio	-0.12%	0.00%	0.07%
OPERF - Total Plan	-0.54%	-3.65%	0.07%
		Total	-4.12%

Implementation: 2018-2020

	vs Policy Benchmarks		
1/1/2018-12/31/2020			
Asset Classes	Asset Allocation	Manager Selection	Interaction
Total Public Equities w/Currency Overlay	-0.25%	-0.65%	0.07%
Fixed Income	0.00%	0.06%	0.00%
Risk Parity	0.00%	-0.05%	0.01%
Cash w/Overlay	-0.01%	0.00%	0.00%
Private Equity	-0.03%	-0.31%	-0.01%
Real Estate	0.05%	0.21%	-0.04%
Alternative Investments	0.10%	-0.85%	-0.02%
Opportunity Portfolio	-0.05%	0.00%	0.01%
OPERF - Total Plan	-0.19%	-1.59%	0.02%
		Total	-1.76%

Implementation: 2018-2020 vs 2017-2019

	vs Custom Benchmarks					
	1/1/2018-12/31/2020			1/1/2017-12/31/2019		
Asset Classes	Asset Allocation	Manager Selection	Interaction	Asset Allocation	Manager Selection	Interaction
Total Public Equities w/Currency Overlay	-0.24%	-0.65%	0.07%	-0.05%	-0.09%	0.01%
Fixed Income	0.01%	0.06%	0.00%	0.03%	0.06%	0.00%
Risk Parity	-0.01%	-0.05%	0.01%	-0.01%	0.00%	0.00%
Cash w/Overlay	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Private Equity	-0.06%	0.12%	0.02%	0.00%	0.25%	0.02%
Real Estate	0.04%	0.21%	-0.04%	0.02%	0.25%	-0.03%
Infra/Nat Resources	0.00%	0.09%	0.01%	0.02%	-0.04%	-0.02%
Hedge Funds	0.00%	-0.70%	0.12%	0.02%	-0.27%	0.04%
Opportunity Portfolio	-0.04%	0.00%	0.01%	-0.05%	0.00%	0.01%
OPERF - Total Plan	-0.31%	-0.92%	0.20%	-0.02%	0.16%	0.03%
		Total	-1.03%		Total	0.17%

Implementation: Value Factor

Back of the Pack

Rolling 3-year annualized return differences for value versus growth, US market, June 1929–June 2020



Past performance is not a guarantee of future results.

Value and Growth represented by the Fama/French US Value Research Index and Fama/French US Growth Research Index, respectively. Fama/French index data available from the data library of Ken French.

Looking Forward: Interest Rates Are Low



Looking Forward

20-year Geometric Expected Returns Equities

	2021 E(R) (%)	2020 E(R) (%)	Δ From 2020 (%)	Notes
US Equity	6.8	7.4	-0.6	Higher price-to-earnings, lower dividend
US Large Cap	6.7	7.2	-0.5	Higher price-to-earnings, lower dividend
US Mid Cap	6.9	7.6	-0.7	Higher price-to-earnings, lower dividend
US Small Cap	7.1	7.9	-0.8	Higher price-to-earnings
Developed Non-US Equity	7.1	7.9	-0.8	Higher price-to-earnings, lower dividend
Dev. Non-US Small Cap	7.0	7.8	-0.8	Higher price-to-earnings, lower dividend
Emerging Market Equity	8.1	9.1	-1.0	Higher price-to-earnings, lower dividend
Emerging Market Small Cap	8.2	9.0	-0.8	Higher price-to-earnings, lower dividend
Frontier Market Equity	8.9	10.0	-1.1	Higher price-to-earnings, lower dividend
Global Equity	7.1	7.8	-0.7	Higher price-to-earnings, lower dividend
Low Volatility Equity	6.4	NA	NA	<i>New Asset Class</i>
Private Equity	9.1	9.4	-0.3	Higher prices, offset by lower borrowing costs
Buyouts	9.0	9.4	-0.4	Higher prices, offset by lower borrowing costs
Venture Capital	9.6	9.3	0.3	Higher earnings

Source: Meketa Investment Group





OREGON STATE TREASURY

Tobias Read
Oregon State Treasurer

350 Winter St NE, Suite 100
Salem, OR 97301-3896

oregon.gov/treasury

Administration

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March 29, 2021

TO: Members of the PERS Board
FROM: Roger Smith, Deferred Compensation Program Manager
SUBJECT: Oregon Savings Growth Plan (OSGP) Annual Report

OVERVIEW

Oregon Administrative Rule 459-050-0030(15) directs that the OSGP Program Manager shall prepare an annual report to the PERS Board.

The attached presentation reflects information for the 2020 calendar year and includes information regarding governance, administrative support, and plan and participant demographics. The report also summarizes assets, cashflow and investment composition as well as investment performance, options, and fees.

A.5. Attachment 1 – *OSGP Board Report Presentation for Calendar Year 2020*

OREGON PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Oregon Savings Growth Plan Annual Report - Calendar Year 2020

March 29, 2021



GOVERNANCE

Advisory Committee

Mary Jo Evers – Local Government

Celeste Van Cleave – Local Government

Colin Benson – State of Oregon

Richard Bailey – State of Oregon

Mike Marostica – State of Oregon

Christine Valentine – State of Oregon

Gene Bentley – Retired

Treasury

Wil Hiles – Public Equity Investment Officer

Claire Illo – Public Equity Investment Officer

Callan Investment Consultant

Anne Heaphy – Senior Vice President

Uvan Tseng – Senior Vice President

Department of Justice

Steven Marlowe – Assistant Attorney General

ADMINISTRATIVE SUPPORT

OSGP Staff

Roger Smith – Program Manager

Kathleen Gannon – Operations Coordinator

Jack Schafroth – Outreach Coordinator

Dee Monday – Administrative Assistant

Dean Marshall – Retirement Counselor

Tamie Brahin – Retirement Counselor

Helen Wilson – Retirement Counselor

Recordkeeper: Voya Financial

Brian Merrick – Relationship Manager

Carol Cann – Operations Manager

Jennifer Moran – Communication
Consultant

Gladys Salguero – Education Team
Manager

PLAN SUMMARY

Assets and Cash Flow (for year ending December 31, 2020)

- Total plan assets = \$2.9 billion
- Net cash flow was \$35 million
- Pre-tax contributions were over \$102 million
- Rollover-in contributions were over \$61 million
- Roth contributions were over \$14 million
 - Participants with Roth elections 5,570

Investment Composition

- The LifePath Options hold 31% of plan assets
- The Large Company Growth Stock Option is second with 14.35% of plan assets
- The Stock Index Option is third with 11.88% of plan assets
- The Schwab Brokerage account has 379 participants with an average balance of \$101,308

INVESTMENT OPTIONS AND PERFORMANCE

Investment options	Ending balance as of 12/31/20	Annual performance	Contribution by fund option
Large Company Growth Stock Option	\$416,098,755	38.43%	\$20,003,695
Stock Index Option	\$344,590,584	20.83%	\$15,810,921
Socially Responsible Investment Option	\$28,327,006	20.21%	\$3,063,651
Small Company Stock Option	\$243,143,714	13.89%	\$10,110,980
International Stock Option	\$154,879,670	12.30%	\$8,796,126
Active Fixed Income Option	\$225,239,038	7.36%	\$13,455,726
Real Return Option	\$4,516,814	3.07%	\$554,839
Large Company Value Stock Option	\$205,187,569	2.75%	\$10,567,690
Stable Value Option	\$330,441,704	2.09%	\$17,204,545

INVESTMENT OPTIONS AND PERFORMANCE

Investment options	Ending balance as of 12/31/20	Annual performance	Contribution by fund option
LifePath® Retirement	\$363,854,760	10.88%	\$18,784,896
LifePath® 2025	\$158,957,354	11.10%	\$14,578,412
LifePath® 2030	\$117,445,434	11.74%	\$12,663,190
LifePath® 2035	\$93,350,754	12.22%	\$10,271,621
LifePath® 2040	\$68,420,560	12.67%	\$8,130,366
LifePath® 2045	\$46,312,185	13.22%	\$6,259,631
LifePath® 2050	\$35,372,658	13.49%	\$5,185,531
LifePath® 2055	\$14,755,472	13.61%	\$2,481,194
LifePath® 2060	\$10,467,412	13.59%	\$1,972,866
LifePath® 2065	\$861,674	n/a	\$107,344

OSGP FEES

Administrative Fees	Percentage of Assets
State of Oregon Administrative Fee	0.07%
Recordkeeping	0.05%
Total Administrative Fees	0.12%

By Investment Option	Weighted Average (%)
LifePath® Portfolios	0.07%
Stable Value	0.33%
Active Fixed Income Option	0.16%
Real Return Fund	0.22%
Large Company Value Stock	0.02%
Stock Index	0.02%
Socially Responsible Investment Option	0.17%
Large Company Growth Stock	0.02%
International Stock	0.53%
Small Company Stock	0.39%

ROLLOVERS

OSGP Rollovers Out for Calendar Year 2020

Institution	# of Rollovers	% of Total	\$ Rolled
PERS Purchase of Service Credit	260	27%	\$1,633,827
Edward Jones	98	10%	\$12,751,282
Vanguard	66	6%	\$9,181,674
Fidelity	61	6%	\$10,019,433
Td Ameritrade	41	4%	\$6,443,373
All Others	440	46%	\$86,632,523

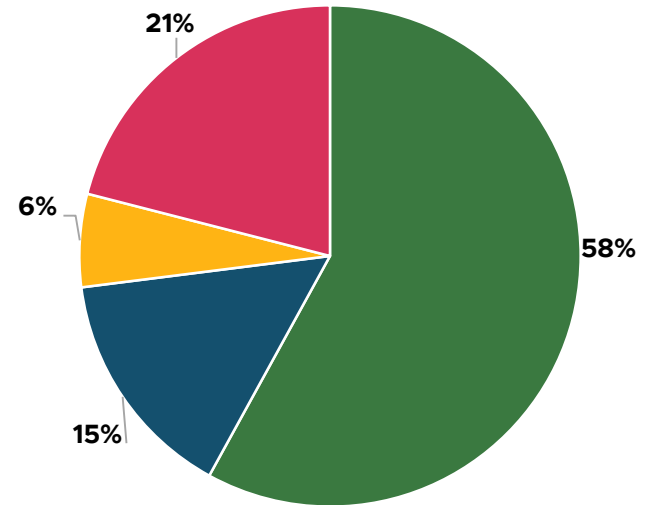
OSGP Rollovers-In for Calendar Year 2020

Institution	# of Rollovers	% of Total	\$ Rolled
IAP	525	56%	\$46,977,975
All Others	414	44%	\$11,789,290

PARTICIPANT STATUS SUMMARY

Calendar Year 2020

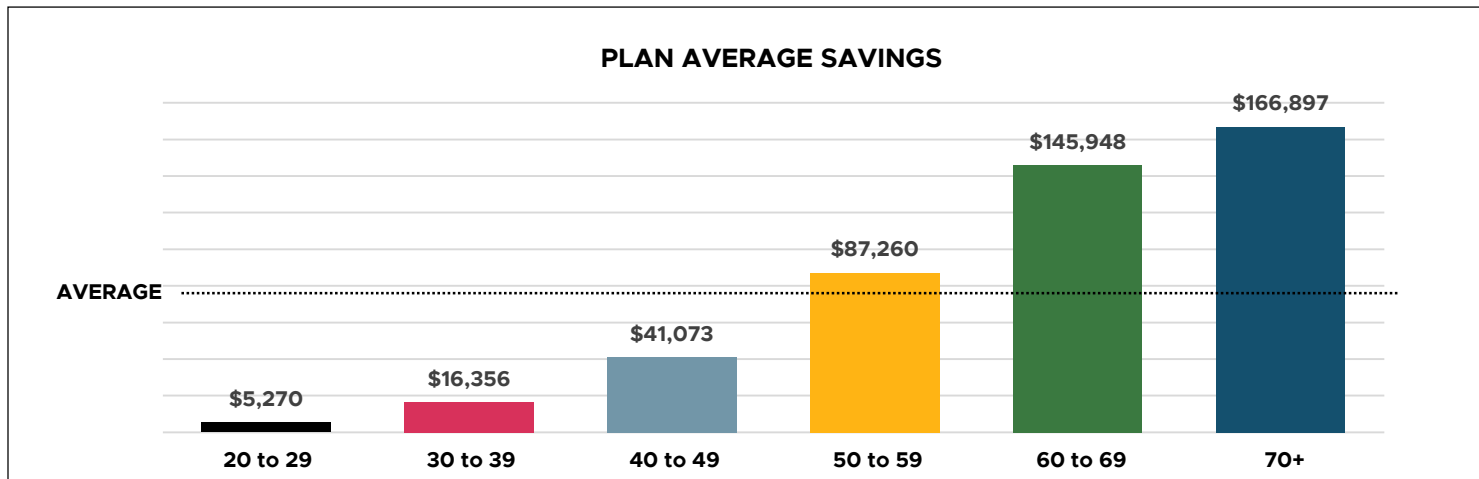
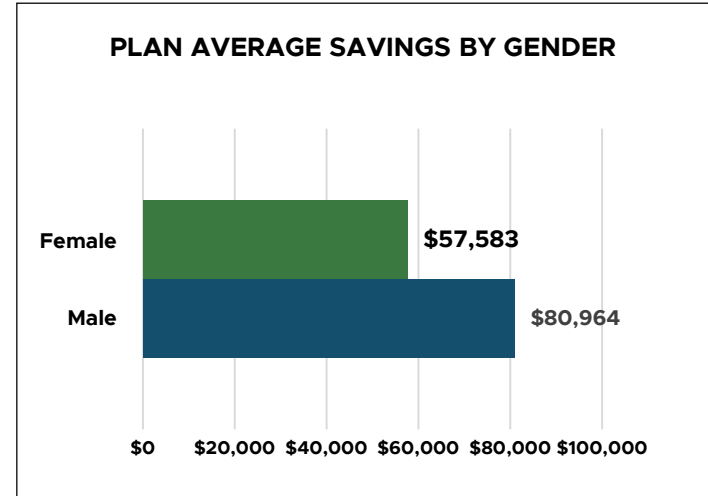
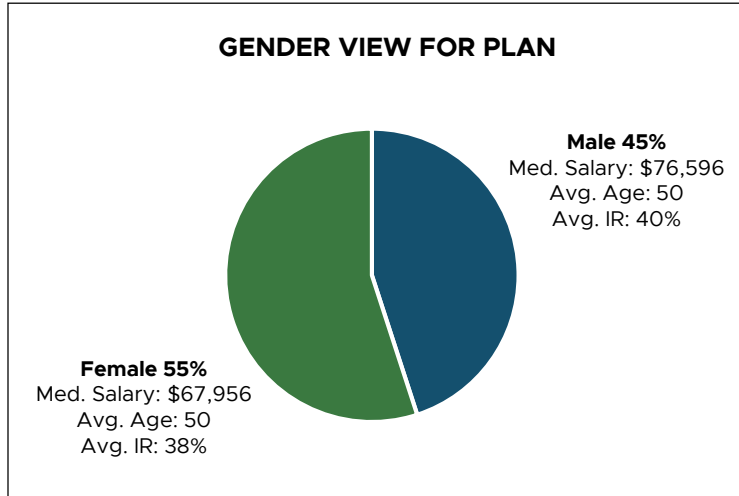
Participant Status	Number of Participants
Active, Contributing	19,701
Active Not Contributing	5,321
Terminated Receiving Installments	2,128
Terminated with a Balance	7,294
Total	34,481*



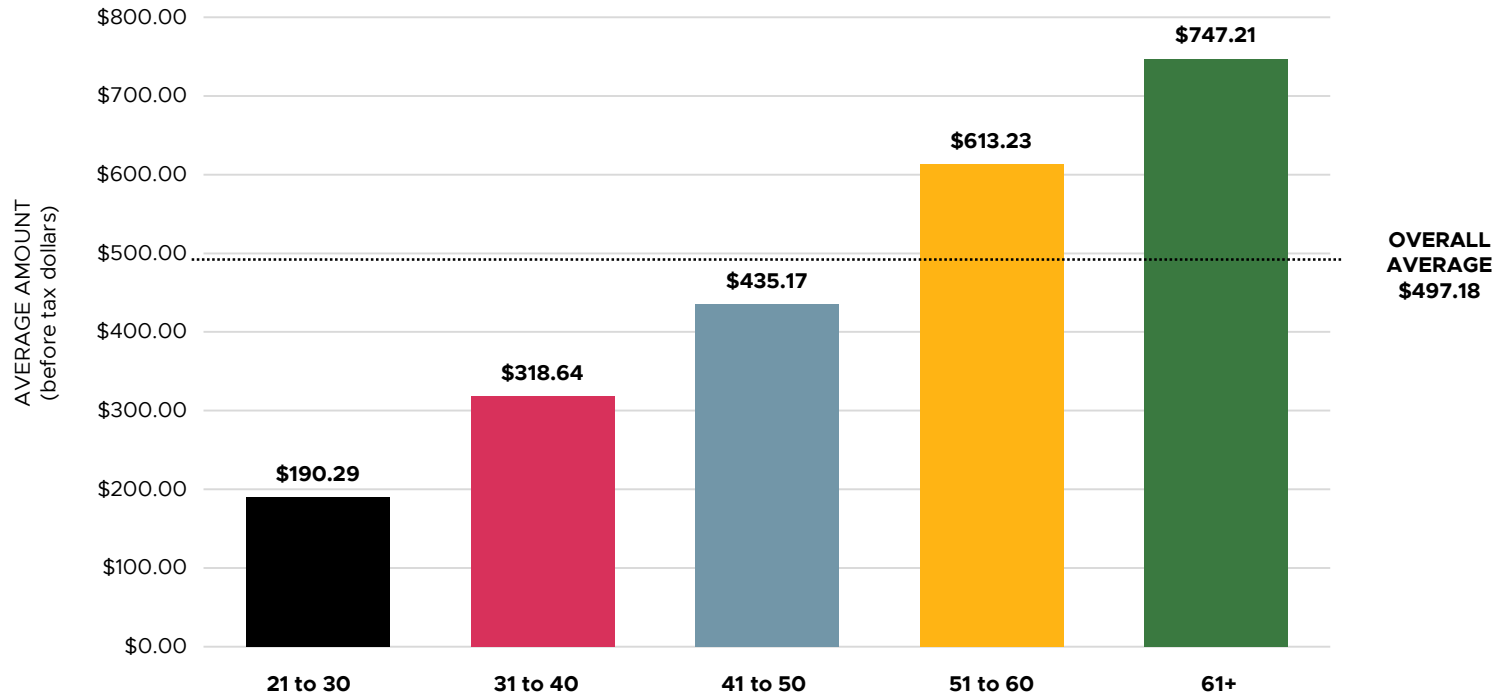
*Total includes 34 suspended accounts not included in chart.

