

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2020

OREGON PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Oregon Public Employees Retirement System
An Agency of the State of Oregon



Front Cover Photo: Painted Hills

Taken by: Radford Bean

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Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2020

Oregon Public Employees Retirement System

An Agency of the State of Oregon

Kevin Olineck

Director

Richard Horsford

Chief Financial Officer

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INTRODUCTORY SECTION

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Oregon

Kate Brown, Governor

Public Employees Retirement System

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

December 1, 2020

Public Employees Retirement Board
Oregon Public Employees Retirement System
11410 SW 68th Parkway
Tigard, Oregon 97223

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the Oregon Public Employees Retirement System (PERS, System or Agency) for the fiscal year ended June 30, 2020. This report includes all funds over which the Public Employees Retirement Board (Board) exercises authority. These funds were established to provide retirement, death, and disability benefits and other postemployment benefits (OPEB) to members; administer retiree health insurance programs; and oversee the state-sponsored deferred compensation program. As of June 30, 2020, PERS provides services to 901 employers and more than 378,000 active, inactive, and retired members and beneficiaries.

The CAFR is intended to fulfill the legal requirements of Oregon Revised Statute (ORS) 238.630. PERS management is responsible for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures.

Macias Gini & O'Connell LLP (MGO) has audited the accompanying financial statements in accordance with generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. The independent auditor's report is included in this report.

Management's Discussion and Analysis

Included in this report is a section entitled Management's Discussion and Analysis (MD&A). This section provides a narrative introduction, overview, and analysis to accompany the basic financial statements. The letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. We would like to direct your attention to the MD&A that begins on page 20.

Financial Information

The financial statements contained in this report have been prepared in accordance with accounting principles generally accepted in the United States of America, also known as generally accepted accounting principles (GAAP) as set forth in the principles established by the Governmental Accounting Standards Board (GASB), including all effective GASB pronouncements, and in conformance with the guidelines for financial reporting developed by the Government Finance Officers Association of the United States and Canada (GFOA).

Management of the System assumes full responsibility for the completeness and reliability of all of the information presented in this report. To provide a reasonable basis for making these representations, management of the System has established internal controls designed to protect the System's assets from loss, theft, or misuse, and to compile sufficient reliable information for the preparation of the included financial statements. Because the cost of internal controls should not exceed their effectiveness, management has developed controls that provide reasonable, rather than absolute, assurance that the financial statements contained in this report will be free of material misstatements. As management, we assert that, to the best of our knowledge and belief, this financial report is complete and reliable in all material aspects.

Factors Affecting Economic Condition

The economic condition of the System is primarily affected by investment earnings. A comparative analysis of investment rates of return is presented on page 31 of this report.

Funding

The System is funded through contributions and investment earnings. For judges, the contribution is set at 7.0 percent of covered salary. Employer contributions are established by actuarial valuations conducted biennially in odd-numbered calendar years. The System's funding objective is to meet long-term benefit promises through contributions that fund benefits as they accrue. An adequate contribution level, when combined with investment earnings, will result in the full funding of benefits as they come due. If the level of funding is adequate, the ratio of assets accumulated to total liabilities will increase, and more income will be available for investment. Prudent investment of assets, and returns on those investments, may increase the funding base and allow for a more stable employer contribution rate. As of the December 31, 2019 actuarial valuation, the System has a funded ratio of 78.6 percent for the defined benefit pension plan it administers, including employer side accounts, and 72.5 percent funded ratio, excluding employer side accounts.

All members, with the exception of judges, contribute 6.0 percent of salary to the Individual Account Program (IAP), an individual account-based program under the PERS tax-qualified governmental plan for all PERS members, established in 2004.

Investments

The Oregon Investment Council (OIC) has statutory authority (ORS 293.701) to establish policies for the investment and reinvestment of the System's funds. The System's long-term investment strategy is designed to capitalize on investment return while protecting principal. The OIC works to strategically allocate assets in the System's portfolio. The target investment portfolio mix at fair value as of June 30, 2020, is 32.50 percent public equity, 17.50 percent private equity, 20.00 percent debt securities, 12.50 percent real estate, 15.00 percent alternatives, and 2.50 percent risk parity. In addition to approved asset classes, target asset allocation ranges, and rebalancing policies, the OIC further safeguards the System's investment portfolio through use of an independent custodian, defined limits on delegated authority, and independent audits. The OIC uses external portfolio managers, employing both passive (indexed) and active investment strategies. The portfolio is broadly diversified among equities, debt securities, real estate, and private equities, with additional diversification achieved through domestic and international investing. System securities are held by State Street Bank and Trust Company.

The System's Regular Investment Portfolio (Portfolio) experienced in fiscal year 2020 a rate of gain of 0.52 percent. This compares with a rate of return of 6.52 percent for fiscal year 2019. The Portfolio's trailing 10-year return was 8.7 percent. Descriptions of OIC policies regarding diversification,

performance objectives, fees, and asset allocation are found on page 98.

Major Initiatives

Senate Bill 1049 (SB 1049)

SB 1049 was signed into law by the governor on June 11, 2019. The challenge for PERS has been to not only implement this bill, but also continue to provide our members and employers with uninterrupted service, while working through the intricacies of SB 1049.

The Agency developed an overall implementation approach to tackle each element of SB 1049, and is managing this as one, comprehensive program with the following five individual projects:

<u>Project</u>	<u>Effective Date</u>
Employer Programs Project	7/1/2019
Salary Limit Project	1/1/2020
Work After Retirement Project	1/1/2020
Member Redirect Project	7/1/2020
Member Choice Project	1/1/2021

Strategic Management System

PERS continues to evolve its outcome-based management system to improve operational performance and organizational alignment. This process-based system integrates problem solving and decision making with active engagement from the front-line staff who perform daily work.

The 2018-2023 PERS Strategic Plan was updated during the year to reflect six strategic priorities, with several areas of focus and specific, achievable goals and objectives. The six strategic priorities are:

1. Organizational Management and Development;
2. Member Services and Communications;
3. Data Reliability;
4. Information Governance, Security, and Technology;
5. Financial Management; and
6. Enterprise Risk Management

For each of the strategic priorities, PERS is using existing strategic and operational planning functions to prioritize and allocate resources. Strategies are being implemented using a variety of approaches. The approaches include problem solving, project management, breakthrough initiatives, and integration into core business practices. Specific performance metrics have been identified for tracking progress as part of strategy initiation.

Supporting the Agency's strategic priorities are six core operating processes and six core supporting processes. Each process has an owner, sub-processes, and outcome measures to monitor and document progress. Quarterly target review meetings are held to review progress and identify areas for improvement.

More information on the 2018-2023 PERS Strategic Plan can be found on our website at: <https://www.oregon.gov/pers/Documents/Strategic-Plan.pdf>

Information Security and Continuity Management Programs

The Agency has been working diligently on establishing a Continuity Management Program, which encompasses our Continuity of Operations Plan, Business Recovery, and Disaster Recovery Plans. Agency staff have made significant strides in establishing an industry standard program. That said, there is recognition that, while we now have the basics in place, there is still significant effort required to ensure that we continue to build out our Continuity Management Program.

Similar to Continuity Management, Information Security is one of the foundational initiatives the Agency needs to have in place. This instills in our stakeholders a sense of trust and confidence, assuring them that the data that we maintain is secure. Working collaboratively with the State Enterprise Security Office, staff made significant strides in building out our Information Security Program.

Member and Employer Satisfaction Surveys

PERS' 2020 member satisfaction survey results show an increase in satisfaction from 2019 and were fairly similar to 2018 results, following the trend of higher satisfaction during years when the Legislature is not in regular session. This is notable as overall member response rates continued to increase year to year, including from nonretired members. Retiree satisfaction continues to hover around 95 percent rating PERS' overall quality of service as "excellent" or "good." Nonretired member satisfaction rose from 74 percent in 2019 to 78 percent in 2020.

Employers reported a satisfaction rating of nearly 89 percent in 2020, up from 87 percent in 2019. 2020 results did reflect a much lower response rate, as employers may have been focused on other reporting requirements during the COVID-19 pandemic.

Awards and Acknowledgements

Certificate of Achievement

The Certificate of Achievement for Excellence in Financial Reporting is applicable for the year ended June 30, 2019. The Certificate of Achievement is a prestigious national award that recognizes conformance with the highest standards of preparation of state and local government financial reports.

To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR, whose contents conform to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for one year. The System has received a Certificate of Achievement for the last 29 consecutive years. We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to the GFOA.

Public Pension Standards Award

The Public Pension Coordinating Council (PPCC) awarded the 2020 Public Pension Standards Award to PERS for its plan design and administration.

The PPCC is a coalition of three associations representing public pension funds covering the vast majority of public employees in the United States. The associations are as follows: the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR). Public pension standards are intended to

reflect minimum expectations for public retirement system management and administration, and to serve as benchmarks by which all defined benefit public plans are measured.

This is the 18th year the PPCC has offered the award to public retirement systems and the 17th consecutive year PERS has applied for, and received, the award.

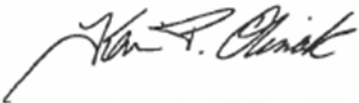
Acknowledgments

The information contained in this report is used to make management decisions, to demonstrate stewardship of the assets entrusted to the System, and to comply with legal and accounting provisions. Staff strives to provide reliable and complete information for these purposes. The compilation of this report reflects the combined efforts of the PERS Financial Services Division.

This report is available on the PERS website at <http://www.oregon.gov/pers/Pages/Financials/Actuarial-Financial-Information.aspx>, and a link to this document is e-mailed to all PERS employers. Summary financial information and the website link is also reported in the PERS newsletter, *Perspectives*, which is distributed to active and retired members.

We would like to thank the PERS Board and staff, participating employers, the Oregon Investment Council, the Office of the State Treasurer, and all others working on behalf of the System for their time, commitment, support, and hard work. We are grateful for their continued support and assistance.

Respectfully submitted,



Kevin Olineck
Director



Richard Horsford
Chief Financial Officer

Public Employees Retirement Board

The Oregon Legislature has delegated authority to the Public Employees Retirement System (PERS) Board of Trustees to administer the PERS system. The Board is composed of five trustees who administer retirement (service and disability), death, and retiree health insurance benefits. PERS also administers the Oregon Savings Growth Plan, a deferred compensation program for state and local government employees.

All members of the Board are appointed by the state governor and confirmed by the state senate. The governor designates the chairperson.

Statute specifies Board membership must consist of three people with experience in business management, pension management, or investing who are not members of the PERS system; one person who is either an employee of the state in a management position or a person who holds an elective office in the governing body of a participating public employer other than the state; and one person representing public employees and retirees.

As of June 30, 2020, the three Board members representing business management, pension management, or investing are Sadhana Shenoy (Board Chair), Stephen Buckley, and Jardon Jaramillo. Steve Demarest was appointed to represent public employees and retirees; Lawrence J. Furnstahl (Vice-Chair) was appointed to represent public employers. Terms for each member are staggered.

Sadhana Shenoy (Board Chair)

Sadhana Shenoy has spent the last five years in the Mobility-as-a-Service (MaaS) space. She was the CFO/COO of Moovel, a transit technology company, and held this position as the company grew from start-up to acquisition and into growth. She started her career as a software engineer working with databases and children's software. She then moved to the nonprofit sector, working on boards within the environmental (Sierra Club), educational (Montessori School of Beaverton) and legal (CRAG Law Center) areas. Ms. Shenoy is a charter and board member of TiE Oregon (The Indus Entrepreneurs) and of TYE Oregon (TiE Youth Entrepreneurs) and enjoys angel investing in exciting new ideas and promoting youth entrepreneurship.

Ms. Shenoy holds Bachelor of Science degrees in accounting and business administration, a Master of Science degree in computer science and is a Certified Public Accountant (CPA) in Oregon.

Lawrence J. Furnstahl (Vice-Chair)

Lawrence J. Furnstahl has three decades of experience in the strategic, financial, and operational management of complex organizations, including universities and academic health centers. Mr. Furnstahl has served as a chief financial officer for more than 25 years. He is now the Executive Vice President and Chief Financial Officer of Oregon Health & Science University (OHSU). OHSU is a \$3.1 billion public corporation with nearly 3,000 faculty, 17,500 staff, and 5,600 students and trainees. OHSU participates in \$486 million of research and is the state's only major academic health center. Prior to joining OHSU in January 2011, Mr. Furnstahl served as Chief Financial and Strategy Officer with the University of Chicago Medical Center and Biological Sciences Division. Over the years, he has also served as Vice President of Financial Planning for Science for University of Chicago; Senior Vice President and Chief Financial Officer for UCSF Stanford Health Care; Vice President and Chief Financial Officer for the University of Chicago; and Vice President and Treasurer of Patient Services for the University of Chicago Hospitals. Mr. Furnstahl is a member of the Visiting Committee to the Physical Sciences Division of the University of Chicago, and a board director and former Chair of the Hyde Park Art Center. He is a graduate of the College of the University of Chicago, with a degree in economics.

Stephen Buckley

Stephen Buckley was a partner at the Portland, Oregon law firm Brownstein Rask LLP prior to his retirement on June 30, 2019. For more than 30 years, Mr. Buckley served as legal counsel for Boards of Trustees of private sector health and welfare plans and defined benefit, defined contribution, and 401(k) pension plans in Washington, Oregon, and California. Mr. Buckley was a frequent speaker at employee benefit plan conferences sponsored by the International Foundation of Employee Benefit Plans. Mr. Buckley earned his Bachelor of Arts degree in political science from Colorado State University and his Juris Doctorate degree from Willamette University College of Law.

Steve Demarest

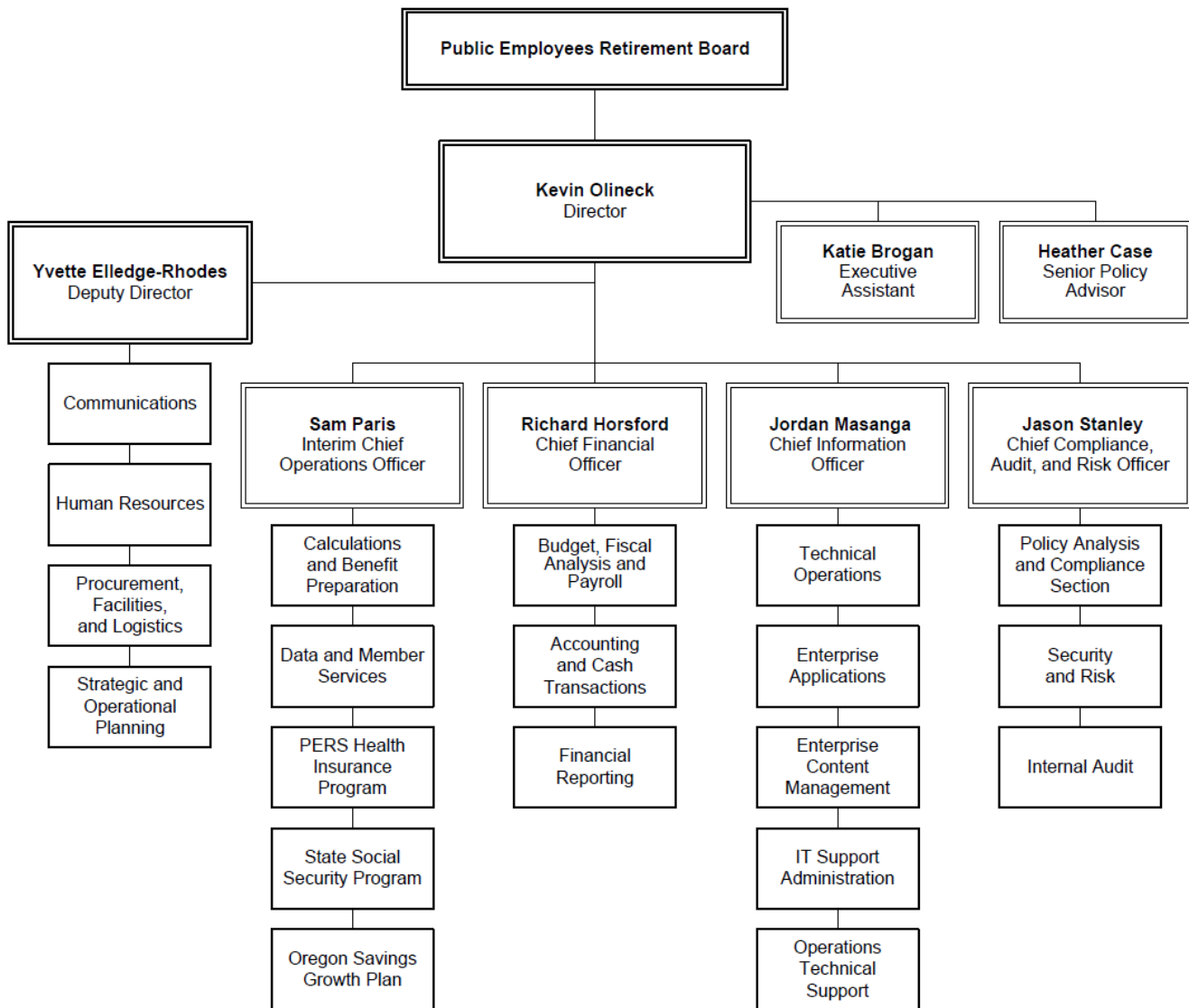
Steve Demarest is an Administrative Law Judge with the Oregon Office of Administrative Hearings. In this position, he hears appeals of a wide variety of decisions by state agencies, boards, and commissions. Mr. Demarest is also the President of the Service Employees International Union (SEIU) Local 503. In this capacity, he supports the value of being “In It Together” with one another and with the communities that SEIU serves.

Jardon Jaramillo

Jardon Jaramillo serves as Controller and Assistant Treasurer at Portland General Electric, communicating and managing financial results. He previously worked as Director of Compensation and Benefits from 2013 to 2016. As director, he was responsible for managing the company’s defined benefit pension plan, as well as overseeing health care programs for all of PGE’s employees. Before joining PGE, Mr. Jaramillo was a manager with Deloitte in the M&A Transactions Services consulting group. He spent his early career at Deloitte in the audit and assurance space. Mr. Jaramillo enjoys contributing to solutions to equity issues in the community and serves as Vice Chair of the Board of Metropolitan Family Services.

Mr. Jaramillo received an MBA from the Anderson School at the University of California Los Angeles, a BA in economics from Northwest Nazarene University, and is a CPA licensed in Oregon.

Organization Chart



Oregon Public Employees Retirement System Consultants

Actuary

Milliman, Inc.

Legal Counsel

Oregon Department of Justice

Auditor

Macias Gini & O'Connell LLP

Insurance Consultant

Butler Partners & Associates LLC

Medical Advisor

F. William Miller, MD

Investments

Investment managers are reported in the Schedule of Fees and Commissions on page 104



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Oregon Public Employees Retirement System

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Morill

Executive Director/CEO

Management would like to offer a special thank you to the Oregon Public Employees Retirement System Financial Reporting Division for their ongoing work to earn this prestigious award.

Financial Reporting Coordinator – Matthew Graves
Senior Investment Accountant – Michiru Farney



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2020***

Presented to

Oregon Public Employees Retirement System

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator



Mission

We serve the people of Oregon by administering public employee benefit trusts to pay the right person the right benefit at the right time



Core Values

Service-Focus: We work together to meet the needs of others with dependability, professionalism, and respect.

Accountability: We take ownership for our decisions, actions, and outcomes.

Integrity: We inspire trust through transparency and ethical, sound judgment.



Operating Principles

Professional: We are responsive, respectful, and sensitive to the needs of our members, employers, and staff.

Accurate: We ensure data integrity and provide consistent, dependable information and benefits.

Judicious: We use sound judgment and prudent, principled decision-making in upholding our fiduciary responsibility.

Information Security: We are constantly vigilant to safeguard confidential information.



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FINANCIAL SECTION

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Independent Auditor's Report

To the Honorable Kate Brown
Governor of Oregon

To the Public Employees Retirement Board of the
Oregon Public Employees Retirement System
Tigard, Oregon

Report on the Financial Statements

We have audited the accompanying financial statements of the fiduciary activities and proprietary activities of the Oregon Public Employees Retirement System (the System), an agency of the State of Oregon, as of and for the fiscal year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the fiduciary activities and proprietary activities of the Oregon Public Employees Retirement System as of June 30, 2020, and the respective changes in financial position and, where applicable, cash flows thereof for the fiscal year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

As discussed in Note 9 to the financial statements, the total pension liability for the Defined Benefit Pension Plan, based on the actuarial valuation as of December 31, 2018, rolled forward to June 30, 2020, exceeded the plan's fiduciary net position by \$21.8 billion. The actuarial valuation is very sensitive to the underlying assumptions, including a discount rate of 7.20 percent, which represents the long-term expected rate of return.

As discussed in Note 10 to the financial statements, the fiduciary net position of the Retirement Health Insurance Account (RHIA) other postemployment benefit plan exceeded the total other postemployment benefits (OPEB) liability, based on the actuarial valuation as of December 31, 2018, rolled forward to June 30, 2020, by \$203.8 million. The actuarial valuation is very sensitive to the underlying assumptions, including a discount rate of 7.20 percent, which represents the long-term expected rate of return.

As discussed in Note 10 to the financial statements, the total OPEB liability for the Retiree Health Insurance Premium Account (RHIPA) other postemployment benefit plan, based on the actuarial valuation as of December 31, 2018, rolled forward to June 30, 2020, exceeded the plan's fiduciary net position by \$10.0 million. The actuarial valuation is very sensitive to the underlying assumptions, including a discount rate of 7.20 percent, which represents the long-term expected rate of return, and a healthcare cost trend rate of 7.10 percent applied at the beginning of the measurement period and decreasing to an ultimate rate of 4.10 percent.

Our opinions are not modified with respect to these matters.

Other Matters

Prior-Year Comparative Information

The financial statements include partial prior-year comparative information. Such information does not include all of the information required to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the System's financial statements for the fiscal year ended June 30, 2019, from which such partial information was derived.

We have previously audited the System's 2019 financial statements, and we expressed unmodified opinions on the respective financial statements of the fiduciary activities and the proprietary activities in our report dated December 16, 2019. In our opinion, the partial comparative information presented herein as of and for the fiscal year ended June 30, 2019, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of changes in net pension liability/(asset) and related ratios, the schedule of investment returns – defined benefit pension plan, the schedule of defined pension plan employer contributions, the schedule of changes in net OPEB (asset) and related ratios – other postemployment benefit plan – RHIA, the schedule of investment returns – other postemployment benefit plan – RHIA, the schedule of changes in net OPEB liability and related ratios – other postemployment benefit plan – RHIPA, the schedule of investment returns – other postemployment benefit plan RHIPA, the schedule of OPEB RHIA employer contributions, the schedule of OPEB RHIPA employer contributions, and the schedule of claims development information, as listed in the table of contents, be presented to supplement the financial statements. Such information, although not a part of the basic

financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The other supplementary information and the introductory, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 1, 2020 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

Macias Gini & O'Connell LLP

Sacramento, California
December 1, 2020

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MANAGEMENT'S DISCUSSION AND ANALYSIS

This section presents management's discussion and analysis of the Oregon Public Employees Retirement System's (PERS or the System) financial performance during the fiscal year ended June 30, 2020. It is a narrative overview and analysis that we present in conjunction with the Letter of Transmittal included in the Introductory Section of this Comprehensive Annual Financial Report (CAFR). It should also be read in conjunction with PERS' basic financial statements, as presented in this report.

PERS is primarily responsible for administering retirement benefits, health insurance benefits, and supplemental retirement savings plans. PERS comprises six funds: a defined benefit pension plan, an individual account-based program under the PERS tax-qualified governmental plan, two Other Postemployment Benefit (OPEB) plans, a deferred compensation plan, and a proprietary fund.

OVERVIEW OF THE FINANCIAL STATEMENTS AND ACCOMPANYING INFORMATION

Management's discussion and analysis provides an introduction to and overview of the basic financial statements, which comprise the following components: Fund Financial Statements and Notes to the Basic Financial Statements. Collectively, this information presents the combined net position restricted for pension benefits, OPEB, individual account-based program, and deferred compensation, along with the unrestricted net position of the proprietary fund administered by PERS as of June 30, 2020. It also summarizes the combined changes in net position restricted for pension benefits, other employee benefits and OPEB, the changes in unrestricted net position, and the cash flows of the proprietary fund for the year then ended, along with an actuarial measurement of the employers' total pension and OPEB liabilities compared to the fiduciary net position of the defined pension and OPEB plans. The information available in each of these sections is briefly summarized below:

Fund Financial Statements

As of June 30, 2020, financial statements are presented for the two types of funds administered by PERS: fiduciary funds, where PERS acts in a fiduciary capacity as a trustee for others and is responsible for administering the assets placed under its control; and a proprietary fund, where fees are charged for services provided and the focus is on determining financial position, operating and non-operating income, changes in net position, and cash flows.

Fiduciary Funds include the Defined Benefit Pension Plan, Oregon Public Service Retirement Plan Individual Account Program (IAP), the Retirement Health Insurance Account (RHIA), the Retiree Health Insurance Premium Account (RHIPA), and the Deferred Compensation Plan, known as the Oregon Savings Growth Plan. Fiduciary funds are used to account for resources held for the benefit of PERS participants. A statement of fiduciary net position and a statement of changes in fiduciary net position are presented for the fiduciary funds as of and for the fiscal year ended June 30, 2020, along with comparative total information as of and for the fiscal year ended June 30, 2019. These financial statements reflect the resources available to pay benefits to retired members and other beneficiaries as of year-end, as well as the changes in those resources during the year.

Proprietary Fund includes the Standard Retiree Health Insurance Account (SRHIA), an enterprise fund. A statement of net position, a statement of revenues, expenses, and changes in net position, and a statement of cash flows are presented for the proprietary fund as of and for the fiscal year ended June 30, 2020, along with comparative total information as of and for the fiscal year ended June 30, 2019. These financial statements reflect the net position, changes in net position, and cash flows resulting from PERS business-type activities.

Notes to the Basic Financial Statements

- Note 1 – provides a summary of significant accounting policies, including the basis of accounting for each of the fund types: investment accounting policies, management's use of estimates, and other significant accounting policies.
- Note 2 – provides a general description of PERS as well as a description of each of the funds administered by PERS. Information regarding employer and member participation in the pension and OPEB plans administered by PERS is also provided.
- Note 3 – provides information on the System's accounts receivables and payables.
- Note 4 – provides information on cash and cash equivalents. The note also describes investments, including the techniques and inputs used to determine fair value, investing authority, investment risk categorizations, and additional information about unfunded investment commitments, securities lending, and derivatives.
- Note 5 – provides information about capital assets used in plan operations.
- Note 6 – provides information on reserves.
- Note 7 – provides information on potential contingencies of PERS.
- Note 8 – provides information on the estimated claims liability of the SRHIA.
- Note 9 – provides information on the Employers' Net Pension Liability.
- Note 10 – provides information on Employers' Net OPEB Liability/(Asset).
- Note 11 – Subsequent Events.

Required Supplementary Information

In addition to the financial statements and notes explained above, this CAFR includes 10 additional Required Supplementary Information schedules with historical trend information, as described below:

- The Schedule of Changes in Net Pension Liability/(Asset) and Related Ratios, page 76, presents the pension plan's change in total pension liability, change in the fiduciary net position, net pension liability, fiduciary net position as a percentage of the total pension liability, total covered payroll, and net pension liability as a percentage of covered payroll. This required 10-year trend schedule will disclose future years prospectively, beginning with the fiscal year ended June 30, 2014.
- The Schedule of Investment Returns – Defined Benefit Pension Plan, page 76, presents for each fiscal year the annual money-weighted return (internal rate of return) on pension plan investments, net of pension plan investment expense. This required 10-year trend schedule will disclose future years prospectively, beginning with the fiscal year ended June 30, 2014.
- The Schedule of Defined Benefit Pension Plan Employer Contributions, on pages 77 and 78, contains a 10-year schedule comparing the amount of actuarially determined contributions with the amount of contributions recognized in relation to the actuarially determined contributions, and showing whether there is a contribution deficiency or excess. The schedule also shows the amounts of contributions recognized by the pension plan in relation to the actuarially determined contributions as a percentage of covered payroll.
- The Schedules of Changes in Net OPEB Liability/(Asset) and Related Ratios, for RHIA is on page 79 and RHIPA on 80, presents the OPEB plan's change in the total OPEB liability, change in the fiduciary net position, net OPEB liability/(asset), fiduciary net position as a percentage of the total OPEB liability, total covered payroll, and net OPEB liability/(asset) as a percentage of covered payroll. These required 10-year trend schedules will disclose future years prospectively, beginning with the fiscal year ended June 30, 2017.

- The Schedules of Investment Returns – OPEB Plans, for RHIA and RHIPA, on pages 79 and 80, respectively, presents for each fiscal year the annual money-weighted return (internal rate of return) for each of the OPEB plan investments, net of OPEB plan investment expense. These required 10-year trend schedules will disclose future years prospectively, beginning with the fiscal year ended June 30, 2017.
- The Schedules of OPEB Plan Employer Contributions for both RHIA and RHIPA, on pages 81 – 84, contain a 10-year schedule comparing the amount of actuarially determined contributions with the amount of contributions recognized in relation to the actuarially determined contributions, and showing whether there is a contribution deficiency or excess. The schedules also show the amounts of contributions recognized by the OPEB plans in relation to the actuarially determined contributions as a percentage of covered payroll.
- The Schedule of Claims Development Information for SRHIA, page 85, shows earned revenues and expenses over the past nine years.

Other Supplementary Information

In addition to the Required Supplementary Information, there are five Other Supplementary Information schedules, as described below:

- The Schedule of Plan Net Position and Schedule of Changes in Plan Net Position – Defined Benefit Pension Plan, pages 87 and 88, display the components of the defined benefit pension plan.
- The Schedule of Administrative Expenses and Schedule of Payments to Consultants and Contractors on pages 89 and 90 show the costs of managing the System.
- The Summary of Investment Fees, Commissions, and Expenses begins on page 91 and provides the detail of investment-related expenses included in the Investment Expense line item reported in the Statement of Changes in Fiduciary Net Position.