PARTICIPANT STATUS SUMMARY

Calendar Year 2020

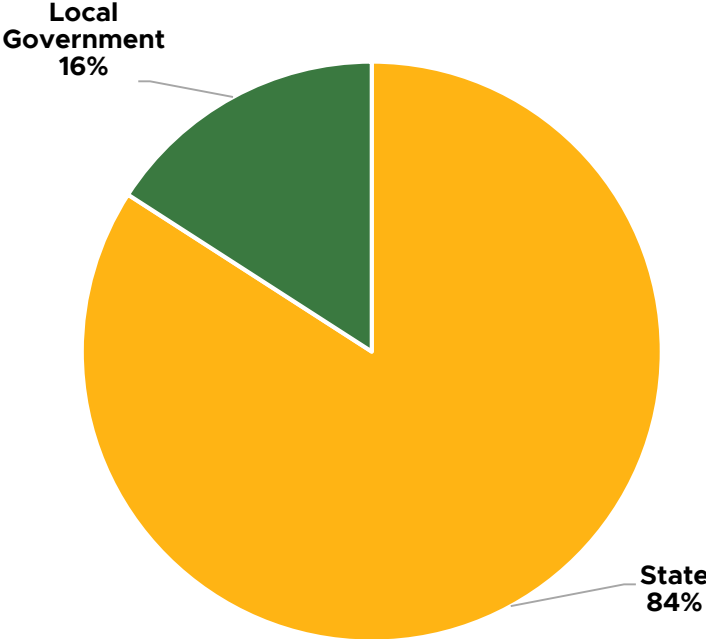


AVERAGE MONTHLY CONTRIBUTIONS

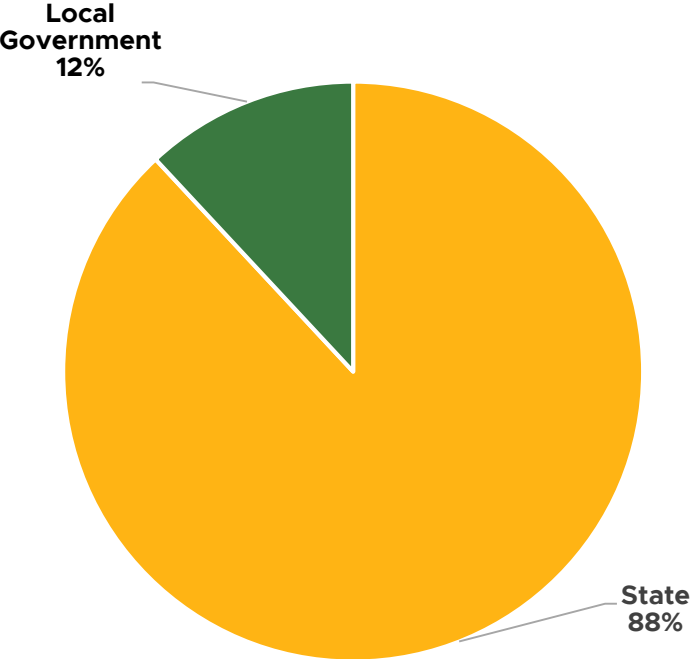


STATE AND LOCAL GOV'T BREAKDOWN

Participants



Assets



COMMUNICATIONS

Communications assists with overall Plan goals through a variety of campaigns while creating a cohesive, professional, and friendly overall look and feel to all OSGP materials.

Projects completed in 2020:

- Virtual PERS 2020 Expo
- Created workshop presentations
- Customized and created animated and live videos
- Created participant education and outreach dedicated website pages
- Implemented employer dedicated website pages
- Deployed automated financial wellness email campaigns
- Designed forms for electronic PERS workflows
- Redesigned flyers and marketing pieces

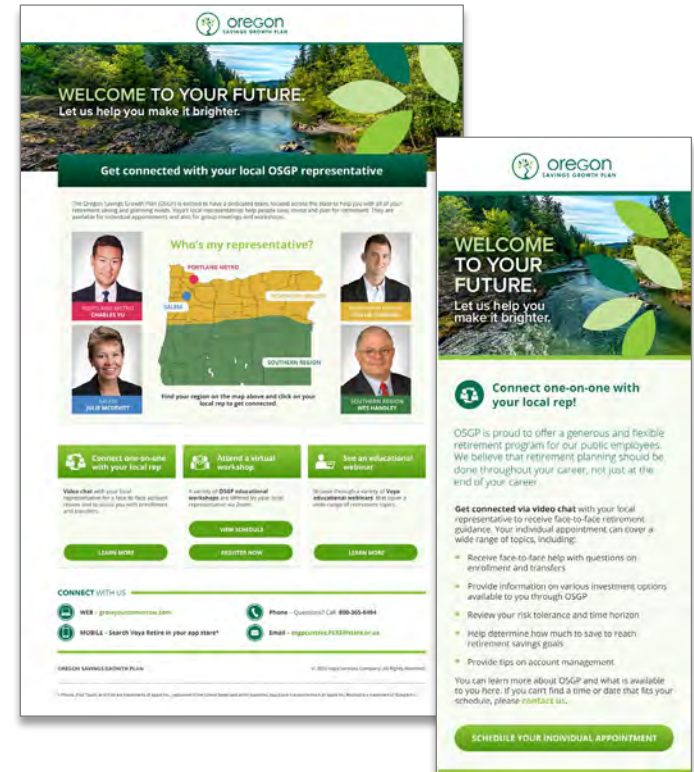
WORKDAY DATA FEED AND EFFORTS

PERS, OSGP, Voya and DAS worked together to develop a weekly Workday-based demographic data feed for all state employees

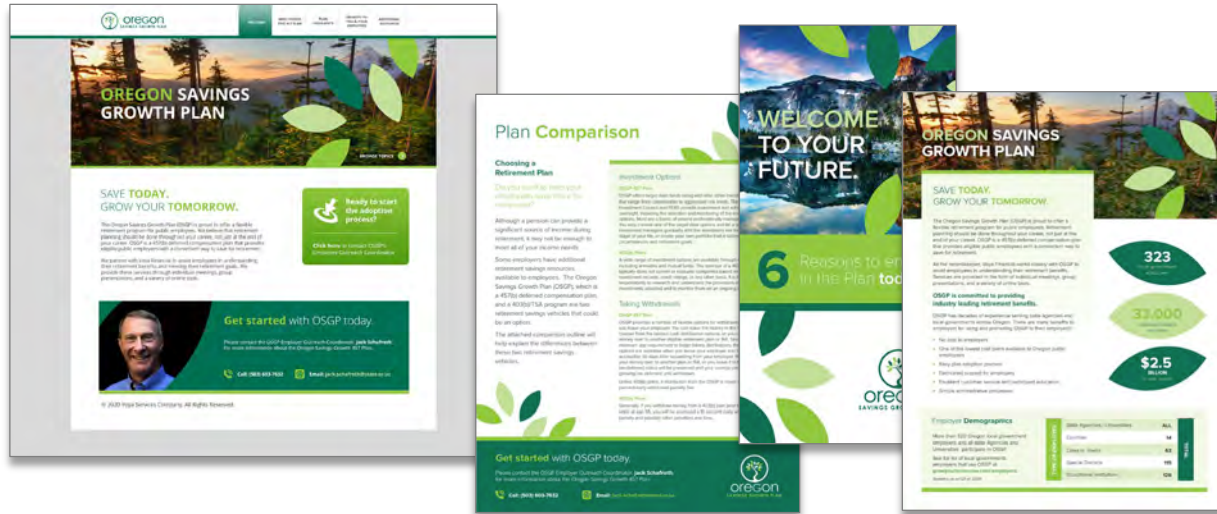
- The data will be used in future marketing campaigns in an effort to promote enrollment, increase current deferrals, and further educated employees on the importance of saving more for retirement
- 23,419 letters were mailed to state employees not currently enrolled in the plan
- Average of 142 new hire letters go out each month
- The data was used to segment by years of service for PERS Expo emails in October 2020
- POMBS and KPM goal: to increase state employee participation from current 43% to over 50% within the next 18 months

EDUCATION AND OUTREACH (E&O)

- E&O team includes a manager and four local reps
- Four different workshops are offered year round
- Workshops are in-person (when allowed), virtual, and recorded
- New pages were created in 2020 for the website to market the team and workshops
- Customized email created for reps to send out
- Marketing materials encourage participants to engage with reps
- In 2020 there was a 96% satisfaction rate for workshop content
- In 2020 62% of attendees took action after attending a workshop



EMPLOYER OUTREACH



Local Government Employers	Number
Total employers that have adopted OSGP	328
Total employers that are new in 2020	14
Total local government employers that stopped using OSGP in 2020	1

LOOKING AHEAD

- Continue to make investing as easy and understandable as possible
- Leverage demographic data
- Reach new employees that haven't taken any action
- Continue existing automated campaigns
- Create new campaigns that encourage enrollment and deferral increases
- Focus on financial wellness in campaigns
- Incorporate recognition of various diversity celebrations in marketing
- Continuously improve and update website to make it easy to navigate, informative, and a true resource for participants and employers

OREGON PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



THANK YOU



March 29, 2021
PERS Board Meeting Agenda

Administrative Rulemaking

1. Adoption of Salary and Contribution Limits



Oregon

Kate Brown, Governor

Public Employees Retirement System

Headquarters:
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Mailing Address:
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March 29, 2021

TO: Members of the PERS Board

FROM: Stephanie Vaughn, Manager, Policy Analysis & Compliance Section

SUBJECT: Adoption of Rulemaking for Salary and Contribution Limits Rules:
 OAR 459-005-0525, *Ceiling on Compensation for Purposes of Contributions and Benefits*
 OAR 459-005-0545, *Annual Addition Limitation*
 OAR 459-080-0400, *Employee Pension Stability Account (EPSA)*
 OAR 459-080-0500, *Limitation on Contributions*

OVERVIEW

- Action: Adopt Salary and Contribution Limits Rules.
- Reason: Update rules to reflect the 2021 Internal Revenue Code (IRC), salary limit, and monthly salary threshold for the Employee Pension Stability Account (EPSA).
- Policy Issue: None identified.

BACKGROUND

The Internal Revenue Service revises various dollar limits annually based on cost-of-living adjustments. These revisions are used throughout the PERS plan's statutes and rules, but revisions to the limits must be adopted by the legislature or PERS Board to be effective.

The rule modifications incorporate the federal adjustment on plan contribution amount for calendar year 2021 and are necessary to ensure compliance with the federal limit.

Also, under ORS 238.005, 238A.005 and 238A.330 as amended by SB 1049 (2019), on January 1 of each year, the PERS Board shall adjust the overall salary limit, and the salary threshold for EPSA contributions to reflect cost of living increases from the previous year based on the Consumer Price Index for All Urban Consumers, West Region (All Items), as published by the Bureau of Labor Statistics of the United States Department of Labor. The amendments to the rules update these amounts to \$197,730 for the calendar year salary limit, and \$2,535 for the monthly threshold for contributions to the EPSA for 2021.

PUBLIC COMMENT AND HEARING TESTIMONY

No rulemaking hearing was held because the PERS building is closed to the public. The public comment period ended March 1, 2021, at 5:00 p.m. No public comments were received.

LEGAL REVIEW

The attached rules were submitted to the Department of Justice for legal review and any comments or changes are incorporated in the rules as presented for adoption.

IMPACT

Mandatory: Yes, statute requires the PERS Board to update its rules to reflect revisions by the IRS and to update its rules to reflect cost of living increases from the previous year for salary limit and EPSA contributions salary threshold.

Benefit: Clarifies the limits for contributions and benefits under federal law for calendar year 2021 and clarifies salary limit and EPSA contributions salary threshold for calendar year 2021.

Cost: There are no discrete costs attributable to the rule.

RULEMAKING TIMELINE

January 29, 2021	Staff began the rulemaking process by filing Notice of Rulemaking with the Secretary of State.
February 1, 2021	PERS Board notified that staff began the rulemaking process.
February 1, 2021	Secretary of State published the Notice in the Oregon Administrative Rules Database. Notice was sent to employers, legislators, and interested parties. Public comment period began.
March 1, 2021	Public comment period ended at 5:00 p.m.
March 29, 2020	Staff proposes adopting the rule modifications, including any changes resulting from public comment or reviews by staff or legal counsel.

BOARD OPTIONS

The PERS Board may:

1. Pass a motion to “adopt the Salary and Contribution Limits rules, as presented.”
2. Direct staff to make other changes to the rules or explore other options.

STAFF RECOMMENDATION

Staff recommends the PERS Board choose Option #1.

B.3. Attachment 1 - 459-005-0525, *Ceiling on Compensation for Purposes of Contributions and Benefits*

B.3. Attachment 2 - 459-005-0545, *Annual Addition Limitation*

B.3. Attachment 3 - 459-080-0400, *Employee Pension Stability Account (EPSA)*

B.3. Attachment 4 - 459-080-0500, *Limitation on Contributions*

**OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 005 – ADMINISTRATION**

1 **459-005-0525**

2 **Ceiling on Compensation for Purposes of Contributions and Benefits**

3 (1) This administrative rule shall be construed consistently with the requirements of
4 the Internal Revenue Code (IRC) Section 401(a)(17) relating to the limitation on annual
5 compensation allowable for determining contribution and benefits under ORS Chapters
6 238 and 238A.

7 (2) For purposes of this rule:

8 (a) “Annual compensation” means “salary,” as defined in ORS 238.005 and 238.205
9 with respect to Chapter 238 and in 238A.005 with respect to Chapter 238A paid to the
10 member during a calendar year or other 12-month period, as specified in this rule.

11 (b) “Eligible participant” means a person who first becomes a member of PERS
12 before January 1, 1996.

13 (c) “Employer” means a “public employer” as defined in ORS 238.005, for the
14 purposes of this rule as it applies to Chapter 238. For the purposes of this rule as it
15 applies to Chapter 238A, an “employer” means a “participating public employer” as
16 defined in 238A.005.

17 (d) “Noneligible participant” means a person who first becomes a member of PERS
18 after December 31, 1995.

19 (e) “Participant” means an active or inactive member of PERS.

20 (3) For eligible participants, the limit set forth in IRC Section 401(a)(17) shall not
21 apply for purposes of determining the amount of employee or employer contributions that
22 may be paid into PERS, and for purposes of determining benefits due under ORS

1 Chapters 238 and 238A. The limit on annual compensation for eligible participants shall
2 be no less than the amount which was allowed to be taken into account for purposes of
3 determining contributions or benefits under former ORS 237.001 to 237.315 as in effect
4 on July 1, 1993, for calendar years before 2020. Beginning in ~~[2020]~~ 2021, the limit on
5 annual compensation taken into account for purposes of determining contributions or
6 benefits under ORS Chapter 238 or 238A for eligible participants shall be measured on a
7 calendar year basis, and shall not exceed ~~[\$195,000]~~ \$197,730 per calendar year.

8 (4) For noneligible participants, the annual compensation taken into account for
9 purposes of determining contributions or benefits under ORS Chapters 238 and 238A
10 shall be measured on a calendar year basis, and shall not exceed ~~[\$195,000]~~ \$197,730 per
11 calendar year beginning in ~~[2020]~~ 2021.

12 (5) A participant employed by two or more agencies or instrumentalities of a PERS
13 participating employer in a calendar year, whether concurrently or consecutively, shall
14 have all compensation paid by the employer combined for determining the allowable
15 annual compensation under this rule.

16 (6) PERS participating employers shall monitor annual compensation and
17 contributions to assure that reports and remitting are within the limits established by this
18 rule and IRC Section 401(a)(17).

19 (7) For a participant, Final Average Salary under ORS 238.005 with respect to
20 Chapter 238 and under 238A.130 with respect to Chapter 238A shall be calculated based
21 on the amount of compensation that is allowed to be taken into account under this rule.

22 (8) With respect to ORS Chapter 238, creditable service, as defined in 238.005, shall
23 be given for each month that an active member is paid salary or wages and allowable

1 contributions have been remitted to PERS, or would be remitted but for the annual
2 compensation limit in this rule. With respect to Chapter 238A, retirement credit as
3 determined in 238A.140, shall be given for each month that an active member is paid
4 salary or wages and allowable contributions have been remitted to PERS, or would be
5 remitted but for the annual compensation limit in this rule.

6 (9) Beginning in 2020, the limitation on annual compensation under sections (3) and
7 (4) of this rule will be indexed by cost-of-living adjustments in subsequent years as
8 provided in the Consumer Price Index for All Urban Consumers, West Region (All
9 Items), as published by the Bureau of Labor Statistics of the United States Department of
10 Labor.

11 Stat. Auth.: ORS 238.630, 238.650, 238A.370 & 238A.450

12 Stats. Implemented: ORS 238.005 & 238A.005

**OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 005 – ADMINISTRATION**

1 **459-005-0545**

2 **Annual Addition Limitation**

3 (1) This administrative rule shall be construed consistently with the requirements of
4 the Internal Revenue Code (IRC) Section 415(c) and the Treasury regulations and
5 Internal Revenue Service rulings and other interpretations issued thereunder.

6 (2) Except as otherwise provided in this rule, a member’s annual additions to PERS
7 for any calendar year after ~~2019~~ 2020 may not exceed ~~[\$57,000]~~ \$58,000 (as adjusted
8 under IRC Section 415(d)).

9 (3) For purposes of this rule, the term “annual additions” has the same meaning as
10 under IRC Section 415(c)(2).

11 (4) The following special rules shall apply with respect to purchases of permissive
12 service credit, as defined in OAR 459-005-0540, Permissive Service Credit:

13 (a) If a member’s after-tax contributions to purchase permissive service credit are
14 included in the member’s annual additions under section (3) of this rule, the member
15 shall not be treated as exceeding the limitation under section (2) of this rule solely
16 because of the inclusion of such contributions.

17 (b) With respect to any eligible participant, the annual addition limitation in section
18 (2) of this rule shall not be applied to reduce the amount of permissive service credit to an
19 amount less than the amount that could be purchased under the terms of the plan as in
20 effect on August 5, 1997. As used in this subsection, the term “eligible participant”
21 includes any individual who became an active member before January 1, 2000.