FIDUCIARY FUNDS

- PERS' assets exceeded its liabilities at the close of fiscal year 2020, with \$81,405.5 million restricted for pension, IAP, OPEB, and deferred compensation benefits.
- Fiduciary net position decreased by \$1,461.1 million, or 1.8 percent, primarily due to a \$2,078.3 million decrease in investments. This increase was offset by a \$462.0 million increase in Cash and Receivables. The decrease in the investment balance was due to a decrease in the fair value of investments due to declining financial market conditions.
- PERS' funding objective is to meet long-term benefit obligations. As of December 31, 2019, the date of the latest actuarial funding valuation, the funded ratio of the defined benefit pension plan, including side accounts, was 78.6 percent. In general, this means that for every dollar of future pension benefits due, PERS has approximately \$0.78 available for payment.
- Revenues (additions to fiduciary net position), which include member and employer contributions of \$3,188.5 million and investment activities totaling \$1,244.1 million, was down 39.2 percent to \$4,437.1 million for fiscal year 2020, compared to \$7,300.6 million in fiscal year 2019. This decrease is primarily attributed to a \$3,455.8 million decrease in revenues from investment activities compared to the prior year.
- Expenses (deductions from fiduciary net position) increased 6.6 percent to \$5,898.2 million during the fiscal year from \$5,532.1 million in fiscal year 2019, primarily due to a similar increase in benefit payments.

FIDUCIARY NET POSITION

The condensed comparative summaries of Fiduciary Net Position on page 24 demonstrate that the pension trust funds are primarily focused on investments and net position (reserves).

- The net position of the Defined Benefit Pension Plan decreased approximately \$1,884.4 million, or 2.7 percent, during the year ended June 30, 2020, primarily due to a \$2,119.2 million, or 3.1 percent, decrease in the value of investments, offset by a \$124.2 million increase in Cash and Cash Equivalents. The decrease in the value of investments was due to declining financial markets, and the increase was due to more contributions received based on higher rates.
- The net position of the OPSRP IAP increased approximately \$330.4 million, or 3.3 percent, during the year ended June 30, 2020. This increase was due to the \$382.7, or 88.1 percent, increase in Cash and Receivables, offset by a \$49.2 million, or 0.5 percent, decrease in Investments. The increase in Cash and Receivables was primarily due to the timing satisfaction of contribution receivables.
- The net position of the Deferred Compensation Plan increased approximately \$103.5 million, or 5.0 percent, during the year ended June 30, 2020, due to a \$93.8 million, or 4.6 percent, increase in the value of investments and a \$9.6 million, or 48.3 percent, increase in Cash and Receivables. The increase in Cash of \$9.6 million was due to timing of year-end investment sales.
- The net position of the RHIA decreased approximately \$18.2 million, or 2.9 percent, during the year ended June 30, 2020, primarily due to a \$9.8 million, or 1.6 percent, decrease in the value of investments as well as a \$6.7 million, or 150.6 percent, increase in Other Payables. These Other Payables were primarily overpaid Employer Contributions.
- The net position of the RHIPA increased approximately \$7.6 million, or 16.4 percent, during the year ended June 30, 2020, primarily due to the increase in the value of investments by \$6.1 million, or 14.5 percent. The decrease in the value of investments was due to a declining financial markets.

CHANGES IN FIDUCIARY NET POSITION

Revenues – Additions to Fiduciary Net Position

Additions to Fiduciary Net Position needed to finance retirement benefits are accumulated through the collection of employer and member contributions and through investment income.

- For fiscal year 2020, the financial markets continued their volatility, resulting in a decrease in Net Investment and Other Income for all plans. See the Investment Activities section on page 28 for further discussion.
- Defined Benefit Pension Plan: Total additions for fiscal year 2020 decreased \$2,509.1 million, or 43.7 percent, compared to fiscal year 2019. This decrease was attributed to a \$3,086.8 million, or 77.0 percent, decrease in Net Investment and Other Income, offset by a \$578.8 million increase in Employer Contributions. The increase in Employer Contributions was primarily due to the \$491.3 million increase in Side Account payments, which was directly attributable to the Employer Incentive Fund (EIF) Program established by the Employer Rate Relief Program of Senate Bill 1049.
- Individual Account Program: Total additions decreased \$258.7 million, or 21.3 percent, due to the \$322.7 million, or 57.1 percent, decrease in Net Investment and Other Income, offset by a \$64.1 million increase in Member Contributions. The increase in Member Contributions was due to an increase in subject salary from an increase in active members, merit increases and cost of living adjustments.
- Deferred Compensation Plan: The Oregon Savings Growth Plan had a \$20.6 million, or 8.4 percent, decrease in total additions. Like the other plans, this decrease was due to the \$31.6 million, or 30.1 percent, decrease in Net Investment and Other Income, compared to fiscal year 2019. This decrease

TABLE 1
FIDUCIARY NET POSITION, PENSION
(in thousands) As of June 30

	Defined Benefit Pension Plan		Individual Account Program		Deferred Compensation Plan	
	2020	2019	2020	2019	2020	2019
Cash and Receivables	\$ 4,215,079	\$ 4,090,855	\$ 817,282	\$ 434,594	\$ 29,442	\$ 19,848
Investments at Fair Value	66,312,176	68,431,344	9,646,811	9,695,972	2,151,257	2,057,502
Securities Lending						
Collateral	709,926	813,156	77,485	87,490	3	6
Other	25,647	30,287	532	684	-	-
Total Assets	<u>71,262,828</u>	<u>73,365,642</u>	<u>10,542,110</u>	<u>10,218,740</u>	<u>2,180,702</u>	<u>2,077,356</u>
Investment Purchases	2,179,278	2,269,342	190,527	200,410	1,180	1,306
Securities Lending						
Payable	710,431	813,339	77,540	87,510	3	6
Other Payables	53,822	79,240	31,657	18,825	738	726
Total Liabilities	<u>2,943,531</u>	<u>3,161,921</u>	<u>299,724</u>	<u>306,745</u>	<u>1,921</u>	<u>2,038</u>
Total Net Position	<u>\$ 68,319,297</u>	<u>\$ 70,203,721</u>	<u>\$ 10,242,386</u>	<u>\$ 9,911,995</u>	<u>\$ 2,178,781</u>	<u>\$ 2,075,318</u>

TABLE 2
FIDUCIARY NET POSITION, OTHER POSTEMPLOYMENT BENEFITS
(in thousands) As of June 30

	Retirement Health Insurance Account		Retiree Health Insurance Premium Account	
	2020	2019	2020	2019
Cash and Receivables	\$ 34,040	\$ 36,551	\$ 7,670	\$ 6,012
Investments at Fair Value	606,438	616,269	48,024	41,940
Securities Lending				
Collateral	6,525	7,380	521	511
Other	28	39	2	3
Total Assets	<u>647,031</u>	<u>660,239</u>	<u>56,217</u>	<u>48,466</u>
Investment Purchases	18,663	19,540	1,268	1,183
Securities Lending Payable	6,530	7,382	521	511
Other Payables	11,094	4,427	89	81
Total Liabilities	<u>36,287</u>	<u>31,349</u>	<u>1,878</u>	<u>1,775</u>
Total Net Position	<u>\$ 610,744</u>	<u>\$ 628,890</u>	<u>\$ 54,339</u>	<u>\$ 46,691</u>

was offset by a \$10.9 million increase in Member Contributions, as the number of participants increased 4.1 percent over fiscal year 2019.

- Retirement Health Insurance Account: Total additions decreased \$70.6 million, or 82.5 percent. The decrease was primarily due to the \$43.3 million, or 87.2 percent, decrease in Employer Contributions, as well a \$27.4 million, or 76.1 percent, decrease in Net Investment and Other Income compared to fiscal year 2019. The decrease in Employer Contributions was due to the rate falling to 0.06 percent beginning in fiscal year 2020, compared to the 0.50 percent in fiscal year 2019.

- Retiree Health Insurance Premium Account: Total additions decreased \$4.5 million, or 27.0 percent, over the fiscal year 2019. This decrease was due to a \$2.8 million, or 19.8 percent, decrease in Employer Contributions, as well as a \$1.7 million decrease in Net Investment and Other Income. The decrease in Employer Contributions was due in part to the contribution rate falling to 0.45 percent beginning in fiscal year 2020, compared to the 0.49 percent in fiscal year 2019, as well as an 11.3 percent decrease in the numbers of participants.

Expenses – Deductions From Fiduciary Net Position

Benefit payments, refunds of contributions to members who terminate employment, health insurance premium subsidies, deferred compensation payments, and administrative costs comprise the System's expenses.

- Defined Benefit Pension Plan: Pension benefit and other expenses were \$5,116.9 million in fiscal year 2020, a \$251.5 million, or 5.2 percent, increase over fiscal year 2019 expenses of \$4,865.4 million, primarily due to the 3.6 percent net increase in the number of retirees, as well as the annual cost of living adjustment. See service retirements discussed on page 29.
- Individual Account Program: IAP benefit and other expenses increased by \$120.4 million, or 23.9 percent, during the year, from \$503.0 million in fiscal year 2019 to \$623.4 million in fiscal year 2020. The increase in IAP benefit payments is consistent with the net increase in the number of service retirements discussed on page 29.
- Deferred Compensation Plan: Deferred compensation benefits and other expenses decreased by \$4.9 million, or 3.9 percent, from \$125.3 million in fiscal year 2019 to \$120.4 million in fiscal year 2020, because of a decrease in requests for rollovers and distributions.
- Retirement Health Insurance Account: RHIA healthcare premium and other expenses decreased by \$445.0 thousand, or 1.3 percent, from \$33.5 million in fiscal year 2019 to \$33.1 million in fiscal year 2020. This decrease was primarily attributed to a \$406.0 thousand, or 1.3 percent, decrease in Healthcare Premium Subsidies caused by a decrease in participants.
- Retiree Health Insurance Premium Account: RHIPA healthcare premium and other expenses decreased by \$439.0 thousand, or 9.1 percent, from \$4.8 million in fiscal year 2019 to \$4.4 million in fiscal year 2020, primarily because of a decrease in participants.

The tables on page 26 show condensed comparative summaries of the changes in fiduciary net position and reflect the activities of the plans administered by the System.

PROPRIETARY FUND

Standard Retiree Health Insurance Account (SRHIA) uses an enterprise fund to account for the activities of PERS' health insurance program (PHIP), a public entity risk pool.

Net Position

- The net position of the SRHIA as of June 30, 2020, was \$98.9 million, a \$9.2 million, or 10.3 percent, increase over fiscal year 2019. This increase was primarily due to a \$10.0 million, or 11.0 percent, increase in Cash and Cash Equivalents due to collection of prior year reinsurance receivables, offset by a \$0.9 increase in Other Payables.

TABLE 3
CHANGES IN FIDUCIARY NET POSITION, PENSION
 (in thousands) For the Fiscal Years Ended June 30:

	Defined Benefit Pension Plan		Individual Account Program		Deferred Compensation Plan	
	2020	2019	2020	2019	2020	2019
Additions:						
Employer Contributions	\$ 2,299,006	\$ 1,720,183	\$ -	\$ -	\$ -	\$ -
Member Contributions	10,179	11,354	711,193	647,139	150,478	139,544
Net Investment and Other Income	923,261	4,010,048	242,628	565,352	73,406	104,964
Total Additions	<u>3,232,446</u>	<u>5,741,585</u>	<u>953,821</u>	<u>1,212,491</u>	<u>223,884</u>	<u>244,508</u>
Deductions:						
Pension Benefits	5,045,931	4,815,059	611,602	490,459	118,350	123,058
Other	70,939	50,306	11,828	12,568	2,071	2,278
Total Deductions	<u>5,116,870</u>	<u>4,865,365</u>	<u>623,430</u>	<u>503,027</u>	<u>120,421</u>	<u>125,336</u>
Net Increase (Decrease)	(1,884,424)	876,220	330,391	709,464	103,463	119,172
Net Position						
Beginning of Year	<u>70,203,721</u>	<u>69,327,501</u>	<u>9,911,995</u>	<u>9,202,531</u>	<u>2,075,318</u>	<u>1,956,146</u>
End of Year	<u>\$ 68,319,297</u>	<u>\$ 70,203,721</u>	<u>\$ 10,242,386</u>	<u>\$ 9,911,995</u>	<u>\$ 2,178,781</u>	<u>\$ 2,075,318</u>

TABLE 4
CHANGES IN FIDUCIARY NET POSITION, OTHER POSTEMPLOYMENT BENEFITS
 (in thousands) For the Fiscal Years Ended June 30:

	Retirement Health Insurance Account		Retiree Health Insurance Premium Account	
	2020	2019	2020	2019
Additions:				
Employer Contributions	\$ 6,360	\$ 49,615	\$ 11,242	\$ 14,009
Net Investment and Other Income	8,595	35,959	772	2,455
Total Additions	<u>14,955</u>	<u>85,574</u>	<u>12,014</u>	<u>16,464</u>
Deductions:				
Healthcare Premium Subsidies	31,828	32,234	4,113	4,487
Other	1,273	1,312	253	318
Total Deductions	<u>33,101</u>	<u>33,546</u>	<u>4,366</u>	<u>4,805</u>
Net Increase (Decrease)	(18,146)	52,028	7,648	11,659
Net Position				
Beginning of Year	<u>628,890</u>	<u>576,862</u>	<u>46,691</u>	<u>35,032</u>
End of Year	<u>\$ 610,744</u>	<u>\$ 628,890</u>	<u>\$ 54,339</u>	<u>\$ 46,691</u>

Changes in Net Position

- SRHIA insurance premiums and other revenue for the fiscal year ended June 30, 2020, was \$32.5 million, a \$79.2 million, or 70.9 percent, decrease from fiscal year 2019. This decrease was primarily due to the continued impact of the change in the financing arrangement with one of the insurance providers from a minimum premium arrangement to a conventionally insured arrangement.
- SRHIA healthcare and other expenses for the fiscal year ended June 30, 2020, decreased \$71.4 million, or 75.4 percent, from \$94.6 million in fiscal year 2019 to \$23.2 million in fiscal year 2020 primarily because of the decreases in claims expense related to the change in financing arrangement.

The tables below and on the next page show the condensed summary of net position and the condensed summary of changes in revenues, expenses, and net position for SRHIA.

TABLE 5
NET POSITION, PROPRIETARY FUND
(in thousands) As of June 30

	Standard Retiree Health Insurance Account	
	2020	2019
Cash and Receivables	\$ 101,316	\$ 91,310
Net OPEB Asset	6	4
Securities Lending Collateral	1,414	2,230
Total Assets	<u>102,736</u>	<u>93,544</u>
Deferred Outflows of Resources:		
Pensions	174	175
OPEB	1	3
Total Deferred Outflows of Resources	<u>175</u>	<u>178</u>
Claims Payable	630	865
Other Payables	1,335	424
Securities Lending Payable	1,414	2,230
Net Pension Liability	547	454
Other Liabilities	43	45
Total Liabilities	<u>3,969</u>	<u>4,018</u>
Deferred Inflows of Resources:		
Pensions	26	25
OPEB	3	2
Total Deferred Inflows of Resources	<u>29</u>	<u>27</u>
Total Net Position	<u>\$ 98,913</u>	<u>\$ 89,677</u>

TABLE 6

REVENUES, EXPENSES, AND CHANGES IN NET POSITION, PROPRIETARY FUND

(in thousands) For the Fiscal Years Ended June 30:

	Standard Retiree Health Insurance Account	
	2020	2019
Revenues:		
Insurance Premiums	\$ 30,379	\$ 83,905
Reinsurance Reimbursements	23	25,857
Investment Income	2,083	1,922
Total Revenues	32,485	111,684
Expenses:		
Claims	18,502	91,575
Change in Estimated Liabilities	(235)	(8,335)
Administrative Expense	4,982	11,360
Total Expenses	23,249	94,600
Net Increase	9,236	17,084
Net Position		
Beginning of Year	89,677	72,593
End of Year	\$ 98,913	\$ 89,677

NET PENSION LIABILITY

The Employers' Net Pension Liability (NPL) as of June 30, 2020, was \$21,823.4 million, compared to a Net Pension Liability of \$17,297.5 million as of June 30, 2019. The \$4,525.9, or 26.2 percent, increase in Employers' Net Pension Liability was primarily due to a \$2,641.5 million increase in Total Pension Liability and a \$1,884.4 million decrease in Fiduciary Net Position.

NET OPEB LIABILITY/(ASSET)

The Employers' Net OPEB Asset for RHIA as of June 30, 2020, was \$203.8 million, compared to the Net OPEB Asset of \$193.3 million as of June 30, 2019. The increase in Employers' Net OPEB Asset was primarily due to a reduction in Total OPEB Liability due to Changes in Assumptions. The Employer's Net OPEB Liability for RHIPA as of June 30, 2020, was \$10.0 million, compared to the Net OPEB Liability of \$25.3 million as of June 30, 2019. The decrease in Employers' Net OPEB Liability was primarily due to Changes in Assumptions.

INVESTMENT ACTIVITIES

During fiscal year 2020, investments decreased 2.6 percent over the prior fiscal year as markets moved toward more volatility. Holdings in all asset classes experienced negative investment returns, except Private Equity and Alternative Equity portfolios. The Alternative Equity portfolio increased by \$990.7 million, or 13.7 percent, and Private Equity portfolio increased \$1,220.4 million, or 7.1 percent. The other portfolios decreased as follows: Debt Securities decreased \$1,063.5 million, or 6.5 percent; Public Equity decreased \$2,925.3 million, or 10.0 percent; Real Estate decreased \$235.0 million, or 2.6 percent; and the Opportunity Portfolio decreased \$65.7 million, or 3.8 percent. One-year returns on asset classes and comparative benchmarks are presented in the table on page 31.

PLAN MEMBERSHIP

The table below reflects the Defined Benefit Pension Plan membership as of the end of the fiscal years.

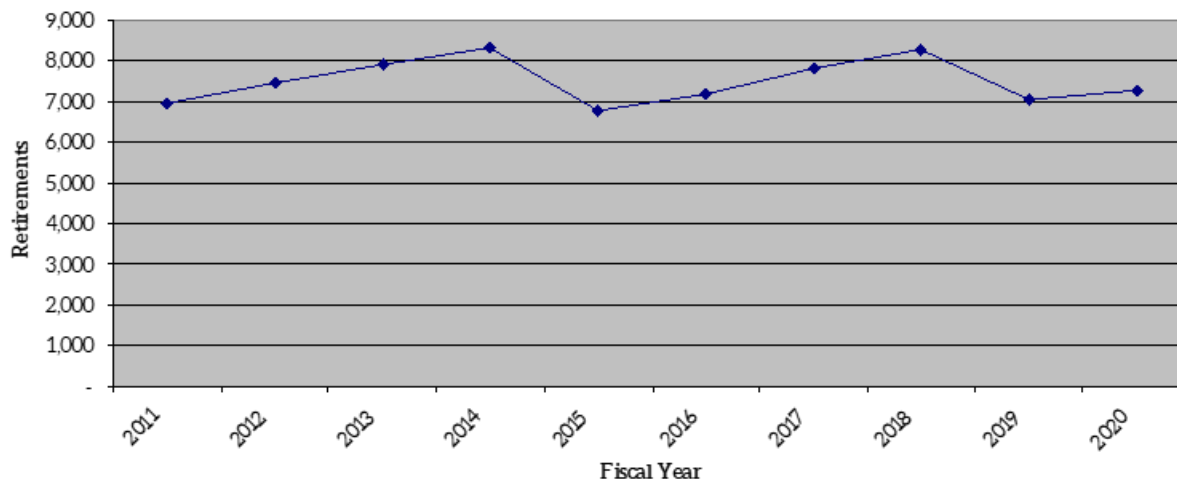
TABLE 7
CHANGES IN PLAN MEMBERSHIP
 As of June 30:

	2020	2019	Percentage Change
Retirees and beneficiaries benefits:			
General	141,085	137,314	2.7 %
Police and Fire	12,537	12,072	3.9
Total	<u>153,622</u>	<u>149,386</u>	2.8
Current and terminated employees:			
Vested:			
General	206,055	205,822	0.1
Police and Fire	17,820	17,623	1.1
Nonvested:			
General	1,264	1,589	(20.5)
Police and Fire	68	79	(13.9)
Total	<u>225,207</u>	<u>225,113</u>	0.0 %

RETIREMENTS FROM SERVICE

Retirements from service increased 3.6 percent in fiscal year 2020, primarily because of a decrease in inactive members receiving benefits. Service retirements in fiscal year 2020 were 7,291 compared to 7,037 in fiscal year 2019.

TABLE 8
RETIREMENTS FROM SERVICE
 By Fiscal Year



CURRENTLY KNOWN FACTS, CONDITIONS, OR DECISIONS

The following are currently known facts, conditions, or decisions that are expected to have a significant effect on the System's financial position or results of operations. During the 2019 Legislative session, Senate Bill 1049 was approved and signed into law by the governor. The five components of the bill have significantly impacted the System, and the bill continues to be implemented:

1. Employer Programs Project (effective July 1, 2019): established the Employer Incentive Fund (EIF) Program, which allows eligible employers to receive matching funds if they apply and make a qualifying deposit into a side account. In order to participate in this program, each employer is required to also participate in the UAL Resolution Program (UALRP).
2. Salary Limit Project (effective January 1, 2020): A new \$195,000 limitation on subject salary used for PERS benefit calculations and contributions is used to determine member IAP contributions, employer contributions to fund the pension program, and the Final Average Salary (FAS) used in calculating retirement benefits under formula methods. This amount will be indexed annually to the Consumer Price Index (CPI).
3. Work After Retirement Project (effective January 1, 2020): The 1,039-hour Work After Retirement limit for all PERS retirees is removed for calendar years 2020 through 2024. If a member retires on or after normal retirement age, starting in 2020, they can work for a PERS-covered employer and continue receiving their pension benefit (without accruing any new benefits) with no hour limitations. If a member retires earlier than normal retirement age, starting in 2020, they can work for a PERS-covered employer and continue receiving their pension benefit (without accruing any new benefits) with no hour limitations if the date of their employment is more than six months after their retirement date.
4. Member Redirect Project (effective July 1, 2020): For 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 will be used to pay for part of the member's future pension benefit.
 - Tier One/Tier Two members: 2.5 percent of each member's salary, currently contributed to the IAP, (whether paid by the member or employer) will start going into an Employee Pension Stability Account (EPSA). The remaining 3.5 percent of salary will continue to go to the member's existing IAP account.
 - OPSRP members: 0.75 percent of each member's salary, currently contributed to the IAP, (whether paid by the member or employer) will start going into their EPSA. The remaining 5.25 percent of salary will continue to go to the member's existing IAP account.
 - Members may voluntarily choose to make additional after-tax contributions into their IAP account to make a full, 6 percent contribution to the IAP.
5. Member Choice Project (effective January 1, 2021): IAP accounts are currently invested in Target-Date Funds based on a member's birth year. Beginning in 2021, members may choose to invest their IAP balance in a fund that is more reflective of their risk tolerance than the default based on their age.

Additionally, the Legislature directed the PERS Board to enact a one-time re-amortization of Tier 1/Tier 2 UAL over 22 years. This means that, effective with the December 31, 2019 rate-setting valuation, the entire unamortized Tier 1/Tier 2 UAL for each rate pool and independent employer will be re-amortized over a 22 year period as a level percentage of projected future payroll.

CONTACTING THE SYSTEM'S FINANCIAL MANAGEMENT

This financial report is designed to provide plan participants, employers, citizens, taxpayers, and others with a general overview of the System's finances and to demonstrate the Board's oversight of the System. If you have questions about this report or need additional financial information, please contact the Financial and Administrative Services Division Administrator at P.O. Box 23700, Tigard, Oregon 97281-3700.

Table 9
Investment Results*
Periods Ended June 30,

	2020	2019
Total Portfolio, Excluding Variable Account Policy Benchmark ¹	0.52 %	6.52 %
	2.60	7.20
Variable Account	1.49	4.91
Benchmark: MSCI All Country World Investable Market Index Net	1.17	4.56
Domestic Stocks	0.20	5.30
Benchmark: Russell 3000 Index	6.53	8.98
International Stocks	(4.21)	0.39
Benchmark: MSCI All Country World ex-US Investable Market Index Net	(4.74)	0.26
Fixed Income Segment	7.75	7.24
Benchmark: Custom Index ²	7.70	7.15
Real Estate ³	4.57	5.85
Benchmark: Oregon Custom Real Estate Benchmark ³	3.93	6.55
Private Equity ⁴	1.07	15.03
Benchmark: Russell 3000 Index + 300 bps	(6.37)	12.01
Alternatives Portfolio	(9.84)	(2.65)
Benchmark: Consumer Price Index + 400 bps	4.67	5.71
Opportunity Portfolio	(0.34)	3.55
Benchmark: Consumer Price Index + 500 bps	5.68	6.72

The rates of return reported in the Investment Section are based on a time-weighted rate of return methodology based upon market values, unless disclosed otherwise in the footnotes to the associated tables.

* Investment Results are based upon OIC asset classes as determined by each manager's primary investment type, not the financial statement classification of individual holdings.

¹ From October 1, 2013, to March 31, 2016, the policy benchmark was 20% Russell 3000+300 Bps quarter lag, 23.5% Oregon Custom FI Benchmark, 12.5% NCREIF Property Index quarter lag, 41.5% MSCI ACWI, and 2.5% CPI+4%.

From April 1, 2016, to June 30, 2016, the policy benchmark was 20% Russell 3000+300 Bps quarter lag, 23.5% Oregon Custom FI Benchmark, 12.5% Oregon Custom Real Estate Benchmark, 41.5% MSCI AC World Index, and 2.5% CPI+4%.

From July 1, 2016, to March 1, 2018, the policy benchmark was 20% Russell 3000+300 Bps quarter lag, 22.5% Oregon Custom FI Benchmark, 12.5% Oregon Custom Real Estate Benchmark, 40% MSCI ACWI IMI Net, and 5% CPI+4%.

From April 1, 2018, to present, the policy benchmark is 19% Russell 3000+300 Bps quarter lag, 22% Oregon Custom FI Benchmark, 12.5% Oregon Custom Real Estate Benchmark, 39% MSCI ACWI IMI Net, and 7.5% CPI+4%.

² From March 1, 2011, to December 31, 2013, index was 60% Barclays Capital (BC) U.S. Universal Index, 20% S&P/LSTA Leveraged Loan Index, 10% JP Morgan Emerging Market Bond Index Global Index, and 10% Bank of America Merrill Lynch (BofA ML) High Yield Master II Index.

From January 1, 2014, to February 29, 2016, index was 40% BC U.S. Aggregate Bond, 40% BC U.S. 1-3 Year Government/Credit Bond Index, 15% S&P LSTA Leveraged Loan Index, and 5% BofA ML High Yield Master II Index.

From March 1, 2016, to present, index is 46% Barclays Aggregate Bond, 37% Barclays Treasury, 13% S&P LSTA, and 4% BofA ML High Yield Master II.

³ Through March 31, 2016, the Oregon Custom Real Estate Benchmark was made up of the NCREIF Property quarter lag Index.

From April 1, 2016, the benchmark is made up of the NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE) quarter lag Net of Fees.

From July 1, 2017, the monthly return is calculated as the geometrically linked monthly portion of the quarterly return. Returns are not actual monthly, but rather equivalent for all intra-quarter months in order to match the actual quarterly return.

⁴ Through December 31, 2016, the Private Equity return combined the estimated return from the most recent quarter with a revision component that trued up the past two quarters' reported returns with the past two quarters' actual returns.

⁵ Until June 30, 2017, the index was Russell 3000+300 Bps, quarter lag. From July 1, 2017, the monthly return is calculated as the geometrically linked monthly portion of the quarterly return. Returns are not actual monthly, but rather equivalent for all intra-quarter months in order to match the actual quarterly return.

Basic Financial Statements

Basic Financial Statements

Statement of Fiduciary Net Position
Pension and Other Postemployment Plans
As of June 30, 2020, with Comparative Totals as of June 30, 2019

	Defined Benefit Pension Plan	Oregon Public Service Retirement Plan Individual Account Program	Defined Benefit OPEB Plans	
			Retirement Health Insurance Account	Retiree Health Insurance Premium Account
Assets:				
Cash and Cash Equivalents	\$ 2,671,774,104	\$ 679,232,233	\$ 22,244,872	\$ 3,861,687
Receivables:				
Employer	28,679,800	-	1,512,702	2,891,437
Plan Member	-	15,183,409	-	-
Interest and Dividends	117,923,915	12,870,658	1,084,642	85,894
Member Loans	-	-	-	-
Investment Sales and Other Receivables	989,584,751	108,010,623	9,191,106	746,827
Transitional Liability	405,156,056	-	-	-
Total Receivables	<u>1,541,344,522</u>	<u>136,064,690</u>	<u>11,788,450</u>	<u>3,724,158</u>
Due from Other Funds	1,960,583	1,984,856	7,236	84,429
Investments:				
Debt Securities	12,289,031,063	2,355,510,828	113,032,167	8,951,162
Public Equity	20,894,757,279	3,675,543,812	188,696,974	14,943,155
Real Estate	7,802,167,535	851,557,809	71,762,851	5,682,992
Private Equity	16,514,046,331	1,802,404,914	151,893,053	12,028,605
Alternatives Portfolio	7,335,842,006	800,661,293	67,473,678	5,343,327
Opportunity Portfolio	1,476,332,181	161,132,428	13,579,022	1,075,340
Total Investments	<u>66,312,176,395</u>	<u>9,646,811,084</u>	<u>606,437,745</u>	<u>48,024,581</u>
Securities Lending Collateral	709,925,758	77,484,991	6,524,946	520,929
Prepaid Expenses	3,039,831	331,778	27,960	2,214
Capital Assets at Cost, Net	22,606,962	200,091	-	-
Total Assets	<u>71,262,828,155</u>	<u>10,542,109,723</u>	<u>647,031,209</u>	<u>56,217,998</u>
Liabilities:				
Investment Purchases and Accrued Expenses	2,179,277,412	190,527,095	18,663,336	1,267,497
Deposits and Other Liabilities	51,745,892	30,264,946	10,801,141	58,870
Due Other Funds	2,076,521	1,391,757	293,040	30,583
Securities Lending Collateral Due Borrowers	710,431,337	77,540,172	6,529,597	521,297
Total Liabilities	<u>2,943,531,162</u>	<u>299,723,970</u>	<u>36,287,114</u>	<u>1,878,247</u>
Net Position:				
Restricted for:				
Pension	68,319,296,993	-	-	-
Individual Account Program	-	10,242,385,753	-	-
Other Postemployment Benefits	-	-	610,744,095	54,339,751
Deferred Compensation Plan	-	-	-	-
Total Net Position	<u>\$ 68,319,296,993</u>	<u>\$ 10,242,385,753</u>	<u>\$ 610,744,095</u>	<u>\$ 54,339,751</u>

The accompanying notes are an integral part of the financial statements.

Deferred Compensation Plan		
	2020	2019
\$ 15,569,724	\$ 3,392,682,620	\$ 2,930,710,218
-	33,083,939	57,347,534
-	15,183,409	1,644,533
673,164	132,638,273	155,433,772
13,182,681	13,182,681	12,705,365
15,967	1,107,549,274	964,123,637
-	405,156,056	453,335,964
<u>13,871,812</u>	<u>1,706,793,632</u>	<u>1,644,590,805</u>
-	4,037,104	12,558,679
447,195,232	15,213,720,452	16,277,259,333
1,704,061,878	26,478,003,098	29,403,270,522
-	8,731,171,187	8,966,132,571
-	18,480,372,903	17,259,957,679
-	8,209,320,304	7,218,603,962
-	1,652,118,971	1,717,803,743
<u>2,151,257,110</u>	<u>78,764,706,915</u>	<u>80,843,027,810</u>
2,575	794,459,199	908,543,194
-	3,401,783	6,156,397
-	22,807,053	24,855,350
<u>2,180,701,221</u>	<u>84,688,888,306</u>	<u>86,370,442,453</u>
1,179,708	2,390,915,048	2,491,779,766
572,820	93,443,669	90,814,540
165,644	3,957,545	12,485,451
2,575	795,024,978	908,748,381
<u>1,920,747</u>	<u>3,283,341,240</u>	<u>3,503,828,138</u>
-	68,319,296,993	70,203,720,619
-	10,242,385,753	9,911,994,999
-	665,083,846	675,581,126
2,178,780,474	2,178,780,474	2,075,317,571
<u>\$ 2,178,780,474</u>	<u>\$ 81,405,547,066</u>	<u>\$ 82,866,614,315</u>

Basic Financial Statements

Statement of Changes in Fiduciary Net Position Pension and Other Postemployment Plans

For the Fiscal Year Ended June 30, 2020, with Comparative Totals for the Fiscal Year Ended June 30, 2019

	Defined Benefit OPEB Plans			
	Defined Benefit Pension Plan	Oregon Public Service Retirement Plan Individual Account Program	Retirement Health Insurance Account	Retiree Health Insurance Premium Account
Additions:				
Contributions:				
Employer	\$ 2,299,006,203	\$ -	\$ 6,359,609	\$ 11,241,801
Plan Member	10,179,238	711,193,387	-	-
Total Contributions	<u>2,309,185,441</u>	<u>711,193,387</u>	<u>6,359,609</u>	<u>11,241,801</u>
Investment Income:				
Net Appreciation/(Depreciation) in Fair Value of Investments	(60,218,476)	135,440,840	(428,999)	84,105
Interest, Dividends and Other Investment Income	1,723,705,555	191,861,873	15,854,139	1,205,347
Total Investment Income	<u>1,663,487,079</u>	<u>327,302,713</u>	<u>15,425,140</u>	<u>1,289,452</u>
Less Investment Expense	(748,415,919)	(85,864,996)	(6,883,027)	(521,039)
Net Investment Income	<u>915,071,160</u>	<u>241,437,717</u>	<u>8,542,113</u>	<u>768,413</u>
Securities Lending Income:				
Securities Lending Income	18,167,451	1,979,307	167,104	12,600
Less Securities Lending Expense	(12,386,003)	(1,349,682)	(113,930)	(8,622)
Net Securities Lending Income	<u>5,781,448</u>	<u>629,625</u>	<u>53,174</u>	<u>3,978</u>
Other Income	<u>2,408,147</u>	<u>560,901</u>	<u>-</u>	<u>-</u>
Total Additions	<u>3,232,446,196</u>	<u>953,821,630</u>	<u>14,954,896</u>	<u>12,014,192</u>
Deductions:				
Benefits	5,039,756,762	611,602,249	-	-
Death Benefits	6,174,392	-	-	-
Refunds of Contributions	18,855,297	-	-	-
Administrative Expense	52,083,371	11,828,627	1,272,953	252,995
Healthcare Premium Subsidies	-	-	31,827,780	4,112,640
Total Deductions	<u>5,116,869,822</u>	<u>623,430,876</u>	<u>33,100,733</u>	<u>4,365,635</u>
Net Increase/(Decrease)	<u>(1,884,423,626)</u>	<u>330,390,754</u>	<u>(18,145,837)</u>	<u>7,648,557</u>
Net Position				
Beginning of Year	70,203,720,619	9,911,994,999	628,889,932	46,691,194
End of Year	<u>\$ 68,319,296,993</u>	<u>\$ 10,242,385,753</u>	<u>\$ 610,744,095</u>	<u>\$ 54,339,751</u>

The accompanying notes are an integral part of the financial statements.

Deferred Compensation Plan	2020	2019
\$ -	\$ 2,316,607,613	\$ 1,783,807,761
150,478,458	871,851,083	798,037,574
<u>150,478,458</u>	<u>3,188,458,696</u>	<u>2,581,845,335</u>
63,249,284	138,126,754	3,633,798,214
12,943,574	1,945,570,488	1,969,216,505
76,192,858	2,083,697,242	5,603,014,719
<u>(4,408,897)</u>	<u>(846,093,878)</u>	<u>(911,808,652)</u>
71,783,961	1,237,603,364	4,691,206,067
20	20,326,482	31,283,406
<u>(20)</u>	<u>(13,858,257)</u>	<u>(22,627,331)</u>
-	6,468,225	8,656,075
<u>1,622,107</u>	<u>4,591,155</u>	<u>18,916,148</u>
<u>223,884,526</u>	<u>4,437,121,440</u>	<u>7,300,623,625</u>
118,349,853	5,769,708,864	5,424,492,416
-	6,174,392	4,083,536
-	18,855,297	11,903,642
2,071,770	67,509,716	54,880,713
-	35,940,420	36,721,152
<u>120,421,623</u>	<u>5,898,188,689</u>	<u>5,532,081,459</u>
103,462,903	(1,461,067,249)	1,768,542,166
<u>2,075,317,571</u>	<u>82,866,614,315</u>	<u>81,098,072,149</u>
<u>\$ 2,178,780,474</u>	<u>\$ 81,405,547,066</u>	<u>\$ 82,866,614,315</u>

Basic Financial Statements

Statement of Net Position

Proprietary Fund

As of June 30, 2020, with Comparative Totals as of June 30, 2019

	Enterprise Fund	
	Standard Retiree Health Insurance Account	
	2020	2019
Assets:		
Current Assets		
Cash and Cash Equivalents	\$ 100,636,981	\$ 73,508,225
Reinsurance Reimbursements and Rebate Receivables	678,640	17,802,127
Securities Lending Collateral	1,413,928	2,229,576
Total Current Assets	102,729,549	93,539,928
Noncurrent Assets		
Net OPEB Asset	6,164	3,702
Total Noncurrent Assets	6,164	3,702
Total Assets	102,735,713	93,543,630
Deferred Outflows of Resources		
Pension	173,715	174,954
OPEB	1,389	3,445
Total Deferred Outflows of Resources	175,104	178,399
Liabilities:		
Current Liabilities		
Accrued Expenses	1,234,622	331,605
Compensated Absences	18,866	17,234
Due to Other Funds	79,559	73,228
Estimated Insurance Claims Due	630,000	865,000
Pension Obligation Bonds	2,041	1,966
Securities Lending Collateral Due Borrowers	1,413,928	2,229,576
Total Current Liabilities	3,379,016	3,518,609
Noncurrent Liabilities		
Compensated Absences	10,560	8,878
Pension Obligation Bonds	17,608	19,672
Other Liabilities	13,993	16,294
Net Pension Liability	546,935	454,125
Total Noncurrent Liabilities	589,096	498,969
Total Liabilities	3,968,112	4,017,578
Deferred Inflows of Resources		
Pension	26,075	25,524
OPEB	3,201	1,594
Total Deferred Inflows of Resources	29,276	27,118
Net Position:		
Restricted for:		
OPEB	4,352	3,702
Unrestricted	98,909,077	89,673,631
Total Net Position	\$ 98,913,429	\$ 89,677,333

The accompanying notes are an integral part of the financial statements.

Statement of Revenues, Expenses, and Changes in Net Position

Proprietary Fund

For the Fiscal Year Ended June 30, 2020, with Comparative Totals for the Fiscal Year Ended June 30, 2019

	Enterprise Fund	
	Standard Retiree Health Insurance Account	
	2020	2019
Operating Revenues:		
Insurance Premium Revenue	\$ 30,379,203	\$ 83,905,350
Reinsurance Reimbursements	22,490	25,856,914
Other Income	-	315
Total Operating Revenues	<u>30,401,693</u>	<u>109,762,579</u>
Operating Expenses:		
Claims Expense	18,501,809	91,574,566
Increase/(Decrease) in Estimated Liabilities	(235,000)	(8,335,000)
Administrative Expense	4,982,230	11,359,850
Total Operating Expenses	<u>23,249,039</u>	<u>94,599,416</u>
Operating Income	7,152,654	15,163,163
Non-Operating Revenues:		
Interest, Dividends and Other Investment Income	2,083,442	1,921,152
Securities Lending Income	14,671	29,667
Less Securities Lending Expense	(14,671)	(29,667)
Net Securities Lending Income	-	-
Total Non-Operating Revenues	<u>2,083,442</u>	<u>1,921,152</u>
Change in Net Position	9,236,096	17,084,315
Total Net Position		
Beginning of Year	<u>89,677,333</u>	<u>72,593,018</u>
End of Year	<u>\$ 98,913,429</u>	<u>\$ 89,677,333</u>

The accompanying notes are an integral part of the financial statements.

Basic Financial Statements

Statement of Cash Flows

Proprietary Fund

For the Fiscal Year Ended June 30, 2020, with Comparative Totals for the Fiscal Year Ended June 30, 2019

	Enterprise Fund	
	Standard Retiree Health Insurance Account	
	2020	2019
Cash Flows from Operating Activities:		
Insurance Premiums and Reinsurance Reimbursements	\$ 47,525,180	\$ 111,916,447
Claims Paid	(18,501,809)	(91,574,566)
Other Receipts	-	315
Other Payments	(3,978,057)	(12,134,518)
Net Cash Provided by Operating Activities	25,045,314	8,207,679
Cash Flows from Investing Activities:		
Interest and Dividends Received	2,083,442	1,921,152
Net Increase in Cash and Cash Equivalents	27,128,756	10,128,831
Cash and Cash Equivalents Beginning of Year	73,508,225	63,379,394
Cash and Cash Equivalents End of Year	\$ 100,636,981	\$ 73,508,225
Reconciliation of Operating Income to Net Cash Provided by Operating Activities		
Operating Income	\$ 7,152,654	\$ 15,163,163
Adjustments to reconcile operating income to net cash provided by operating activities:		
Changes in assets, deferred outflows of resources, liabilities, and deferred inflows of resources:		
Reinsurance Reimbursements and Rebate Receivables	17,123,487	2,154,183
Net OPEB Asset	(2,462)	(2,413)
Deferred Outflows of Resources - Pension	1,239	(32,805)
Deferred Outflows of Resources - OPEB	2,056	(245)
Accrued Expenses	903,017	(836,205)
Compensated Absences	3,314	1,678
Due to Other Funds	6,331	(11,002)
Estimated Insurance Claims Due	(235,000)	(8,335,000)
Pension Obligation Bonds	(1,989)	(1,728)
Other Liabilities	(2,301)	(362)
Net Pension Liability	92,810	85,288
Deferred Inflows of Resources - Pension	551	22,442
Deferred Inflows of Resources - OPEB	1,607	685
Net Cash Provided by Operating Activities	\$ 25,045,314	\$ 8,207,679

The accompanying notes are an integral part of the financial statements.

Note 1 - Summary of Significant Accounting Policies

A. Reporting Entity

The accompanying financial statements include all activities and funds administered by the Oregon Public Employees Retirement System (PERS or the System). The Defined Benefit and OPEB plans are fiduciary component units of the State of Oregon for financial reporting purposes. PERS financial statements are included in fiduciary and proprietary funds in the *State of Oregon's Comprehensive Annual Financial Report (CAFR)*.

B. Basis of Presentation

The accompanying financial statements are prepared on the basis of a fiscal year ended June 30, 2020, in accordance with generally accepted accounting principles in the United States of America as set forth in Governmental Accounting Standards Board (GASB) pronouncements that apply to governmental accounting for fiduciary funds and enterprise funds. Fiduciary funds are used to account for assets held by a governmental unit in a trustee capacity (trust funds). Proprietary funds may be used to report any activity for which a fee is charged to external users for goods or services.

PERS' pension, other postemployment benefits (OPEB), and deferred compensation activities are accounted for in five pension and other postemployment benefit trust funds:

- Defined Benefit Pension Plan, a cost-sharing, multiple-employer plan, which includes the Variable Annuity Account
- Oregon Public Service Retirement Plan - Individual Account Program, an individual account-based program under the PERS tax-qualified governmental plan
- Retirement Health Insurance Account, a cost-sharing, multiple-employer plan
- Retiree Health Insurance Premium Account, a single-employer plan
- Deferred Compensation Fund (Oregon Savings Growth Plan)

PERS' public entity risk pool activity is accounted for in a single proprietary enterprise fund:

- Standard Retiree Health Insurance Account

C. Basis of Accounting

The accrual basis of accounting is used for all funds. Revenues are recognized when earned. Contributions are recognized when due, pursuant to legal (or statutory) requirements. Benefits and withdrawals are recognized when they are currently due and payable in accordance with the terms of the plans.

Proprietary funds distinguish operating revenues and expenses from non-operating items.

Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues are insurance premiums and reinsurance reimbursements, and operating expenses include claims and administrative expenses. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses. Deferred outflows of resources related to pension and OPEB resulting from contributions made subsequent to the measurement date will be recognized as a reduction of the net pension liability and net OPEB liability, or an increase in the net OPEB asset in the following year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension and OPEB will be recognized in pension and OPEB expenses for approximately each of the subsequent four years.

D. Investments

Oregon Revised Statute (ORS) 293.706 established the Oregon Investment Council (OIC), which consists of five voting members. Four members of the council, who are qualified by training and experience in the field of investment or finance, are appointed by the governor subject to state senate confirmation. The State Treasurer serves as the council's remaining voting member. In addition, the Director of the System serves as a non-voting OIC member.

ORS 293.701 defines the investment funds over which OIC has responsibility. Included are the Oregon Public Employees Retirement Fund (OPERF), which is composed of the Defined Benefit Pension Plan, the Individual Account Program, the Other Postemployment Benefit plans, and the Deferred Compensation Fund. OIC establishes policies for the investment and reinvestment of moneys in the investment funds as well as the acquisition, retention, management, and disposition of investments in the investment funds. OIC is also responsible for providing an examination of the effectiveness of the investment program.

OIC ensures moneys in the investment funds are invested and reinvested to achieve the investment objective of making the moneys as productive as possible. Furthermore, the investments of those funds are managed as a prudent investor would do under the prevailing circumstances and in light of the purposes, terms, distribution requirements, and laws governing each investment fund. This standard requires the exercise of reasonable care, skill, and caution and is applied to investments not in isolation, but in the context of each fund's portfolio as part of an overall investment strategy. The strategy should incorporate risk and return objectives reasonably suitable to the particular investment fund.

When implementing investment decisions, OIC has a duty to diversify the investments of the investment funds unless, under the circumstances, it is not prudent to do so. In addition, OIC must act with prudence when selecting agents and delegating authority.

Investments are recognized at fair value - the amount that could be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Investments that do not have a readily determinable fair value are valued using the net asset value (NAV) per share. Such values generally represent PERS' ownership interest in partnership capital.

The fair value of publicly traded debt and equity securities in active markets is determined by the custodian's pricing agent using nationally recognized pricing services. The custodian's pricing agent values equity securities traded on a national or international exchange at the last reported sales price and generally values debt securities by using evaluated bid prices. For securities that do not have an active market, such as private placements or commingled investment vehicles, a market price is calculated by either the custodian's pricing agent or the investment manager. For example, a similar benchmark security may be used to derive the fair value. The benchmark will typically have a coupon rate and maturity date comparable to the debt security being valued, and its market risk will be similar, considering current market conditions. The fair value of real estate investment trust (REIT) securities is determined by the custodian's pricing agent using recognized pricing services.

Investments in real estate, other than publicly traded REITs, for which observable market prices in active markets do not exist, are reported at fair value as of June 30, 2020, as determined by management based on valuation information provided in good faith by the general partner. Direct investments in real estate are appraised every two to three years, and between appraisals, investment managers adjust values to reflect current and projected operating performance and financial transactions. In the absence of observable market prices, general partners determine the fair value of real estate partnerships using valuation methods considered most appropriate. A variety of factors are considered, including the nature of the investment, local market conditions, trading values on public exchanges for comparable investments, current and projected operating performance, and financing transactions subsequent to the acquisition of the investment.

Investments in private equities are recorded at fair value as of June 30, 2020, as determined by

management based on valuation information provided by the general partner. Investments in private equities representing publicly traded securities are stated at quoted market price. When observable market inputs are not available, valuation models are applied. The general partner determines fair value based on the best information available and by reference to information including, but not limited to, the following: projected sales, net earnings, earnings before interest, taxes, depreciation and amortization, balance sheets, public and private transactions, valuations for publicly traded comparable companies, and/or other measures, and consideration of any other pertinent information including the types of securities held and the general partner's own assumptions regarding the investment. The methods used to determine the fair value of these investments typically include: (1) the market approach (whereby fair value is derived by reference to observable valuation measures for comparable companies or assets) and (2) the income approach (e.g., the discounted cash flow method).

Investments in the opportunity and alternatives portfolios are recorded at fair value as of June 30, 2020, by the respective general partner or account manager. Investments in the opportunity and alternatives portfolios representing publicly traded securities are stated at quoted market price. Where observable market inputs are not available, valuation models are applied. The general partner or account manager determines fair value based on the best information available and by reference to information including, but not limited to, the following: projected sales, net earnings, earnings before interest, taxes, depreciation and amortization, balance sheets, public and private transactions, valuations for publicly traded comparable companies, and/or other measures, and consideration of any other pertinent information including the types of securities held and the general partner's own assumptions regarding the investment. The methods used to determine the fair value of these investments typically include: (1) the market approach (whereby fair value is derived by reference to observable valuation measures for comparable companies or assets) and (2) the income approach (e.g., the discounted cash flow method).

Due to the inherent uncertainty and the degree of judgment involved in determining private equity, opportunity, real estate, and alternatives portfolio investment valuations, the fair values reflected in the accompanying financial statements may differ significantly from values that would have been used had a readily determinable fair value for the investments existed, and the difference could be material. In addition, these investments are generally considered to be illiquid long-term investments, and the recorded fair values may materially differ from the amounts that eventually may be realized from the sale or other disposition of these investments.

OIC has approved the following asset classes for the OPERF: Short-Term Investments, Fixed Income, Real Estate, Public and Private Equities, and Alternative Investments. In addition, OPERF invests in the Opportunity Portfolio, which may be populated with investment approaches across a wide range of investment opportunities with no limitation as to asset classes or strategies. Risk parity is a new investment strategy added to the asset allocation mix in 2019, and its inception date was May 1, 2020. OIC must approve, in advance, the purchase of investments in a new asset class not described above.

Table 1 below displays the OIC-approved asset allocation policy. See the Long-Term Expected Rate of Return Table 31 on page 74.

TABLE 1

Asset Class	Target Allocation
Cash	0.0%
Debt Securities	20.0%
Public Equity	32.5%
Private Equity	17.5%
Real Estate	12.5%
Alternatives Portfolio	15.0%
Risk Parity*	2.5%
Total	<u>100.0%</u>

* Risk Parity asset class/strategy included within Alternatives Portfolio on the Statement of Net Position

E. Earnings Crediting

By law, earnings are credited to member accounts on a calendar-year basis. Members in Tier One are currently guaranteed to receive at least the assumed earnings rate used in the most recent actuarial valuation. Members participating in the Variable Annuity Account, IAP members, and Tier Two members are credited actual earnings or losses, less deductions allowed by law.

F. Administrative Costs

The System's administrative expenses are funded from investment earnings and administrative fees collected from members and are allocated to all plans and programs administered by the System. If investment earnings and fees are insufficient for such purpose, the remaining expenses are paid from employer contributions.

G. Use of Estimates in the Preparation of Financial Statements

The preparation of the System's financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain financial

statement amounts and disclosures. Actual results could differ from those estimates.

H. Comparative Totals

The basic financial statements include certain prior year summarized comparative information in total, but not at the level of detail required for a presentation in conformity with the accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the System's financial statements as of and for the fiscal year ended June 30, 2019, from which the summarized information was derived. Certain reclassifications have been made to the comparative totals as of and for the fiscal year ended June 30, 2019, to conform to the presentation as of and for the fiscal year ended June 30, 2020.

Note 2 - Description of Plan

A. Organization

PERS administers a cost-sharing, multiple-employer defined benefit pension plan for units of state government, political subdivisions, community colleges, and school districts, containing multiple actuarial pools. Plan assets may be used to pay the benefits of the employees of any employer that provides pensions through the Plan. Participation by state government units, school districts, and community colleges is mandatory. Participation by most political subdivisions is optional but irrevocable if elected. As of June 30, 2020, there were 901 participating employers.

PERS is administered in accordance with Oregon Revised Statutes (ORS) Chapter 238, Chapter 238A, and Internal Revenue Code Section 401(a). The Oregon Legislature has delegated authority to the Public Employees Retirement Board (Board) to administer and manage the System. All members of the Board are appointed by the governor and confirmed by the senate. The governor designates the chairperson. One member must be a public employer manager or a local elected official, one member must be a union-represented public employee or retiree, and three members must have experience in business management, pension management, or investing.

B. Plan Membership

Employer, retiree, and active and inactive member data as of June 30, 2020, is shown in Table 2 on the following page.

The 1995 Legislature enacted Chapter 654, Section 3, Oregon Laws 1995, which has been codified into ORS 238.435. This legislation created a second tier of benefits for those who established membership on or after January 1, 1996. The second tier does not have the Tier One assumed earnings rate guarantee and has a higher normal retirement age of 60, compared to age 58 for Tier One.

Notes to the Financial Statements

TABLE 2

Plan Membership as of June 30, 2020	Employers	Defined Benefit Plan				Postemployment Healthcare	
		Tier 1	Tier 2	OPSRP	Total	RHIA	RHIPA
Employers							
State Agencies	108						
Political Subdivisions	480						
Community Colleges	17						
School Districts	296						
Total Employers	901						
Inactive Members - General Service							
Retirees and beneficiaries currently receiving benefits		116,109	15,631	6,562	138,302	41,349	700
Alternate Payees currently receiving benefits		2,665	110	8	2,783	n/a	n/a
Inactive Members - General Service Receiving Benefits		118,774	15,741	6,570	141,085	41,349	700
Inactive members eligible for, but not yet receiving benefits		6,872	5,189	6,036	18,097	12,400	n/a
Inactive members eligible for refund value of account only		2,708	8,083	n/a ¹	10,791	n/a	n/a
Inactive members not eligible for refund or retirement		0	0	15,574	15,574	n/a	n/a
Inactive Members - General Service Not Receiving Benefits		9,580	13,272	21,610	44,462	12,400	-
Total Inactive Members - General Service		128,354	29,013	28,180	185,547	53,749	700
Inactive Members - Police and Fire							
Retirees and beneficiaries currently receiving benefits		10,172	1,398	368	11,938	2,448	103
Alternate Payees currently receiving benefits		574	23	2	599	n/a	n/a
Inactive Members - Police and Fire Receiving Benefits		10,746	1,421	370	12,537	2,448	103
Inactive members eligible for, but not yet receiving benefits		277	231	245	753	644	n/a
Inactive members eligible for refund value of account only		73	377	n/a ¹	450	n/a	n/a
Inactive members not eligible for refund or retirement		0	0	865	865	n/a	n/a
Inactive Members - Police and Fire Not Receiving Benefits		350	608	1,110	2,068	644	-
Total Inactive Members - Police and Fire		11,096	2,029	1,480	14,605	3,092	103
Active Members - General Service							
State Agencies		4,243	6,849	32,377	43,469	10,977	10,947
School Districts		6,546	12,955	52,667	72,168	19,408	n/a
Political Subdivisions		3,608	6,694	29,104	39,406	10,260	n/a
Community Colleges		595	1,272	5,947	7,814	1,862	n/a
Total Active Members - General Service		14,992	27,770	120,095	162,857	42,507	10,947
Active Members - Police and Fire							
State Agencies		528	1,439	4,070	6,037	1,965	1,921
School Districts		13	23	54	90	34	n/a
Political Subdivisions		789	2,312	6,577	9,678	3,100	n/a
Community Colleges		1	4	10	15	5	n/a
Total Active Members - Police and Fire		1,331	3,778	10,711	15,820	5,104	1,921
Grand Total Members		155,773	62,590	160,466	378,829	104,452	13,671

¹ Defined benefit only. No individual accounts are maintained.

As of June 30, 2020, there were 16,323 active plan members, 129,520 retired plan members or their beneficiaries currently receiving benefits, 9,930 inactive plan members entitled to but not yet receiving benefits, for a total of 155,773 Tier One members.

For Tier Two members, as of June 30, 2020, there were 31,548 active plan members, 17,162 retired plan members or their beneficiaries currently receiving benefits, 13,880 inactive plan members entitled to but not yet receiving benefits,

for a total of 62,590.

The 2003 Legislature enacted HB 2020, codified as ORS 238A, which created the Oregon Public Service Retirement Plan (OPSRP). OPSRP consists of the Pension Program and the Individual Account Program. Membership includes public employees hired on or after August 29, 2003.

As of June 30, 2020, there were 130,806 active plan members, 6,940 retired plan members or their beneficiaries currently receiving benefits, 6,281 inactive plan members entitled to but not yet

receiving benefits, and 16,439 inactive plan members not eligible for refund or retirement, for a total of 160,466 OPSRP Pension Program members.

Beginning January 1, 2004, PERS active Tier One and Tier Two members became members of the Individual Account Program (IAP) of OPSRP. PERS members retain their existing Regular or Variable accounts, but member contributions are now deposited into the member's IAP account. Accounts are credited with earnings and losses net of administrative expenses. OPSRP is part of PERS and is administered by the Board. The PERS Board is directed to adopt any rules necessary to administer OPSRP, and such rules are to be considered part of the plan for IRS purposes.

C. Plan Benefits

a. PERS Pension (Chapter 238 – Tier One/Tier Two)

1. Pension Benefits

The PERS retirement allowance is payable monthly for life. Members may select from 13 retirement benefit options that are actuarially equivalent to the base benefit.

These options include survivorship benefits and lump-sum refunds. The basic benefit is based on years of service and final average salary. A percentage (2.0 percent for Police and Fire employees, 1.67 percent for General Service employees) is multiplied by the number of years of service and the final average salary. Benefits may also be calculated under a formula plus annuity (for members who were contributing before August 21, 1981) or a money match computation if a greater benefit results. Monthly payments must be a minimum of \$200 per month or the member will receive a lump-sum payment of the actuarial equivalent of benefits to which he or she is entitled.

Under Senate Bill 1049, passed during the 2019 legislative session, the salary included in the determination of Final Average Salary will be limited for all members beginning in 2020. The limit will be equal to \$195,000 in 2020, and will be indexed with inflation in later years.

Police and Fire members may purchase increased benefits that are payable between the date of retirement and age 65.

A member is considered vested and will be eligible at minimum retirement age for a service retirement allowance if he or she has had a contribution in each of five calendar years or has reached at least 50 years of age before ceasing employment with a participating employer (age 45 for Police and Fire members). General Service employees may retire after reaching age 55. Police and Fire members are eligible after reaching age 50. Tier One General Service employee benefits are

reduced if retirement occurs prior to age 58 with fewer than 30 years of service. Police and Fire member benefits are reduced if retirement occurs prior to age 55 with fewer than 25 years of service. Tier Two members are eligible for full benefits at age 60. The plans are closed to new members hired on or after August 29, 2003.

A judge member who has made contributions to PERS during each of five calendar years shall receive a retirement allowance, payable monthly, for life. Before reaching age 60, judge members must choose the calculation formula under which they will retire. The election is irrevocable after the member attains age 60. The two formulas, A and B, are described in the following paragraph.

The Plan A retirement allowance for judge members is computed by multiplying 2.8125 percent by the final average salary for the first 16 years of service and 1.67 percent of the final average salary multiplied by the number of years of service as a judge in excess of 16. For most judge members, the maximum amount is limited to 65 percent of final average salary. The Plan B retirement allowance for judge members is computed by multiplying 3.75 percent by the final average salary for the first 16 years of service and 2.0 percent of the final average salary multiplied by the number of years of service as a judge in excess of 16 years of service. For most judge members, the maximum amount is limited to 75 percent of final average salary. Plan B requires a judge to serve up to 35 days per year for a period of five years as a pro tem judge. There is no actuarial reduction for retirement before age 65.

2. Death Benefits

Upon the death of a nonretired member, the beneficiary receives a lump-sum refund of the member's account balance (accumulated contributions and interest). In addition, the beneficiary will receive a lump-sum payment from employer funds equal to the account balance, provided one or more of the following conditions are met:

- the member was employed by a PERS employer at the time of death,
- the member died within 120 days after termination of PERS-covered employment,
- the member died as a result of injury sustained while employed in a PERS-covered job, or
- the member was on an official leave of absence from a PERS-covered job at the time of death.

A member's beneficiary may choose a monthly payment for life instead of the lump-sum or a combination of lump-sum and monthly payments, if eligible. The monthly payment must be a minimum of \$30 per month for deaths that occurred July 30, 2003, and earlier; \$200 per month for deaths that occur after July 30, 2003.

3. Disability Benefits

A member with 10 or more years of creditable service who becomes disabled from other than duty-connected causes may receive a non-duty disability benefit. A disability resulting from a job-incurred injury or illness qualifies a member (including PERS judge members) for disability benefits regardless of the length of PERS-covered service. Upon qualifying for either a non-duty or duty disability, service time is computed to age 58 (55 for Police and Fire members) when determining the monthly benefit.

Judge members of PERS who have served a minimum of six consecutive years and who become physically or mentally incapacitated are entitled to benefits as provided in ORS 238.555.

4. Benefit Changes After Retirement

Members may choose to continue participation in their Variable Account after retiring and may experience annual benefit fluctuations caused by changes in the fair value of the underlying global equity investments of that account.