1 (5) If a member makes a payment to PERS to purchase retirement credit for service
2 in the Armed Forces pursuant to 238.156(3)(c) or 238A.150 and the service is covered
3 under Internal Revenue Code Section 414(u), the following special rules shall apply for
4 purposes of applying the annual addition limitation in section (2) of this rule:

5 (a) The payment shall be allocated as an annual addition to the calendar year to
6 which it relates; and

7 (b) The member shall be treated as having received the following amount of
8 compensation for the period of service in the Armed Forces to which the payment relates:

9 (A) The amount of compensation the member would have received from a
10 participating employer had the member not been in the Armed Forces; or

11 (B) If the amount in paragraph (A) of this subsection is not reasonably certain, the
12 member's average compensation from the participating employer during the 12-month
13 period immediately preceding the period of service in the Armed Forces (or, if shorter,
14 the period of employment immediately preceding the period of service in the Armed
15 Forces).

16 (6) The provisions of this rule are effective on January 1, 2004.

17 Stat. Auth.: ORS 238.630, 238.650, 238A.370 & 238A.450

18 Stats. Implemented: ORS 238.005 - 238.715, 238A.370

**OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 080 – OPSRP INDIVIDUAL ACCOUNT PROGRAM**

1 **459-080-0400**

2 **Employee Pension Stability Account (EPSA)**

3 (1) The Employee Pension Stability Account (EPSA) is a member account under the IAP
4 as established in ORS 238A.353. A portion of the member contributions is credited to the
5 member's EPSA when the member's monthly salary exceeds the threshold amount and
6 the system funded status is below 90%.

7 (2) The monthly salary threshold amount:

8 (a) Is ~~[\$2,500 for calendar year 2020]~~ \$2,535 for calendar year 2021;

9 (b) Includes salary from all PERS covered employment during the calendar month; and

10 (c) Is determined based on the date the salary is paid except for retroactive salary
11 payments, which are allocated to the period when the salary was earned or would have
12 been earned.

13 (3) Though part of the IAP, EPSA funds are not invested in target date funds. EPSA
14 funds are held in a separate member account that will be credited annually with earnings
15 or losses in accordance with OAR 459-007-0005. There is no guaranteed rate of return on
16 a member's EPSA.

17 (4) Unless withdrawn prior to earliest retirement age, a member's EPSA will be applied
18 to the cost of the member's retirement or other pension benefit attributable to service on
19 and after July 1, 2020. The portion of the member's benefit attributable to service on and
20 after July 1, 2020 will be determined by dividing the number of months of service after
21 July 1, 2020 by the total months of service.

1 (5) If the amount in the EPSA exceeds the cost of the pension or other retirement benefits
2 that are payable to the member or the member's beneficiary determined according to
3 section (4) of this rule, the board shall pay the excess amounts in a lump sum to the
4 member or the member's IAP beneficiary.

5 Stat. Auth.: ORS 238A.450

6 Stats. Implemented: ORS 238A.050, OL 2019, Ch. 355, Sec. 2, & OL 2018, Ch. 118

7 Hist.: F. & cert. ef. 6-23-20

**OREGON ADMINISTRATIVE RULE
PUBLIC EMPLOYEES RETIREMENT BOARD
CHAPTER 459
DIVISION 080 – OPSRP INDIVIDUAL ACCOUNT PROGRAM**

1 **459-080-0500**

2 **Limitation on Contributions**

3 (1) For purposes of this rule, “annual addition” has the same meaning given the term
4 in 26 U.S.C. 415(c)(2).

5 (2) Except as otherwise provided in this rule, the annual addition to a member
6 account for any calendar year may not exceed [~~\$57,000~~] \$58,000 effective January 1,
7 ~~[2020]~~ 2021.

8 (3) If a payment of employee contributions for a period of military service is made
9 under OAR 459-080-0100:

10 (a) The payment shall be allocated as an annual addition to the calendar year(s) of
11 military service to which it relates; and

12 (b) For the purpose of determining the amount of the payment under this section, the
13 member’s compensation shall be determined under OAR 459-080-0100(3)(d).

14 Stat. Auth.: ORS 238A.450

15 Stats. Implemented: ORS 238A.370

Action and Discussion Items

1. Legislative Update
2. SB 1049 Implementation Update
3. Final 2020 Earnings Crediting and Reserving
4. Preparatory Discussion for Upcoming Experience Study



Oregon

Kate Brown, Governor

Public Employees Retirement System

Headquarters:
11410 S.W. 68th Parkway, Tigard, OR
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March 29, 2021

TO: Members of the PERS Board
FROM: Heather Case, Senior Policy Advisor
SUBJECT: Legislative Update

2021 LEGISLATIVE SESSION- BILLS IMPACTING PERS

The 2021 legislative session began on February 19, and will continue until mid-to-late June. As of March 5, over 2,200 bills have been introduced for consideration during the 2021 legislative session. Of those, we are tracking 30 that directly impact PERS statutes or refer to PERS. Other bills may have an impact on various aspects of agency operation, and are also being tracked. During session, our highest priority is to monitor bills that will impact the PERS plan directly by amending or adding to ORS Chapters 238 and 238A, that refer to “retirement,” or that include incidental reference to PERS in non-PERS statutes.

Topics include, but are not limited to: Police and Fire (P&F) designation, reimbursement of employee contributions at 90% funded, release time counted as service time for union members, pension forfeiture if convicted of rape or murder, FAS calculated on five years instead of three years, no new members after Jan 2022, lower retirement age for P&F.

With few exceptions, committees have until April 13 to hold work sessions on first chamber bills (House bills in the House and Senate bills in the Senate). The following 31 bills qualify for close monitoring, but are not the only bills the agency is tracking. Official information about all legislation is available on the legislative website: www.oregonlegislature.gov

Bill Number	Relating to Clause
SB 42	Relating to the State Board of Parole and Post-Prison Supervision
SB 111	Relating to public employee retirement
SB 112	Relating to public employee retirement; declaring an emergency
SB 113	Relating to public employee retirement; declaring an emergency
SB 137	Relating to connection to federal tax law; prescribing an effective date
SB 138	Relating to connection to federal tax law; prescribing an effective date
SB 297	Relating to judicial marshals; prescribing an effective date
SB 413	Relating to salary under Public Employees Retirement System
SB 425	Relating to telecommunicators
SB 426	Relating to telecommunicator members of the Public Employees Retirement System

SB 427	Relating to telecommunicator members of the Public Employees Retirement System
SB 446	Relating to the calculation of final average salary under the Public Employees Retirement System
SB 510	Relating to members of the Public Employees Retirement System who commit crimes
HB 2012	Relating to telecommunicators
HB 2149	Relating to management service in state employment
HB 2223	Relating to public employee retirement
HB 2242	Relating to telecommunicators
HB 2375	Relating to the forfeiture of retirement credit under the Oregon Public Service Retirement Plan; declaring an emergency
HB 2457	Relating to connection to federal tax law; prescribing an effective date
HB 2512	Relating to reemployment of retired members of the Public Employees Retirement System
HB 2516	Relating to retirement of firefighters under Oregon Public Service Retirement Plan
HB 2577	Relating to connection to federal tax law; prescribing an effective date
HB 2709	Relating to public employee retirement
HB 2748	Relating to the Oregon Public Service Retirement Plan
HB 2750	Relating to the retirement benefits of state officers; declaring an emergency
HB 2866	Relating to designated representatives
HB 2867	Relating to payments under the Public Employees Retirement System subject to Oregon personal income tax; prescribing an effective date
HB 2875	Relating to public employee retirement
HB 2906	Relating to employee contributions to the Public Employees Retirement System
HB 3130	Relating to the employment of substitute teachers
SB 5536	Relating to the financial administration of the Public Employees Retirement System; declaring an emergency

2021 LEGISLATIVE SESSION- PERS' AGENCY BILLS

PERS' agency bills are SB 111, 112, and 113. These bills are working their way through the Senate currently. The bills have been assigned to the Senate Committee on Labor and Business. There has been one public hearing for each bill, and a public hearing and possible work session (work session only for SB 113) is scheduled for all three bills on Thursday, March 11.

SB 111 currently has three active amendments, which have been combined into an omnibus amendment, named the -6 amendment. This amendment contains amendments from OHSU to extend SB 111's salary fix to apply to their own employees more retroactively, an amendment from the public charter schools that does the same thing for their employees, and an amendment from the Oregon State Firefighter's Council expanding optional death benefits for Tier 1 and Tier 2 members.

SB 112 has two amendments University of Oregon has filed an amendment on behalf of all the public universities to make their Optional Retirement Plan the default retirement plan when new employees fail to elect a plan. The American Federation of Teachers has filed an amendment to make the subject of which plan is the default retirement plan for public universities able to be bargained on a local level with unions.

SB 113 does not have any amendments.

PERS BUDGET PRESENTATIONS

In late February and early March, the Joint Ways and Means Subcommittee on General Government held three public hearings on Senate Bill 5366, the PERS budget bill. Presentations included an agency and system overview, and highlights of agency budget structure and requests. Meeting video and materials are available at:

<https://olis.oregonlegislature.gov/liz/2021R1/Measures/Testimony/SB5536>

Additional budget conversations will continue with the full Joint Ways and Means Committee near the end of the legislative session.

REQUIRED REPORTING UPDATE

A summary of the required statutory reporting for PERS during the 2021 legislative session was given during the last board meeting. PERS has successfully completed its required reporting regarding SB 1566 (2018) and Preliminary Earnings Crediting to the legislature. After this board meeting, PERS will complete its Final Earnings Crediting report and send that to the legislature as well.

We anticipate being invited to present to the Joint Committee on Information Management and Technology on the progress of SB 1049 (2019) implementation in late March or early April.

Action and Discussion Items

1. Legislative Update
2. SB 1049 Implementation Update
3. Final 2020 Earnings Crediting and Reserving
4. Preparatory Discussion for Upcoming Experience Study



Oregon

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March 29, 2021

TO: Members of the PERS Board
FROM: Yvette Elledge-Rhodes, Deputy Director
SUBJECT: SB 1049 Implementation Update

Senate Bill 1049 was signed into law by the Governor on June 11, 2019. PERS staff continue to focus on completing work in an efficient and effective manner.

PROGRAM/PROJECT IMPLEMENTATION

The SB 1049 Implementation Program is being managed as one comprehensive program, with the following five individual projects. All projects go through the Enterprise Information Services (EIS) stage gate process.

Project	Effective Date	Project Health and Status (as of 3/9/21)
SB 1049 Program		Program health: Red <ul style="list-style-type: none"> Program is Red due to Member Redirect project extending beyond the end of the biennium. All project schedules were rebaselined on 3/5/21 to effort driven schedules.
Employer Programs Project	Effective 7/1/2019	Project health: Yellow <ul style="list-style-type: none"> Project is Yellow as the team continues to define the scope of Work Package (WP) 2 and determine the impact to the schedule. User testing for WP1 began on 3/4/21; on track for a 3/30/2021 completion date.
Salary Limit Project	Effective 1/1/2020	Project health: Green <ul style="list-style-type: none"> Business Functional Testing (BFT) began on 2/22/21 for WP4; on track for a 5/13/21 deployment.
Work After Retirement Project	Effective 1/1/2020	Project health: Red <ul style="list-style-type: none"> Project is Red due to missed requirements in WP2. A Change Request was approved to add a fourth work package. Estimates of work effort, budget and resources required are currently being validated. Two issues identified from November deployment. BFT began on 2/22/21 for WP3; on track for a 5/13/21 deployment.

Member Redirect Project	Effective 7/1/2020	Project health: Green <ul style="list-style-type: none"> • User Acceptance Testing (UAT) for WP3 began on 2/22/21; on track for a 3/23/21 deployment. • Construction for WP4.2 and WP12 began on 3/1/21.
Member Choice Project	Effective 1/1/2021	Project health: Green <ul style="list-style-type: none"> • UAT began for WP2 on 2/24/21; on track for a 3/23/21 deployment.

Highlighted activities completed or in progress since early February 2021:

- Program and project activities
 - iQMS activities
 - Quarterly QA Status and Improvement Report received 2/2/21
 - February 2021 Periodic Quality Status Report received 3/5/21
- EIS Stage Gate process requirements
 - EIS is reviewing new baselined schedules
 - PERS will be submitting a Change Request to document when and why schedules were rebaselined
 - Once approved, EIS will be completing new endorsement memos
- Budget reporting
 - Budget Presentations to the Legislature completed on 3/1/21
 - JCIMT meeting has yet to be scheduled
 - Continuing monthly meetings with the Chief Financial Office, Legislative Fiscal Office, and the Governor’s Office
- Communications
 - Employer Programs
 - Published UALRP guide #2, “Guide to Understanding Your Valuation”
 - March *Employer News* published
 - Staff presented at the Oregon Government Finance Officers Association Spring Conference on 3/8/21

PROGRAM/PROJECT BUDGET

The high-level budget information is contained within Page 2 of the attachment to agenda item A.3.c. The detailed budget can be viewed in the attached Monthly Status Report.

PERS staff will continue to update the board as program implementation continues throughout the year.

C.2. Attachment 1 – *Monthly Project Status Report and Roadmap*

Program information:

Program start: July 1, 2019 | Program end: April 30, 2024

Subprojects:

Project 1: Employer Programs

- Project start: July 1, 2019 | Project end: July 16, 2021
- Project status: **Green**

Project 2: Work After Retirement (WAR)

- Project start: July 1, 2019 | Project end: July 27, 2021
 - Re-baseline planning in process for new WP4: Side Account Credit Allocation
- Project status: **Red**

Project 3: Salary Limit

- Project start: July 1, 2019 | Project end: May 28, 2021
- Project status: **Green**

Program statement:

SB 1049 is comprehensive legislation intended to address the increasing cost of funding Oregon's Public Employees Retirement System (PERS), reduce system Unfunded Actuarial Liability (UAL) obligations, and provide relief to escalating contribution rate increases for public employers. Implementation will occur across five subprojects.

Project 4: Member Redirect

- Project start: July 1, 2019 | Project end: February 21, 2024
- Project status: **Green**

Project 5: Member Choice

- Project start: October 23, 2019 | Project end: August 4, 2021
- Project status: **Green**

For details regarding individual project status, please refer to the respective project section(s) below.

Overall program status: **Red**

The program status continues to be red. Member Redirect and WAR have long-term activities scheduled beyond the 2019-21 biennium.

The effort to complete and validate the conversion of duration-based schedules to work-effort based schedules is complete, and all schedules were re-baselined on 3/5/2021. EIS issued Stage Gate addendums for all projects on 3/17/2021 to acknowledge the new schedules.

A WAR change request was approved by Steering Team that will extend the WAR project end date. Detailed planning is in process, and details can be found in the WAR section of this report. A draft schedule has been created and is in review, showing a project end date in February 2022. WAR will remain in a red status until the schedule is rebaselined and the budget is approved for this additional workload.

All other projects are in a green status, and all production deployments required by the end of the 2019-2021 biennium are on track for on-time delivery.

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Budget health: **Red**

Member Redirect and WAR activities are planned beyond 2019-21 biennium, but 2021-2023 budget has not yet been approved. The chart below does not yet reflect the WAR change request.

29560- SB 1049 Implementation Program by Project							
Other Funds Lmt	19-21 Budget	Actual to Date	Projections	19-21 Total	Variance	21-23 Policy Package	Program Cost
Salary Limit Project	\$ 1,422,027	\$ 804,100	\$ 580,994	\$ 1,385,094	\$ 36,933	\$ -	\$ 1,385,094
Work After Retirement Project	\$ 2,182,839	\$ 1,526,947	\$ 540,272	\$ 2,067,219	\$ 115,620	\$ 337,000	\$ 2,404,219
Member Redirect Project	\$ 21,040,133	\$ 15,319,868	\$ 3,377,203	\$ 18,697,071	\$ 2,343,062	\$ 22,477,797	\$ 41,174,868
Employer Programs Project	\$ 2,051,084	\$ 1,033,214	\$ 973,243	\$ 2,006,457	\$ 44,627	\$ -	\$ 2,006,457
Member Choice Project	\$ 2,337,814	\$ 1,642,943	\$ 638,530	\$ 2,281,473	\$ 56,341	\$ -	\$ 2,281,473
Total	\$ 29,033,897	\$ 20,327,073	\$ 6,110,242	\$ 26,437,315	\$ 2,596,583	\$ 22,814,797	\$ 49,252,112

AFN
\$ 20,218,215

Schedule health: **Red**

Member Redirect and WAR have long-term work package implementation activities are scheduled beyond the 2019-21 biennium. The Program and all projects have converted from duration-based schedules to work effort-based schedules with validated resource allocations. The Quality Check Point review has been approved, and all schedules were re-baselined on 3/5/2021.

Scope health: **Green**

The program and project scope is understood and has been incorporated into program-level plans and schedules.

Quality Assurance activities:

- The Quality Check Point review for Work Effort-based schedules was approved 2/28/2021.
- iQMS Deliverable 3.3.4 Periodic Quality Status Report started on 12/31/2020, due 3/19/2021.
- iQMS Deliverable 4.1.5 Quarterly QA Status and Improvement Report started on 3/10/2021, due 5/4/2021.
- iQMS Deliverable 3.3.5 Periodic Quality Status Report will start on 3/31/2021, due 6/9/2021.

Emerging concerns/needs/impacts:

- Now that the work effort-based schedules have been baselined, the SB 1049 team is updating the standards and processes for progressing effort-based schedules and for monitoring resource allocations.

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Program Risks and Mitigation

Listed below are the most critical risks for this project.

For the complete Risk Log, please see the Risk Log tab in the most recent weekly status report: [SB 1049 Program Weekly Status Report](#)

#	Risk Description	Mitigation and/or Contingency Plan	Notes
58	Technical Debt Impact to Timelines: Technical Debt Limits Ability to Provide SB 1049 Functionality within the mandated timeframes.	➤ Assess the individual technical debt items to determine if it is required or optional. Escalate to Steering as required.	
81	Technology Risk: Complexity and fragility of jClarety system	➤ Some or all of the SB 1049 projects may require attention to fixing technical debt or finding appropriate work arounds. See the individual project risks logs for specific mitigation activities.	
104	Unknown Requirements for Cloud Platform- Since PERS has no experience with Cloud development, there may be unknown requirements to implement this technology into the agency.	➤ Microsoft engaged to help design and support cloud-based activities	Both Employer Programs and Cross Project Effort have work packages that will be released to the cloud.