Under ORS 238.360, monthly benefits are adjusted annually through cost-of-living changes (COLA). The COLA is capped at 2.0 percent.

b. OPSRP Pension Program

1. Pension Benefits

This portion of OPSRP provides a life pension funded by employer contributions. Benefits are calculated with the following formula for members who attain normal retirement age:

Police and Fire: 1.8 percent is multiplied by the number of years of service and the final average salary. Normal retirement age for Police and Fire members is age 60 or age 53 with 25 years of retirement credit. To be classified as a Police and Fire member, the individual must have been employed continuously as a Police and Fire member for at least five years immediately preceding retirement.

General Service: 1.5 percent is multiplied by the number of years of service and the final average salary. Normal retirement age for General Service members is age 65, or age 58 with 30 years of retirement credit.

Under Senate Bill 1049, passed during the 2019 legislative session, the salary included in the determination of final average salary will be limited for all members beginning in 2020. The limit will be equal to \$195,000 in 2020, and will be indexed with inflation in later years.

A member of the pension program becomes vested on the earliest of the following dates: the date the member completes 600 hours of service in each of five calendar years, the date the member reaches

normal retirement age, and, if the pension program is terminated, the date on which termination becomes effective.

2. Death Benefits

Upon the death of a nonretired member, the spouse or other person who is constitutionally required to be treated in the same manner as the spouse receives for life 50 percent of the pension that would otherwise have been paid to the deceased member. The surviving spouse or other person may elect to delay payment of the death benefit, but payment must commence no later than December 31 of the calendar year in which the member would have reached 70½ years.

3. Disability Benefits

A member who has accrued 10 or more years of retirement credits before the member becomes disabled or a member who becomes disabled due to job-related injury shall receive a disability benefit of 45 percent of the member's salary determined as of the last full month of employment before the disability occurred.

c. Individual Account Program

1. Benefit Terms

The IAP is an individual account-based program under the PERS tax-qualified governmental plan as defined under ORS 238A.400. An IAP member becomes vested on the date the employee account is established or on the date the rollover account was established. If the employer makes optional employer contributions for a member, the member becomes vested on the earliest of the following dates: the date the member completes 600 hours of service in each of five calendar years, the date the member reaches normal retirement age, the date the IAP is terminated, the date the active member becomes disabled, or the date the active member dies. The accounts fall under Internal Revenue Code Section 401(a).

Upon retirement, a member of the IAP may receive the amounts in his or her employee account, rollover account, and vested employer account as a lump-sum payment or in equal installments over a 5-, 10-, 15-, or 20-year period or an anticipated life span option. Installment amounts vary with market returns as the account remains invested while in distribution. When chosen, the distribution option must result in a \$200 minimum distribution amount, or the frequency of the installments will be adjusted to reach that minimum.

2. Death Benefits

Upon the death of a nonretired member, the beneficiary receives in a lump sum the member's account balance, rollover account balance, and vested employer optional contribution account balance. If a retired member dies before the

installment payments are completed, the beneficiary may receive the remaining installment payments or choose a lump-sum payment.

3. Recordkeeping

PERS contracts with Voya Financial to maintain IAP participant records.

d. Postemployment Healthcare Benefits

ORS 238.420 established the Retirement Health Insurance Account (RHIA) and authorizes a payment of up to \$60 from RHIA toward the monthly cost of health insurance for eligible PERS members. RHIA is a cost-sharing, multiple-employer OPEB plan for 901 participating employers. The plan was closed to new entrants hired on or after August 29, 2003.

To be eligible to receive this monthly payment toward the premium costs, the member must: (1) have eight years or more of qualifying service in PERS at the time of retirement or receive a disability allowance as if the member had eight years or more of creditable service in PERS, (2) receive both Medicare Parts A and B coverage, and (3) enroll in a PERS-sponsored health plan.

A surviving spouse or dependent of a deceased PERS retiree who was eligible to receive the subsidy is eligible to receive the subsidy if he or she (1) is receiving a retirement benefit or allowance from PERS or (2) was insured at the time the member died and the member retired before May 1, 1991.

For the fiscal year ended June 30, 2020, PERS employers contributed 0.06 percent of PERS-covered salaries for Tier One and Tier Two members to fund the normal cost portion of RHIA

benefits. No UAL rate was assigned for the RHIA program as it was funded at 126.4 percent as of December 31, 2017. Typically, PERS employers contribute an actuarially determined percent of all PERS-covered salaries to amortize the unfunded actuarial accrued liability over a fixed period with new unfunded actuarial accrued liabilities being amortized over 10 years. These rates were based on the December 31, 2017, actuarial valuation. This is included in the employer contribution rates listed in Table 3 below.

Employer contributions are advance-funded on an actuarially determined basis. There is no inflation assumption for RHIA postemployment benefits because the payment amount is set by statute and is not adjusted for increases in healthcare costs. The number of inactive plan RHIA participants receiving benefits was 43,797 for the fiscal year ended June 30, 2020, and there were 47,611 active and 13,044 inactive members who meet the requirements to receive RHIA benefits when they retire.

ORS 238.415 established the Retiree Health Insurance Premium Account (RHIPA) and requires the Board on or before January 1 of each year to calculate the average difference between the health insurance premiums paid by retired state employees under contracts entered into by the Board and health insurance premiums paid by active state employees. ORS 238.415 authorizes payment of this average difference to qualified retired state employees. Retired state employees are qualified to receive this benefit if they had eight or more years of qualifying service with a state agency in the System at the time of retirement or are receiving a disability pension calculated as if they had eight or more years of qualifying service but are not eligible for federal Medicare coverage. RHIPA is a single-employer (the state as one employer) defined benefit

TABLE 3

Contribution Rate Summary ¹	Defined Benefit Pension						Postemployment Healthcare		
	PERS Defined Benefit Plan					OPSRP Pension Program		RHIA	RHIPA
	Pooled Employers			Non-Pooled Employers		All Employers		All Employers	State Agencies
	State Agencies ²	Local Government Rate Pool ³	School Pool ³	Political Subdivisions ^{3,4}	Judiciary	General Service	Police and Fire		
Employee IAP	6.00 %	6.00 %	6.00 %	6.00 %	0.00 %	6.00 %	6.00 %	0.00 %	0.00 %
Employee Normal Cost	0.00	0.00	0.00	0.00	7.00	0.00	0.00	0.00	0.00
Employer Normal Cost	15.71	15.83	13.79	16.92	17.43	8.40	13.03	0.06	0.18
Unfunded Actuarial Liability	4.63	10.43	16.73	7.03	3.04	1.45	1.45	0.00	0.27
Total Employer Contributions	20.34 %	26.26 %	30.52 %	23.95 %	20.47 %	9.85 %	14.48 %	0.06 %	0.45 %

¹Group average rates shown were effective July 1, 2019 through June 30, 2021.

²A subcomponent of the State and Local Government Rate Pool; includes UAL payment rate offset.

³Does not include UAL payment rate offsets.

⁴Non-pooled Political Subdivisions are valued separately for the Defined Benefit Plan.

OPEB plan and was closed to new entrants hired on or after August 29, 2003.

A surviving spouse or dependent of a deceased retired state employee is eligible to receive the subsidy if he or she (1) is receiving a retirement benefit or allowance from PERS or (2) was insured at the time the member died, and the member retired on or after September 29, 1991.

For the fiscal year ended June 30, 2020, state agencies contributed 0.06 and 0.18 percent of PERS-covered salaries for Tier One and Tier Two members to fund the normal cost portion of RHIA and RHIPA benefits, respectively. State agencies contributed 0.27 percent of all PERS-covered salaries to amortize the unfunded actuarial accrued liability of the RHIPA program over a fixed period with new unfunded actuarial accrued liabilities being amortized over 10 years. The first 10 year amortization base for outstanding RHIA and RHIPA UAL amounts began December 31, 2007. These rates were based on the December 31, 2017, actuarial valuation. This is included in the employer contribution rates listed in Table 3 on the previous page.

The number of inactive plan RHIPA participants receiving benefits was 803 for the fiscal year ended June 30, 2020. As of June 30, 2020, there were 12,868 active members who meet the requirements to receive RHIPA benefits when they retire. Inactive members are not eligible for these benefits. All subsidy payments from the RHIA and RHIPA are initially deposited in the Standard Retiree Health Insurance Account, as described in Note 8 on page 69, and subsequently remitted to the appropriate PERS health plan.

e. Deferred Compensation Plan

Deferred compensation plans are authorized under Internal Revenue Code Section 457. The Oregon Legislature enacted Chapter 179, Oregon Laws 1997, which established the Deferred Compensation Fund. ORS 243.400 to 243.507 established and provided for PERS to administer the state deferred compensation plan, known as the Oregon Savings Growth Plan (OSGP). As of June 30, 2020, the fair value of investments was \$2,151.3 million.

The plan is a benefit available to all state employees. To participate, an employee executes an individual agreement with the state deferring current earnings to be paid at a future date. Participants in the plan are not required to pay federal and state income taxes on the deferred contributions and earnings until the funds are received. Participants or their beneficiaries cannot receive the funds until at least one of the following occurs: termination by reason of resignation, death, disability, or retirement; unforeseeable emergency; or by requesting a *de minimis* distribution from

inactive accounts valued less than \$5,000. A loan program is also available for eligible participants. Member loans receivable at June 30, 2020, totaled \$13.2 million. Of that amount, \$10.6 million is not expected to be collected within one year.

PERS contracts with Voya Financial to maintain OSGP participant records. The Oregon State Treasury, as custodian of the assets, also contracts with State Street Bank and Trust Company to provide financial services. There are 20 investment options with varying degrees of market risk. Up to five financial institutions provide investment services in mutual funds for each investment option. A participant receives a blend of these mutual funds within the investment option. Participants direct the selection of investment options and also bear any market risk. The Oregon State Treasury has no liability for losses under the plan but does have the prudent investor responsibility of due care. Total membership as of June 30, 2020, was 28,063.

PERS may assess a charge to the participants not to exceed 2.0 percent on amounts deferred, both contributions and investment earnings, to cover costs incurred for administering the program. Actual charges to participants, including investment charges, for the fiscal year ended June 30, 2020, averaged 0.18 percent of amounts deferred. Oregon Revised Statute 243.505 established a Deferred Compensation Advisory Committee to provide input to the PERS Board. This committee is composed of seven members who meet at least quarterly.

f. Standard Retiree Health Insurance Account

ORS 238.410 established the Standard Retiree Health Insurance Account (SRHIA), a public entity risk pool. SRHIA is both a risk sharing and insurance purchasing pool. The Board contracts for medical and hospital insurance on behalf of retired members. Members and their dependents are eligible for PERS healthcare coverage if the member is receiving a retirement allowance or benefit under the System. A surviving spouse or dependent of a PERS retiree is eligible to participate if he or she was covered under the health plan at the time of the retiree's death. As of June 30, 2020, there were 57,401 retirees and their dependents participating in the health insurance program.

PERS contracts with various contracted health plans (CHP) on a fully insured conventionally funded insurance basis and remits premiums collected from participating members to the CHPs monthly. PERS contracts with Moda Health/Delta Dental on a fully insured insurance basis with some benefit programs under a conventionally funded arrangement and others under a minimum premium arrangement. Under the minimum premium programs, a monthly minimum premium that represents administrative, stoploss, and other fixed costs is remitted. In addition, claims are invoiced on a weekly basis as Moda/Delta Dental

makes payments for services delivered to covered PERS members. A settlement is required after calendar year end to reconcile that the claims payments did not exceed the contractual maximum liability established during the annual renewal process. Prior to January 1, 2019, Medicare Advantage was conventionally funded, while a minimum premium arrangement was in effect for Medicare Supplement, Medicare Supplement Rx, Medicare Advantage Rx, Non Medicare Medical and Rx, and Dental. Beginning January 1, 2019, Medicare Supplement and Medicare Supplement Rx became conventionally funded, and only dental remained on a minimum premium arrangement.

As of June 30, 2020, SRHIA recognized Reinsurance Reimbursement and Rebate receivables of approximately \$678,000. These receivables were composed of outstanding drug rebates, which reflect changes in the prior year estimated receivables. The System, through Moda Health, provides a custom Medicare Part D prescription drug plan known as an Employer Group Waiver Plan (EGWP). EGWP subsidies can include direct subsidies, low-income cost-sharing subsidies, low-income premium subsidies, reinsurance subsidies, and coverage gap discounts. Reinsurance subsidies are reported as operating revenues; coverage gap discounts along with pharmacy rebates are reported as an offset to claims expense. The current estimate of Incurred But Not Reported (IBNR) insurance claims is \$630,000.

D. Contributions

PERS' funding policy provides for periodic member and employer contributions at rates established by the Board, subject to limits set in statute. The rates established for member and employer contributions were approved based on the recommendations of the System's third-party actuary.

a. Member Contributions

Beginning January 1, 2004, all member contributions, except for contributions by judge members, were placed in the OPSRP Individual Account Program (IAP). Prior to that date, all member contributions were credited to the Defined Benefit Pension Plan. Member contributions are set by statute at 6.0 or 7.0 percent of salary and are remitted by participating employers. The contributions are either deducted from member salaries or paid by the employers on the members behalf. The Member Reserve, described in Note 6.A., represents accumulated member contributions and earnings allocations made prior to January 1, 2004, and subsequent earnings allocations less refunds and amounts transferred to reserves for retirements and disabilities. The IAP member accounts represent member contributions made on or after January 1, 2004, plus earnings allocations less disbursements for refunds, death benefits, and

retirements.

1. Target Date Funds

The Oregon Investment Council, responsible for all PERS fund investments, approved the transition to a Target Date Fund investment methodology for all IAP accounts beginning January 1, 2018. This change in investment methodology reflects an investment best practice that will better protect participants from potential losses as they approach and enter retirement by gradually reducing investment risk as participants age. Participants are placed in Target Date Funds based on their year of birth. Investments in each fund will adjust over time to reduce investment risk – and potential losses in market downturns. As the participant moves toward retirement, the investments in the fund gradually shift, becoming more conservative to help protect against market fluctuations.

b. Employer Contributions

PERS funding policy provides for monthly employer contributions at actuarially determined rates. These contributions, expressed as a percentage of covered payroll, are intended to accumulate sufficient assets to pay benefits when due. This funding policy applies to the PERS Defined Benefit Plan and OPEB Plans. Employer contribution rates during the period were based on the December 31, 2017, actuarial valuation, which became effective July 1, 2019. The state of Oregon and certain schools, community colleges, and political subdivisions have made supplemental unfunded actuarial liability payments, and their rates have been reduced. See the contribution rate summary provided in Table 3 on page 46. Effective January 1, 2020, Senate Bill 1049 required employers to pay contributions on re-employed PERS retirees' salary as if they were an active member, excluding IAP (6 percent) contributions.

1. PERS Defined Benefit Plan (ORS238)

Pension rates for State Agencies was 20.34, the Local Government Rate Pool 26.26 percent, schools 30.52 percent, and judiciary 20.47 percent of PERS-covered salaries, effective July 1, 2019. Political subdivisions that have not joined the State and Local Government Rate Pool had an average pension rate of 23.95 percent.

Oregon Laws 2001, Chapter 945, Section 13 authorized the establishment of the State and Local Government Rate Pool. Local political subdivisions were given the option to join the state of Oregon and community colleges for the actuarial purpose of calculating employer rates. Participation by local political subdivisions in this pool was effective for the actuarial valuation period beginning January 1, 2002. Oregon Laws 2001, Chapter 945, Section 13 authorized the establishment of the State and Local Government Rate Pool and the School Districts Pool. Local political subdivisions were given the option to join the state of Oregon and community colleges for

the actuarial purpose of calculating employer rates while all education service districts, school districts, and charters schools were/are required to join the School Districts Pool. Participation in these pools was effective for the actuarial valuation period beginning January 1, 2002.

Based on the actuarial valuation as of December 31, 2017, the state agencies, the judiciary, schools, and political subdivisions all had increases in employer contribution rates on July 1, 2019. These rate changes are measured against the actual average rates paid since the last rate-setting valuation. Every two years, the PERS Board adjusts contributions so that, over time, those contributions will be sufficient to fund the benefits earned, if earnings follow assumptions.

2. OPSRP Pension Program (ORS 238A)

All PERS employers with OPSRP Pension Program members are actuarially pooled and share the same contribution rate. The OPSRP Pension Program employer rates effective July 1, 2019, through June 30, 2021, are 9.85 percent of covered salaries for General Service employees and 14.48 percent of covered salaries for Police and Fire employees. These rates increased from 9.29 percent of covered salaries for General Service and 14.06 percent of covered salaries for Police and Fire employees for the period July 1, 2017, through June 30, 2019. Each of these rates includes a component related to disability benefits for General Service and Police and Fire members.

Note 3 - Receivables and Payables

A. Receivables

Table 4 disaggregates accounts receivable balances reported in the Statements of Fiduciary Net Position. The Strunk and Eugene Accrual resulted from recalculating benefits for recipients who received overpayments based on the reallocation of 1999 earnings. Approximately 84 percent of these receivables were received as of June 30, 2020, \$7.2 million is expected to be collected within the next year. Additionally, there were \$678,638 in Reinsurance Reimbursements and Rebate receivables reported in the Statement of Net Position - Proprietary Fund.

TABLE 4

<u>Accounts Receivable</u>	<u>June 30, 2020</u>
Broker Receivables	\$ 1,107,003,882
Transition Liability	405,156,056
Interest and Dividend Receivables	132,638,273
Employer and Member Receivables	48,267,348
Strunk Eugene Accrual	7,212,854
Other	6,515,219
Total Accounts Receivable	\$ 1,706,793,632

TABLE 5

<u>Accounts Payable</u>	<u>June 30, 2020</u>
Broker Payable	\$ 1,926,647,946
Pension Roll	409,466,960
Investment Fees	14,599,457
Death Benefits	31,645,508
Compensated Absences	2,681,397
Services and Supplies	2,855,961
Other	3,017,819
Total Accounts Payable	\$ 2,390,915,048

B. Payables

Table 5 above disaggregates payable balances reported in the Statements of Fiduciary Net Position as Investment Purchases and Accrued Expenses.

Note 4 - Investments

The Oregon State Treasury is the investment officer for the state of Oregon. Investment standards are established in ORS 293.726 and require funds to be managed as a prudent investor would do. The Oregon Investment Council (OIC) establishes policies for the investment and reinvestment of moneys in the Oregon Public Employees Retirement Fund. Policies are established based on the primary investment asset class of each investment manager and do not reflect the classifications of individual holdings as presented in the financial statements. Contracts with individual investment managers provide additional guidelines that vary from manager to manager.

A. Deposits

PERS cash and cash equivalents consist of cash on hand, deposits in the Oregon Short Term Fund (OSTF), moneys held by external investment managers, cash equivalents held by the health insurance provider, and cash held by the IAP program custodian. OSTF is a cash and investment pool that operates as a demand deposit account and is required for use by all state funds. See Table 6. OSTF is separately audited by the Oregon Audits Division. The audited financial statements can be viewed at <https://sos.oregon.gov/audits/Documents/2020-31.pdf>. OSTF investment risks are

TABLE 6

<u>Depository Account</u>	<u>Bank Balance</u>
Insured	\$ 750,000
Oregon Short Term Fund	2,397,352,589
Health Insurance Claims Fund	5,809,517
IAP On Demand Deposit	5,839,760
Uninsured and Uncollateralized	1,093,670,140
Total Deposits	\$ 3,503,422,006

addressed in the notes to those financial statements.

Health Insurance Claims Fund of \$6.1 million was held at US Bank. The account is identified as Public Funds; therefore, any amount in the account above Federal Deposit Insurance Corporation (FDIC) was insured by Public Funds Collateralization Program.

1. Custodial Credit Risk

Custodial credit risk for deposits is the risk that in the event of a bank failure, PERS' deposits may not be recovered. As noted above, the deposit and investment risks, including custodial risk, of the OSTF are outlined in the OSTF financial statements. As of June 30, 2020, the carrying amount of PERS' deposits in OSTF totaled \$2,387.3 million, and the corresponding bank balance was \$2,397.6 million. Investment managers' deposits with custodian banks consist of cash and cash equivalents that represent buying reserves. As of June 30, 2020, there was \$1,093.8 million on deposit for the accounts of the OPERF investment managers.

As of June 30, 2020, IAP On Demand Deposit Account of \$6.1 million was held at State Street Bank, the custodian of the IAP program third-party administrator. The balance on the deposit is insured by the FDIC up to the standard maximum deposit insurance amount. The balance in excess of the FDIC limit was uninsured and uncollateralized.

2. Foreign Currency Risk

Foreign currency risk for deposits is the risk that changes in exchange rates will adversely affect the fair value of the deposits. Foreign currency risk is controlled via contractual agreements with the investment managers. As of June 30, 2020, \$55.7 million in cash and cash equivalents was exposed to foreign currency risk. The U.S. dollar balances of these deposits, organized by currency denomination, are presented in Table 12 on page 57.

3. Restricted Cash Equivalents

PERS' cash and cash equivalents as of June 30, 2020, include collateral of \$148.8 million held by investment managers. Swap collateral is offset by a related liability with a net settlement feature. Collateral is restricted and is not available to pay current liabilities.

B. Investments

Table 7 lists the fair value of investments held by the state of Oregon for PERS as of June 30, 2020.

1. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Observable inputs are developed based on market data obtained

TABLE 7

Investments as of June 30, 2020	Fair Value
U.S. Treasury Obligations	\$ 5,337,284,337
U.S. Treasury Obligations - Strips	355,511,392
U.S. Treasury Obligations - TIPS	147,776,346
U.S. Federal Agency Mortgage Securities	990,155,010
U.S. Federal Agency Mortgage TBAs	304,182,248
U.S. Federal Agency Debt	77,956,751
U.S. Federal Agency Strips	36,466,563
International Debt Securities	896,943,084
Non-Government Debt Securities	446,285,721
Corporate Bonds	2,324,873,646
Bank Loans	1,602,262,409
Municipal Bonds	58,325,982
Collateralized Mortgage Obligations	456,754,907
Asset-Backed Securities	257,284,727
Guaranteed Investment Contracts ¹	268,076,165
Domestic Fixed Income Funds	968,199,810
Global Fixed Income Funds	685,381,354
Total Debt Securities	15,213,720,452
Derivatives in Asset Positions	382,933,147
Domestic Equity Securities	11,827,351,463
International Equity Securities	8,431,408,849
Domestic Equity Funds	2,236,301,888
Global Equity Funds	1,856,896,621
International Equity Funds	1,030,339,554
Target Date Funds	688,691,915
Oregon Savings Growth Plan - Self Directed	24,079,661
Total Public Equity	26,478,003,098
Real Estate and Real Estate Investment Trusts	8,731,171,187
Private Equity	18,480,372,903
Alternatives Portfolio	8,209,320,304
Opportunity Portfolio	1,652,118,971
Total PERS Investments - Fiduciary Funds	\$ 78,764,706,915

¹Guaranteed Investment Contracts are stated at contract value.

from sources independent of the reporting entity. Unobservable inputs are developed based on the best information available about the assumptions market participants would use in pricing the asset.

The classification of investments within the fair value hierarchy is based upon the activity level in the market for the security type and the inputs used to determine their fair value. The three levels of the hierarchy are described below:

Level 1 - Unadjusted quoted prices for identical instruments in active markets.

Level 2 - Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs are observable.

Level 3 - Valuations derived from valuation techniques in which significant inputs are unobservable.

Inputs used to measure fair value might fall in different levels of the fair value hierarchy. Categorization within the hierarchy is based on the lowest level input that is significant to the fair value measurement.

Equity securities are generally valued based on quoted prices from an active market and are therefore categorized in level 1. In the absence of quoted market prices, such as equity securities that trade infrequently or not at all, valuations are based on the last traded price or a price provided by investment managers and are generally categorized in level 3.

Debt securities classified as level 2 are valued using the latest bid prices or evaluated quotes from independent pricing vendors. The third-party vendors use a variety of methods when pricing these securities that incorporate relevant observable market data to arrive at an estimate of what a buyer in the marketplace would pay for a security under current market conditions. When independent price sources are not available, debt securities are priced based on the last traded price or a valuation provided by the investment manager and are categorized in level 3.

Funds priced using a net asset value ("NAV") that is published daily and validated with a sufficient level of observable activity are categorized in level 1. If observable activity is limited, yet supports that the NAV represents an exit value of the security at the measurement date, the securities are categorized in level 2. Investments that are measured at NAV as a practical expedient, such as most private equity, alternative, opportunity and real estate investments, are excluded from the fair value hierarchy if the NAV per share (or its equivalent) was calculated in a manner consistent with the Financial Accounting Standards Board's measurement principles for investment companies. Funds not meeting this criteria are categorized in level 3.

Exchange-traded derivatives, including futures, rights, and warrants, that are actively traded are valued using quoted prices and are categorized in level 1. Derivative contract valuations, such as swaps and options, are modeled using observable pricing inputs and techniques that do not entail material subjectivity and are, therefore, categorized in level 2. Level 3 derivatives include securities valued at a price that has been determined by the investment manager's valuation committee.

Investments in real estate, other than real estate investment trusts, which are generally valued based on an active market price and are categorized in level 1, have been valued based on the NAV per share (or its equivalent), as provided by the general partner. This type includes 67 commingled real

estate funds, structured as limited partnerships, where the funds have a finite term. Distributions from the funds will be received as the underlying investments of the funds are liquidated. Liquidation is expected to take place during the five-year period following the termination of the investment period, which extends to 2035. Investments in real estate also include 14 joint ventures where the investments are expected to be held for the long term and generate cash flow that will represent a significant component of the total return. Real estate also includes investments in 9 open-ended funds that permit quarterly redemption of shares, subject to certain requirements being met.

Private Equity consists of approximately 260 funds, organized as limited partnerships and limited liability companies, participating in diversified strategies including leveraged buyouts, venture capital, growth equity, fund-of-funds, co-investments, and special situations. The fair values of the private equity investments have been determined using the NAV per share (or its equivalent), as provided by the general partner or managing member. These funds have a finite term. Distributions will be received as the underlying investments of the funds are liquidated, which is expected to occur over the next 12 to 14 years.

Alternatives Portfolio investments seek to provide diversification and inflation hedging characteristics to OPERF and include investments with a focus on infrastructure and natural resources. Alternatives Portfolio consists of 60 investments in commingled funds organized as limited partnerships and limited liability companies. The fair values of the investments have been determined using a NAV per share (or its equivalent) of the investments. For alternative infrastructure and natural resource investments, which include 52 of the 60 funds, the funds have a finite term. Distributions will be received as the underlying investments of the funds are liquidated, which is expected to occur over the next 10 to 14 years. The remaining eight funds are open-ended, permitting periodic redemption of shares, subject to certain requirements being met. They consist of 7 funds investing in diversifying hedge strategies, and 1 fund investing in a risk parity strategy.

The Opportunity Portfolio includes strategies that fall outside of other asset classes and include 17 funds investing in a broad range of performing and distressed debt and debt-related securities as well as royalties and insurance-based investments. The fair values of the investments have been determined using a NAV per share (or its equivalent) of the investments. For 10 of the 17 funds, the funds have a finite term. Distributions will be received as the underlying investments of the funds are liquidated, which is expected to occur over the next 7 to 10 years. The remaining seven funds are open ended, permitting periodic redemption of shares.

PERS has the following recurring fair value measurements as of June 30, 2020. See Table 8 below.

Disclosures regarding redemption and investments valued at the NAV per share (or its equivalent), including Unfunded Commitments, are presented in Table 9 on page 54.

2. Rate of Return

For the fiscal year ended June 30, 2020, the annual money-weighted rate of return on defined benefit pension plan investments, net of defined benefit pension plan investment expenses, was 0.46 percent. The annual money-weighted rates of return on the other postemployment healthcare benefits (OPEB) investments, net of OPEB investment expenses, were 0.61 percent for the Retirement Health Insurance Account (RHIA) and

1.03 percent for the Retiree Health Insurance Premium Account (RHIPA). The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the timing of cash flows and the changing amounts actually invested.

3. Investment Concentrations

As of June 30, 2020, there were no organizations that represent 5 percent or more of the pension plan's fiduciary net position or total investments.

4. Credit Risk Debt Securities

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. OIC has no formal policy regarding credit risk. As of June 30, 2020, the fair value of below grade investments, excluding unrated

TABLE 8

		Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
		6/30/2020		
Investments and Derivative Instruments Measured at Fair Value				
Investments by Fair Value Level				
Debt Securities				
U.S. Treasury Obligations	\$	5,337,284,337	\$	5,337,284,337
U.S. Treasury Obligations - Strips		355,511,392		355,511,392
U.S. Treasury Obligations - TIPS		147,776,346		147,776,346
U.S. Federal Agency Mortgage Securities		990,155,010		990,155,010
U.S. Federal Agency Mortgage TBAs		304,182,248		304,182,248
U.S. Federal Agency Debt		77,956,751		77,956,751
U.S. Federal Agency Strips		36,466,563		36,466,563
Non-Government Debt Securities		446,285,721		446,285,721
Corporate Bonds		2,919,217,469		2,876,773,640
Bank Loans		1,743,006,016		1,605,943,112
Municipal Bonds		58,325,982		58,325,982
Collateralized Mortgage Obligations		472,953,844		472,953,844
Asset-Backed Securities		402,941,444		369,110,541
Domestic Fixed Income Funds		968,199,810		968,199,810
Global Fixed Income Funds		685,381,354		685,381,354
Total Debt Securities ¹		14,945,644,287		14,732,306,651
Public Equity				
Domestic Equity Securities		11,827,351,463	11,749,921,333	77,430,130
International Equity Securities		8,431,408,849	8,409,226,518	22,182,331
Domestic Equity Funds		2,236,301,888		2,236,301,888
Global Equity Funds		1,856,896,621		1,856,896,621
International Equity Funds		1,030,339,554	791,172,139	30,269,801
Target Date Funds		688,691,915		688,691,915
Oregon Savings Growth Plan - Self Directed		24,079,661	24,079,661	
Total Public Equity		26,095,069,951	20,974,399,651	4,990,788,038
Real Estate Investment Trusts		576,729,728	576,700,989	28,739
Opportunity Open Ended Funds		91,076,925	91,076,925	
Total Investments by Fair Value Level	\$	41,708,520,891	\$	21,642,177,565
			\$	19,723,094,689
				\$
				343,248,637

TABLE 8 continues on the next page

Notes to the Financial Statements

TABLE 8 continuing from the previous page

Investments Measured at the Net Asset Value (NAV)

Real Estate	
Real Estate Investments	\$ 6,579,569,153
Real Estate Open Ended Funds	1,574,872,306
Total Real Estate	<u>8,154,441,459</u>
Private Equity	18,480,372,903
Alternatives Portfolio	
Alternative Diversifying Strategies	3,421,268,143
Alternative Infrastructure	2,968,653,013
Alternative Natural Resources	1,508,729,948
Alternative Risk Parity	310,669,200
Total Alternatives Portfolio	<u>8,209,320,304</u>
Opportunity Portfolio	
Opportunity Private Investments	461,082,554
Opportunity Open Ended Funds	1,099,959,492
Total Opportunity Portfolio	<u>1,561,042,046</u>
Total Investments Measured at the NAV	<u>36,405,176,712</u>
Total Investments Measured at Fair Value	<u>\$ 78,113,697,603</u>

Investments Derivative Instruments

Credit Default Swaps	\$ 6,426,783	\$ -	\$ 5,683,318	\$ 743,465
Foreign Exchange Forwards	34,743,745	-	34,743,745	-
Forwards	228,764,133	-	-	228,764,133
Interest Rate Swaps	134,873,683	-	134,789,089	84,594
Options	8,161,982	301,859	7,710,060	150,063
Rights and Warrants	4,466,162	2,720,845	89,975	1,655,342
Total Return Swaps	240,404	235,633	4,771	-
Total Assets	<u>417,676,892</u>	<u>3,258,337</u>	<u>183,020,958</u>	<u>231,397,597</u>
Credit Default Swaps	(2,192,823)	-	(2,192,823)	-
Foreign Exchange Forwards	(52,180,875)	-	(52,180,875)	-
Interest Rate Swaps	(141,176,738)	-	(141,176,738)	-
Options	(13,496,438)	-	(13,496,438)	-
Total Return Swaps	(267,825)	-	(267,825)	-
Total Liabilities	<u>(209,314,699)</u>	<u>-</u>	<u>(209,314,699)</u>	<u>-</u>
Total Investments Derivative Instruments	<u>\$ 208,362,193</u>	<u>\$ 3,258,337</u>	<u>\$ (26,293,741)</u>	<u>\$ 231,397,597</u>

Invested Securities Lending Collateral

Asset-Backed Securities	\$ 142,972,456	\$ -	\$ 142,972,456	\$ -
U.S. Government & Agencies	29,999,375	-	29,999,375	-
Negotiable Certificates of Deposit	199,503,355	-	199,503,355	-
Commercial Paper	66,984,811	-	66,984,811	-
Corporate Bonds	141,581,538	-	141,581,538	-
Repurchase Agreements	208,549,000	-	208,549,000	-
Total Invested Securities Lending Collateral²	<u>\$ 789,590,535</u>	<u>\$ -</u>	<u>\$ 789,590,535</u>	<u>\$ -</u>

¹Guaranteed Investment Contracts are excluded from the table as these are stated at contract value.

²For OSTF's participation in securities lending activity of \$6,249,087, refer to their audited financial statements at:

<https://sos.oregon.gov/audits/Documents/2020-31.pdf>

TABLE 9

Investments Measured at the Net Asset Value					
	Fair Value	Unfunded Commitments*	Redemption Frequency (If Currency Eligible)	Redemption Notice Period	
Real Estate					
Real Estate Investments	\$ 6,579,569,153	\$ 2,320,060,188	n/a	n/a	
Real Estate Open Ended Funds	1,574,872,306	137,000,000	Quarterly	15 - 90 days	
Private Equity	18,480,372,903	9,573,818,423	n/a	n/a	
Alternatives Portfolio					
Alternative Diversifying Strategies	3,421,268,143	-	Monthly	3 - 90 days	
Alternative Infrastructure	2,968,653,013	2,019,486,676	n/a	n/a	
Alternative Natural Resources	1,508,729,948	1,307,048,052	n/a	n/a	
Alternative Risk Parity	310,669,200	-	Monthly	5 days	
Opportunity Portfolio					
Opportunity Private Investments	461,082,554	268,132,512	n/a	n/a	
Opportunity Open Ended Funds	1,099,959,492	331,925,260	Monthly, Quarterly	5 - 90 days	
Total	\$ 36,405,176,712	\$ 15,957,471,111			

* Excludes unfunded commitments associated with investments included in the fair value hierarchy (Levels 1, 2, and 3) and new commitments not yet funded at 6/30/2020.

securities, is \$2,246.1 million, or 24.62 percent, of total securities subject to credit risk and 14.76 percent of total debt securities. The weighted quality rating average is A. Unrated securities include \$191.4 million in bank loans, \$1,653.6 million in domestic and global fixed income funds, \$268.1 million in guaranteed investment contracts, and \$192.7 million in other debt securities. Unrated federal agency securities include \$179.4 million in Federal Home Loan Mortgage Corporation (FHLMC), \$739.3 million in Federal National Mortgage Association (FNMA), and \$178.0 million in other federal agency securities. These federal agency securities are not rated by the credit rating agencies as these are implicitly guaranteed by the U.S. government. Table 10 on the next page details the quality ratings for credit risk debt securities as of June 30, 2020.

5. Custodial Credit Risk

Custodial credit risk for investments is the risk that in the event of a failure of the counterparty, PERS will not be able to recover the value of the investments or collateral securities that are in the possession of an outside party. OIC has no formal policy regarding the holding of securities by a custodian or counterparty. As of June 30, 2020, no investments were exposed to custodial credit risk.

6. Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This risk is managed within the portfolio using the effective duration methodology.

As of June 30, 2020, the weighted average duration of PERS' fixed income portfolio was 4.52 years.

Effective duration is a measure of a fixed income investment's exposure to fair value changes arising from changes in interest rates. Effective duration makes assumptions regarding the most likely timing and amounts of variable cash flows. These assumptions take into consideration factors indicative of investments highly sensitive to interest rate changes, including callable options, prepayments, and other factors. These factors are reflected in the effective duration numbers provided herein.

No individual fixed income investment manager's portfolio was outside the policy guidelines as of June 30, 2020. Table 11 on the next page shows the investments by type, amount, and effective weighted duration.

At June 30, 2020, PERS held approximately \$1,446.9 million in debt instruments backed by pooled mortgages, Collateralized Mortgage Obligations (CMOs), or fixed-rate mortgages. These securities represent a stream of principal and interest payments from underlying mortgages. Assets with these characteristics are susceptible to prepayment by the mortgage holders which may result in a decrease in total interest realized. The value of these securities can be volatile as interest rates fluctuate. Additionally, the risk of default exists and collateral held may potentially be insufficient to cover the principal due. PERS also held approximately \$304.2 million in To-Be-

Notes to the Financial Statements

TABLE 10

Schedule of Credit Risk at June 30, 2020

Quality Rating	Fair Value
AAA	\$ 640,503,249
AA	391,724,379
A	829,854,741
BBB	1,613,310,160
BB	308,572,159
B	1,394,738,908
CCC	527,562,837
CC	10,865,537
D	4,404,430
Not Rated	2,305,749,668
Not Rated - U.S. Agency ¹	1,096,615,150
Total Subject to Credit Risk	9,123,901,218
U.S. Government Guaranteed Securities	6,089,819,234
Total Debt Securities	\$ 15,213,720,452

¹ Federal Agency securities are not rated by the credit rating agencies as they carry an implicit guarantee of the U.S. Government. See Credit Risk Debt Securities note disclosure on the previous page for more detail.

TABLE 11

Schedule of Interest Rate Risk - Effective Duration at June 30, 2020

Investments	Fair Value	Effective Weighted Duration Rate (in years)
U.S. Treasury Obligations	\$ 5,337,284,337	8.16
U.S. Treasury Obligations - Strips	355,511,392	0.68
U.S. Treasury Obligations - TIPS	147,776,346	14.02
U.S. Federal Agency Mortgage Securities	990,155,010	2.32
U.S. Federal Agency Mortgage TBAs	304,182,248	4.04
U.S. Federal Agency Debt	77,956,751	6.72
U.S. Federal Agency Strips	36,466,563	0.11
International Debt Securities	796,372,106	3.07
Non-U.S. Government Debt Securities	206,470,012	6.29
Corporate Bonds	2,295,444,054	6.64
Bank Loans	1,483,526,385	0.64
Municipal Bonds	58,325,982	9.07
Collateralized Mortgage Obligations	456,754,907	1.74
Asset-Backed Securities	257,284,727	1.40
Domestic Fixed Income Funds	968,199,810	3.67
Global Fixed Income Funds	685,381,354	5.99
No Effective Duration:		
International Debt Securities	100,570,978	N/A
Non-U.S. Government Debt Securities	239,815,709	N/A
Corporate Bonds	29,429,592	N/A
Bank Loans	118,736,024	N/A
Guaranteed Investment Contracts	268,076,165	N/A
Total Debt Securities	15,213,720,452	
Cash Equivalent - Mutual Funds - STIF	937,563,912	35 Days ¹
Cash Equivalent - Oregon Short Term Fund	1,969,249,492	202 Days ¹
Total Subject to Interest Rate Risk	\$ 18,120,533,856	

¹Weighted average maturity. Pools are not rated.

Announced (TBA) federal agency-issued mortgage pools. An additional \$257.3 million of debt instruments held are asset-backed securities backed primarily by automobiles, consumer credit receivables, heavy equipment leases, and student loan receivables.

7. Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. As of June 30, 2020, approximately 2.42 percent of the debt investment portfolio was invested in non-dollar denominated securities. Policies for PERS' portfolio do not limit non-dollar denominated investments. PERS utilizes a currency overlay manager to reduce risk through offsetting investments in the developed foreign currency market for international equity portfolios. See Table 12 on the next page.

8. Unfunded Commitments

OIC has entered into agreements that commit OPERF, upon request, to make additional investment purchases up to a predetermined amount. As of June 30, 2020, the OPERF had \$10,757.4 million in commitments to purchase private equity investments, which includes \$6,145.6 million in callable distributions and \$3,069.6 million in commitments to purchase real estate investments. Additionally, there were \$3,976.5 million in commitments to purchase alternative portfolio, which includes \$779.5 million in callable distributions, and \$600.1 million in commitments to purchase opportunity portfolio investments, which includes \$332.2 million in callable distributions. These amounts are unfunded and are not recorded in the Statement of Fiduciary Net Position.

C. Securities Lending

In accordance with state investment policies, OPERF participates in securities lending transactions. Through securities lending authorization agreements, the Oregon State Treasury has authorized its custodian, State Street Bank, to lend its securities pursuant to the terms and conditions of policy and applicable agreements. Both OPERF and the borrowers maintained the right to terminate all securities lending transactions on demand. There were no significant violations of the provisions of securities lending agreements during the period of these financial statements.

The custodian had the authority to loan short-term, fixed income, and equity securities and to receive as collateral U.S. dollar and foreign currency cash, U.S. government and agency securities, letters of credit, and foreign sovereign debt of Organization of Economic Cooperation and Development (OECD) countries. Borrowers were required to deliver collateral for each loan equal to not less than 102 percent of the fair value of loaned U.S. securities and international fixed income securities, or 105 percent

in the case of international equity. The custodian did not have the ability to pledge or sell collateral securities absent a borrower default, and OPERF did not impose any restrictions during the fiscal year on the amount of the loans the custodian made on its behalf. OPERF is fully indemnified against losses caused by borrower default by its current custodian. There were no losses during the year from the failure of borrowers to return loaned securities and no recoveries of amounts from prior losses.

Prior to July 1, 2010, OPERF was a participant in a securities lending collateral reinvestment pool managed by State Street Global Advisors (SSgA), a division of State Street Bank. On July 1, 2010, OPERF withdrew from this pool and directed SSgA to allocate its share of pool assets into a new legacy fund owned exclusively by OPERF. At the same time, OPERF also directed SSgA to open a new securities lending collateral reinvestment fund for ongoing lending activities. The legacy fund will be maintained until all existing assets have matured or been sold, and proceeds will be invested in the new fund. Since the assets in the legacy and new funds are wholly owned by OPERF, the balances in the funds are stated at fair value in the Statement of Fiduciary Net Position as of June 30, 2020. Previous securities lending collateral reinvestment pool balances were stated at "constant value," which approximates fair value, since OPERF was a participant in a pool along with other qualified plans, due to the lending agent's practice of redeeming shares at \$1.00 per unit. The investments in the legacy and new funds are held by the custodian.

The maturities of investments made with cash collateral did not generally match the maturities of the securities loaned. Because the securities loaned are callable on demand by either the lender or borrower, the life of the loans at June 30, 2020, is effectively one day. On June 30, 2020, OPERF had no credit risk exposure to borrowers because the amounts OPERF owes borrowers exceeds the amounts borrowers owe OPERF.

On June 30, 2020, the fair value of cash collateral received and invested cash collateral were \$790.2 million and \$789.6 million, respectively. The cumulative unrealized loss in invested cash collateral of \$0.6 million has been recognized in securities lending income in the Statement of Changes in Fiduciary Net Position in the period in which the gain or losses occurred. For the fiscal year ended June 30, 2020, total income from securities lending activity was \$20.3 million, and total expenses for the period were \$13.9 million for a net gain of \$6.4 million.

OSTF also participates in securities lending activity. OPERF receives an allocated portion of this activity based on its deposits in OSTF. As of June 30, 2020, OPERF's allocated portion of cash collateral received and invested cash collateral were \$5.9

Notes to the Financial Statements

TABLE 12

Currency Exposures by Asset Class in US Dollar Equivalents as of June 30, 2020							
Currency	Cash and Cash Equivalents	Debt Securities	Public Equity	Derivatives in Asset Positions	Real Estate	Alternatives Portfolio	Total
Argentine peso	\$ 4,734	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,734
Australian dollar	1,307,375	-	380,410,481	-	5,188,893	-	386,906,749
Brazilian real	414,047	303,842	113,767,277	3,470,863	186,695	-	118,142,724
Canadian dollar	4,783,099	-	397,787,970	2,713,639	820,636	-	406,105,344
Chilean peso	452,303	-	4,571,345	-	-	-	5,023,648
Chinese yuan	8,277,917	805,853	185,094,504	-	-	-	194,178,274
Colombian peso	22,045	-	2,230,712	-	-	-	2,252,757
Czech koruna	4,132	-	2,185,486	-	-	-	2,189,618
Danish krone	259,543	1,593	215,184,969	-	-	-	215,446,105
Egyptian pound	6,667	-	5,534,049	-	-	-	5,540,716
Euro	11,612,333	260,542,245	1,542,100,669	22,517,783	1,376,031	1,423,802,517	3,261,951,578
Hong Kong dollar	2,636,145	-	545,423,287	1,517	1,670,659	-	549,731,608
Hungarian forint	60,691	-	9,713,149	-	-	-	9,773,840
Indian rupee	545,967	-	107,635,341	-	-	-	108,181,308
Indonesian rupiah	200,459	-	20,148,000	-	-	-	20,348,459
Israeli shekel	148,471	-	47,436,376	-	200,589	-	47,785,436
Japanese yen	7,784,949	15,735,373	1,338,765,919	27,344,462	4,471,467	-	1,394,102,170
Kenya shilling	-	-	1,186,629	-	-	-	1,186,629
Kuwaiti dinar	-	-	658,562	-	-	-	658,562
Malaysian ringgit	481,084	4,387,490	45,172,704	-	28,743	-	50,070,021
Mexican peso	775,942	19,125,291	38,689,642	78,106,168	11,903,887	-	148,600,930
Moroccan dirham	-	-	44,658	-	-	-	44,658
Taiwan dollar	1,439,792	-	268,814,124	-	1,487	-	270,255,403
New Zealand dollar	41,769	-	32,006,758	-	560,048	-	32,608,575
Nigerian naira	392,969	-	3,555,490	-	-	-	3,948,459
Norwegian krone	443,489	-	58,595,970	-	-	-	59,039,459
Pakistani rupee	171	-	3,085,669	-	-	-	3,085,840
Peruvian nuevo sol	2,106	-	14,016	-	-	-	16,122
Philippine peso	201,565	-	12,059,891	-	-	-	12,261,456
Polish zloty	423,950	-	16,660,526	-	-	-	17,084,476
Pound sterling	7,208,117	51,795,749	1,194,229,895	2,597,271	344,938	-	1,256,175,970
Qatar riyal	3,493	-	2,562,672	-	-	-	2,566,165
Romanian leu	-	-	1,909,449	-	-	-	1,909,449
Russian ruble	196,757	15,088,313	58,084,518	-	-	-	73,369,588
Saudi Arabian riyal	40,089	-	5,648,486	-	-	-	5,688,575
Singapore dollar	949,638	-	63,414,781	-	10,556,148	-	74,920,567
South African rand	703,093	-	104,553,791	-	327,877	-	105,584,761
South Korean won	1,215,070	-	339,580,558	2,114	93,994	-	340,891,736
Swedish krona	1,195,773	-	214,029,260	-	-	-	215,225,033
Swiss franc	458,004	-	546,098,740	3,223	-	-	546,559,967
Thai baht	605,452	-	31,697,241	-	564,904	-	32,867,597
Tunisia dinar	-	-	-	18	-	-	18
Turkish lira	402,788	-	35,112,966	-	1,308,682	-	36,824,436
United Arab Emirates dirham	7,153	-	4,995,871	-	-	-	5,003,024
Vietnamese dong	24,024	-	7,047,758	-	-	-	7,071,782
Zimbabwe dollar	3	-	-	-	-	-	3
Total Subject to Foreign Currency Risk	\$ 55,733,168	\$ 367,785,749	\$ 8,007,500,159	\$ 136,757,058	\$ 39,605,678	\$ 1,423,802,517	\$ 10,031,184,329

million and \$6.2 million, respectively.

Cash collateral received for OSTF securities lent is invested in securities lending collateral pools and is not exposed to custodial risk. For more information on OSTF's participation in securities lending activity, refer to their audited financial statements at: <https://sos.oregon.gov/audits/Documents/2020-31.pdf>.

Table 13 shows the combined balances of the securities on loan, cash and securities collateral received, and investments of cash collateral held. Securities lending collateral subject to credit risk as of June 30, 2020, is shown in Table 14. Securities lending collateral subject to interest rate risk as of June 30, 2020, is shown in Table 15.

D. Derivatives

Oregon Investment Council policy allows, with some restrictions, for the use of derivative instruments in the prudent management of OPERF investments. Certain internally and externally managed accounts are allowed, through contract and policy, to invest in derivative instruments to carry out their investment management activities. Risks inherent with derivatives are managed through investment management's adherence to contractual and policy prescribed terms that are consistent with OPERF's investing objectives.

All derivative instruments held by OPERF are considered investments. The fair value of OPERF derivative investments is reported in the

TABLE 13

<u>Securities Lending as of June 30, 2020</u>			
Investment Type	Securities on Loan at Fair Value	Cash and Securities Collateral Received	Investments of Cash Collateral at Fair Value
U.S. Treasury Securities	\$ 666,257,126	\$ 680,567,896	\$ 138,532,065
U.S. Agency Securities	23,984,449	24,403,830	7,223,160
Domestic Equity Securities	683,142,857	695,111,654	436,320,880
Domestic Debt Securities	166,170,250	169,453,378	157,744,224
International Equity Securities	288,585,351	305,549,932	47,005,370
International Debt Securities	2,748,178	2,800,347	2,798,341
Allocation from Oregon Short Term Fund	7,507,229	7,661,308	6,249,087
Total	\$ 1,838,395,440	\$ 1,885,548,345	\$ 795,873,127

Investment Sales and Other Receivables, Investment Purchases and Accrued Expenses, and the Public Equity lines of the Statement of Fiduciary Net Position - Pension and Other Postemployment Plans on pages 33 and 34. Changes in fair value during the fiscal year are reported in the Net Appreciation/Depreciation in Fair Value of Investments line of the Statement of Changes in Fiduciary Net Position - Pension and Other Postemployment Plans on pages 35 and 36.

Table 16 on page 60 presents the fair value amounts, the related net appreciation/(depreciation) in fair value amounts and the notional amounts of derivative instruments outstanding as of June 30, 2020.

A forward foreign currency exchange contract is a forward contract that is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. The fair value of a foreign currency forward is determined by the difference between the contract exchange rate and the closing exchange rate, at the end of a reporting period. Risks associated with such contracts include movement in the value of foreign currencies and the ability of the counterparty to perform.

A futures contract represents a commitment to purchase or sell an underlying asset at a future date and at a specified price. Futures contracts have standardized terms and are traded on exchanges. The counterparty credit risk for futures is generally less than for privately negotiated forward contracts, since the clearinghouse, which is the issuer or counterparty to each exchange-traded future, settles daily the net change in the futures contract's value in cash with the broker and results in the contract itself having no fair value at the end of any trading day.

A swap is an agreement that obligates two parties to exchange a series of cash flows or the net value of cash flows at specified intervals based upon,

or calculated by, reference to changes in specified prices or rates for a specified amount of an underlying asset. Swaps are privately negotiated contracts with customized terms and are transacted in over-the-counter markets. OPERF held various types of swaps including credit default, interest rate, and total return swaps. The payment flows are usually netted against each other, with the difference being paid by one party or another. In addition, collateral may be pledged or received by OPERF in accordance with the terms of the respective swap agreements to provide value and recourse to OPERF or its counterparties. Swaps are subject to general market risk, liquidity risk, credit risk, interest rate risk, and the risk that the counterparty may fail to perform.

An option is an instrument that gives one party the right, but not the obligation, to buy or sell an underlying asset from or to another party at a fixed price over a specified period of time. In writing an option, OPERF bears the market risk of an unfavorable change in the price of the underlying investment of the written option. Exercise of an option written by OPERF could result in OPERF selling or buying an asset at a price different from the current fair value. Options may be subject to interest rate risk, general market risk, liquidity risk, credit risk, foreign currency risk, and, for non-exchange traded options, the risk of the counterparty's ability to perform.

Rights are the right, but not the obligation, to purchase newly issued equity shares, often in proportion to the number of shares currently owned, in a specified company, at a pre-established price on or within a predetermined date. A warrant provides the holder the right, but not the obligation, to purchase securities from the issuing entity at a specific price and within a certain time period. In the OPERF portfolio, rights and warrants are often obtained and held because of existing investments and are subject to general market risk and liquidity risk.

TABLE 14

Securities Lending Invested Cash Collateral Subject to Credit Risk as of June 30, 2020	
Quality Rating	Fair Value
AAA	\$ 171,153,215
AA ¹	273,817,102
A	194,252,602
B	1,818,616
Total Subject to Credit Risk	641,041,535
U.S. Government Guaranteed Repurchase Agreements	148,549,000
Allocation from Oregon Short Term Fund	6,249,087
Cash	33,505
Total Securities Lending Invested Cash Collateral	\$ 795,873,127

¹Commercial paper ratings of A-1+/A-1 categorized as AA.

TABLE 15

Securities Lending Invested Cash Collateral Subject to Interest Rate Risk as of June 30, 2020		
Security Type	Fair Value	Effective Weighted Duration Rate (in days)¹
Asset-Backed Securities	\$ 142,972,456	21
Negotiable Certificates of Deposit	199,503,355	20
Corporate Bonds	141,581,538	82
Commercial Paper	66,984,811	22
Treasury Bills	29,999,375	6
Repurchase Agreements	60,000,000	2
Total Subject to Interest Rate Risk	641,041,535	35
U.S. Government Guaranteed Repurchase Agreements	148,549,000	
Allocation from Oregon Short Term Fund	6,249,087	
Cash	33,505	
Total Securities Lending Invested Cash Collateral	\$ 795,873,127	

¹Weighted average days to maturity or next reset date.

TABLE 16

Derivative Instruments as of June 30, 2020

Investment Derivatives	Net Appreciation/ (Depreciation) in		Classification	Fair Value	Notional Value ²
	Fair Value of Investments ^{1,3}				
Commodity Futures Long	\$	2,072,995	Public Equity	\$ -	\$ 43,921,236
Credit Default Swaps Bought		1,253,746	Public Equity	3,101,902	38,930,000
Credit Default Swaps Written		(15,863,595)	Public Equity	1,132,058	309,970,252
Equity Options Bought		(30)	Public Equity	-	-
Equity Options Written		(22,247)	Public Equity	(22,511)	(370,000)
Fixed Income Futures Long		97,860,226	Public Equity	-	2,693,469,929
Fixed Income Futures Short		(35,048,248)	Public Equity	-	(395,601,541)
Fixed Income Options Bought		(2,039,078)	Public Equity	7,860,123	407,954,713
Fixed Income Options Written		6,443,875	Public Equity	(12,740,104)	(1,889,887,244)
Foreign Currency Options Bought		(393,479)	Public Equity	-	-
Foreign Currency Options Written		136,566	Public Equity	(385,886)	(6,630,000)
Futures Options Bought		(2,081,015)	Public Equity	301,859	1,506,000
Futures Options Written		8,200,645	Public Equity	(347,937)	(732,500)
Foreign Exchange Forwards		37,694,577	Receivables/Payables	(17,437,130)	11,291,080,118
Index Futures Long		(51,994,975)	Public Equity	-	20,668,572
Index Futures Short		610,532	Public Equity	-	(18,570)
Pay Fixed Interest Rate Swaps		(60,693,200)	Public Equity	(35,537,698)	1,060,238,112
Receive Fixed Interest Rate Swaps		37,965,926	Public Equity	29,234,643	1,249,718,213
Rights		(768,079)	Public Equity	1,402,481	2,279,018
Total Return Swaps Bond		6,092,150	Public Equity	121,793	21,387,065
Total Return Swaps Equity		225,458	Public Equity	(149,214)	(57,926,743)
Warrants		(48,070)	Public Equity	3,063,681	808,143
Total	\$	29,604,680		\$ (20,401,940)	\$ 14,790,764,773

¹ Negative values (in brackets) refer to losses.

² Notional may be a dollar amount or size of underlying for futures, rights, warrants, and options. Negative values refer to short positions.

³ Excludes futures margin payments.

Counterparty Credit Risk

Table 17 on page 61 presents a summary of counterparty credit ratings relating to derivative instruments in asset positions, as of June 30, 2020.

Interest Rate Risk

As of June 30, 2020, OPERF is exposed to interest rate risk on its various swap arrangements and options. Table 18 on page 61 presents a segmented time schedule of those instruments, and Table 19, on pages 62 through 65, shows a schedule of derivative instruments that were highly sensitive to interest rate changes.

Foreign Currency Risk

OPFERF is exposed to foreign currency risk on its derivative instruments. Table 20 on page 66 presents a summary of derivative instruments subject to foreign currency risk as of June 30, 2020.

Note 5 - Capital Assets Used in Plan Operations

Capital construction of PERS' headquarters in Tigard, Oregon, was completed May 31, 1997. The land, building, and improvements are recorded at cost. The depreciation of the building and improvements is computed on the straight-line method over the estimated useful life of 40 years.

Data processing hardware, furniture, and equipment are recorded at cost. These are items that are not consumed in the normal course of operations, have a useful life of more than one year, and are valued at \$5,000 or more.

Depreciation is computed using the straight-line method over the assets' estimated useful lives. Useful lives range from 3 to 10 years.