Program Issues and Action Plans

Listed below are the most critical issues for this project.

For the complete Issue Log, please see the Issue Log tab in the most recent weekly status report: [SB 1049 Program Weekly Status Report](#)

No	Issue	Resolution / Notes	Estimated Resolution Date
	No current issues		

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Program information: Cross Project Effort

Start: May 28, 2020 | End: TBD
Project Manager: Susan K. Mundell

Cross Project Effort objective:

The Cross Project Effort is focused on technical tools, and extracts that are used across multiple SB 1049 projects. Originally, these efforts were included as Work Packages within the individually impacted projects. The scope of this effort has not changed, but the work has been restructured to ensure it receives an appropriate level of coordination and ensure the success of the necessary inter-project integrations.

Overall status: Green

Narrative: Cross Projects is busy with WP1.2: Individual Account Program (IAP) Validator in User Acceptance Testing and WP7.2: Employer Actuarial Extract in Business Functional Testing. The following packages are in development with Business Functional Testing scheduled to begin in April: WP2.2: IAP Payment Recon, WP4: IAP Adjustment Calculator, WP5: Prior Year Earnings Invoicing Tool and WP7.1: Non-Retired Census Actuarial Extract. In addition to this, the extract for WP7.1: Payout Actuarial Extract is being tested by the Actuarial Analyst in a non-production environment to permit the on-time valuation for the 2020 Actuarial timeline that begins on April 1, 2021. The Effort Based project schedule was baselined as of 3/5/2021. There are still two outstanding work packages not fully scheduled that will require a rebaseline once the schedule for these has been developed. These are WP6: IAP Account Balance Comparison tool which is holding for Microsoft 365 deployment in October 2021 and WP7.3 Payout Actuarial Extract which cannot be developed before June 2023 when the Member Redirect work package 11 is elaborated.

Schedule Deliverables and Milestones

Milestones Schedule				
Milestone	Percent Complete	Baseline Finish Date	Actual / Forecast Finish Date*	Status/ Notes
Baselined Effort Based Project Schedule	100%	03/05/2021	03/05/2021	
WP1.2: IAP Validator Tool Long-Term Deployed	0%	03/24/2021	03/24/2021	
WP2.2: IAP Payment Recon Long-Term Deployed	0%	04/29/2021	04/29/2021	
WP5: Prior Year Earnings Invoicing Tool Deployed	0%	05/13/2021	05/13/2021	
WP7.2 : Employer Actuarial Extract Deployed	0%	05/13/2021	05/13/2021	
WP4: IAP Adjustment Calculator Deployed	0%	06/02/2021	06/02/2021	
WP7.1: Non-Retired Actuarial Extract Deployed	0%	06/24/2021	06/24/2021	

*Finish Date Color: Green = on Schedule, Yellow = in Jeopardy, Red = Late
Note: Future milestones exist and will be rotated in as the timing becomes more relevant.

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison



Senate Bill (SB) 1049 Implementation Road Map

2019-2021 Biennium

	2019						2020						2021										
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Employer Programs	<ul style="list-style-type: none"> 7/1/19 - Effective Date 9/3/19 - Employer Incentive Fund (EIF) Application #1 Opens 11/27/19 - EIF Application #1 Closes 12/2/19 - EIF Application #2 Opens 												<ul style="list-style-type: none"> 8/6/20 - Employer Rate Projection Tool (ERPT) Assessment Complete 12/1/20 - EIF Application #2 Closes 3/30/21 - Work Package (WP) 1 Migrate and Adapt ERPT → 6/30/21 - WP2 ERPT Stakeholder Acceptance and Deployment → 										
Salary Limit							<ul style="list-style-type: none"> 12/24/19 - Work Package (WP) 1 - Short Term 1/1/20 - Effective Date 1/24/20 - WP2 Post 2020 Salary Limit - Long Term 						<ul style="list-style-type: none"> 11/19/20 - WP3 User Screens to Record Annual Salary Limit - Long Term 5/13/21 - WP4 Proration Reports and Workflow - Long Term → 5/28/21 - Project Close → 										
Work After Retirement							<ul style="list-style-type: none"> 12/19/19 - Work Package (WP) 1 Retiree Wages Suspended - Short Term 1/1/20 - Effective Date 						<ul style="list-style-type: none"> 11/19/20 - WP2 New Wage Codes with General Ledger (GL) Integration - Long Term 5/13/21 - WP3 Retro Rate Change - Long Term → 										
Member Redirect							<ul style="list-style-type: none"> 6/18/20 - Work Package (WP) 1 Employee Pension Stability Account Set Up/Batch/General Ledger - Short Term → 7/1/20 - Effective Date → 						<ul style="list-style-type: none"> 9/22/20 - Voluntary Contributions Initial Functionality - Long Term 10/30/20 - WP2.2 IAP Forecaster Tool - non-jClarety - Long Term 11/19/20 - Voluntary Contributions Final Functionality Release - Long Term 1/21/21 - WP5.2 Online Member Services User Interface - Long Term → 1/26/21 - WP2 TIED SSIS - Non-jClarety - Long Term → 6/24/21 - WP4.2 EPSA Display, and WP12 Full EPSA Set up Screen - Long Term → 										
Member Choice	<ul style="list-style-type: none"> 10/23/19 - Project Kick Off 5/15/20 - Member Annual Statements (MAS) Flyer Communication → 						<ul style="list-style-type: none"> 8/19/20 - Member Choice Notification → 						<ul style="list-style-type: none"> 8/20/20 - Work Package (WP) 1 Online Member Services (OMS) Changes Deployed 9/1-30/20 - Election Period 1/1/21 - Effective Date 3/23/21 - WP2 OMS & jClarety Enhancements - Long Term → 5/1/21 - Member Choice reflected in MAS → 6/24/21 - WP3 Online Member Services (OMS) Election and Bugs → 										
PROGRAM INITIATIVE													<ul style="list-style-type: none"> 1/26/21 - WP2.1 IAP Payment Recon (short-term) → 2/22/21 - WP3 IAP Divorce Tool → 3/26/21 - WP1.2 IAP Validator Tool (long-term) → 5/13/21 - WP5 PYE Invoicing Tool → 4/29/21 - WP2.2 IAP Payment Recon (long-term) → 5/13/21 - WP7.2 Employer Information Actuarial Extract → 6/2/21 - WP4 IAP Adjustment Calculator → 6/24/21 - WP7.1 Non-Retired Census Actuarial Extract → 										
Cross Project Effort							<ul style="list-style-type: none"> 9/17/20 - WP1.1 IAP Validator Tool (short-term) → 																

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

2021-2023 Biennium

PROJECTS	2021						2022						2023										
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Employer Programs	• 7/16/21 – Project Close																						
Work After Retirement							▪ 12/16/21 – WP4 Side Account Credit Allocation																
							• 2/23/22 – Project Close (Tentative)																
Member Redirect							<ul style="list-style-type: none"> • 10/14/21 – WP4.3 EPSA Transaction Display – Long Term • 10/14/21 – WP5 Voluntary Contribution Maintenance – Long Term • 1/25/22 – WP6 EPSA Retirement – Long Term • 4/21/22 – WP7 EPSA Divorce – Long Term • 7/28/22 – WP8 Pre-Retirement Death – Long Term 						3/23/23 – WP9 Withdrawals – Long Term →										
Member Choice	• 8/4/21 – Project Close																						
PROGRAM INITIATIVE																							
Cross Project Effort							<ul style="list-style-type: none"> • TBD – WP6 IAP Balance Comparison Tool • TBD – WP7.3 Tier One/Tier Two/OPSRP Payouts Actuarial Extract 																

2023-2025 Biennium

PROJECTS	2023						2024						2025										
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Member Redirect	• 9/28/23 – WP10 Post-Retirement Death – Long Term						• 1/25/24 – WP11 Maintaining Benefits – Long Term																
							• 2/29/24 – Migration Finalization																
							• 2/21/24 – Project Close																

Project information: Employer Programs

Project start: July 1, 2019 | **Project end:** July 16, 2021

Project Manager: Joli Whitney

Project objective:

The Employer Programs section of SB 1049 expands the requirements for the Employer Incentive Fund (EIF); and appropriates \$100 million from the General Fund to the Employer Incentive Fund; directs net proceeds from Oregon Lottery Sports betting to the Employer Incentive Fund; allows participating public employers who make larger than \$10 million deposits to side accounts to determine when they wish to have these funds included in their employer rate assessment; and requires all public employers to participate in the Unfunded Actuarial Liability Resolution Program (UALRP).

Overall project status: **Green**

Project Narrative: The first work package (WP1 Migrate and Adapt ERPT), converting the acquired Employer Rate Projection Tool (ERPT) from operating on an Oracle platform to the PERS standard SQL successfully completed User Testing on 3/19/2021. A Quality Gate to review and approve the outcomes is scheduled for 3/23/2021.

The second work package (WP2) will move the new ERPT from the internal datacenter to an Azure cloud hosted environment. The team has been in frequent workshops with Microsoft to conduct these activities. The ERPT will be the first PERS application hosted in the cloud environment. This is a key opportunity for the technical staff to gain experience deploying and managing applications in a shared environment. There are risks associated with new technology which are being closely monitored. The team has made great progress in this new area so far and are anticipating a smooth and successful path forward. The current focus of the project team is how to incorporate Employers into User Acceptance Testing. An external testing plan is in development to manage this important activity.

The work effort based schedule was re-baselined on 3/5/2021. Further updates to the project schedule have been completed to reflect the project change request (CR) approved by the SB 1049 Steering Team on 1/12/2021. The CR clearly defined the requirements which would be delivered in the two planned work packages for the ERPT.

Employer Rate Projection Tool Work Packages

WP1 Migrate and Adapt ERPT

- Acceptance Quality Gate: 3/30/2021 (this WP will not be released to production)
- Convert tool to use PERS standard platform
 - Move from Oracle to SQL
- Enhance tool to meet PERS branding standards and add disclaimer language

WP2 ERPT Stakeholder Acceptance and Deployment to Cloud

- Production Deployment Date: 6/30/2021
- User Acceptance Testing with Employer Stakeholders
- Cloud hosting

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Budget health: Green

Employer Programs is currently within the budget allocated by the Legislature.

29560 SB1049 - Employer Programs Project					
Expenses	Budget	Actual to Date	Projections	Total	Variance
*Personal Services - PERS	\$ 900,000	\$ 793,919	\$ 105,416	\$ 899,335	\$ 665
General Overhead Allocation	\$ 328,438	\$ 209,025	\$ 107,692	\$ 316,717	\$ 11,721
Personal Services - SB1049	\$ 230,811	\$ 158,391	\$ 47,162	\$ 205,553	\$ 25,258
Office Expenses	\$ 5,000	\$ 77	\$ 4,000	\$ 4,077	\$ 923
IT Professional Services	\$ 1,306,083	\$ 659,838	\$ 639,637	\$ 1,299,475	\$ 6,608
Professional Services	\$ 170,752	\$ -	\$ 170,752	\$ 170,752	\$ -
IT Expendable Prop	\$ 10,000	\$ 5,883	\$ 4,000	\$ 9,883	\$ 117
SB1049 Expenses	\$ 2,051,084	\$ 1,033,214	\$ 973,243	\$ 2,006,457	\$ 44,627
Project Total	\$ 2,951,084	\$ 1,827,133	\$ 1,078,659	\$ 2,905,792	\$ 45,292
Average Monthly Spend (Burn Rate)		\$ 54,379.70	\$ 194,648.60		
*Not included in SB1049 Expenses					

Schedule health: Green

The schedule is well understood.

Scope health: Green

The scope of the project is well understood.

Quality Assurance activities:

- Quality Check Point of the Effort Based Project Schedule completed on 3/5/2021.
- Quality Check Point of the Final Work Package Development documentation of WP1 will begin on 3/31/2021.
- Quality Check Point of the Quality Assurance Test Plan of WP2 document will begin on 3/31/2021.

Emerging concerns/needs/impacts:

- This project represents the first time PERS has deployed an application into a cloud hosted environment. As with all new processes, there may be unanticipated obstacles or challenges to provide the tool in this new manner.

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

High Level Project Risks and Mitigation

Listed below are the most critical risks for this project.

For the complete Risk Log, please see the Risk Log tab in the most recent weekly status report: [Employer Programs Weekly Status Report](#)

#	Risk Description	Mitigation and/or Contingency Plan	Notes
35	Non-Dedicated Actuarial Subject Matter Expert- A critical technical resource is not fully dedicated to the project and has limited availability due to other critical agency commitments.	<ul style="list-style-type: none"> ➤ Detailed schedule of other agency critical activities developed ➤ Business Owner may act as back up to Subject Matter Experts in some circumstances 	Work Package 4- Side Account Invoicing- in the WAR Project which was recently approved through a CR will also be a strong pull on this resource. This work has been planned to follow the completion of the Employer Programs project and is not anticipated to affect this project.
38	Missing or Inaccurate Tasks for Cloud Deployment in Project Schedule- The plan to deploy ERPT to the Cloud involves technology which PERS has no experience with or existing processes to manage. Tasks to deploy to the cloud may be missing or take longer than anticipated and planned.	<ul style="list-style-type: none"> ➤ Training of PERS staff to implement and manage cloud-based application ➤ Knowledgeable resources may need to be reassigned from other work to assist with challenges ➤ ERPT solution may need to be deployed as a web-based application to meet the project deadline 	The technical team has been in regular workshops with Microsoft to receive guidance and best practices for Azure cloud, but this has been an iterative process and some activities or tasks to provide this service may be overlooked.

Project Issues and Action Plans

Listed below are the most critical issues for this project.

For the complete Issue Log, please see the Issue Log tab in the most recent weekly status report: [Employer Programs Weekly Status Report](#)

No	Issue	Resolution / Notes	Estimated Resolution Date
	No current issues		

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project Schedule Deliverables and Milestones

Milestones Schedule				
Milestone	Percent Complete	Baseline Finish Date	Actual / Forecast Finish Date*	Status/ Notes
Rebaseline Project Schedule	100%	9/29/2020	9/29/2020	
Receive EIS Endorsement Memo	100%	9/30/2020	9/30/2020	
EIF Application Closes (Window #2)	100%	12/1/2020	12/1/2020	
WP1 Development Complete	100%	1/7/2021	1/29/2021	
WP1 Business Functional Testing Complete	100%	2/26/2021	2/26/2021	
WP1 User Testing Complete	100%	3/19/2021	3/19/2021	
WP1 Final Acceptance Quality Gate	0%	3/30/2021	3/30/2021	
WP2 Development Complete	0%	4/8/2021	4/8/2021	
WP2 Business Functional Testing Complete	0%	4/28/2021	4/28/2021	
WP2 User Acceptance Testing Complete	0%	6/7/2021	6/7/2021	
WP2 Deployment Complete (ERPT Complete)	0%	6/30/2021	6/30/2021	
Launch UALRP	0%	6/30/2021	6/30/2021	
Project End	0%	7/16/2021	7/16/2021	

*Finish Date Color: Green = on Schedule, Yellow = in Jeopardy, Red = Late

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project information: Work After Retirement (WAR)

Project start: July 1, 2019 | **Project end:** 7/27/2021

Project Manager: Susan K. Mundell

Overall project status: **RED**

Project Narrative: WAR Work Package 3 (WP3): Retro Rate Change has completed the Business Functional Testing and is in preparation for the 3/29/2021 start of User Acceptance Testing.

Transition of the over 74,000 WAR Work Package 1 suspended retiree records in the system from January 1, 2021 through to WAR Work Package 2 deployment on 11/19/2020 has been completed. All 2020 retiree records have been invoiced to the employers.

The work effort based schedule was re-baselined on 3/5/2021.

WAR Change Request CR29560 WAR-05 was approved by SB 1049 Steering Team and added Work Package 4: Side Account Credit Allocation, to the WAR project. This functionality is critical to employer invoicing and was missed due to the Technical Debt issue of a lack of adequate general ledger technical documentation and a loss of institutional knowledge. The narrow scope of WAR Work Package 4: Side Account Credit Allocation will be to have WAR receivables credit Side Accounts in the same manner as active member receivables currently work. The resources have been identified, the budget is in the 2021/2023 budget packet and the initial draft schedule has been developed with a 12/16/2021 Release date and a 2/23/2022 project close date. These milestone dates are subject to change until we baseline WAR WP4, but should be relatively accurate.

WAR is in a red status due to the extension of the project with WAR Work Package 4: Side Account Credit Allocation. It will stay red until the scheduled is rebaselined, and the budget is approved for this additional workload.

Work Packages:

Work Package 1: Suspend DTL2-07 Retiree Wage Codes – Short-term

- Production Deployment Date: 12/19/2019 (Complete)

Work Package 2: New Wage Codes with General Ledger Integration – Long-term

- Production Deployment Date: 11/19/2020 (Complete)

Project objective:

Effective January 1, 2020, the Work After Retirement (WAR) sections of SB 1049 allow most service retirees to work unlimited hours for PERS participating employers in calendar years 2020-2024 while retaining their retirement benefit. It also requires employers to pay employer contributions on retirees' salary during that period.

Work Package 3: Retro Rate Change – Long-term

- Production Deployment Date: 5/13/2021
- Development and testing completed 2/19/2021
- Business Functional Testing was completed on 3/19/2021
- User Acceptance Testing is scheduled to begin on 3/29/2021

Work Package 4: Side Account Credit Allocation

- New work packaged added from CR29560 WAR-05
- Draft Schedule puts WP4 deployment on 12/16/2021,

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Budget health: RED

The additional budget needed for WAR work package 4 is pending legislative approval of the 2021/23 budget and it not reflected in this chart.