Data processing software generated internally as part of the Oregon Retirement Information On-line Network (ORION) project is recorded at cost. The useful life is amortized using the straight-line

TABLE 17

Derivative Instruments Subject to Counterparty Credit Risk as of June 30, 2020					
Counterparty Name	Percentage of Net Exposure	S&P Rating	Fitch Rating	Moody's Rating	
Toronto Dominion Bank	15.52%	AA-	AA-	Aa3	
JP Morgan CME	12.42%	A-	AA-	A2	
UBS AG	11.44%	A+	AA-	Aa3	
JP Morgan Chase Bank N.A. London	11.19%	A+	AA	Aa2	
State Street Bank London	10.61%	A	AA-	A1	
Westpac Banking Corporation	8.68%	AA-	A+	Aa3	
Barclays Bank CME	4.39%	A	A+	A1	
Citibank N.A.	3.81%	A+	A+	Aa3	
NatWest Markets PLC	2.74%	A-	A+	Baa2	
Citigroup Global Markets INC	2.42%	BBB+	A	A3	
JP Morgan Chase Bank, N.A.	2.07%	A+	AA	Aa2	
Bank of New York	1.89%	A	AA-	A1	
JP Morgan LCH	1.62%	A-	AA-	A2	
State Street Bank and Trust Company	1.42%	AA-	AA	Aa3	
Citigroup Global Markets CME	1.02%	BBB+	A	A3	
Goldman Sachs Bank USA	1.00%	BBB+	A	A3	
Credit Agricole CIB	0.97%	A+	A+	Aa3	
Goldman Sachs International	0.86%	A+	A+	A1	
Australia and New Zealand Banking Group	0.69%	AA-	A+	Aa3	
Goldman Sachs ICE	0.63%	BBB+	A	A3	
JP Morgan ICE	0.62%	A-	AA-	A2	
National Australia Bank Limited	0.59%	AA-	A+	Aa3	
Société Générale	0.52%	A	A-	A1	
Credit Suisse FOB ICE	0.50%	A+	A	A1	
Citigroup Global Markets LCH	0.45%	BBB+	A	A3	
Barclays Bank PLC Wholesale	0.42%	A	A+	A1	
Morgan Stanley ICE	0.32%	BBB+	A	A3	
Barclays Bank ICE	0.31%	A	A+	A1	
HSBC Bank PLC	0.29%	A-	A+	A2	
BNP Paribas SA	0.15%	A+	A+	Aa3	
Goldman Sachs & Co. LLC	0.09%	BBB+	A	A3	
Morgan Stanley and Co. International PLC	0.09%	BBB+	A	A3	
Morgan Stanley Co. Incorporated	0.09%	BBB+	A	A3	
J P Morgan Securities Inc	0.04%	A-	AA-	A2	
Morgan Stanley Capital Services Inc	0.04%	BBB+	A	A3	
Morgan Stanley and Co. International	0.03%	A+	NR	A1	
Credit Suisse International	0.02%	A+	A	A1	
Deutsche Bank AG	0.02%	BBB+	BBB	A3	
Bank of America, N.A.	0.01%	A+	AA-	Aa2	
Standard Chartered Bank	0.01%	A	A+	A1	
	<u>100.00%</u>				

TABLE 18

Derivative Instruments Subject to Interest Rate Risk as of June 30, 2020						
Investment Type	Fair Value	Investment Maturities (in years)				
		Less Than 1	1 - 5	6 - 10	More than 10	
Credit Default Swaps Bought	\$ 3,101,902	\$ -	\$ -	\$ -	\$ 3,101,902	
Credit Default Swaps Written	1,132,058	-	3,339,494	-	(2,207,436)	
Fixed Income Options Bought	7,860,123	2,047,415	3,844,076	1,702,830	265,802	
Fixed Income Options Written	(12,740,104)	(9,836,847)	(2,004,531)	(898,726)	-	
Pay Fixed Interest Rate Swaps	(35,537,698)	(1,474,948)	(16,682,054)	(9,176,916)	(8,203,780)	
Receive Fixed Interest Rate Swaps	29,234,643	80,509	17,763,904	9,255,452	2,134,778	
Total Return Swaps Bond	121,793	121,793	-	-	-	
Total Return Swaps Equity	(149,214)	(149,214)	-	-	-	
Total	\$ (6,976,497)	\$ (9,211,292)	\$ 6,260,889	\$ 882,640	\$ (4,908,734)	

TABLE 19

Derivative Instruments Highly Sensitive to Interest Rate Changes as of June 30, 2020

Investment Type	Reference Rate	Fair Value	Notional Value
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.75000%	\$ (5,299,913)	\$ 11,385,000
Pay Fixed Interest Rate Swaps	Receive Variable 12-month GBP UKRPI, Pay Fixed 3.41250%	(550,729)	11,546,688
Pay Fixed Interest Rate Swaps	Receive Variable 12-month GBP UKRPI, Pay Fixed 3.45000%	(575,533)	11,546,688
Pay Fixed Interest Rate Swaps	Receive Variable 12-month US CPI, Pay Fixed 2.24900%	(1,627,298)	17,815,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.57200%	(1,869,357)	17,930,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month JPY LIBOR, Pay Fixed 0.33600%	(9,840)	342,402
Pay Fixed Interest Rate Swaps	Receive Variable 6-month JPY LIBOR, Pay Fixed 0.71500%	(17,309)	227,464
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.35900%	(1,224,155)	15,480,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.35800%	(1,742,876)	22,050,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.35000%	(834,296)	8,540,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.87000%	(582,535)	34,670,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.77000%	(449,838)	31,370,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.37000%	(898,235)	2,260,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month JPY LIBOR, Pay Fixed 0.29500%	(4,541)	324,883
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.73200%	(674,968)	46,340,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.37800%	(101,175)	880,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.77050%	(878,226)	57,540,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 0.29000%	(34,558)	14,039,375
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 0.30000%	(49,668)	22,013,741
Pay Fixed Interest Rate Swaps	Receive Variable 6-month JPY LIBOR, Pay Fixed 0.16650%	2,433	225,611
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.70900%	(48,443)	830,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.66650%	(35,052)	640,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.64500%	(116,588)	1,880,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month JPY LIBOR, Pay Fixed 0.20050%	3,183	113,732
Pay Fixed Interest Rate Swaps	Receive Variable 3-month SEK LIBOR, Pay Fixed 0.16500%	-	64,749,669
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.55000%	(5,213,244)	75,276,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.56000%	(296,848)	31,300,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.56000%	(53,294)	5,600,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.097500%	(98,015)	1,120,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.76900%	(432,751)	4,025,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.99800%	(99,251)	1,050,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(15,236)	1,864,429
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.11050%	(220,038)	2,090,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.13650%	(209,350)	2,300,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.45500%	(58,125)	2,340,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(39,380)	8,356,236
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.76350%	(1,069,179)	9,910,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	13,634	8,524,709
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(4,012)	432,413
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(30,465)	4,413,980
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(31,048)	4,413,980
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.76000%	(196,725)	1,775,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 0.18500%	(139,107)	3,683,932
Pay Fixed Interest Rate Swaps	Receive Variable 3-month CAD CDOR, Pay Fixed 2.21000%	(557,679)	2,580,029
Pay Fixed Interest Rate Swaps	Receive Variable 6-month JPY LIBOR, Pay Fixed 0.37140%	(644)	177,133
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.63050%	(186,255)	1,940,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.31250%	(255,817)	3,880,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.31500%	(402,181)	6,120,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.45500%	(1,258,631)	34,210,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.11000%	(55,226)	1,755,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.82000%	(86,732)	3,600,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.66250%	(3,798)	990,000

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Investment Type	Reference Rate	Fair Value	Notional Value
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.90000%	36,568	6,780,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.79177%	120,012	3,442,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.81801%	95,971	3,459,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	1,168	6,738,900
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(4,474)	4,582,452
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(2,956)	4,571,221
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(11,774)	7,435,253
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(24,356)	8,378,699
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(79,771)	17,408,825
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(81,744)	17,453,751
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 1.0000%	(83,942)	17,453,751
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.62550%	(78,509)	5,340,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.87750%	(1,152,104)	24,370,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.93750%	(752,734)	15,550,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.65200%	(4,320)	710,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.70000%	(21,544)	3,750,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.76000%	21,662	5,070,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.76500%	19,705	5,190,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.77000%	11,641	3,470,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 3.05750%	(4,025,787)	76,650,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.92000%	(954)	2,345,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.39600%	(31,825)	8,560,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.60000%	(16,535)	6,040,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.64800%	(3,213)	2,390,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.76100%	(19,359)	4,323,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.00000%	(581,536)	39,409,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.67000%	(6,175)	2,130,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.24763%	(6,516)	11,640,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.08950%	(27,996)	860,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.13550%	(38,702)	860,000
Pay Fixed Interest Rate Swaps	Receive Variable 6-month JPY LIBOR, Pay Variable 6-month LIBOR	-	53,029,615
Pay Fixed Interest Rate Swaps	Receive Variable 6-month Euro EURIBOR, Pay Fixed 0.05500%	(25,007)	2,549,551
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.68000%	(9,958)	3,850,000
Pay Fixed Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 0.26000%	(138,665)	62,100,000
Pay Fixed Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.65200%	4,945	3,880,000
Subtotal - Pay Fixed Interest Rate Swaps		(35,537,698)	1,060,238,112
Receive Fixed Interest Rate Swaps	Receive Fixed 3.08000%, Pay Variable 3-month LIBOR	1,077,206	1,910,000
Receive Fixed Interest Rate Swaps	Receive Fixed 3.48500%, Pay Variable 12-month GBP UKRPI	610,626	11,546,688
Receive Fixed Interest Rate Swaps	Receive Fixed 3.50500%, Pay Variable 12-month GBP UKRPI	641,906	11,546,688
Receive Fixed Interest Rate Swaps	Receive Fixed 2.16400%, Pay Variable 12-month USCPI	896,974	17,815,000
Receive Fixed Interest Rate Swaps	Receive Fixed 2.52600%, Pay Variable 3-month LIBOR	5,051,803	138,540,000
Receive Fixed Interest Rate Swaps	Receive Fixed 2.25000%, Pay Variable 3-month LIBOR	1,154,078	31,810,000
Receive Fixed Interest Rate Swaps	Receive Fixed 2.44650%, Pay Variable 3-month LIBOR	211,862	1,240,000
Receive Fixed Interest Rate Swaps	Receive Fixed 2.10150%, Pay Variable 3-month LIBOR	84,268	620,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.71300%, Pay Variable 3-month LIBOR	860,535	56,630,000
Receive Fixed Interest Rate Swaps	Receive Fixed 7.02400%, Pay Variable BRL BRCDI	147,230	3,460,334
Receive Fixed Interest Rate Swaps	Receive Fixed 7.04400%, Pay Variable BRL BRCDI	123,517	2,841,116
Receive Fixed Interest Rate Swaps	Receive Fixed 7.02400%, Pay Variable BRL BRCDI	174,352	4,097,763
Receive Fixed Interest Rate Swaps	Receive Fixed 7.02400%, Pay Variable BRL BRCDI	186,610	4,385,882
Receive Fixed Interest Rate Swaps	Receive Fixed 0.29850%, Pay Variable 6-month Euro EURIBOR	1,414	617,732
Receive Fixed Interest Rate Swaps	Receive Fixed 7.45000%, Pay Variable 1-month MXN TIII	1,660,649	11,671,788
Receive Fixed Interest Rate Swaps	Receive Fixed 7.44000%, Pay Variable 1-month MXN TIII	1,719,546	12,150,863
Receive Fixed Interest Rate Swaps	Receive Fixed 0.45350%, Pay Variable 6-month Euro EURIBOR	(2,340)	2,706,792
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(9,219)	2,740,486
Receive Fixed Interest Rate Swaps	Receive Fixed 1.52800%, Pay Variable 3-month LIBOR	80,509	16,950,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.62250%, Pay Variable 3-month CAD CDOR	1,262,345	100,954,479

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Investment Type	Reference Rate	Fair Value	Notional Value
Receive Fixed Interest Rate Swaps	Receive Fixed 0.17700%, Pay Variable 3-month SEK LIBOR	(566,797)	64,749,669
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(1,061)	2,212,605
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(4,902)	2,650,634
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(1,661)	1,954,281
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(1,301)	2,235,068
Receive Fixed Interest Rate Swaps	Receive Fixed 3.20750%, Pay Variable 3-month LIBOR	445,237	3,530,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.92850%, Pay Variable 3-month LIBOR	36,594	155,000
Receive Fixed Interest Rate Swaps	Receive Fixed 3.09000%, Pay Variable 3-month LIBOR	3,425,879	27,740,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month JPY LIBOR	252,236	53,029,615
Receive Fixed Interest Rate Swaps	Receive Fixed 1.63000%, Pay Variable 3-month LIBOR	361,122	3,785,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.79700%, Pay Variable 3-month LIBOR	215,849	1,940,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.72550%, Pay Variable 3-month LIBOR	202,765	1,940,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.76000%, Pay Variable 3-month LIBOR	110,700	1,040,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.95000%, Pay Variable 3-month CAD CDOR	664,988	12,121,145
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	23,103	17,880,548
Receive Fixed Interest Rate Swaps	Receive Fixed 1.75000%, Pay Variable 3-month LIBOR	181,044	1,695,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.69400%, Pay Variable 3-month LIBOR	197,098	1,940,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.58000%, Pay Variable 3-month LIBOR	177,283	1,950,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.57000%, Pay Variable 3-month LIBOR	204,908	2,250,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.60550%, Pay Variable 3-month LIBOR	180,083	1,930,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.80500%, Pay Variable 3-month LIBOR	235,631	975,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.82800%, Pay Variable 3-month LIBOR	187,049	760,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	2,703	1,830,734
Receive Fixed Interest Rate Swaps	Receive Fixed 1.43200%, Pay Variable 3-month LIBOR	150,045	1,940,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.31300%, Pay Variable 3-month LIBOR	112,838	1,710,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.31900%, Pay Variable 3-month LIBOR	128,461	1,930,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.09500%, Pay Variable 3-month LIBOR	332,829	18,740,000
Receive Fixed Interest Rate Swaps	Receive Fixed 2.51500%, Pay Variable 3-month LIBOR	1,457,279	14,160,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.05800%, Pay Variable 3-month LIBOR	79,830	4,690,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.23900%, Pay Variable 3-month LIBOR	114,538	1,940,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.98750%, Pay Variable 3-month LIBOR	73,218	4,690,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.97900%, Pay Variable 3-month LIBOR	42,310	2,740,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(1,245)	9,277,219
Receive Fixed Interest Rate Swaps	Receive Fixed 0.88150%, Pay Variable 3-month LIBOR	125,877	9,330,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.87800%, Pay Variable 3-month LIBOR	125,895	9,380,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.87250%, Pay Variable 3-month LIBOR	76,142	5,720,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.73300%, Pay Variable 3-month LIBOR	64,079	6,230,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.72950%, Pay Variable 3-month LIBOR	190,006	18,600,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(6,292)	4,649,841
Receive Fixed Interest Rate Swaps	Receive Fixed 0.66800%, Pay Variable 3-month LIBOR	42,042	4,685,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.66200%, Pay Variable 3-month LIBOR	10,492	1,185,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.69200%, Pay Variable 3-month LIBOR	44,290	4,685,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.02000%, Pay Variable 3-month LIBOR	95,544	2,630,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(12,933)	9,265,988
Receive Fixed Interest Rate Swaps	Receive Fixed 0.67850%, Pay Variable 3-month LIBOR	32,261	4,300,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.25000%, Pay Variable 3-month LIBOR	54,742	613,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(5,189)	3,998,414
Receive Fixed Interest Rate Swaps	Receive Fixed 0.76000%, Pay Variable 3-month LIBOR	39,133	1,855,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(10,199)	6,323,335
Receive Fixed Interest Rate Swaps	Receive Fixed 0.50050%, Pay Variable 3-month LIBOR	(19,892)	1,700,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.50750%, Pay Variable 3-month LIBOR	27,238	4,710,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.69300%, Pay Variable 3-month LIBOR	(21,607)	350,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.10250%, Pay Variable 3-month LIBOR	68,492	1,375,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.70000%, Pay Variable 3-month LIBOR	857,406	46,070,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.60000%, Pay Variable 3-month LIBOR	505,939	79,088,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.77000%, Pay Variable 3-month LIBOR	1,295,282	59,270,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.70550%, Pay Variable 3-month LIBOR	18,408	2,340,000

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Investment Type	Reference Rate	Fair Value	Notional Value
Receive Fixed Interest Rate Swaps	Receive Fixed 0.38250%, Pay Variable 3-month LIBOR	18,071	5,420,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.42800%, Pay Variable 3-month LIBOR	12,995	3,060,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.37000%, Pay Variable 3-month LIBOR	4,877	1,580,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.35550%, Pay Variable 3-month LIBOR	11,607	4,150,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.34450%, Pay Variable 3-month LIBOR	35,975	13,960,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.61900%, Pay Variable 3-month LIBOR	(2,755)	2,060,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	17,283	9,962,341
Receive Fixed Interest Rate Swaps	Receive Fixed 0.35250%, Pay Variable 3-month LIBOR	23,230	8,450,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	8,255	6,750,132
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	9,812	6,559,196
Receive Fixed Interest Rate Swaps	Receive Fixed 0.63900%, Pay Variable 3-month LIBOR	2,983	2,770,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.81950%, Pay Variable 3-month LIBOR	50,949	2,790,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	16,719	8,592,098
Receive Fixed Interest Rate Swaps	Receive Fixed 0.38000%, Pay Variable 3-month LIBOR	234,954	52,520,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	14,740	8,187,764
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	13,877	7,457,716
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	16,977	8,322,542
Receive Fixed Interest Rate Swaps	Receive Fixed 0.65350%, Pay Variable 3-month LIBOR	3,206	1,600,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.29700%, Pay Variable 3-month LIBOR	7,125	5,030,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.59300%, Pay Variable 3-month LIBOR	(39)	10,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	5,747	4,705,999
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	6,241	4,694,767
Receive Fixed Interest Rate Swaps	Receive Fixed 0.29650%, Pay Variable 3-month LIBOR	10,524	6,040,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	2,361	4,447,674
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	1,321	1,617,336
Receive Fixed Interest Rate Swaps	Receive Fixed 0.79000%, Pay Variable 3-month LIBOR	(6,026)	4,060,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.29450%, Pay Variable 3-month LIBOR	10,460	7,480,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.35800%, Pay Variable 3-month LIBOR	8,645	4,690,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.66500%, Pay Variable 3-month LIBOR	7,110	2,350,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.30701%, Pay Variable 3-month LIBOR	10,705	5,790,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.29400%, Pay Variable 3-month LIBOR	9,198	5,790,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.70300%, Pay Variable 3-month LIBOR	6,912	1,040,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.66400%, Pay Variable 3-month LIBOR	999	350,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.65200%, Pay Variable 3-month LIBOR	23,068	4,740,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.67950%, Pay Variable 3-month LIBOR	29,554	4,740,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.70225%, Pay Variable 3-month LIBOR	6,864	1,050,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	26,726	7,839,587
Receive Fixed Interest Rate Swaps	Receive Fixed 0.68163%, Pay Variable 3-month LIBOR	24,238	4,770,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(325)	3,740,090
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(1,118)	7,693,578
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	1,194	3,717,627
Receive Fixed Interest Rate Swaps	Receive Fixed 0.63650%, Pay Variable 3-month LIBOR	(2)	750,000
Receive Fixed Interest Rate Swaps	Receive Fixed 0.63900%, Pay Variable 3-month LIBOR	326	1,600,000
Receive Fixed Interest Rate Swaps	Receive Fixed 1.00000%, Pay Variable 6-month Euro EURIBOR	(600)	2,089,059
Subtotal - Receive Fixed Interest Rate Swaps		29,234,643	1,249,718,213
Total Interest Rate Swaps		\$ (6,303,055)	\$ 2,309,956,325

TABLE 20

Derivative Instruments Subject to Foreign Currency Risk as of June 30, 2020					
Currency Name	Currency Forward Contracts		Options/Rights/ Warrants	Swaps	Total Exposure
	Net Receivables	Net Payables			
Australian dollar	\$ 9,508,321	\$ (9,210,980)	\$ -	\$ 5,805	\$ 303,146
Brazilian real	(2,920,219)	1,332,346	2,274	631,709	(953,890)
Canadian dollar	942,152	(4,387,222)	88,612	1,398,453	(1,958,005)
Chilean peso	(19,377)	821,809	-	-	802,432
Colombian peso	(63,969)	-	-	-	(63,969)
Czech koruna	(4,161)	(37,158)	-	-	(41,319)
Danish krone	(34,847)	(356,678)	-	-	(391,525)
Egyptian pound	110,857	(80,557)	-	-	30,300
Euro	5,221,929	(12,272,403)	226,186	457,759	(6,366,529)
Hong Kong dollar	45,466	(166,248)	1,517	(9,307)	(128,572)
Hungarian forint	(333,623)	149,494	-	-	(184,129)
Indian rupee	784,286	(21,484)	-	-	762,802
Indonesian rupiah	(67,164)	11,966	-	-	(55,198)
Japanese yen	858,731	(3,610,231)	131,936	(102,803)	(2,722,367)
Malaysian ringgit	(47,474)	166,495	-	-	119,021
Mexican peso	389,296	1,942,994	-	3,380,195	5,712,485
Moroccan dirham	(7,453)	-	-	-	(7,453)
New Israeli sheqel	275,814	(5,229,804)	-	-	(4,953,990)
New Taiwan dollar	(20,132)	(1,569,875)	-	-	(1,590,007)
New Zealand dollar	12,202,986	(12,380,047)	-	-	(177,061)
Norwegian krone	(1,057,770)	(5,651,716)	-	-	(6,709,486)
Peruvian nuevo sol	-	1,985	-	-	1,985
Philippine peso	319,088	(8,961)	-	-	310,127
Polish zloty	526	113,039	-	-	113,565
Pound sterling	(6,428,489)	10,467,148	1,583,568	185,974	5,808,201
Romanian leu	143,122	-	-	-	143,122
Russian ruble	(510,826)	2,034,676	-	-	1,523,850
Saudi riyal	614	268	-	-	882
Singapore dollar	297,058	(659,244)	-	-	(362,186)
South African rand	(561,029)	980,577	-	-	419,548
South Korean won	154,785	(339,299)	2,113	-	(182,401)
Swedish krona	10,444,830	(5,374,559)	-	(539,506)	4,530,765
Swiss franc	4,956,899	(8,889,434)	-	(5,784)	(3,938,319)
Thailand baht	116,959	(6,482)	-	-	110,477
Tunisian dinar	(354)	-	18	-	(336)
Turkish lira	(270,128)	38,479	-	-	(231,649)
United Arab Emirates dirham	762	(2,933)	-	-	(2,171)
Yuan renminbi	214,857	17,528	-	-	232,385
Yuan renminbi - offshore	101,422	(4,364)	-	-	97,058
Total Subject to Foreign Currency Risk	34,743,745	(52,180,875)	2,036,224	5,402,495	(9,998,411)
U.S. dollar	-	-	(2,904,518)	(7,499,011)	(10,403,529)
Total	\$ 34,743,745	\$ (52,180,875)	\$ (868,294)	\$ (2,096,516)	\$ (20,401,940)

Notes to the Financial Statements

method over 20 years. See Table 21.

Note 6 - Reserves and Designations

In accordance with the following plan requirements, various funds have been established to account for reserves or designations held for future and current payments:

Chapter 238 Defined Benefit Plan

Table 22 on the next page details the amounts comprising the total Net Position Restricted for Pension Benefits.

A. Member Reserve

The Member Reserve represents member

contributions made through December 31, 2003, and earnings allocations less refunds and amounts transferred to reserves for retirements and disabilities.

B. Employer Contribution Designation

The Employer Contribution Designation represents employer contributions and earnings allocations less amounts transferred to reserves for retirements and disabilities. Employer side accounts consist of lump sum payments deposited into the Oregon Public Employees Retirement Fund, less amounts amortized as credits to employer contributions, plus investment earnings allocated in accordance with OAR 459-007-0530. Final earnings crediting is done annually on a calendar year basis.

TABLE 21

<u>Schedule of Changes in Capital Assets for the fiscal year ended June 30, 2020</u>				
	<u>Beginning of Year</u>	<u>Increases</u>	<u>Decreases</u>	<u>End of Year</u>
Capital assets, not being depreciated or amortized:				
Land	\$ 944,463	\$ -	\$ -	\$ 944,463
Total capital assets, not being depreciated or amortized	944,463	-	-	944,463
Capital assets, being depreciated or amortized:				
Furniture and Equipment	1,252,013	87,636	(5,748)	1,333,901
Data Processing Software	40,395,201	194,372	-	40,589,573
Data Processing Hardware	2,016,498	216,990	(227,514)	2,005,974
Building and Building Improvement	8,691,997	-	-	8,691,997
Total capital assets being depreciated or amortized	52,355,709	498,997	(233,261)	52,621,445
Less accumulated depreciation or amortization for:				
Furniture and Equipment	(1,194,187)	(76,508)	-	(1,270,695)
Data Processing Software	(21,065,475)	(1,871,485)	-	(22,936,960)
Data Processing Hardware	(1,528,914)	(147,328)	19,438	(1,656,804)
Building and Building Improvement	(4,656,246)	(238,150)	-	(4,894,396)
Total accumulated depreciation or amortization	(28,444,822)	(2,333,471)	19,438	(30,758,856)
Total capital assets, being depreciated or amortized, net	23,910,887	(1,834,474)	(213,823)	21,862,590
Capital assets, net	\$ 24,855,350	\$ (1,834,474)	\$ (213,823)	\$ 22,807,053
<u>Depreciation expense</u>		<u>Amount</u>		
Defined Benefit Pension Plan Depreciation		\$ 2,306,695		
Oregon Public Service Retirement Plan				
Individual Account Program Depreciation		26,776		
Total depreciation expense		\$ 2,333,471		

PERS estimates that the approximate value of employer side accounts was \$5,126.2 million as of June 30, 2020. Side account balances are included in the Employer Contribution Designation reserve.

C. Benefit Reserve

The Benefit Reserve is the amount set aside to pay future benefits. It includes funds transferred from the individual member and employer accounts and earnings allocations less amounts paid for retirements and disabilities.

D. Tier One Rate Guarantee Reserve

The Tier One Rate Guarantee Reserve may be credited with investment earnings in excess of the required Tier One assumed earnings rate guarantee. ORS 238.255(1) requires regular accounts for Tier One members to be credited at the assumed rate of return on investments adopted by the Board for use in actuarial valuations.

The regular account for Tier One members and alternate payees of those members cannot be credited with earnings in excess of the assumed interest rate until: (a) the reserve is fully funded with amounts determined by the Board, after consultation with the actuary employed by the Board, necessary to ensure a zero balance in the reserve when all Tier One members and alternate payees of those members have retired; and (b) the reserve has been fully funded as described in paragraph (a) of this subsection in each of the three immediately preceding calendar years.

E. Contingency Reserve

The Contingency Reserve is to be maintained and used by the Board to prevent any deficit of

moneys available for the payment of retirement allowances caused by interest fluctuations, changes in mortality rates, or other unforeseen contingencies.

F. Employer Contingency Reserve

The Employer Contingency Reserve was established by the Board to prevent any deficit in the fund caused by insolvency of an employer. Earnings on employer contributions fund this reserve.

G. Unallocated Earnings Designation

The Unallocated Earnings Designation represents January through June investment earnings or losses less administrative expenses, which will be credited on a calendar year basis. Crediting takes place in March of the following year after employer annual reports have been reconciled and contributions have been posted to individual member and employer accounts.

H. OPSRP Defined Benefit Program

OPSRP Defined Benefit Program reserve represents the program's accumulation of employer contributions and investment earnings less benefits and administrative expenses.

Other Postemployment Benefits Plans

I. Retirement Health Insurance Account (RHIA)

The RHIA plan fiduciary net position balance represents the program's accumulation of employer contributions and investment earnings less premium subsidies and administrative expenses. As of June 30, 2020, the balance of this account was \$610.7 million. The Internal Revenue Code limits employer contributions to a 401(h) account to a maximum of 25 percent of the employer's normal cost contributions to the pension plan.

TABLE 22

Reserves and Designations	Defined Benefit Pension Plan
Chapter 238 Defined Benefit Plan and Employee Benefit Plan	
Member Reserve	\$ 2,441,178,128
Employer Contribution Designation	23,263,651,418
Benefit Reserve	23,687,887,887
Tier One Rate Guarantee Reserve	448,776,254
Contingency Reserve	47,500,000
Employer Contingency Reserve	2,500,000
Unallocated Earnings Designation	11,890,918,168
OPSRP Defined Benefit Program	6,536,885,138
Net Position Restricted for Pension Benefits	\$ 68,319,296,993

J. Retiree Health Insurance Premium Account (RHIPA)

The RHIPA plan fiduciary net position balance represents the program's accumulation of employer contributions and investment earnings less premium subsidies and administrative expenses. As of June 30, 2020, the balance of this account was \$54.3 million. The Internal Revenue Code limits employer contributions to a 401(h) account to a maximum of 25 percent of the employer's normal cost contributions to the pension plan.

Other Plans

K. Individual Account Program (IAP)

The IAP fiduciary net position balance represents member contributions and investment earnings less benefits paid and administrative expenses. As of June 30, 2020, the balance of this account was \$10,242.4 million. Member contributions are described in Note 2.D.a. The Oregon Legislature created the IAP in 2003 to provide an individual account-based defined contribution retirement benefit for new workers hired on or after August 29, 2003, and for Tier One/Tier Two members active on and after January 1, 2004.

L. Deferred Compensation Plan

The Deferred Compensation plan fiduciary net position balance represents the program's accumulation of plan member contributions and investment earnings less benefits paid and administrative expenses. As of June 30, 2020, the balance of this account was \$2,178.8 million. The Internal Revenue Code (IRC) limits plan member contributions to an IRC 457 account to a maximum of \$19,500 (calendar year 2019), with optional catch-up provisions available to members over age 50.

Enterprise Fund

M. Standard Retiree Health Insurance Account (SRHIA)

The SRHIA net position balance represents the program's accumulation of retiree insurance premiums, reinsurance reimbursements, and interest earnings less insurance claims and administrative expenses. As of June 30, 2020, the balance of this account was \$98.9 million.

Note 7 - Litigation

PERS is a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, in the opinion of the System's legal counsel, the resolution of these matters will not have a material adverse effect on the financial condition of the System.

Note 8 - Standard Retiree Health Insurance Account

A. Basis for Estimated Liabilities

The Standard Retiree Health Insurance Account (SRHIA) establishes claim liabilities based on estimates of the ultimate costs of claims (including future claim adjustment expenses) that have been reported but not settled and of claims that have been incurred but not reported. Table 23 below shows the changes in the aggregated estimated claims liabilities for the fiscal years ended June 30, 2020, and 2019.

The estimated claims liability was calculated by Butler Partners & Associates, PERS' health insurance consultant, at June 30, 2020, using a variety of mathematical and statistical techniques and adjusted for actual experience to produce current estimates that reflect recent settlements, claim frequency, and other economic and social factors. Adjustments to claims liabilities are charged or credited to expense in the periods in which they are made. The estimated claims liability of \$630,000 is carried at its face amount, and no interest discount is assumed. The IBNR represents an estimate for claims that have been incurred prior to June 30, 2020, but have not been reported to the SRHIA.

TABLE 23

<u>Changes in the Aggregated Estimated Claims Liabilities of SRHIA</u>		
<u>For the Fiscal Year Ended June 30,</u>		
	<u>2020</u>	<u>2019</u>
Total Estimated Claims at Beginning of Fiscal Year	\$ 865,000	\$ 9,200,000
<u>Insured Claims and Claim Adjustment Expenses</u>		
Provision for Insured Events		
of Current Fiscal Year	11,487,321	69,661,876
Increase in Provision for		
Insured Events of Prior Years	<u>6,779,488</u>	<u>13,577,690</u>
Total Incurred Claims and		
Claim Adjustment Expenses	<u>18,266,809</u>	<u>83,239,566</u>
<u>Payments</u>		
Claims and Claim Adjustment Expenses		
Attributable to Insured Events of		
Current Fiscal Year	11,759,552	77,981,591
Claims and Claim Adjustment Expenses		
Attributable to Insured Events of		
Prior Fiscal Year	<u>6,742,257</u>	<u>13,592,975</u>
Total Payments	<u>18,501,809</u>	<u>91,574,566</u>
Total Estimated Claims at End of Fiscal Year	<u>\$ 630,000</u>	<u>\$ 865,000</u>

Note 9 - Employers' Net Pension Liability

Actuarial Cost Method and Assumptions

The components of the net pension liability of the defined benefit pension plan are shown in Table 24 on page 71. The actuarial valuation calculations are based on the benefits provided under the terms of the plan in effect at the time of each valuation and on the pattern of sharing of costs between the employer and plan members. The December 31, 2018, Actuarial Valuation was used to develop the GASB 67 financial reporting results for the Defined Benefit Pension Plan as of June 30, 2020, using

standard roll forward procedures. Key actuarial methods and assumptions used to measure the total pension liability are illustrated in Table 25 on page 71.

Discount Rate

The discount rate used to measure the total pension liability was 7.20 percent for the Defined Benefit Pension Plan. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments for the Defined Benefit Pension Plan was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity Analysis

Table 26 on page 71 presents the net pension liability calculated using the discount rate of 7.20 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is one percent lower (6.20 percent) or one percent higher (8.20 percent) than the current rate. The results of actuarial valuations used for rate setting and the related Schedules of Funding Progress may be found in the Actuarial Section beginning on page 106.

Long-Term Expected Rate of Return

To develop an analytical basis for the selection of the long-term expected rate of return assumption, in May 2019 the PERS Board reviewed long-term assumptions developed by both Milliman's capital market assumptions team and the Oregon Investment Council's (OIC) investment advisors. Table 31 on page 74 shows Milliman's assumptions for each of the asset classes in which the plan was invested at that time based on the OIC long-term target asset allocation. The OIC's description of each asset class was used to map the target allocation to the asset classes shown on page 74. Each asset class assumption is based on a consistent set of underlying assumptions, and includes adjustment for the inflation assumption. These assumptions are not based on historical returns, but instead are based on a forward-looking capital market economic model.