29560 SB1049 - Work After Retirement (WAR) Project					
Expenses	Budget	Actual to Date	Projections	Total	Variance
*Personal Services - PERS	\$ 1,214,174	\$ 1,158,908	\$ 52,184	\$ 1,211,092	\$ 3,082
General Overhead Allocation	\$ 637,166	\$ 418,050	\$ 219,034	\$ 637,084	\$ 82
Personal Services - SB1049	\$ 462,087	\$ 317,607	\$ 95,146	\$ 412,753	\$ 49,334
Office Expenses	\$ 2,194	\$ 97	\$ 500	\$ 597	\$ 1,597
Professional Services	\$ 140,000	\$ 131,000	\$ -	\$ 131,000	\$ 9,000
IT Professional Services	\$ 931,392	\$ 654,658	\$ 222,592	\$ 877,250	\$ 54,142
IT Expendable Property	\$ 10,000	\$ 5,536	\$ 3,000	\$ 8,536	\$ 1,464
SB 1049 Total Expenses	\$ 2,182,839	\$ 1,526,947	\$ 540,272	\$ 2,067,219	\$ 115,620
Project Total	\$ 3,397,013	\$ 2,685,855	\$ 592,456	\$ 3,278,311	\$ 118,702
Average Monthly Spend (Burn Rate)		\$ 84,830.39	\$ 90,045.33		
*Not included in SB1049 expenses					

Schedule Health: RED

The initial draft schedule for WAR Work Package 4: Side Account Credit Allocation has been completed. This work package is to begin on 5/10/2021 with development for bug fixes from WP2 and move onto Side Account development after the scope is defined on 7/26/2021. The project will remain in red until the schedule is rebaselined.

Scope health: Green

The detailed definition of the scope was expanded by CR29560 WAR-05 which created Work Package 4: Side Account Credit Allocation. Detailed requirements for this scope will be elaborated in July, 2021.

Quality Assurance activities:

- A Quality Check Point review was completed on 2/26/2021 for contractual deliverable D1.0.18 Contractor Support Log.
- A Quality Check Point review was completed on 2/28/2021 for the Effort Based WAR Project Schedule.
- A Quality Check Point review was completed on 3/23/2021 for contractual deliverable D3.3.1 Work Package Development documents.

Emerging concerns/needs/impacts:

- Increased Scope for WAR Work Package 4: Side Account Credit Allocations requires the project to extend beyond the end of the 2019 / 2021 biennium. The SB 1049 budget has not been approved for the 2021 / 2023 biennium.

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

High Level Project Risks and Mitigation

Listed below are the most critical risks for this project.

For the complete Risk Log, please see the Risk Log tab in the most recent weekly status report: [WAR Weekly Status Report](#)

	Risk Description	Mitigation and/or Contingency Plan	Notes
2	Complexity of Effort: The forecasted amount of work, timing, available documentation and complexity is inaccurate or assumptions made that are off base.	<ul style="list-style-type: none"> ➤ Schedule additional time to verify complex code. ➤ Use iterative development to reverse engineer the General Ledger code to meet Business need. ➤ Ensure effective inter-team project communication. 	Additional time has been added for elaboration in WP4 due to the complexity of the jClarety general ledger processes. Side Account Credit Allocation will be coding within jClarety general ledger.

Project Issues and Action Plans

Listed below are the most critical issues for this project.

For the complete Issue Log, please see the Issue Log tab in the most recent weekly status report: [WAR Weekly Status Report](#)

	Risk Description	Mitigation and/or Contingency Plan	Notes
8	Realized Risk #8: Schedule Delay or Re-Baseline Planning: The project schedule does not have capacity for all scope needed and is delayed or requires a re-baseline.	<ul style="list-style-type: none"> ➤ Close partnership with Release Manager to ensure continued measurable progress fits within schedule perimeters. ➤ Additional planning and regular forward looking schedule review. 	The initial WP4 schedule has been developed. It will be approved through the SB document approval process once all the resources has been updated, verified and validated as available.
9	Realized Risk #9: Project Budget Not Sufficient: The approved project budget is not sufficient to cover all required expenses.	<ul style="list-style-type: none"> ➤ Plan to request additional funds. ➤ Look for cost savings to fund additional workload. ➤ Ensure effective communication with LFO. 	The budget request has been given to LFO along with the 2021/2023 biennium SB 1049 budget request.
10	Realized Risk #84: Project Scope: Change Requests adding additional scope to project resulting in requiring additional effort from resources, changes to the baselined schedule and/or additional required funding.	<ul style="list-style-type: none"> ➤ Closely follow the documented CR process to ensure any additional scope is necessary for the success of the project. 	A new CR is under development that will, if approved, add scope to this project by adding some new reports that are needed by business.

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project Schedule Deliverables and Milestones

Milestones Schedule				
Milestone	Percent Complete	Baseline Finish Date	Actual / Forecast Finish Date*	Status/ Notes
WP1 - Phase Closure Complete	100%	2/13/2020	2/13/2020	
WP2 - Deployment Complete	100%	10/22/2020	11/19/2020	
WP3 - Development Complete	100%	2/19/2021	2/19/2021	
WAR - Baselined Effort Based Project Schedule	100%	3/5/2021	3/5/2021	
WP3 - Business Functional Testing (BFT) Complete	0%	3/19/2021	3/19/2021	
WP3 - Ready for User Acceptance Testing (UAT) Quality Gate	0%	3/29/2021	3/26/2021	
WP3 - User Acceptance Testing Complete	0%	5/7/2021	5/07/2021	
WP3 - Quality Assurance Testing Complete	0%	5/7/2021	5/07/2021	
WP3 - Move to Production Quality Gate Complete	0%	5/12/2021	5/11/2021	
WP3 - Deployment Complete	0%	5/13/2021	5/13/2021	
WP3 - Phase Closure Complete	0%	6/30/2021	6/30/2021	
WP4 - High Level Estimate Complete	100%		2/25/2021	
WP4 - Business Requirements Document Complete	0%		7/12/2021	Initial Draft Schedule
WP4 - Development Complete	0%		9/29/2021	Initial Draft Schedule
WP4 - Business Functional Testing (BFT) Complete	0%		10/21/2021	Initial Draft Schedule
WP4 - User Acceptance Testing (UAT) Complete	0%		12/14/2021	Initial Draft Schedule
WP4 - Deployment Complete	0%		12/16/2021	Initial Draft Schedule
WP4 - Phase Closure Complete	0%		12/22/2021	Initial Draft Schedule
WAR Project Complete	0%	7/27/2021	2/23/2022	Initial Draft Schedule

*Finish Date Color: Green = on Schedule, Yellow = in Jeopardy, Red = Late

NOTE: The WP4 initial draft schedule is under review and is subject to change until it is baselined.

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project information: Salary Limit

Project start: 7/01/ 2019 | Project end: 5/28/2021

Project Manager: Bruce Rosenblatt

Project objective:

The Salary Limit Project is necessary because SB 1049 redefined "salary," which changes the calculation method for Final Average Salary, and contributions for members with subject salary greater than \$195,000. This limit is on salary for plan purposes, and is not a salary cap. The Salary Limit was adjusted for the Consumer Price Index, on 1/04/2021. The redefinition impacts the data and business processes used by diverse teams at PERS, including Benefit Calculations, Member Estimates, Data Verifications, Employer Data Reporting, and Account Data Reviews and Reporting.

Overall project status: **Green**

Project Narrative: The Salary Limit Project is comprised of four Work Packages. Work Package 1 (WP1) delivered a short-term solution in 2019, delivering new reports so PERS can manually report on impacted members and their employers for Tier 1/Tier 2, and Oregon Public Service Retirement Plan. Work Package 2 (WP2) implemented a Data Change Request on 1/23/2020 to post the 2020 limit. Work Package 3 (WP3) provided entry screens, and approval roles, to record annual salary limit changes and effective dates for all plans. Work Package 4 (WP4) addresses the proration processes for partial year activities, and introduces Calculation Alert Messages on application screens.

Work Packages:

Work Package 1: Short-term Minimum Viable Product (MVP)

- Production Deployment Date: 12/24/2019 (Complete)

Work Package 2: Annual Implementation of New Salary Limit

- Production Deployment Date: 1/23/2020 (Complete)

Work Package 3: Adding self-service screens to jClarety system to record annual changes and effective dates - Long-term

- Production Deployment Date: 11/19/2020 (Complete)

Work Package 4 - Enhances proration work processes when partial year calculations may apply - Long-term

- Production Deployment Date: 5/13/2021
- Reviewed Centralized Data Management reports, and continued User Acceptance Testing for key selected reports
- Business Functional Testing finished on 3/15/2021
- WP4 User Acceptance Testing will start on 3/29/2021

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Budget Health: Green

Salary Limit Project budget projections are currently lower than the budget allocated by the Legislature.

29560 SB1049 - Salary Limit					
Expenses	Budget	Actual to Date	Projections	Total	Variance
*Personal Services - PERS	\$ 1,000,000	\$ 971,401	\$ 25,000	\$ 996,401	\$ 3,599
General Overhead Allocation	\$ 318,583	\$ 209,025	\$ 109,478	\$ 318,503	\$ 80
Personal Services - SB1049	\$ 232,356	\$ 158,391	\$ 47,159	\$ 205,550	\$ 26,806
Services and Supplies	\$ 147,088	\$ 131,240	\$ 15,500	\$ 146,740	\$ 348
IT Professional Services	\$ 714,000	\$ 299,909	\$ 404,857	\$ 704,766	\$ 9,234
IT Expendable Prop	\$ 10,000	\$ 5,536	\$ 4,000	\$ 9,536	\$ 464
SB1049 Total Expenses	\$ 1,422,027	\$ 804,101	\$ 580,994	\$ 1,385,095	\$ 36,932
Project Total	\$ 2,422,027	\$ 1,775,502	\$ 605,994	\$ 2,381,496	\$ 40,531
Average Monthly Spend (Burn Rate)		\$ 47,300.05	\$ 82,999.14		
*Not included in SB1049 Expenses					

Schedule health: Green

The project is proceeding per the schedule approved by the SB 1049 Steering Team. Conversion from a duration-base schedule to an effort-based schedule is complete. This revised schedule was approved at the Quality Check Point review, and was re-baselined on 3/05/2021.

Scope health: Green

The project scope is understood for all releases.

Quality Assurance activities:

- A Quality Check Point review was completed on 2/28/2021 for the Effort Based Salary Limit Project Schedule
- The Functional Design Specification for Work Package 4 was reviewed on 3/19/2021, in preparation for Top Team Review by 3/29/2021
- Quality Assurance - Pre Quality Gate (5/05/2021) and Signoff of Quality Gate (5/11/2021) are scheduled

Emerging concerns/needs/impacts:

- No emerging concerns

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

High Level Project Risks and Mitigation

Listed below are the most critical risks for this project.

For the complete Risk Log, please see the Risk Log tab in the most recent weekly status report: [Salary Limit Weekly Status Report](#)

#	Risk Description	Mitigation and/or Contingency Plan	Notes
88	Testing Centralized Data Management (CDM) reports	➤ All report requests were prioritized so that reports with the biggest operations benefit are revised first;	New version of the detailed calculation report which excludes member redirect and voluntary contribution transactions, will more clearly identify plan members impacted by salary limit legislation

Project Issues and Action Plans

Listed below are the most critical issues for this project.

For the complete Issue Log, please see the Issue Log tab in the most recent weekly status report: [Salary Limit Weekly Status Report](#)

No	Issue	Resolution / Notes	Estimated Resolution Date
	No current issues		

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project Schedule Deliverables and Milestones

Milestones Schedule				
Milestone	Percent Complete	Baseline Finish Date	Actual / Forecast Finish Date*	Status/ Notes
WP2 - Post New Salary Limit - Release to Production	100%	1/23/2020	1/23/2020	
WP3 - Requirements Complete	100%	3/13/2020	3/13/2020	
Change Request Approval (SL_01)	100%	5/15/2020	5/15/2020	
Baseline the project schedule	100%	6/17/2020	6/17/2020	
WP4 - Requirements Complete	100%	7/14/2020	7/14/2020	
WP3 - Development Complete	100%	8/14/2020	8/14/2020	
WP3 - Business Function Testing (BFT) Complete	100%	9/04/2020	9/02/2020	
WP3 - User Acceptance Testing (UAT) Complete	100%	9/04/2020	11/13/2020	
WP3 - Deployment Complete	100%	10/22/2020	11/19/2020	
WP4 - Signoff User Stories & Acceptance Criteria Complete	100%	8/18/2020	11/17/2020	
WP4 - Development Complete	100%	1/19/2021	2/19/2021	
WP4 - Business Function Testing (BFT) Complete	100%	3/19/2021	3/15/2021	
WP4 - User Acceptance Testing (UAT) Complete	0%	5/07/2021	5/07/2021	
WP4 - Deployment Complete	0%	5/13/2021	5/13/2021	
Project Complete	0%	5/28/2021	5/28/2021	

*Finish Date Color: Green = on Schedule, Yellow = in Jeopardy, Red = Late

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project information: Member Redirect

Project start: July 1, 2019 | **Project end:** February 21, 2021

Project Manager: Chris Yu

Project objective:

Effective July 1, 2020 this section of the bill redirects a portion of member contributions to a new Employee Pension Stability Account (EPSA) when the funded status of the plan is below 90% and the member’s monthly salary is more than \$2,500.

Overall project status: **Green**

Project Narrative: The overall project health is green and progressing on schedule. The User Acceptance Testing for work package 3.1 (EPSA Earnings) and work package 3.2 (Member Annual Statement Extract) completed early on 3/16/2021 and is on track to pass quality gate and deploy by 3/23/2021. Construction for work package 4.2 (EPSA Earnings) and work package 12 (EPSA Screen Setup) continues on schedule for the 4/15/2021 completion date.

The Project Schedule was re-baselined on 3/5/2021 and there are updated deployment dates as a result of converting to an effort based schedule. The overall impact to the project was that it brought the end date in by 2 months to 2/21/2021. These changes can be found on the Project Schedule Deliverables and Milestones section of this report.

Work Packages:

Work Package 3.1 EPSA Earnings - Long-Term

- Production Deployment Date: 3/23/2021
- User Acceptance Testing began on 2/19/2021 and was completed on 3/16/2021

Work Package 3.2 Member Annual Statement Extract- Long-Term

- Production Deployment Date: 3/23/2021
- User Acceptance Testing began on 2/19/2021 and was completed on 3/16/2021

Work Package 4.2 EPSA Earnings - Long-Term

- Production Deployment Date: 6/24/2021
- Construction began on 3/3/2021 and continue towards the completion date of 4/15/2021

Work Package 12 Full EPSA Screen Setup - Long-Term

- Production Deployment Date: 6/24/2021
- Construction began on 3/3/2021 and continue towards the completion date of 4/15/2021

Additional long-term work packages exist. See the Milestones Schedule for a complete list of work packages

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Budget health: Green The project is below budget for the current biennium. The issue of additional budget needed for work beyond the current biennium is being tracked at the program level.

29560 SB1049 - Member Redirect Project					
Expenses	Budget	Actual to Date	Projections	Total	Variance
*Personal Services - PERS	\$ 1,370,000	\$ 1,342,992	\$ 27,008	\$ 1,370,000	\$ -
General Overhead Allocation	\$ 4,778,742	\$ 3,135,375	\$ 1,642,147	\$ 4,777,522	\$ 1,220
Personal Services - SB1049	\$ 4,111,180	\$ 2,376,993	\$ 488,716	\$ 2,865,709	\$ 1,245,471
Services and Supplies	\$ 826,890	\$ 463,673	\$ 316,458	\$ 780,131	\$ 46,759
IT Professional Services	\$ 10,923,321	\$ 9,061,456	\$ 813,882	\$ 9,875,338	\$ 1,047,983
IT Expendable Property	\$ 200,000	\$ 88,573	\$ 110,000	\$ 198,573	\$ 1,427
Data Processing Hardware	\$ 200,000	\$ 193,798	\$ 6,000	\$ 199,798	\$ 202
SB1049 Total Expenses	\$ 21,040,133	\$ 15,319,869	\$ 3,377,203	\$ 18,697,072	\$ 2,343,061
Project Total	\$ 22,410,133	\$ 16,662,861	\$ 3,404,211	\$ 20,067,072	\$ 2,343,061
Average Monthly Spend (Burn Rate)		\$ 851,103.82	\$ 562,867.17		
*Not included in SB1049 Expenses					

Schedule Health: Green

The current project tasks are on schedule for all current milestone dates.
The issue of long-term work packages scheduled beyond the 2019-21 biennium are being tracked at the program level.

Scope health: Green

The project scope is understood for all releases.

Quality Assurance activities:

- A Quality Check Point review was completed on 2/28/2021 for the Effort Based Member Redirect Project Schedule
- The Quality Gate Meeting for Work Package 3.1 (EPSA Earnings) and Work Package 3.2 (Member Annual Statement Extract) will be on 3/22/2021

Emerging concerns/needs/impacts:

- Work Package 6 EPSA Retirement UAT has overlap with WAR Work Package 4. Both Project Managers will monitor and track it as a risk.

High Level Project Risks and Mitigation

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Listed below are the most critical risks for this project.

For the complete Risk Log, please see the Risk Log tab in the most recent weekly status report: [Member Redirect Weekly Status Report](#)

#	Risk Description	Mitigation and/or Contingency Plan	Notes
2	Complexity of Effort: The forecasted amount of work, timing, and complexity is inaccurate or assumptions made that are off base.	➤ The Project Manager, Product Owner Team and Solutions Architect have agreed to schedule all remaining work package requirement elaborations after July 1 st 2021.	
69	Release 9.9.1 Browser Update: The new browser update will impact ALL testing resource availability during the WP4.2 EPSA Transaction Display and WP12 Full EPSA Set up screen UAT, which will be in May and June 2021	➤ This risk has been communicated to the SB 1049 Steering Team and will be monitored by the Project Managers and Program Managers of SB 1049	WP4.2 and WP12 will begin UAT on 5/25/2021 and deploy on 6/24/2021.

Project Issues and Action Plans

Listed below are the most critical issues for this project.

For the complete Issue Log, please see the Issue Log tab in the most recent weekly status report: [Member Redirect Weekly Status Report](#)

No	Issue	Resolution / Notes	Estimated Resolution Date
	No current issues		

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project Schedule Deliverables and Milestones

Milestones Schedule				
Milestone	Percent Complete	Baseline Finish Date	Actual / Forecast Finish Date*	Status/ Notes
WP4.1 - EPSA Minimum Salary	100%	6/24/2021	12/22/2021	
WP 5.2 - Online Member Services User Interface	100%	1/26/2021	1/21/2021	
WP2.1 - Tool for IAP Earnings Data	100%	1/26/2021	1/26/2021	
WP3.1 - EPSA Earnings	0%	3/23/2021	3/23/2021	
WP3.2 - Member Annual Statement Extract	0%	3/23/2021	3/23/2021	
WP4.2 - EPSA Transaction Display	0%	6/24/2021	6/24/2021	
WP12 - Full EPSA Set up screen	0%	6/24/2021	6/24/2021	
WP5 - Voluntary Contribution maintenance	0%	10/14/2021	10/14/2021	
WP4.3 - EPSA Correct Member Account	0%	10/14/2021	10/14/2021	
WP6 - EPSA Retirement	0%	1/25/2022	1/25/2022	
WP7 - EPSA Divorce	0%	4/21/2022	4/21/2022	
WP8 - Pre-Retirement Death	0%	7/28/2022	7/28/2022	
WP9 - Withdrawals	0%	3/23/2022	3/23/2022	
WP10 - Post-Retirement Death	0%	9/28/2023	9/28/2023	
WP11 - Maintaining Benefits	0%	1/25/2024	1/25/2024	
Migration Finalization	0%	2/9/2024	2/9/2024	
Project Complete	0%	2/21/2024	2/21/2024	

*Finish Date Color: Green = on Schedule, Yellow = in Jeopardy, Red = Late

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Project information: Member Choice

Project start: October 23, 2019 | **Project end:** August 4, 2021

Project Manager: Joli Whitney

Overall project status: **Green**

Project Narrative: Work package 2.1 (WP2.1 Online Member Services and jClarety Enhancements) has completed User Acceptance Testing and is on schedule to deploy in production in Release 9.7.0 on 3/23/2021. A Project Change Request was approved by SB 1049 Steering Team on 2/23/2021 to reduce the scope of the third and final work package (WP3). This change removed requirements to add Date of Birth Validation and IAP Statuses into jClarety. The change request reduced the scope of WP3 and will still satisfy the minimum requirements needed for SB 1049 and allow the project to complete on time. The new focus of WP3 is Online Member Services Election and Bugs. WP3 will be included in a combined release with Member Redirect and Cross Project Effort in late June.

Short-term Solutions (to meet 1/1/2021 Member Choice effective date)

WP1: Member Election - Short-term

WP1.1 Online Election

- Production Deployment Date: 8/20/2020 (Complete)

WP1.2 Voya's updates to website and nightly sweep program

- Production Deployment Date: 1/19/2021 (Complete)

WP1.3 PERS paper form election process including workflow

- Production Deployment Date: 8/12/2020 (Complete)

WP1.4 Development of new reports (to Voya and internal)

- Production Deployment Date 9/29/2020 (Complete)

Project objective:

The Member Choice sections of SB 1049 give members a say in how their Individual Account Program (IAP) accounts will be invested. Members' regular IAP accounts are currently allocated to Target-Date Funds (TDF) based on their year of birth. Beginning with calendar year 2021, members will be able to elect a TDF other than the default TDF.

WP2- Refining TDF Processes - Long-term

WP2.1 -Online Member Services and jClarety Enhancements

- Production Deployment Date: 3/23/2021

WP2.2 Central Data Management Reports

- Production Deployment Date: 6/18/2021
- Reports for Financial Reporting Services which have a dependency on status data delivered in WP2.1

WP3- Online Member Services Election and Bugs

- Production Deployment Date: 6/24/2021

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

Budget health: Green

Member Choice Project is currently within the budget allocated by the Legislature.

29560 SB1049 - Member Choice Project Budget					
Expenses	Budget	Actual to Date	Projections	Total	Variance
*Personal Services - PERS	\$ 860,000	\$ 851,847	\$ 6,764	\$ 858,611	\$ 1,389
General Overhead Allocation	\$ 318,583	\$ 209,025	\$ 107,442	\$ 316,467	\$ 2,116
Personal Services - SB1049	\$ 311,193	\$ 158,391	\$ 93,589	\$ 251,980	\$ 59,213
Office Expenses	\$ 1,500	\$ 1,163	\$ 200	\$ 1,363	\$ 137
Professional Services	251,198	\$ 280,000	-	\$ 280,000	\$ (28,802)
IT Professional Services	\$ 1,449,000	\$ 988,829	\$ 436,799	\$ 1,425,628	\$ 23,372
IT Expendable Prop	\$ 6,340	\$ 5,535	\$ 500	\$ 6,035	\$ 305
SB1049 Total Expenses	\$ 2,337,814	\$ 1,642,943	\$ 638,530	\$ 2,281,473	\$ 56,341
Project Total	\$ 3,197,814	\$ 2,494,790	\$ 645,294	\$ 3,140,084	\$ 57,730
Average Monthly Spend (Burn Rate)		\$ 91,274.59	\$ 106,421.67		
*Not included in SB1049 Expenses					

Schedule Health: Green

The project schedule is well understood.

Scope health: Green

With the approval of the Change Request to reduce the scope of WP3, the project scope is well understood.

Quality Assurance activities:

- Quality Check Point of the Effort Based Project Schedule was completed 2/28/2021.
- Quality Check Point of the Functional Design Specification Document for WP3 will begin on 3/31/2021.
- Quality Check Point of the Work Package Transition Support Document for WP2 will begin on 3/31/2021.

Emerging concerns/needs/impacts:

- No emerging concerns

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison

High Level Project Risks and Mitigation

Listed below are the most critical risks for this project.

For the complete Risk Log, please see the Risk Log tab in the most recent weekly status report: [Member Choice Weekly Status Report](#)

#	Risk Description	Mitigation and/or Contingency Plan	Notes
33	Technical Debt Impact to Timelines- Technical Debt Limits Ability to Provide SB 1049 Functionality within the mandated timeframes.	➤ Assess the individual technical debt items to determine if it is required or optional. Escalate to Steering as required.	Target Date Fund (TDF) is largely a new concept within jClarety and Online Member Services. There are possible gaps which may be encountered as we continue to add Member Choice functionality into existing systems.

Project Issues and Action Plans

Listed below are the most critical issues for this project.

For the complete Issue Log, please see the Issue Log tab in the most recent weekly status report: [Member Choice Weekly Status Report](#)

No	Issue	Resolution / Notes	Estimated Resolution Date
	No issues	.	

SB 1049 Implementation Program

Status Report for March 19, 2021

Executive Sponsor: Kevin Olineck
Program Manager: Christa Harrison







Project Schedule Deliverables and Milestones

Milestones Schedule				
Milestone	Percent Complete	Baseline Finish Date	Actual / Forecast Finish Date*	Status/ Notes
Member Choice TDFs Effective (Legislative deadline)	100%	1/1/2021	1/1/2021	
WP2.1 Development Complete	100%	1/8/2021	1/8/2021	
WP2.1 Business Functional Testing Complete	100%	2/19/2021	2/19/2021	
WP2.1 User Acceptance Testing Complete	100%	3/19/2021	3/17/2021	
WP2.1 Deployment Complete	0%	3/23/2021	3/23/2021	
WP3 Development Complete	0%	4/19/2021	4/19/2021	
WP3 Business Functional Testing Complete	0%	5/14/2021	5/14/2021	
W2.2 Development Complete	0%	5/19/2021	5/19/2021	
WP2.2 Business Functional Testing Complete	0%	6/3/2021	6/3/2021	
WP3 User Acceptance Testing Complete	0%	6/15/2021	6/15/2021	
WP2.2 User Acceptance Testing Complete	0%	6/17/2021	6/17/2021	
WP3 Deployment Complete	0%	6/24/2021	6/24/2021	
Project Close	0%	8/4/2021	8/4/2021	






*Finish Date Color: Green = on Schedule, Yellow = in Jeopardy, Red = Late

Senate Bill (SB) 1049 Implementation Road Map


2019-2021 Biennium

	2019						2020						2021										
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
 Employer Programs	<ul style="list-style-type: none"> 7/1/19 – Effective Date 9/3/19 – Employer Incentive Fund (EIF) Application #1 Opens 						<ul style="list-style-type: none"> 11/27/19 – EIF Application #1 Closes 12/2/19 – EIF Application #2 Opens 						<ul style="list-style-type: none"> 8/6/20 – Employer Rate Projection Tool (ERPT) Assessment Complete 12/1/20 – EIF Application #2 Closes 3/30/21 – Work Package (WP) 1 Migrate and Adapt ERPT → 6/30/21 – WP2 ERPT Stakeholder Acceptance and Deployment → 										
 Salary Limit							<ul style="list-style-type: none"> 12/24/19 – Work Package (WP) 1 – Short Term 1/1/20 – Effective Date 1/24/20 – WP2 Post 2020 Salary Limit – Long Term 						<ul style="list-style-type: none"> 11/19/20 – WP3 User Screens to Record Annual Salary Limit – Long Term 5/13/21 – WP4 Proration Reports and Workflow – Long Term → 5/28/21 – Project Close → 										
 Work After Retirement							<ul style="list-style-type: none"> 12/19/19 – Work Package (WP) 1 Retiree Wages Suspended – Short Term 1/1/20 – Effective Date 						<ul style="list-style-type: none"> 11/19/20 – WP2 New Wage Codes with General Ledger (GL) Integration – Long Term 5/13/21 – WP3 Retro Rate Change – Long Term → 										
 Member Redirect							<ul style="list-style-type: none"> 6/18/20 – Work Package (WP) 1 Employee Pension Stability Account Set Up/Batch/General Ledger – Short Term 7/1/20 – Effective Date 						<ul style="list-style-type: none"> 9/22/20 – Voluntary Contributions Initial Functionality – Long Term 10/30/20 – WP2.2 IAP Forecaster Tool – non-jClarety – Long Term 11/19/20 – Voluntary Contributions Final Functionality Release – Long Term 1/21/21 – WP5.2 Online Member Services User Interface – Long Term → 1/26/21 – WP2 TIED SSIS – Non-jClarety – Long Term → 6/24/21 – WP4.2 EPSA Display, and WP12 Full EPSA Set up Screen – Long Term → 3/23/21 – WP3 EPSA Earnings – Long Term 										
 Member Choice	<ul style="list-style-type: none"> 10/23/19 – Project Kick Off 5/15/20 – Member Annual Statements (MAS) Flyer Communication → 						<ul style="list-style-type: none"> 8/19/20 – Member Choice Notification → 						<ul style="list-style-type: none"> 8/20/20 – Work Package (WP) 1 Online Member Services (OMS) Changes Deployed 9/1-30/20 – Election Period 3/23/21 – WP2 OMS & jClarety Enhancements – Long Term → 5/1/21 – Member Choice reflected in MAS → 6/24/21 – WP3 Online Member Services (OMS) Election and Bugs → 1/1/21 – Effective Date 3/19/21 										
PROGRAM INITIATIVE													<ul style="list-style-type: none"> 1/26/21 – WP2.1 IAP Payment Recon (short-term) → 2/22/21 – WP3 IAP Divorce Tool → 3/26/21 – WP1.2 IAP Validator Tool (long-term) → 5/13/21 – WP5 PYE Invoicing Tool → 4/29/21 – WP2.2 IAP Payment Recon (long-term) → 5/13/21 – WP7.2 Employer Information Actuarial Extract → 6/2/21 – WP4 IAP Adjustment Calculator → 6/24/21 – WP7.1 Non-Retired Census Actuarial Extract → 										
 Cross Project Effort							<ul style="list-style-type: none"> 9/17/20 – WP1.1 IAP Validator Tool (short-term) → 																

2021-2023 Biennium

PROJECTS	2021						2022												2023					
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
 Employer Programs	<ul style="list-style-type: none"> ● 7/16/21 – Project Close 																							
 Work After Retirement							<ul style="list-style-type: none"> ● 12/16/21 – WP4 Side Account Credit Allocation ● 2/23/22 – Project Close (Tentative) 																	
 Member Redirect							<ul style="list-style-type: none"> ● 10/14/21 – WP4.3 EPSA Transaction Display – Long Term ● 10/14/21 – WP5 Voluntary Contribution Maintenance – Long Term ● 1/25/22 – WP6 EPSA Retirement – Long Term ● 4/21/22 – WP7 EPSA Divorce – Long Term ● 7/28/22 – WP8 Pre-Retirement Death – Long Term 												<ul style="list-style-type: none"> ● 3/23/23 – WP9 Withdrawals – Long Term → ● 					
 Member Choice	<ul style="list-style-type: none"> ● 8/4/21 – Project Close 																							
PROGRAM INITIATIVE																								
 Cross Project Effort							<ul style="list-style-type: none"> ● TBD – WP6 IAP Balance Comparison Tool ● TBD – WP7.3 Tier One/Tier Two/OPSRP Payouts Actuarial Extract 																	

2023-2025 Biennium

PROJECTS	2023						2024												2025					
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
 Member Redirect	<ul style="list-style-type: none"> ● 9/28/23 – WP10 Post-Retirement Death – Long Term 						<ul style="list-style-type: none"> ● 1/25/24 – WP11 Maintaining Benefits – Long Term ● 2/29/24 – Migration Finalization ● 2/21/24 – Project Close 																	

Action and Discussion Items

1. Legislative Update
2. SB 1049 Implementation Update
3. Final 2020 Earnings Crediting and Reserving
4. Preparatory Discussion for Upcoming Experience Study



Oregon

Kate Brown, Governor

Public Employees Retirement System

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March 29, 2021

TO: Members of the PERS Board
FROM: Richard Horsford, Chief Financial Officer
Amanda Marble, Financial Reporting Manager
SUBJECT: 2020 Final Earnings Crediting and Reserving

OVERVIEW

- Action: Allocate 2020 final earnings crediting.
- Subject: Crediting earnings for calendar year 2020 to the PERS Fund's accounts and reserves.

The PERS Board is charged with crediting the earnings from the PERS Fund each calendar year. Some of those allocations are directed by statute or rule; the balance is at the PERS Board's discretion.

2020 FINAL ALLOCATIONS

The PERS Board's Annual Earnings Crediting rule (OAR 459-007-0005) directs the crediting to the Judge and Tier Two member regular accounts, as well as the OPSRP Pension Program, Benefits-in-Force, and Employer reserves. Staff recommends the following allocations be adopted by the PERS Board:

Non-Discretionary Allocations

1. Tier One Member Regular Accounts Reserve and Judge Member Accounts

Credit Tier One member regular accounts and Judge member accounts with the assumed earnings rate (7.20%) in effect during 2020.

Tier One Rate Guarantee Reserve: This reserve, established under ORS 238.255(1), is used to fund crediting of the assumed rate to Tier One member regular accounts when earnings are less than the assumed rate. The allocated proportionate share of 2020 earnings for this reserve is \$252.3 million. As actual earnings did not at least equal the assumed rate this year, \$585.4 thousand of these earnings will be used to "top-up" crediting to Tier One member regular accounts at the assumed rate (7.20%). The remaining \$34.8 million in earnings will be added to Tier One Rate Guarantee Reserve, leaving a remaining balance of \$526.8 million in this reserve for future crediting years.

2. Tier Two Member Regular Accounts

Credit Tier Two member regular accounts with a proportional share of available PERS Fund Regular Account earnings, which will result in a final rate of 7.18%.

3. Benefits-in-Force and Employer Reserves

Credit the Benefits-in-Force and Employer Reserves evenly with the remaining available PERS Fund Regular Account earnings, which will result in a final rate of 7.18%.

4. OPSRP Pension Plan Member Accounts

OPSRP member accounts usually are credited with a proportional share of available PERS Fund Regular Account earnings, which will result in a final rate of 7.24%.

Oregon Public Employees Retirement System Calendar Year 2020 Final 2020 Crediting and Reserving (All dollar amounts in millions)								
	Reserves Before Crediting	Gross Investment Income (a)	Investment Expense (b)	Administrative Expenses (c)	Other Adjustments ² (d)	Net 2020 Crediting (a+b+c+d)	Reserves After Crediting	2020 Rates
Tier One Member Regular Accounts	2,927.2	285.3	(33.6)	(3.9)	(37.0)	210.8	3,138.0	7.20%
Tier One Rate Guarantee Reserve	492.0	-	-	-	34.8	34.8	526.8	N/A
Tier Two Member Regular Accounts	973.0	81.2	(9.6)	(1.1)	(0.6)	69.9	1,042.9	7.18%
Benefits In Force Reserve	19,449.4	1,623.0	(191.1)	(22.4)	(12.7)	1,396.8	20,846.2	7.18%
Employer Reserves	32,543.3	2,715.6	(319.8)	(37.6)	(21.3)	2,336.9	34,880.2	7.18%
OPSRP Pension	7,039.1	610.6	(62.6)	(10.1)	(28.1)	509.8	7,548.9	7.24%
IAP Accounts, as a whole ¹	10,362.5	948.4	(75.1)	(15.2)	9.4	867.5	11,230.0	8.37%
UAL Lump-Sum Pmt. Side Accounts ¹	4,778.7	374.7	(31.2)	(0.2)	-	343.3	5,122.0	Various ³
Contingency Reserve	50.0	-	-	-	-	-	50.0	N/A
Total	\$78,615.2	\$6,638.8	(\$723.0)	(\$90.5)	(\$55.5)	\$5,769.8	\$84,385.0	

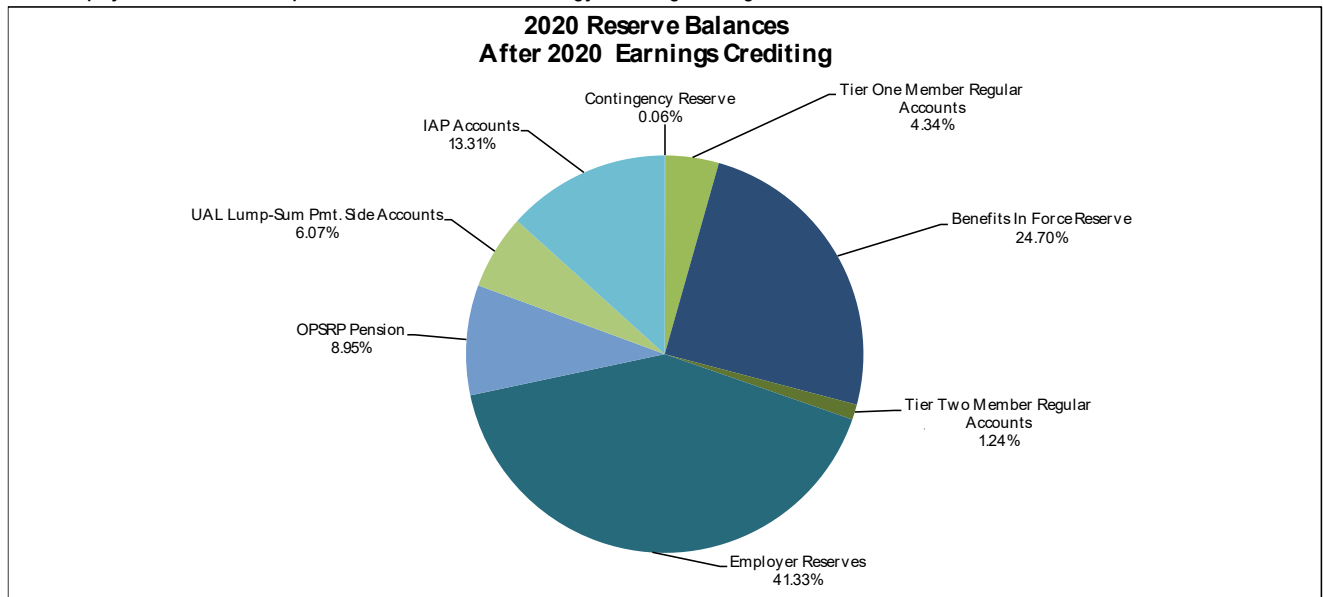
¹ Informational only. Not affected by Board reserving or crediting decisions.