Depletion Date Projection

GASB 67 generally requires that a blended discount rate be used to measure the Total Pension Liability (the Actuarial Accrued Liability calculated using the Individual Entry Age Normal Cost Method). The long-term expected return on plan

investments may be used to discount liabilities to the extent that the plan's Fiduciary Net Position (fair value of investment assets, all others at cost) is projected to cover benefit payments and administrative expenses. A 20-year high-quality (AA/Aa or higher) municipal bond rate must be used for periods where the Fiduciary Net Position is not projected to cover benefit payments and administrative expenses. Determining the discount rate under GASB 67 will often require that the actuary perform complex projections of future benefit payments and asset values. GASB 67 (paragraph 43) does allow for alternative evaluations of projected solvency, if such evaluation can reliably be made. GASB does not contemplate a specific method for making an alternative evaluation of sufficiency; it is left to professional judgment.

The following circumstances an alternative evaluation of sufficiency for Oregon PERS:

- PERS has a formal written policy to calculate an Actuarially Determined Contribution (ADC), which is articulated in the actuarial valuation report.
- The ADC is based on a closed, layered amortization period, which means that payment of the full ADC each year will bring the plan to a 100 percent funded position by the end of the amortization period if future experience follows assumption.
- GASB 67 specifies that the projections regarding future solvency assume that plan assets earn the assumed rate of return and there are no future changes in the plan provisions or actuarial methods and assumptions, which means that the projections would not reflect any adverse future experience that might impact the plan's funded position.

Based on these circumstances, it is our third-party actuary's opinion that the detailed depletion date projections outlined in GASB 67 would clearly indicate that the Fiduciary Net Position is always projected to be sufficient to cover benefit payments and administrative expenses.

Note 10 - Employers' Net OPEB Liability/ (Asset) Actuarial Cost Method and Assumptions

The components of the Net OPEB liability (asset) for the OPEB plans are shown in Table 27 on page 73. The actuarial valuation calculations are based on the benefits provided under the terms of the plan in effect at the time of each valuation and on the pattern of sharing of costs between the employer and plan members as of the December 31, 2018, valuation rolled forward to June 30, 2020. Key actuarial methods and assumptions used to measure the total OPEB liability are illustrated in Table 28.

TABLE 24

<u>Net Pension Liability (in Millions)</u>	
<u>As of June 30,</u>	
	<u>2020</u>
Total Pension Liability	\$ 90,142.7
Plan Fiduciary Net Position	68,319.3
Employers' Net Pension Liability	\$ 21,823.4
Plan net position as a percentage of total pension liability	75.8 %

TABLE 25

<u>Actuarial Methods and Assumptions</u>	
	<u>Pension</u>
Valuation date	December 31, 2018
Measurement date	June 30, 2020
Experience Study	2018, published July 24, 2019
Actuarial assumptions:	
Actuarial cost method	Entry Age Normal
Inflation rate	2.50 percent
Long-term expected rate of return	7.20 percent
Discount rate	7.20 percent
Projected salary increases	3.50 percent
Cost-of-living adjustments (COLA)	Blend of 2.00% COLA and graded COLA (1.25%/0.15%) in accordance with <i>Moro</i> decision; blend based on service.
Mortality	<p>Healthy retirees and beneficiaries: Pub-2010 Healthy Retiree, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p> <p>Active members: Pub-2010 Employee, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p> <p>Disabled retirees: Pub-2010 Disable Retiree, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p>

TABLE 26

<u>Sensitivity of Net Pension Liability to Changes in the Discount Rate (in Millions)</u>			
<u>As of June 30, 2020</u>			
	1% Decrease (6.20 %)	Current Discount Rate (7.20%)	1% Increase (8.20 %)
Employers' Net Pension Liability			
Defined Benefit Pension Plan	\$ 32,406.0	\$ 21,823.4	\$ 12,949.5

Discount Rate

The discount rate used to measure the total OPEB liability was 7.20 percent for the OPEB Plans. The projection of cash flows used to determine the discount rate assumed that contributions from contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the OPEB plans' fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments for the OPEB Plans was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity Analysis

Table 29 on page 73 presents the net OPEB liability/(asset) calculated using the discount rate of 7.20 percent, as well as what the net OPEB liability/(asset) would be if it were calculated using a discount rate that is one percent lower (6.20 percent) or one percent higher (8.20 percent) than the current rate. The results of actuarial valuations used for rate setting and the related Schedules of Funding Progress may be found in the Actuarial Section on pages 128 and 133.

Table 30 on page 74 presents the net OPEB liability/(asset) calculated using the current healthcare cost trend rates, as well as what the net OPEB liability/(asset) would be if it were calculated using healthcare trend rates that are one percentage point lower, or one percentage point higher than the current rates. Healthcare trend cost rates are applicable to RHIPA only because of to the variable nature of benefits.

Long-Term Expected Rate of Return

To develop an analytical basis for the selection of the long-term expected rate of return assumption, in May 2019 the PERS Board reviewed long-term assumptions developed by both Milliman's capital market assumptions team and the Oregon Investment Council's (OIC) investment advisors. Table 31 on page 74 shows Milliman's assumptions for each of the asset classes in which the plans were invested at that time based on the OIC long-term target asset allocation. The OIC's description of each asset class was used to map the target allocation to the asset classes shown on page 74. Each asset class assumption is based on a consistent set of underlying assumptions and includes adjustment for the inflation assumption. These assumptions are not based on historical returns, but instead are based on a forward-looking capital market economic model.

Depletion Date Projection

GASB 74 generally requires that a blended discount rate be used to measure the Total OPEB

Liability (the Actuarial Accrued Liability calculated using the Individual Entry Age Normal Cost Method). The long-term expected return on plan investments may be used to discount liabilities to the extent that the plan's Fiduciary Net Position (fair value of investment assets) is projected to cover benefit payments and administrative expenses. A 20-year high-quality (AA/Aa or higher) municipal bond rate must be used for periods where the Fiduciary Net Position is not projected to cover benefit payments and administrative expenses. Determining the discount rate under GASB 74 will often require that the actuary perform complex projections of future benefit payments and asset values. GASB 74 (paragraph 51) does allow for alternative evaluations of projected solvency, if such evaluation can reliably be made. GASB does not contemplate a specific method for making an alternative evaluation of sufficiency; it is left to professional judgment.

The following circumstances justify an alternative evaluation of sufficiency for PERS:

- PERS has a formal written policy to calculate an Actuarially Determined Contribution (ADC), which is articulated in the actuarial valuation report.
- The ADC is based on a closed, layered amortization period, which means that payment of the full ADC each year will bring the plan to a 100 percent funded position by the end of the amortization period if future experience follows assumption.
- GASB 74 specifies that the projections regarding future solvency assume that plan assets earn the assumed rate of return and there are no future changes in the plan provisions or actuarial methods and assumptions, which means that the projections would not reflect any adverse future experience that might impact the plan's funded position.

Based on these circumstances, it is our third-party actuary's opinion that the detailed depletion date projections outlined in GASB 74 would clearly indicate that the Fiduciary Net Position is always projected to be sufficient to cover benefit payments and administrative expenses.

Note 11—Subsequent Events

The legislature held a second special session, August 10, 2020 and passed two budget bills that pertain to PERS. HB 4304 contained the policy updates needed to complete the budget reductions passed in SB 5723, reducing the Employer Incentive Fund (EIF) by \$35,248,198, with that money going back to the general fund. Additionally, all current and future revenue streams for the EIF were eliminated. The School District Unfunded Liability Fund (SDULF) was reduced by \$11,539,471, with that

Notes to the Financial Statements

TABLE 27

<u>Net OPEB - RHIA (Asset) (in Millions)</u> <u>As of June 30, 2020</u>		<u>Net OPEB - RHIPA Liability (in Millions)</u> <u>As of June 30, 2020</u>	
	<u>2020</u>		<u>2020</u>
Total OPEB - RHIA Liability	\$ 406.9	Total OPEB - RHIPA Liability	\$ 64.3
Plan Fiduciary Net Position	<u>610.7</u>	Plan Fiduciary Net Position	<u>54.3</u>
Employers' Net OPEB - RHIA (Asset)	\$ <u>(203.8)</u>	Employer's Net OPEB - RHIPA Liability	\$ <u>10.0</u>
Plan net position as a percentage of Total OPEB - RHIA Liability	150.1 %	Plan net position as a percentage of Total OPEB - RHIPA Liability	84.5 %

TABLE 28

<u>Actuarial Methods and Assumptions</u>				
	<u>RHIA</u>		<u>RHIPA</u>	
Valuation date	December 31, 2018		December 31, 2018	
Measurement date	June 30, 2020		June 30, 2020	
Experience Study	2018, published July 24, 2019		2018, published July 24, 2019	
Actuarial assumptions:				
Actuarial cost method	Entry Age Normal		Entry Age Normal	
Inflation rate	2.50 percent		2.50 percent	
Long-term expected rate of return	7.20 percent		7.20 percent	
Discount rate	7.20 percent		7.20 percent	
Projected salary increases	3.50 percent		3.50 percent	
Retiree healthcare participation	Healthy retirees: 32% Disabled retirees: 20%		8-14 Years of Service: 10.0% 15-19 Years of Service: 15.0% 20-24 Years of Service: 19.0% 25-29 Years of Service: 26.0% 30+ Years of Service: 34.0%	
Healthcare cost trend rate	Not applicable		Applied at beginning of plan year, starting with 7.1% for 2019, decreasing to 5.0% for 2022, increasing to 5.9% for 2031, and decreasing to an ultimate rate of 4.1% for 2094 and beyond.	
Mortality	<p>Healthy retirees and beneficiaries: Pub-2010 Healthy Retiree, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p> <p>Active members: Pub-2010 Employee, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p> <p>Disabled retirees: Pub-2010 Disabled Retiree, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p>		<p>Healthy retirees and beneficiaries: Pub-2010 Healthy Retiree, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p> <p>Active members: Pub-2010 Employee, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p> <p>Disabled retirees: Pub-2010 Disabled Retiree, sex distinct, generational with Unisex, Social Security Data Scale, with job category adjustments and set-backs as described in the valuation.</p>	

TABLE 29

<u>Sensitivity of Net OPEB Liability/(Asset) to Changes in the Discount Rate (in Millions)</u> <u>As of June 30, 2020</u>				
	1% Decrease	Current	1% Increase	
<u>Employers' Net OPEB Liability/(Asset)</u>	<u>(6.20 %)</u>	<u>Discount</u>	<u>Rate (7.20%)</u>	<u>(8.20 %)</u>
Other Postemployment Benefit Plan - RHIA	\$ (164.5)	\$ (203.8)	\$ (237.3)	
Other Postemployment Benefit Plan - RHIPA	\$ 14.0	\$ 10.0	\$ 6.2	

TABLE 30

Sensitivity of Net OPEB Liability to Changes in the Healthcare Cost Trend Rate (in Millions)**As of June 30, 2020 ***

Employers' Net OPEB Liability	1% Decrease	Current Trend Rate	1% Increase
Other Postemployment Benefit Plan - RHIPA	\$ 7.0	\$ 10.0	\$ 13.7

* Not applicable for RHIA

TABLE 31

Long-Term Expected Rate of Return ¹

Asset Class	Target Allocation	Annual Arithmetic Return ²	20-Year Annualized Geometric Mean	Annual Standard Deviation
Core Fixed Income	9.60 %	4.14 %	4.07 %	3.90 %
Short-Term Bonds	9.60	3.70	3.68	2.10
Bank/Leveraged Loans	3.60	5.40	5.19	6.85
High Yield Bonds	1.20	6.13	5.74	9.35
Large/Mid Cap US Equities	16.17	7.35	6.30	15.50
Small Cap US Equities	1.35	8.35	6.68	19.75
Micro Cap US Equities	1.35	8.86	6.79	22.10
Developed Foreign Equities	13.48	8.30	6.91	17.95
Emerging Market Equities	4.24	10.35	7.69	25.35
Non-US Small Cap Equities	1.93	8.81	7.25	19.10
Private Equity	17.50	11.95	8.33	30.00
Real Estate (Property)	10.00	6.19	5.55	12.00
Real Estate (REITS)	2.50	8.29	6.69	21.00
Hedge Fund of Funds - Diversified	1.50	4.28	4.06	6.90
Hedge Fund - Event-driven	0.38	5.89	5.59	8.10
Timber	1.13	6.36	5.61	13.00
Farmland	1.13	6.87	6.12	13.00
Infrastructure	2.25	7.51	6.67	13.85
Commodities	1.13	5.34	3.79	18.70
Assumed Inflation - Mean			2.50 %	1.65 %

¹ Based on the OIC Statement of Investment Objectives and Policy Framework for the Oregon Public Employees Retirement Fund, revised as of April 24, 2019.

² The arithmetic mean is a component that goes into calculating the geometric mean. Expected rates of return are presented using the geometric mean, which the Board uses in setting the discount rate.

money also going back to the general fund. Governor Brown line item vetoed parts of HB 4304 restoring funding to the EIF and the SDULF. The SDULF receives an annual transfer from the proceeds on unclaimed property from the Common School Fund and will receive a transfer in January 2021. While these funding streams currently have no revenue, this does raise the possibility of both of these programs being funded again in the future.

Starting July 1, 2020, Senate Bill 1049 required member contributions to their IAP accounts to be

redirected to the Defined Benefit fund. If the member earns more than \$2,500 a month, 0.75% for OPSRP members and 2.5% for Tier One and Tier Two members' salaries that were previously contributed to the member's IAP began funding the new Employee Pension Stability Accounts to help fund the cost of future pension benefits without changing those benefits, which means reduced contributions to the member's IAP account. PERS estimates that approximately \$125 million in member contributions will be redirected in fiscal year 2020-21.

OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Required Supplementary Information
Schedule of Changes in Net Pension Liability/(Asset) and Related Ratios (Unaudited)
Defined Benefit Pension Plan
For the Fiscal Year Ended June 30,¹
(amounts in millions)

	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability²							
Service Cost	\$ 1,187.2	\$ 1,146.4	\$ 1,108.2	\$ 1,105.5	\$ 1,016.8	\$ 960.9	\$ 1,020.3
Interest on Total Pension Liability	6,162.9	5,952.1	5,858.2	5,662.2	5,355.3	4,779.5	4,819.4
Effect of Plan Changes ³	-	(50.6)	-	-	-	-	-
Changes in Benefit Terms	-	-	-	-	-	5,353.5	(2,423.6)
Changes in Assumptions	(50.5)	-	2,240.3	-	3,946.4	-	-
Differences Between Expected and Actual Experience	406.7	804.2	74.3	351.8	317.3	380.0	-
Benefit Payments	(5,064.8)	(4,827.0)	(4,656.6)	(4,362.2)	(4,206.5)	(3,943.6)	(3,863.4)
Net Change in Total Pension Liability	2,641.5	3,025.1	4,624.4	2,757.3	6,429.3	7,530.3	(447.3)
Total Pension Liability - Beginning	87,501.2	84,476.1	79,851.7	77,094.4	70,665.1	63,134.8	63,582.1
Total Pension Liability - Ending	\$ 90,142.7	\$ 87,501.2	\$ 84,476.1	\$ 79,851.7	\$ 77,094.4	\$ 70,665.1	\$ 63,134.8
Plan Fiduciary Net Position							
Employer Contributions	\$ 2,299.0	\$ 1,720.2	\$ 1,390.1	\$ 1,022.2	\$ 977.3	\$ 1,123.3	\$ 915.2
Member Contributions	10.2	11.4	12.6	13.1	14.2	13.8	15.3
Net Investment and Other Income	923.3	4,010.0	6,247.5	7,660.0	413.9	2,364.5	9,886.6
Benefit Payments	(5,064.8)	(4,815.1)	(4,642.7)	(4,346.2)	(4,193.3)	(3,927.2)	(3,837.8)
Refunds of Contributions	-	(11.9)	(13.9)	(16.0)	(13.1)	(16.5)	(25.6)
Administrative Expense	(52.1)	(38.4)	(37.8)	(43.5)	(40.5)	(35.7)	(31.2)
Net Change in Plan Fiduciary Net Position	(1,884.4)	876.2	2,955.8	4,289.6	(2,841.5)	(477.8)	6,922.5
Plan Fiduciary Net Position - Beginning	70,203.7	69,327.5	66,371.7	62,082.1	64,923.6	65,401.4	58,478.9
Plan Fiduciary Net Position - Ending	\$ 68,319.3	\$ 70,203.7	\$ 69,327.5	\$ 66,371.7	\$ 62,082.1	\$ 64,923.6	\$ 65,401.4
Net Pension Liability/(Asset)	\$ 21,823.4	\$ 17,297.5	\$ 15,148.6	\$ 13,480.0	\$ 15,012.3	\$ 5,741.5	\$ (2,266.6)
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability/(Asset)	75.8 %	80.2 %	82.1 %	83.1 %	80.5 %	91.9 %	103.6 %
Covered Payroll	\$ 11,574.8	\$ 10,716.7	\$ 10,044.0	\$ 10,037.5	\$ 9,428.4	\$ 9,000.2	\$ 8,701.7
Net Pension Liability/(Asset) as a Percentage of Covered Payroll	188.5 %	161.4 %	150.8 %	134.3 %	159.2 %	63.8 %	(26.0) %

¹ 10-year trend information will be disclosed prospectively

² See Table 25 for Actuarial Methods and Assumptions

³ Senate Bill 1049, signed into law in June 2019, introduced a limit on the amount of annual salary included for the calculation of benefits. Beginning in 2020, annual salary in excess of \$195,000 (as indexed in future years) will be excluded when determining member benefits. As a result, future benefits for certain active members are now projected to be lower than prior to the legislation.

Changes in Benefit Terms and Assumptions:

Benefit Terms: The 2013 Oregon Legislature made a series of changes to PERS that lowered projected future benefit payments from the System. These changes included reductions to future Cost of Living Adjustments (COLA) made through Senate Bills 822 and 861. Senate Bill 822 also required the contribution rates scheduled to be in effect from July 2013 to June 2015 to be reduced. The Oregon Supreme Court decision in *Moro v. State of Oregon*, issued on April 30, 2015, reversed a significant portion of the reductions the 2013 Oregon Legislature made to future System Cost of Living Adjustments (COLA) through Senate Bills 822 and 861. This reversal increased the total pension liability as of June 30, 2015 compared to June 30, 2014 total pension liability.

Assumptions: The PERS Board adopted assumption changes that were used to measure the June 30, 2016 total pension liability and June 30, 2018 total pension liability. For June 30, 2016, the changes included the lowering of the long-term expected rate of return to 7.50 percent and lowering of the assumed inflation to 2.50 percent. For June 30, 2018, the long-term expected rate of return was lowered to 7.20 percent. In addition, the healthy mortality assumption was changed to reflect an updated mortality improvement scale for all groups, and assumptions were updated for merit increases, unused sick leave, and vacation pay were updated.

Required Supplementary Information
Schedule of Investment Returns (Unaudited)
Defined Benefit Pension Plan
For the Fiscal Year Ended June 30¹

	2020	2019	2018	2017	2016	2015	2014
Annual Money-Weighted Rate of Return Net of Investment Expense	0.5%	6.4%	9.7%	11.8%	1.6%	3.7%	17.2%

¹ 10-year trend information will be disclosed prospectively.

Required Supplementary Information

Required Supplementary Information

Schedule of Defined Benefit Pension Plan Employer Contributions³ (Unaudited)

Last 10 Fiscal Years

(Dollar amounts in thousands)

	2020	2019	2018	2017	2016
Actuarially determined contributions ¹	\$ 1,981,943	\$ 1,410,966	\$ 1,318,672	\$ 960,254	\$ 941,321
Contributions in relation to the actuarially determined contributions ²	1,981,943	1,410,966	1,318,672	960,254	941,321
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 11,574,796	\$ 10,716,707	\$ 10,044,005	\$ 10,037,542	\$ 9,428,447
Contributions as a percentage of covered payroll	17.12%	13.17%	13.13%	9.57%	9.98%

Notes:

¹ The actuarially determined contributions on this Schedule of Defined Benefit Pension Plan Contributions have been adjusted to remove contribution requirements related to employer-specific liabilities.

² Employer contributions on the Statement of Changes in Fiduciary Net Position include interest related to employer-specific liabilities and employers' optional supplemental contributions.

³ For Actuarial Assumptions and Methods, see table below.

Actuarial Assumptions and Methods Used to Set the Actuarially Determined Contributions

Actuarial Valuation:	December 31, 2017	December 31, 2015	December 31, 2013
Effective:	July 2019 - June 2021	July 2017 - June 2019	July 2015 - June 2017
Actuarial cost method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization method:	Level percentage of payroll	Level percentage of payroll	Level percentage of
Asset valuation method:	Fair value	Fair value	Fair value
Remaining amortization periods:	20 years	20 years	20 years
Actuarial assumptions:			
Inflation rate	2.50 percent	2.50 percent	2.75 percent
Projected salary increases	3.50 percent	3.50 percent	3.75 percent
Investment rate of return	7.20 percent	7.50 percent	7.75 percent

2015	2014	2013	2012	2011
\$ 909,912	\$ 866,635	\$ 781,015	\$ 774,461	\$ 361,655
909,912	866,635	781,015	774,461	361,655
\$ -	\$ -	\$ -	\$ -	\$ -
\$ 9,000,246	\$ 8,701,657	\$ 8,280,731	\$ 8,650,799	\$ 8,618,636
10.11%	9.96%	9.43%	8.95%	4.20%

December 31, 2011	December 31, 2009	December 31, 2007
July 2013 - June 2015	July 2011 - June 2013	July 2009 - June 2011
Projected Unit Credit	Projected Unit Credit	Projected Unit Credit
Level percentage of payroll	Level percentage of payroll	Level percentage of payroll
Fair value	Fair value	Fair value
N/A	N/A	20 years
2.75 percent	2.75 percent	2.75 percent
3.75 percent	3.75 percent	3.75 percent
8.00 percent	8.00 percent	8.00 percent

Required Supplementary Information

Required Supplementary Information Schedule of Changes in Net OPEB (Asset) and Related Ratios (Unaudited) Other Postemployment Benefit Plan - RHIA For the Fiscal Year Ended June 30,¹ (amounts in millions)

	2020	2019	2018	2017
Total OPEB Liability²				
Service Cost	\$ 2.3	\$ 2.5	\$ 3.1	\$ 3.4
Interest on Total OPEB Liability	30.3	32.4	34.2	33.8
Changes in Benefit Terms	-	-	-	-
Changes in Assumptions	(16.5)	-	(0.5)	-
Differences Between Expected and Actual Experience	(13.0)	(32.3)	(9.1)	-
Benefit Payments	(31.8)	(32.2)	(32.5)	(31.2)
Net Change in Total OPEB Liability	(28.7)	(29.6)	(4.8)	6.0
Total OPEB Liability - Beginning	435.6	465.2	470.0	464.0
Total OPEB Liability - Ending	\$ 406.9	\$ 435.6	\$ 465.2	\$ 470.0
Plan Fiduciary Net Position				
Employer Contributions	\$ 6.3	\$ 49.6	\$ 48.0	\$ 49.8
Net Investment and Other Income	8.6	36.0	50.9	57.6
Benefit Payments	(31.8)	(32.2)	(32.6)	(31.2)
Administrative Expense	(1.3)	(1.3)	(1.3)	(1.3)
Net Change in Plan Fiduciary Net Position	(18.2)	52.1	65.0	74.9
Plan Fiduciary Net Position - Beginning	628.9	576.8	511.8	436.9
Plan Fiduciary Net Position - Ending	\$ 610.7	\$ 628.9	\$ 576.8	\$ 511.8
Net OPEB Asset	\$ (203.8)	\$ (193.3)	\$ (111.6)	\$ (41.8)
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	150.1	144.4 %	124.0 %	108.9 %
Covered Payroll	\$ 3,955.6	\$ 4,023.3	\$ 4,303.2	\$ 4,570.1
Net OPEB Asset as a Percentage of Covered Payroll	(5.15) %	(4.80) %	(2.59) %	(0.91) %

¹ 10-year trend information will be disclosed prospectively

² See Table 28 for Actuarial Methods and Assumptions

Changes in Benefit Terms and Assumptions:

Assumptions: The PERS Board adopted assumption changes that were used to measure the June 30, 2018 and 2019 total OPEB liability. The changes include the lowering of the long-term expected rate of return from 7.50 to 7.20 percent. In addition, healthy retiree participation and healthy mortality assumptions were changed to reflect an updated trends and mortality improvement scale for all groups.

Required Supplementary Information Schedule of Investment Returns (Unaudited) Other Postemployment Benefit Plan - RHIA For the Fiscal Year Ended June 30¹

	2020	2019	2018	2017
Annual Money-Weighted Rate of Return Net of Investment Expense	0.6%	6.7%	9.7%	12.5%

¹ 10-year trend information will be disclosed prospectively.

Required Supplementary Information
Schedule of Changes in Net OPEB Liability and Related Ratios (Unaudited)
Other Postemployment Benefit Plan - RHIPA
For the Fiscal Year Ended June 30,¹
(amounts in millions)

	2020	2019	2018	2017
Total OPEB Liability²				
Service Cost	\$ 1.4	\$ 1.5	\$ 1.5	\$ 1.5
Interest on Total OPEB Liability	5.1	5.0	5.2	5.0
Changes in Benefit Terms	-	-	-	-
Changes in Assumptions	(7.9)	-	0.4	-
Differences Between Expected and Actual Experience	(2.2)	(0.3)	(3.0)	-
Benefit Payments	(4.1)	(4.5)	(4.7)	(4.3)
Net Change in Total OPEB Liability	(7.7)	1.7	(0.6)	2.2
Total OPEB Liability - Beginning	72.0	70.3	70.9	68.7
Total OPEB Liability - Ending	\$ 64.3	\$ 72.0	\$ 70.3	\$ 70.9
Plan Fiduciary Net Position				
Employer Contributions	\$ 11.2	\$ 14.0	\$ 13.3	\$ 11.9
Net Investment and Other Income	0.8	2.5	2.4	2.0
Benefit Payments	(4.1)	(4.5)	(4.7)	(4.3)
Administrative Expense	(0.3)	(0.3)	(0.3)	(0.3)
Net Change in Plan Fiduciary Net Position	7.6	11.7	10.7	9.3
Plan Fiduciary Net Position - Beginning	46.7	35.0	24.3	15.0
Plan Fiduciary Net Position - Ending	\$ 54.3	\$ 46.7	\$ 35.0	\$ 24.3
Net OPEB Liability	\$ 10.0	\$ 25.3	\$ 35.3	\$ 46.6
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	84.5 %	64.9 %	49.8 %	34.3 %
Covered Payroll	\$ 1,166.4	\$ 1,120.5	\$ 1,165.3	\$ 1,327.1
Net OPEB Liability as a Percentage of Covered Payroll	0.86 %	2.26 %	3.03 %	3.51 %

¹ 10-year trend information will be disclosed prospectively

² See Table 28 for Actuarial Methods and Assumptions

Changes in Benefit Terms and Assumptions:

Assumptions: The PERS Board adopted assumption changes that were used to measure the June 30, 2018 and 2019 total OPEB liability. The changes include the lowering of the long-term expected rate of return from 7.50 to 7.20 percent. In addition, the healthy healthcare participation and cost trend rates, and healthy mortality assumptions were changed to reflect an updated trends and mortality improvement scale for all groups.

Required Supplementary Information
Schedule of Investment Returns (Unaudited)
Other Postemployment Benefit Plan - RHIPA
For the Fiscal Year Ended June 30¹

	2020	2019	2018	2017
Annual Money-Weighted Rate of Return Net of Investment Expense	1.0%	7.6%	10.2%	14.3%

¹ 10-year trend information will be disclosed prospectively

Required Supplementary Information

Required Supplementary Information
 Schedule of OPEB RHIA Employer Contributions¹ (Unaudited)
 Last 10 Fiscal Years
 (Dollar amounts in thousands)

	2020	2019	2018	2017	2016
Actuarially determined contributions ¹	\$ 6,360	\$ 49,615	\$ 47,998	\$ 49,786	\$ 44,588
Contributions in relation to the actuarially determined contributions	6,360	49,615	47,998	49,786	44,588
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 11,574,796	\$ 10,716,707	\$ 10,044,005	\$ 10,037,542	\$ 9,428,447
Contributions as a percentage of covered payroll	0.05%	0.46%	0.48%	0.50%	0.47%

Note:

¹ For Actuarial Assumptions and Methods, see table below.

Actuarial Assumptions and Methods Used to Set the Actuarially Determined Contributions

Actuarial Valuation:	December 31, 2017	December 31, 2015	December 31, 2013
Effective:	July 2019 - June 2021	July 2017 - June 2019	July 2015 - June 2017
Actuarial cost method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization method:	Level percentage of payroll, closed	Level percentage of payroll, closed	Level percentage of payroll, closed
Amortization Period:	10 years	10 years	10 years
Asset valuation method:	Market value	Market value	Market value
Remaining amortization periods:	10 years	20 years	20 years
Actuarial assumptions:			
Inflation rate	2.50 percent	2.50 percent	2.75 percent
Healthcare cost trend rates	None. Statute stipulates \$60 monthly payment for healthcare insurance.	None. Statute stipulates \$60 monthly payment for healthcare insurance.	None. Statute stipulates \$60 monthly payment for healthcare insurance.
Projected salary increases	3.50 percent	3.50 percent	3.75 percent
Investment rate of return	7.20 percent	7.50 percent	7.75 percent

2015	2014	2013	2012	2011
\$ 53,648	\$ 48,253	\$ 47,294	\$ 46,465	\$ 22,177
53,648	48,253	47,294	46,465	22,177
\$ -	\$ -	\$ -	\$ -	\$ -
\$ 9,000,246	\$ 8,686,772	\$ 8,686,771	\$ 8,650,799	\$ 8,618,636
0.60%	0.56%	0.54%	0.54%	0.26%

December 31, 2011	December 31, 2009	December 31, 2007
July 2013 - June 2015	July 2011 - June 2013	July 2009 - June 2011
Projected Unit Credit	Projected Unit Credit	Projected Unit Credit
Level percentage of payroll, closed	Level percentage of payroll, closed	Level percentage of payroll, closed
10 years	10 years	N/A
Market value	Market value	Market value
N/A	N/A	20 years
2.75 percent	2.75 percent	2.75 percent
None. Statute stipulates \$60 monthly payment for healthcare insurance.	None. Statute stipulates \$60 monthly payment for healthcare insurance.	None. Statute stipulates \$60 monthly payment for healthcare insurance.
3.75 percent	3.75 percent	3.75 percent
8.00 percent	8.00 percent	8.00 percent

Required Supplementary Information

Required Supplementary Information

Schedule of OPEB RHIPA Employer Contributions¹ (Unaudited)

Last 10 Fiscal Years

(Dollar amounts in thousands)

	2020	2019	2018	2017	2016
Actuarially determined contributions ¹	\$ 11,242	\$ 14,009	\$ 13,290	\$ 11,864	\$ 10,967
Contributions in relation to the actuarially determined contributions	11,242	14,009	13,290	11,864	10,967
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 3,555,791	\$ 3,118,065	\$ 2,952,776	\$ 3,024,383	\$ 2,850,753
Contributions as a percentage of covered payroll	0.32%	0.45%	0.45%	0.39%	0.38%

Note:

¹ For Actuarial Assumptions and Methods, see table below.