IAP accounts receiving installments have already received 2020 earnings.

² Primarily due to One Rate Guarantee Reserve transfer of the Tier One member regular account excess earnings, defined benefit commingled earnings transfer, and the earnings credited to mid-year retirements.

³ The average of the various final earnings rates is 7.18%.

Note: The actual market returns for private equity investments are reported on a three-month lag as additional time is needed to value these non-public assets and returns. Private equity returns for the fourth quarter will be reflected in the following year earnings crediting.



*Informational only. Not affected by Board reserving or crediting decisions.

IAP accounts receiving installments have already received 2020 earnings.

EARNINGS ALLOCATIONS DIRECTED BY STATUTE OR RULE

The following reserves and accounts are allocated earnings by applicable statute or rule. In compliance with these restrictions, the final earnings allocation reflects the following:

- 5. Individual Account Program (IAP):** These member accounts are credited with actual earnings or losses of the PERS Fund Regular Account as required by ORS 238A.350 (1). The overall final IAP earnings for 2020 are 8.37% after deducting IAP expenses. The table below illustrates the IAP earnings by tranche.

Oregon Public Employees Retirement System				
Final IAP TDF Earnings				
(All dollar amounts in thousands)				
TDF Fund	Reserves Before Crediting	2020 Crediting	Reserves After Crediting	2020 Rates
RAF Fund	\$ 887,691.0	\$ 81,449.9	\$ 969,140.9	9.17%
2025 Fund	1,423,004.9	125,655.8	1,548,660.7	8.83%
2030 Fund	1,816,751.1	168,085.3	1,984,836.4	9.25%
2035 Fund	2,003,911.1	163,260.8	2,167,171.9	8.14%
2040 Fund	1,683,888.5	124,146.3	1,808,034.8	7.37%
2045 Fund	1,237,559.7	114,438.6	1,351,998.3	9.24%
2050 Fund	645,139.0	62,427.2	707,566.2	9.67%
2055 Fund	248,642.0	21,704.2	270,346.2	8.72%
2060 Fund	57,135.3	4,157.9	61,293.2	7.27%
2065 Fund	2,994.0	180.3	3,174.3	6.02%
Total	\$10,006,716.6	\$865,506.3	\$10,872,222.9	

In accordance with Senate Bill 1049 (2019), effective July 1, 2020 all currently employed Tier One/Tier Two and OPSRP members earning \$2,500/month or more, a portion of their 6 percent monthly IAP contributions will be redirected to an “Employee Pension Stability Account.” The Employee Pension Stability Account (EPSA) will be used to pay for part of the member’s future pension benefit.

For earnings crediting purposes, Tier One/Tier Two member EPSA accounts will be credited with the same rate as Tier Two Regular Member accounts, which will result in a final rate of 7.18%.

For earnings crediting purposes, OPSRP member EPSA accounts will be credited with the same rate as OPSRP Pension Member Accounts, which will result in a final rate of 7.24%.

- 6. Employer Lump Sum Payment Accounts:** These accounts are credited with actual earnings or losses of the PERS Fund Regular Account less administrative expenses, as authorized by ORS 238.225. For 2020, the average final crediting rate for these accounts is 7.18%.
- 7. Health Insurance Accounts:** These accounts are created as part of the PERS Fund and directed by statute to be credited with actual earnings or losses, less the expense related to the administration of the programs (ORS 238.410(7); 238.415(4); 238.420(4)). For 2020, the final crediting rate for these accounts are 7.44% for RHIA, 7.09% for RHIPA, and 0.67% for SRHIA (invested in the Treasury Short-Term Fund).

Oregon Public Employees Retirement System Health Insurance Accounts Final Rates	
Health Insurance Fund	2020
RHIA	7.44%
RHIPA	7.09%
SRHIA *	0.68%

* Invested in the Treasury Short-Term Fund

8. Variable Annuity Account: This account is credited with earnings and losses on its distinct asset allocation of the PERS Fund. The Variable Annuity Account is only invested in equities and therefore its earnings are discrete from those of the more diversified PERS Fund Regular Account. For 2020, the final Variable Annuity Account earnings is 11.77%.

Administrative Expenses: PERS administrative costs are funded by earnings when they are sufficient, as they were in 2020 (ORS 238.610(1)). As directed by House Bill 4155 (2014 Regular Session), the administrative costs to comply with Governmental Accounting Standards Board (GASB) 68 and 75 reporting standards were \$32,938, and will be recovered from earnings on employer’s contributions.

CONTINGENCY RESERVE ALLOCATION

ORS 238.670 (1) to limit the Board’s crediting of funds to the Contingency Reserve; specifically, “...the board may not credit further amounts to the reserve account if the amounts in the reserve account exceed \$50 million.”

As the current balance of the Contingency Reserve is \$50 million, with \$2.5 million earmarked for resolving employer insolvencies. The staff recommends no additional allocation at this time.

BOARD ACTION – FINAL EARNINGS CREDITING

The Board’s options for 2020 final earnings crediting include:

1. Pass a motion to “adopt the final crediting of earnings as presented for calendar year 2020.”
2. Pass a motion adopting an alternative final allocation of 2020 earnings.

STAFF RECOMMENDATION

Staff recommends the Board choose Option #1.

Action and Discussion Items

1. Legislative Update
2. SB 1049 Implementation Update
3. Final 2020 Earnings Crediting and Reserving
4. Preparatory Discussion for Upcoming Experience Study



PREPARATORY DISCUSSION FOR UPCOMING EXPERIENCE STUDY

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

Presented by:

Matt Larrabee, FSA, EA

Scott Preppernau, FSA, EA

March 29, 2021

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Four-Meeting Process – Assumptions & Methods

- March 29: Assumed rate, including preliminary Milliman outlook model
- June 2: Joint meeting with Oregon Investment Council (OIC)
 - Assumed rate – outlooks from OIC’s consultants, Milliman
- June 4: Economic assumptions, system funding methods
 - Inflation and system payroll growth
 - Actuarial methods, including amortization and rate collaring policy
- July 23: Demographic assumptions, Board direction to actuary
 - Member-specific assumptions based on study of recent PERS experience
 - Assumptions and methods adopted for use in:
 - 12/31/2020 actuarial valuation with advisory 2023-2025 contribution rates
 - 12/31/2021 actuarial valuation with proposed final 2023-2025 contribution rates

Two-Year Rate-Setting Cycle

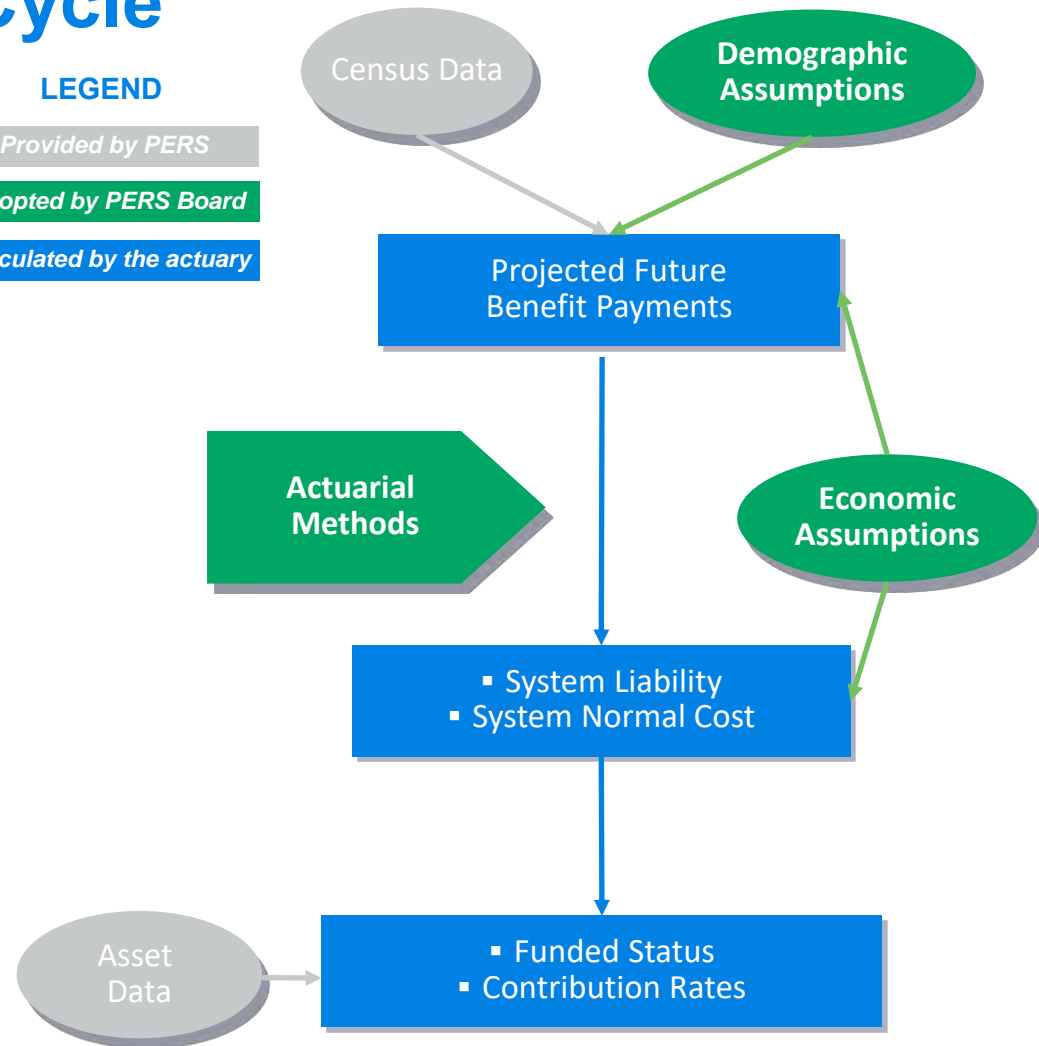
LEGEND

Provided by PERS

Adopted by PERS Board

Calculated by the actuary

- **July 2021: Assumptions & methods adopted by Board in consultation with the actuary**
- October 2021: System-wide 12/31/20 actuarial valuation results
- December 2021: Advisory 2023-2025 employer-specific contribution rates
- July 2022: System-wide 12/31/21 actuarial valuation results
- September 2022: Disclosure & adoption of employer-specific **2023-2025 contribution rates**



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Valuation Process and Timeline

- Actuarial valuations are conducted annually
 - Alternate between “rate-setting” and “advisory” valuations
 - This valuation as of 12/31/2020 is advisory
- Board adopts contribution rates developed in rate-setting valuations, and those rates go into effect 18 months after the valuation date

Valuation Date	Employer Contribution Rates
12/31/2017	July 2019 – June 2021
12/31/2019	July 2021 – June 2023
12/31/2021	July 2023 – June 2025

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The Assumed Rate

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The Assumed Rate: What Is It?

- Assumed rate: expected average annual **future** investment return
- PERS Board sets the assumed rate every two years
 - This year the rate will be selected at the July 23 meeting
- The assumed rate is used to determine:
 - The contribution cost rate for benefits earned in the future (normal cost rate)
 - The system's current unfunded actuarial liability (UAL)
 - The contribution cost rate to systematically amortize UAL over time (UAL rate)
 - Actuarial equivalence factors (AEFs) for amounts of optional benefit forms
 - AEFs to convert account balances to “money match” annuities for Tiers 1 & 2
 - Account balance interest crediting level for Tier 1 actives

Use of the Assumed Rate

The PERS Funding Equation

At the end of each calendar year, the PERS actuaries calculate the system's funded status using the following basic equation:

$$\begin{array}{ccc} \mathbf{B} & = & \mathbf{C} & + & \mathbf{E} \\ \text{BENEFITS} & & \text{CONTRIBUTIONS} & & \text{EARNINGS} \\ \textit{Present value of} & & \textit{Employer funds to pay} & & \textit{Future returns on} \\ \textit{earned benefits} & & \textit{for pension benefits} & & \textit{investment funds} \\ \text{Set by: Oregon Legislature} & & \text{Set by: PERS Board} & & \text{Managed by: Oregon Investment Council} \end{array}$$

Every two years, the PERS Board adjusts contribution rates so that, over time, contributions will be sufficient to fund the benefits earned, if earnings follow assumptions.

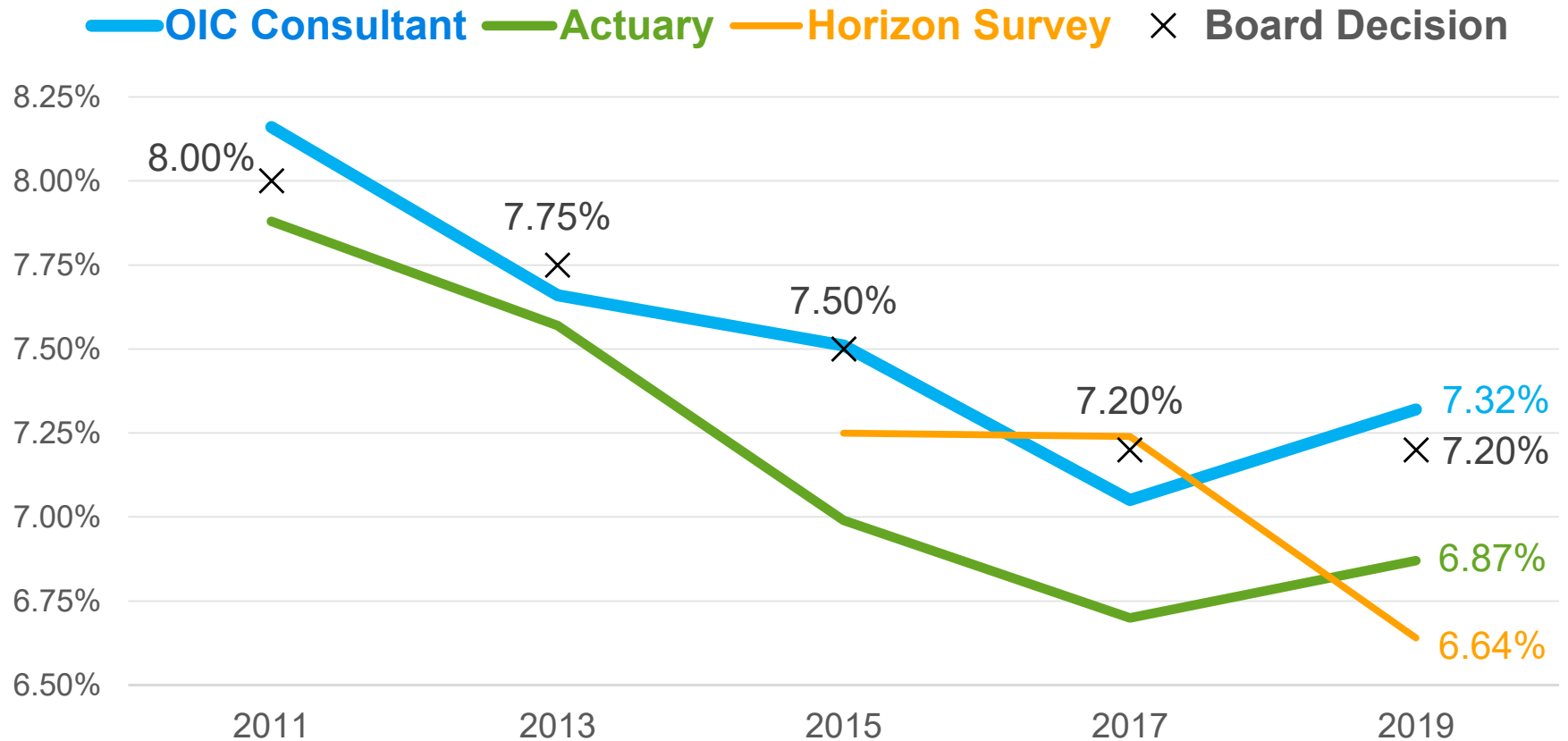
- “B” is predictable with a relatively high degree of certainty
- “E” is the unpredictable **actual** future investment return on PERS assets
- “C” is the balancing item --- it must provide to “B” what “E” fails to cover
- The **assumed rate** is the Board's estimate of “E” to prudently set “C”
- The Board's decision on “E” does **not** affect actual future earnings

Considerations in Assumed Rate Selection

- Rate selected should be **prudent**, based on best-estimate outlooks
- Stakeholders should realize rate selected **will not affect actual returns**
- Recent returns are generally not considered a predictor of future returns
 - Likeliest possible effect: **strong recent returns may lead to lower future returns**

Investment Return 50th Percentile Outlooks

Geometric Returns from Outlook Models in Prior Five Reviews



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Assumed Rate - Data Used in Prior Board Decision

- The table below is from the **July 2019** Board meeting
 - Median returns are geometric averages over the timeframe indicated

	2019 Outlook Milliman	2019 Outlook OIC Consultant	2019 Outlook Horizon
Median Annualized Return	6.87%	7.32%	6.64%
Assumed Inflation	2.50%	2.25%	2.24%
Time Horizon Modeled	20 years	10 years	10 years

- To avoid the potential risk of a modified opinion, GASB requires an assumption for financial reporting is not disclaimed by the actuary
 - A disclaimer would be required under Actuarial Standards of Practice (ASOPs) if the assumption “*significantly conflicts*” with what the actuary considers reasonable
- The OIC consultant’s outlook is important in our reasonability assessment

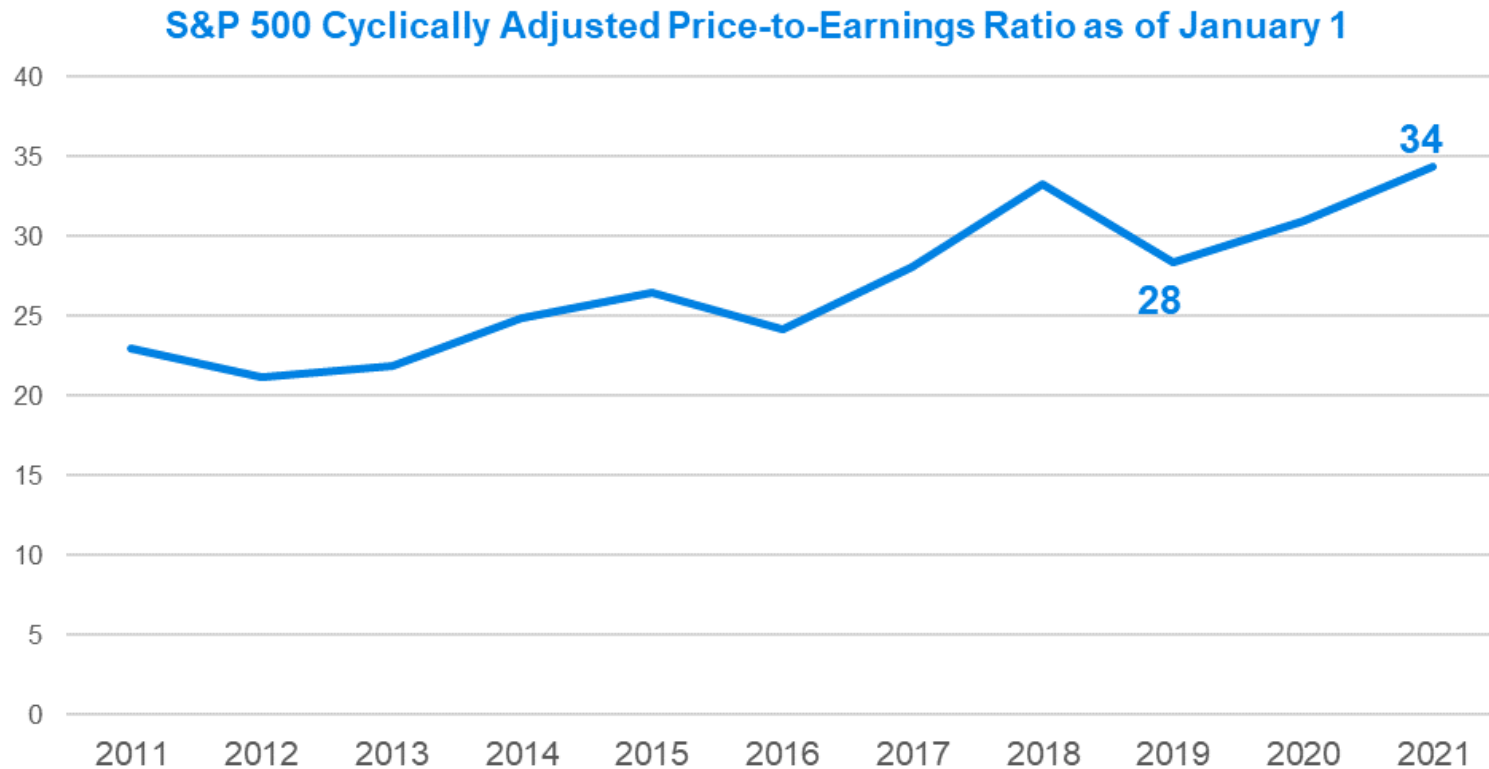
Preliminary Updates to Milliman Outlooks

	2019 Outlook Milliman Final	2021 Outlook Milliman Preliminary
Median Annualized Geometric Return	6.87%	6.12%
Assumed Inflation	2.50%	2.40%
Time Horizon Modeled	20 years	20 years

- **OIC consultant outlooks will be shared on June 2**
 - Milliman’s outlook will be updated for the June Board meeting, including reflection of any changes to OIC’s target asset allocation policy
- Board’s 2019 2.50% inflation assumption used in the 2019 Milliman outlook
 - That was below Social Security’s long-term outlook at that time of 2.60%
 - Social Security’s current long-term outlook of 2.40% is used as a placeholder in Milliman’s preliminary 2021 outlook
 - Other key inflation outlooks are currently below 2.40%

Why Did Milliman's Outlook Decrease So Much?

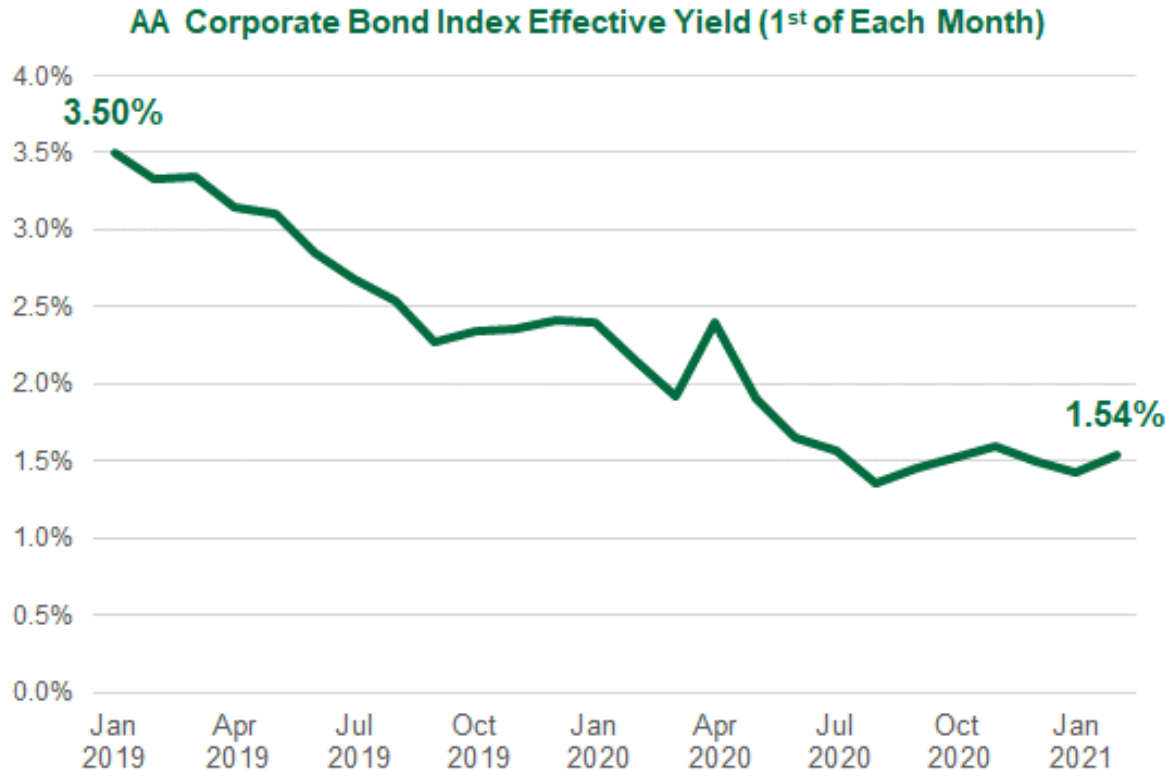
- Milliman's outlook is based on January 2021 market conditions
- The S&P 500 P/E ratio increased substantially from 2019 to 2021



- This helped create strong cumulative two-year public equity returns (+41.1% for PERS), but **will make it harder to achieve strong future public equity returns**

Why Did Milliman's Outlook Decrease So Much?

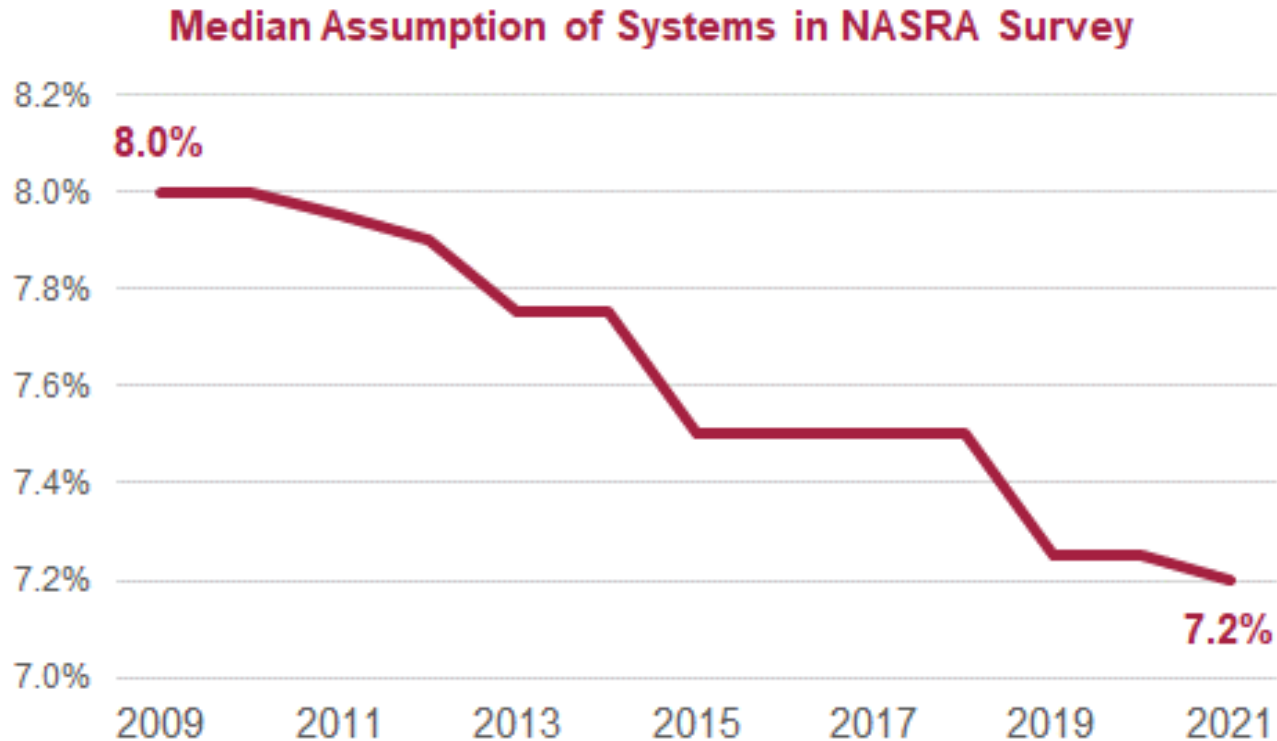
- Fixed income yields decreased to historic lows between January 2019 and January 2021



- Yield decreases led to strong cumulative two-year fixed income returns (+17.2% for PERS), but **will make it harder to achieve strong future fixed income returns**

What About the Assumptions of Other Systems?

- This line shows the median return assumption over time for 130 large and/or statewide public systems



- The median may decrease to **7.0%** by the end of 2021
 - That happening would mean the mid-point of public systems' return assumptions would have decreased by a full 1.0% in just over a decade

System-Average Liability and Contribution Rate Effects

Valuation Date:	12/31/2019	12/31/2020		
	Final 2021-23 at	Preliminary Estimated Advisory 2023-25 at		
Assumed Rate:	7.20%	7.20%	7.00%	6.80%
Funded Status (Excluding Side Accounts)	72%	73%	72%	70%
Unfunded Actuarial Liability (UAL) (Excluding Side Accounts)	\$24.6 B	\$24.3 B	\$26.3 B	\$28.4 B
System-Average Uncollared Total Contribution Rates				
Total Normal Cost Rate (Employer plus Member)	11.09%	10.90%	11.44%	12.02%
Tier 1/Tier 2 UAL Rate	13.13%	13.17%	13.93%	14.70%
OPSRP UAL Rate	<u>1.69%</u>	<u>1.63%</u>	<u>1.86%</u>	<u>2.09%</u>
Uncollared Total Base Rate	25.91%	25.70%	27.23%	28.81%

- Preliminary 12/31/2020 estimates do not reflect updated census information or assumption changes that may occur in the upcoming experience study

Rate Collaring

- PERS applies a “rate collar” as part of rate-setting process, as discussed in detail in recent Board meetings
- Based on the results of the December 31, 2019 valuation, rate collar does not limit rates for the 2021-23 biennium for the large rate pools
 - Collared and uncollared rates are equal
- December’s financial modeling included illustration of potential modifications to the collar structure
- Any change to the rate collar structure would be adopted as part of the upcoming experience study
- Any potential collar changes would be considered in conjunction with changes in assumed rate or other assumptions

Agenda for Upcoming Presentations

- June 2: Assumed rate
 - Joint board meeting with Oregon Investment Council (OIC)
 - Outlooks from OIC's consultants, updates to Milliman's model
- June 4: Economic assumptions, rate-setting methods
 - Inflation and system payroll growth
 - Amortization and contribution rate collaring
- July 23: Demographic assumptions, Board decisions
 - Member-specific assumptions based on study of recent PERS experience
 - Assumptions and methods adopted will be used for:
 - 12/31/2020 actuarial valuation with advisory 2023-2025 contribution rates
 - 12/31/2021 actuarial valuation with 2023-2025 contribution rates proposed for adoption



Appendix

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Certification

This presentation discusses actuarial methods and assumptions for use in the valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”). For the most recent complete actuarial valuation results, including cautions regarding the limitations of use of valuation calculations, please refer to our formal Actuarial Valuation Report as of December 31, 2019 (“the Valuation Report”) published on September 17, 2020. The Valuation Report, including all supporting information regarding data, assumptions, methods, and provisions, is incorporated by reference into this presentation. The statements of reliance and limitations on the use of this material is reflected in the actuarial report and still apply to this presentation. The Valuation Report should be referenced for additional detail on the assumptions, methods, and plan provisions underlying this presentation.

This presentation also summarizes a limited number of high-level preliminary estimates based on information projected to December 31, 2020 from the December 31, 2019 actuarial valuation. These results are preliminary in nature, are shown here only for illustrating the effect of assumption changes, and should not be relied upon for other purposes. Final results will be published in the December 31, 2020 Actuarial Valuation Report to be published later this year. In preparing this presentation, we relied, without audit, on information (some oral and some in writing) supplied by the System’s staff and information published by Oregon State Treasury. This information includes, but is not limited to, statutory provisions, employee 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. The valuation results were developed using models intended for valuations that use standard actuarial techniques.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan 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 plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. Our annual financially modeling presentation to the PERS Board should be referenced for additional analysis of the potential variation in future measurements. The PERS Board has the final decision regarding the appropriateness of the assumptions.

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Certification

The calculations in this report have been made on a basis consistent with our understanding of the plan provisions described in the appendix of the Valuation Report. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work is prepared solely for the internal business use of the Oregon Public Employees Retirement System. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product.

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

The consultants who worked on this assignment are retirement 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.

Appendix

Cyclically Adjusted Price-to-Earnings Ratio

Cyclically Adjusted PE Ratio (CAPE ratio), also referred to as Schiller PE ratio, is based on the average inflation adjusted earnings of the prior 10 years. Values shown are as of January 1 and were retrieved from: <https://www.multpl.com/shiller-pe/table/by-year>.

AA Corporate Bond Index

Index shown is the ICE BofA AA US Corporate Index Effective Yield published by the Federal Reserve Bank of St. Louis. Values are as of the first of the month and were retrieved from: <https://fred.stlouisfed.org/series/BAMLC0A2CAAAY>.

System-Average Liability and Contribution Rate Effects

Estimated December 31, 2020 system-average liabilities and contribution rates were projected based on results from the December 31, 2019 valuation,. Unless noted otherwise, results reflect the data, assumptions, methods, and provisions summarized in the Valuation Report.

Valuation assets as of December 31, 2020 were estimated based on information provided for the 2020 Preliminary Earnings Crediting discussion at the February 1, 2021 PERS Board meeting.

Uncollared total contribution rates as of December 31, 2020 were calculated using a payroll growth assumption of 3.40%.

Appendix

Actuarial Basis

Capital Market Assumptions - Milliman

For assessing the expected portfolio return under Milliman's capital market assumptions (adjusted for inflation assumption shown below), we considered the Oregon PERS Fund to be allocated among the model's asset classes as shown below. This allocation is based on the Oregon Investment Council's Statement of Investment Objectives and Policy Framework for the Oregon PERS Fund, as revised April 2018, and changes adopted in April 2019.

	Annual Arithmetic Mean	20-Year Annualized Geometric Mean	Annual Standard Deviation	Policy Allocation
US Large/Mid-Cap Equity	6.33%	5.15%	16.45%	16.17%
US Small Cap Equity	7.42%	5.50%	21.15%	1.35%
US Micro-Cap Equity	8.11%	5.75%	23.60%	1.35%
Non-US Developed Equity	7.78%	6.31%	18.45%	13.47%
Emerging Markets Equity	9.55%	6.86%	25.40%	4.23%
Non-US Small Cap Equity	8.22%	6.51%	20.00%	1.92%
Private Equity	11.35%	7.71%	30.00%	17.50%
US Core Fixed Income	2.80%	2.73%	3.85%	9.60%
US Short-Term Bonds	2.49%	2.47%	2.05%	9.60%
US Bank/Leveraged Loans	4.91%	4.66%	7.40%	3.60%
High Yield Bonds	5.77%	5.36%	9.70%	1.20%
Real Estate	6.29%	5.66%	12.00%	10.00%
Global REITs	8.03%	6.36%	19.75%	2.50%
Timber	6.55%	5.81%	13.00%	1.13%
Farmland	6.95%	6.21%	13.00%	1.13%
Infrastructure	7.24%	6.26%	15.00%	2.25%
Commodities	4.68%	3.10%	18.85%	1.13%
Hedge Fund of Funds - Diversified	4.08%	3.85%	7.10%	1.50%
Hedge Fund Event-Driven	5.59%	5.26%	8.70%	0.37%
US Inflation (CPI-U)		2.40%	1.65%	N/A
Fund Total (reflecting asset class correlations)	6.86%	6.16%*	12.64%	100.00%

* Reflects 0.10% average reduction to model passive investment expenses. The model does not try to assess the actual investment expenses for active management. The model's 20-year annualized geometric median is **6.12%**.