Actuarial Assumptions and Methods Used to Set the Actuarially Determined Contributions

Actuarial Valuation:	December 31, 2017	December 31, 2015	December 31, 2013
Effective:	July 2019 - June 2021	July 2017 - June 2019	July 2015 - June 2017
Actuarial cost method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization method:	Level percentage of payroll, closed	Level percentage of payroll, closed	Level percentage of payroll, closed
Amortization Period:	10 years	10 years	10 years
Asset valuation method:	Market value	Market value	Market value
Remaining amortization periods:	10 years	20 years	20 years
Actuarial assumptions:			
Inflation rate	2.50 percent	2.50 percent	2.75 percent
Healthcare cost trend rates	Graded from 6.5 percent in 2018 to 4.2 percent in 2093.	Graded from 6.3 percent in 2016 to 4.4 percent in 2094.	Graded from 6.1 percent in 2014 to 4.7 percent in 2083.
Projected salary increases	3.50 percent	3.50 percent	3.75 percent
Investment rate of return	7.20 percent	7.50 percent	7.75 percent

2015	2014	2013	2012	2011
\$ 6,887	\$ 6,150	\$ 3,444	\$ 3,378	\$ 1,428
6,887	6,150	3,444	3,378	1,428
\$ -	\$ -	\$ -	\$ -	\$ -
\$ 2,737,792	\$ 2,566,555	\$ 2,422,404	\$ 2,563,850	\$ 2,374,856
0.25%	0.24%	0.14%	0.13%	0.06%

December 31, 2011	December 31, 2009	December 31, 2007
July 2013 - June 2015	July 2011 - June 2013	July 2009 - June 2011
Projected Unit Credit	Projected Unit Credit	Projected Unit Credit
Level percentage of payroll, closed	Level percentage of payroll, closed	Level percentage of payroll, closed
10 years	10 years	N/A
Market value	Market value	Market value
N/A	N/A	20 years
2.75 percent	2.75 percent	2.75 percent
Graded from 6.9 percent in 2012 to 4.5 percent in 2029	Graded from 7.0 percent in 2010 to 4.5 percent in 2029	Graded from 8.0 percent in 2008 to 5.0 percent in 2013
3.75 percent	3.75 percent	3.75 percent
8.00 percent	8.00 percent	8.00 percent

Required Supplementary Information

Required Supplementary Information
 Schedule of Claims Development Information (Unaudited)
 Standard Retiree Health Insurance Account
 Fiscal and Policy Year Ended (In Millions)¹

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1. Net earned required contribution and investment revenues	\$ 174.19	\$ 188.99	\$ 195.59	\$ 198.85	\$ 226.61	\$ 197.92	\$ 157.55	\$ 176.38	\$ 111.68	\$ 32.49
2. Unallocated expenses	20.01	22.15	25.00	29.00	32.09	26.30	16.55	16.11	11.36	4.98
3. Estimated incurred claims and expense, end of policy year	152.55	150.62	172.89	175.41	212.21	179.01	133.10	142.94	83.24	18.27
4. Paid (cumulative) as of:										
End of policy year	150.42	160.15	172.76	175.01	211.90	184.61	133.60	142.44	91.57	18.50
One year later	161.43	171.80	185.22	192.78	226.61	200.50	151.25	149.18	98.32	
Two years later	161.34	171.68	185.21	192.81	226.61	200.50	151.78	156.07		
Three years later	161.27	171.66	185.20	192.81	226.61	200.49	151.75			
Four years later	161.25	171.66	185.20	192.81	226.60	200.48				
Five years later	161.27	171.66	185.20	192.81	226.60					
Six years later	161.27	171.66	185.20	192.81						
Seven years later	161.27	171.66	185.20							
Eight years later	161.27	171.66								
Nine years later	161.27									
5. Reestimated incurred claims and expense:										
End of policy year	152.55	150.62	172.89	175.41	212.21	179.01	133.10	142.94	83.24	18.27
One year later	163.56	162.27	185.35	193.18	226.92	194.90	151.25	149.68	89.98	
Two years later	163.47	162.20	185.34	193.21	226.92	194.91	151.28	156.57		
Three years later	163.35	162.17	185.33	193.21	226.91	194.90	151.25			
Four years later	163.34	162.17	185.33	193.22	226.91	194.88				
Five years later	163.35	162.17	185.33	193.21	226.90					
Six years later	163.35	162.17	185.33	193.21						
Seven years later	163.35	162.17	185.33							
Eight years later	163.35	162.17								
Nine years later	163.35									
6. Increase in estimated incurred claims and expense from end of policy year:	10.79	11.58	12.46	17.77	14.71	15.89	18.15	13.59	6.74	

OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Other Supplementary Information

Other Supplementary Information
 Schedule of Plan Net Position
 Defined Benefit Pension Plan
 As of June 30, 2020

	Oregon Public Service Retirement Plan			Total
	Regular Account	Pension Program	Variable Account	
Assets:				
Cash and Cash Equivalents	\$ 2,343,747,091	\$ 320,335,949	\$ 7,691,064	\$ 2,671,774,104
Receivables:				
Employer	18,212,470	10,467,330	-	28,679,800
Interest and Dividends	106,722,875	11,201,040	-	117,923,915
Investment Sales and Other Receivables	894,975,127	94,609,624	-	989,584,751
Transitional Liability	405,156,056	-	-	405,156,056
Total Receivables	<u>1,425,066,528</u>	<u>116,277,994</u>	<u>-</u>	<u>1,541,344,522</u>
Interaccount Receivables and Payables	922,503	1,565,776	(2,488,279)	-
Due from Other Funds	1,960,583	-	-	1,960,583
Investments:				
Debt Securities	11,121,753,597	1,167,277,466	-	12,289,031,063
Public Equity	18,566,761,149	1,948,664,094	379,332,036	20,894,757,279
Real Estate	7,061,076,207	741,091,328	-	7,802,167,535
Private Equity	14,945,454,467	1,568,591,864	-	16,514,046,331
Alternative Equity	6,639,044,755	696,797,251	-	7,335,842,006
Opportunity Portfolio	1,336,102,306	140,229,875	-	1,476,332,181
Total Investments	<u>59,670,192,481</u>	<u>6,262,651,878</u>	<u>379,332,036</u>	<u>66,312,176,395</u>
Securities Lending Cash Collateral	642,365,854	67,543,757	16,147	709,925,758
Prepaid Expenses	2,751,092	288,739	-	3,039,831
Capital Assets at Cost, Net	20,988,042	1,618,920	-	22,606,962
Total Assets	<u>64,107,994,174</u>	<u>6,770,283,013</u>	<u>384,550,968</u>	<u>71,262,828,155</u>
Liabilities:				
Investment Purchases and Accrued Expenses	2,011,469,764	164,793,735	3,013,913	2,179,277,412
Deposits and Other Liabilities	50,731,964	1,012,359	1,569	51,745,892
Due Other Funds	2,076,521	-	-	2,076,521
Securities Lending Cash Collateral Due Borrowers	642,823,410	67,591,780	16,147	710,431,337
Total Liabilities	<u>2,707,101,659</u>	<u>233,397,874</u>	<u>3,031,629</u>	<u>2,943,531,162</u>
Net Position Restricted for Pension Benefits	<u>\$ 61,400,892,515</u>	<u>\$ 6,536,885,139</u>	<u>\$ 381,519,339</u>	<u>\$ 68,319,296,993</u>

Other Supplementary Information
 Schedule of Changes in Plan Net Position
 Defined Benefit Pension Plan
 For the Fiscal Year Ended June 30, 2020

	Oregon Public Service Retirement Plan			
	Regular Account	Pension Program	Variable Account	Total
Additions:				
Contributions:				
Employer	\$ 1,437,131,638	\$ 861,874,565	\$ -	\$ 2,299,006,203
Plan Member	<u>10,001,015</u>	<u>-</u>	<u>178,223</u>	<u>10,179,238</u>
Total Contributions	<u>1,447,132,653</u>	<u>861,874,565</u>	<u>178,223</u>	<u>2,309,185,441</u>
Investment Income:				
Net Appreciation (Depreciation) in Fair Value of Investments	(126,565,491)	66,295,146	51,869	(60,218,476)
Interest, Dividends and Other Investment Income	<u>1,555,974,927</u>	<u>167,599,715</u>	<u>130,913</u>	<u>1,723,705,555</u>
Total Investment Income	<u>1,429,409,436</u>	<u>233,894,861</u>	<u>182,782</u>	<u>1,663,487,079</u>
Less Investment Expense	<u>(676,291,008)</u>	<u>(71,757,222)</u>	<u>(367,689)</u>	<u>(748,415,919)</u>
Net Investment Income	753,118,428	162,137,639	(184,907)	915,071,160
Securities Lending Income:				
Securities Lending Income	16,581,462	1,585,863	126	18,167,451
Less Securities Lending Expense	<u>(11,300,693)</u>	<u>(1,085,184)</u>	<u>(126)</u>	<u>(12,386,003)</u>
Net Securities Lending Income	5,280,769	500,679	-	5,781,448
Other Income	<u>2,404,693</u>	<u>3,454</u>	<u>-</u>	<u>2,408,147</u>
Total Additions	<u>2,207,936,543</u>	<u>1,024,516,337</u>	<u>(6,684)</u>	<u>3,232,446,196</u>
Deductions				
Benefits	4,957,129,034	48,603,681	34,024,047	5,039,756,762
Death Benefits	6,174,392	-	-	6,174,392
Refunds of Contributions	18,567,207	-	288,090	18,855,297
Administrative Expense	42,417,250	8,161,874	1,504,247	52,083,371
Interaccount Transfers	<u>(65,831,179)</u>	<u>-</u>	<u>65,831,179</u>	<u>-</u>
Total Deductions	<u>4,958,456,704</u>	<u>56,765,555</u>	<u>101,647,563</u>	<u>5,116,869,822</u>
Net Increase/(Decrease)	(2,750,520,161)	967,750,782	(101,654,247)	(1,884,423,626)
Net Position Restricted for Pension Benefits				
Beginning of Year	<u>64,151,412,676</u>	<u>5,569,134,357</u>	<u>483,173,586</u>	<u>70,203,720,619</u>
End of Year	<u>\$ 61,400,892,515</u>	<u>\$ 6,536,885,139</u>	<u>\$ 381,519,339</u>	<u>\$ 68,319,296,993</u>

Other Supplementary Information

Other Supplementary Information
Schedule of Administrative Expenses - All Funds
For the Fiscal Year Ended June 30, 2020

Personal Services:

Staff Salaries	\$ 26,204,740
Social Security	5,383,224
Retirement	1,889,852
Unemployment Compensation	21,395
Workers' Compensation	7,870
Insurance	6,136,468
Assessments	<u>160,584</u>
Total Personal Services	39,804,132

Professional Services:

Actuarial	716,392
Data Processing	28,780
Audit	628,351
Legal Counsel	413,695
Medical Consultants	110,476
Training and Recruitment	153,449
Contract Services	10,914,758
Healthcare Fees	<u>5,465,982</u>
Total Professional Services	18,431,882

Communications:

Printing	175,571
Telephone	424,091
Postage	639,234
Travel	<u>152,496</u>
Total Communication	1,391,392

Rentals:

Office Space	726,544
Equipment	<u>6,318</u>
Total Rentals	732,862

Miscellaneous:

Central Government Charges	3,850,915
Supplies	3,695,774
Maintenance	524,236
Non-Capitalized Equipment	1,768,413
Depreciation	2,290,811
Other	<u>1,529</u>
Total Miscellaneous	12,131,678

Total Administrative Expenses:	\$ <u><u>72,491,946</u></u>
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Other Supplementary Information
Schedule of Payments to Consultants and Contractors
For the Fiscal Year Ended June 30, 2020

Individual or Firm	Fees Paid	Nature of Service
Milliman Inc	\$ 716,392	Actuarial
Gabriel, Roeder, Smith & Company	81,510	Actuarial
Macias Gini & O'Connell LLP	628,351	Audit
Oregon Audits Division	22,800	Audit
CEM Benchmarking	45,000	Benchmarking
Deloitte Consulting LLP	565,852	Consulting
Callan Associates Inc.	45,000	Consulting
Cascade Centers Inc	5,490	Consulting
Department of Administrative Servies	22,526	Contractual
Butler Partners & Associates LLC	110,476	Health Insurance
BenefitHelp Solutions	3,359,993	Health Insurance
ODS Health Plan Inc	2,056,002	Health Insurance
Voya	3,189,390	IAP Administration
Ice Miller LLP	1,967	Legal
Oregon Department of Justice	315,826	Legal
Jill Goldsmith Atty At Law	2,005	Legal
Moyes & Associates	260	Legal
Frederick William Miller MD	37,450	Medical
DeJoan M Dordevich MD	650	Medical
Emmanuel Hospital & Health Center	631	Medical
Legacy Emmanuel Hospital	877	Medical
Oregon Medical Evaluation	5,497	Medical
Willamette Community Health Solutions	1,251	Medical
Perspecta State & Local Inc	9,750	Technology
Gartner Group Inc	108,000	Technology
Lancesoft	7,463,438	Technology
LexisNexis Risk Data Management Inc	7,395	Technology
U Work Com Inc	30,361	Technology
Fishnet Security Inc	7,200	Technology
Advisicon Inc	23,800	Technology
Proposal Technologies Network	6,475	Technology
Provaliant, Inc.	12,500	Technology
Oregon Department of Human Services	53,667	Vital Records
	<u>\$ 18,937,781</u>	

Other Supplementary Information

Other Supplementary Information Summary of Investment Fees, Commissions, and Expenses For the Fiscal Year Ended June 30, 2020

	2020		2020
Debt Securities Managers		Real Estate Portfolio Managers (continued)	
Alliance Bernstein L.P.	\$ 1,956,024	Lincoln Non Mandate	\$ 497,642
BlackRock Financial Management	2,009,251	Lion Mexico Fund	224,391
KKR Financial Credit Portfolio	6,568,628	Lone Star Fund IX	509,951
Oak Hill Advisors	7,020,964	Lone Star Fund VII	(2,313)
Wellington Management Company, LLP	1,363,568	Lone Star Fund VIII	6,039
Western Asset Management Company	1,550,357	Lone Star Real Estate Fund II	4,380
Domestic Equity Fund Managers		Lone Star Real Estate Fund III	73,115
AQR Capital Management, LLC	905,034	Lone Star Real Estate Fund IV	276,489
Aronson, Johnson, & Ortiz, LP	1,344,938	Lone Star Real Estate Fund V	206,697
Boston Company/Mellon	1,507,278	LORE One, LP (Core)	5,302,384
Callan LLC	1,077,577	LORE One, LP (Value Add)	3,135,062
Dimensional Fund Advisors	3,128,306	Madison Realty Capital Debt Fund III, LP	1,578,477
Eudaimonia Asset Management	895,988	Morgan Stanley Prime Property Fund	2,289,258
International Equity Fund Managers		Prologis Targeted US Logistic Fund	1,526,801
Acadian Asset Management, Inc.	4,128,390	Prologis Targeted Europe Logistics Fund	1,806,615
Adrian Lee & Partners	1,300,000	Regency Core	1,181,680
AHL Partners LLP	162,339	Regency II	1,383,680
Alliance Bernstein International	1,876,055	Rockpoint Finance Fund I, LP	11,523
AQR Capital Management	3,621,586	Rockpoint Growth and Income Fund I, LP	904,654
Arrowstreet Capital, LP	11,908,862	Rockpoint Real Estate Fund II, LP	28,308
Aspect Capital Limited	266,667	Rockpoint Real Estate Fund III	189,184
Brandes Investment Partners LLC	2,072,587	Rockpoint Real Estate Fund IV	365,374
Dimensional Fund Advisors	3,955,836	Rreef America REIT II	973,332
EAM Investors, LLC	547,690	Sculptor RE III	447,854
Genesis Asset Managers, LLP	2,364,649	Sculptor RE IV	1,109,105
Harris Associates LP	1,883,194	Starwood Capital Hospitality Fund II Global LP	448,668
Lazard Asset Management	4,635,647	Vornado Capital Partners LP	608,375
Los Angeles Capital Management	2,352,206	Waterton Fund IX PT Chicago, LLC	582,000
PE Global	447,541	Waterton Residential Property Venture XI	431,000
Walter Scott Management	2,421,011	Waterton Residential Property Venture XII	1,056,606
Westwood Global Investments	1,434,105	Western National Realty II, PIV-O	32,335
William Blair & Company, LLC	2,408,928	Windsor Columbia Realty Fund	8,072,723
Real Estate Portfolio Managers		WRPV XI CK Expansion, LLC	170,833
ABKB / Lasalle Advisors-Intl	874,762	Private Equity Portfolio Managers	
ABS Allegiance RE	1,374,020	A&M Capital Partners	369,494
Aetos Capital Asia III	44,436	A&M Capital Partners Europe I	2,365,951
Aetos Capital Asia TE II	33,051	A&M Capital Partners II	3,014,808
AG Asia Realty Fund II, LP	82,127	ACON Equity Partners IV	2,002,500
Alpha Asia Macro Trends Fund II	89	Advent Global Technology	762,363
Ascentris-OR Partners LLC	3,433,009	Advent International Global Private Equity IX	1,623,626
Beacon Capital Strategic Partners VI, LP	65,870	Advent International Global Private Equity VI A	200,738
Blackstone Real Estate Partners IX, LP	1,843,750	Advent International Global Private Equity VII C	378,873
Blackstone Real Estate Partners VII, LP	548,292	Advent Latin American Private Equity VI	1,326,840
Brazil Real Estate Opportunities II	1,210,994	Affinity Asia Pacific Fund III	301,074
Cameron Village	581,420	APAX IX	2,759,225
Clarion (Non Mandate)	228,678	APAX VIII	1,037,002
Clarion Columbia Office Property	4,884,105	Apollo Investment Fund IX	6,240,000
Cohen & Steers Capital Management	242,217	Apollo Investment Fund VII	433,434
Columbia Woodbourne Holdings, LLC	465,622	Apollo Investment Fund VIII	1,951,843
DivcoWest Fund IV REIT, LP	136,914	Aquiline Financial Services Fund III	1,423,748
DivcoWest Fund V	1,884,394	Austin Ventures X	63,215
DivcoWest Fund VI	949,321	Avista Capital Partners III	9,227
DW-Columbia Perfco	1,936,377	Baring Asia Private Equity Fund V	1,220,149
Harrison Street Core Property Fund, LP	1,502,576	Baring Asia Private Equity Fund VI	2,809,037
Harrison Street Real Estate Partners V-A	905,857	BDCM Opportunity Fund IV	2,678,947
Harrison Street REP V Co-Investment	306,962	Black Diamond Opportunity III	1,540,253
Heitman America Real Estate Trust, LP	1,168,708	Blackstone Capital Partners VI	736,592
Heritage Fields Capital	397,844	Blackstone Capital Partners VII	5,077,982
IL & FS India Realty Fund	186,924	Blackstone Energy Partners II	2,435,931
IL & FS India Realty Fund II	153,919	Bridgepoint Europe VI (Sidecar)	3,848,174
JPMCB Strategic Property Fund	1,783,673	Capital International Private Equity Fund VI	615,836
Landmark Real Estate Partners VII, LP	492,947	CCMP Asia Opportunity Fund III	551,472
LBA Core Industrial	66,224	CDH Fund V	1,278,991
Lincoln CIP Industrial Core	3,751,884	Centerbridge Capital Partners II	604,021

Other Supplementary Information
Summary of Investment Fees, Commissions, and Expenses
For the Fiscal Year Ended June 30, 2020

	2020		2020
<u>Private Equity Portfolio Managers (continued)</u>		<u>Private Equity Portfolio Managers (continued)</u>	
Centerbridge Capital Partners III	\$ 2,030,548	MBK Partners Fund IV	\$ 953,182
Centerbridge Captial Partners	(7,566)	MHR Institutional Partners III	283,866
Centerbridge Special Credit Partners III	2,218,265	MHR Institutional Partners IV	2,569,908
Cinven V Fund	367,116	Montauk TriGuard Fund VI	855,000
Cinven VI Fund	1,655,088	Nordic Capital Fund VIII	763,738
Cinven VII Fund	1,846,026	North Haven Private Equity Asia IV	1,131,457
Clearlake Capital Partners VI	266,694	Novalpina Capital Fund I	4,505,911
Clearvue Partners III	3,406,027	Northwest Emerging Ventures	50,000
Coller International Partners	780,069	Northwest Emerging Ventures II	220,000
Court Square Capital Partners III	139,902	Northwest Emerging Ventures III	688,874
Crescent Mezzanine Partners VI	343,943	Oak Investments Partners XII	(8,529)
CVC Capital Partners Asia V	745,890	Oaktree European Principal Fund III (US)	627,867
CVC Capital Partners VI	1,393,228	Oaktree Opportunities Fund IX	869,027
CVC Capital Partners VII	3,796,697	Oaktree Opportunities Fund VIII	54,293
EnCap Energy Capital Fund X	935,825	Oaktree Opportunities Fund VIIIb	328,316
EnCap Energy Capital Fund XI	3,750,000	Oaktree Opportunities Fund X	654,292
Endeavour Capital Fund VII	2,074,022	Oaktree Opportunities Fund Xb	910,411
First Reserve XII	39,772	Oaktree Principal Fund V	265,628
Fisher Lynch Capital Fund II	1,464,040	Odyssey Investment Partners Fund VI	1,153,846
Francisco Partners III	454,253	Opus Capital Venture Partners VI	535,747
Francisco Partners IV	1,672,904	Opus Capital Venture Partners V	497,633
Francisco Partners V	3,750,001	OrbiMed Private Investments VI	1,019,997
General Atlantic Partners	6,125,000	Orchid Asia VI	1,130,388
Genstar Capital Partners IX	2,100,000	Orchid Asia VII	2,697,072
Genstar Capital Partners VIII	1,528,664	Palladium Equity Partners IV	761,002
Genstar IX Opportunities Fund I	172,124	Palladium Equity Partners V	4,010,959
Genstar VIII Opportunities Fund	443,434	Pathway Private Equity Fund	1,804,995
GGV Capital Select	316,747	Pathway Private Equity Fund III	27,372
GGV Capital V	1,357,297	Pathway Private Equity Fund III-B	244,434
GGV Capital VI	831,846	Permira VI	2,822,695
GGV Capital VII	1,600,000	Permira VII	2,967,928
GGV Discovery I	328,430	Pine Brook Capital Partners II	1,243,807
GGV Discovery II	450,362	Providence Equity Partners VI	110,442
GI Partners Fund V	4,375,000	Providence Equity Partners VII	970,158
GI Partners Fund IV	1,520,318	Public Pension Capital	1,344,664
Gores Capital Partners II	35,802	Rhône Partners IV	137,018
Gores Capital Partners III	225,969	Rhône Partners V	3,428,832
Granite Ventures II	92,699	Riverside Capital Appreciation Fund VI	785,121
Green Equity Investors V	13,351	Riverside Capital Appreciation Fund V	97,984
Green Equity Investors VI	812,104	Riverside Europe Fund IV	226,734
Green Equity Investors VII	3,640,110	Riverstone-Carlyle RAE Fund II	307,299
GSO Capital Opportunities Fund II	348,563	Roark Capital Partners IV	1,139,538
GTCR Fund XII	2,333,863	Roark Capital Partners V	4,375,000
Hamilton Lane Int'l SMID Fund	977,657	RRJ Capital Master Fund II	177,148
Hellman & Friedman Capital Partners IX	4,200,000	RRJ Capital Master Fund III	862,069
Hellman & Friedman Capital Partners VIII	683,723	Sofinnova Venture Partner VIII	191,327
KKR 2006 Fund	298,900	Tailwind Capital Partners II	269,538
KKR Asian Fund	18,431	Tailwind Capital Partners III	2,500,000
KKR Asian Fund II	410,981	Tailwind Capital Partners	69,290
KKR Asian Fund III	3,750,000	TCW Crescent Mezzanine Partners V	89,001
KKR European Fund II	834,243	TDR Capital III	625,418
KKR North America XII Fund	5,439,816	TDR Capital IV	3,143,660
KSL Capital Credit Opportunities Fund	309,054	TPG Growth II	260,164
KSL Capital Partners Fund III	402,086	TPG Growth III (A)	1,697,012
KSL Capital Partners IV	1,355,465	TPG Growth IV	3,504,902
KSL Capital Partners V	3,500,000	TPG Healthcare Partners	1,276,756
Lion Capital Fund III	781,522	TPG Partners VI	2,623
Lion Capital Fund II	185,181	TPG Partners VII	2,906,201
Littlejohn Fund III	412,053	TPG Partners VIII	5,107,024
Littlejohn Fund IV	304,459	USV 2016	323,000
MatlinPatterson Global Opportunities Partners III	15,163	USV 2019	90,000
Mayfield Select	39,841	USV Opportunity 2019	98,438
Mayfield XIV	605,506	Vector Capital Fund IV	64,637
Mayfield XV	558,498	Veritas Capital Fund V	1,797,481

Other Supplementary Information

Other Supplementary Information Summary of Investment Fees, Commissions, and Expenses For the Fiscal Year Ended June 30, 2020

	2020		2020
Private Equity Portfolio Managers (continued)		Alternatives Portfolio Managers (continued)	
Veritas Capital Fund VI	\$ 3,300,348	NGP Natural Resources XII	\$ 3,755,437
Veritas Capital Fund VII	1,362,705	Northern Shipping Fund III	2,680,120
Vestar Capital Partners V	310,368	Northern Shipping Fund IV	1,859,633
Vista Equity Partners Fund V	2,402,378	Orion Mine Finance Fund I	636,214
Vista Equity Partners Fund III	101,064	QL Capital Partners	1,923,085
Vista Equity Partners Fund IV	653,294	Reservoir Resource Partners	14,910
Vista Equity Partners Fund VI	7,500,000	SailingStone Global Natural Resources Portfolio	413,349
Vista Equity Partners Fund VII	7,500,000	SailingStone Natural Gas Portfolio	79,076
Vista Foundation Fund III	4,000,000	Silver Creek Aggregate Reserves Fund I	126,047
Vista Foundation Fund II	1,233,677	Starwood Energy Infrastructure Fund III	2,249,500
Warburg Pincus Private Equity IX	3	Stonepeak Infrastructure Fund	708,061
Wellspring Capital Partners V	309,069	Stonepeak Infrastructure Fund II	3,314,840
WLR Recovery Fund V	435,355	Stonepeak Infrastructure Fund III	2,319,356
Alternatives Portfolio Managers		Taurus Mining Finance Annex Fund	342,613
Alinda Infrastructure Fund II	327,424	Taurus Mining Finance Fund II	2,256,181
Alterna Core Capital Assets Fund II	874,838	Taurus Mining Finance Fund	710,892
Appian Natural Resources Fund	679,038	Tillridge Global Agribusiness Partners II	1,771,384
Appian Natural Resources Fund II	2,719,178	Twin Creeks Timber	242,498
AQR Multi-Strategy Fund X	4,960,653	Warwick Partners III	2,176,471
Aspect Core Trend HV Fund	6,445,543	Warwick Partners IV	4,537,701
Blackrock Style Advantage	897,018	Westbourne Infrastructure Debt 6	221,968
Brookfield Agriculture Fund II	(4,683,000)	Opportunity Portfolio Managers	
Brookfield Infrastructure Fund III B	3,945,427	Apollo Credit Opportunity Fund II	5,081
Brookfield Infrastructure Fund IV	3,785,702	Blackstone Tactical Opportunities	2,447,506
Brookfield Timberlands Fund V	109,856	Content Partners Fund 3	615,368
Digital Colony Partners	2,033,322	Fidelity Real Estate Opportunistic Income Fund	1,305,842
EMR Capital Resources Fund II	3,137	Galton Onshore Mortgage Recovery Fund III	11,342
EnCap Flatrock Midstream Fund III	593,166	OrbiMed Royalty Opportunities II	391,261
EnCap Flatrock Midstream Fund IV	1,695,000	Sanders Capital All Asset Value Fund	4,614,180
The Energy & Minerals Group Fund III	2,199,600	TPG Specialty Lending Europe I (US Feeder)	911,872
EnerVest Energy Institutional Fund XIV	752,764	TSSP Adjacent Opportunities Partners	3,695,059
EQT Infrastructure Fund III	3,188,201	Russell Investments - Cash Overlay	561,566
EQT Infrastructure Fund IV	3,770,000	BlackRock - Variable Fund	220,402
Global Infrastructure Partners III	5,100,754	IAP Target Date Funds: Alliance Bernstein	3,196,513
Global Infrastructure Partners II A1	1,830,989	IAP Target Date Funds: State Street Bank	366,401
Global Infrastructure Partners Capital Solutions Fund	266,823	Brokerage Commissions	8,868,379
Global Infrastructure Partners IV	5,200,000	Consulting and Subscription Fees	8,318,966
Homestead Capital USA Farmland Fund II	970,900	State Street Bank:	
International Infrastructure Finance Company Fund	94,124	Incentive Fee/Carried Interest	169,372,214
LS Power Equity Partners IV	3,000,000	Foreign Income Taxes	11,328,923
LS Power Equity Partners III	851,624	Operating Expenses ¹	119,509,757
NGP Agribusiness Follow-on Program	1,130,408	Other Expenses ²	10,275,151
NGP Natural Resources X	606,999	State Treasury Fees	23,205,605
NGP Natural Resources XI	2,444,168	Deferred Compensation Investment Fees and Expenses	4,408,896
		Total Investment Fees, Commissions and Expenses	\$ 846,093,878

¹Start up fee for new private equity fund and improvement made to real estate property.

²Expenses related to legal, travel, and other adjustments.

Note: Negative management fees are due to adjusting entries and reimbursements.

INVESTMENT SECTION

OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM





Tobias Read
Oregon State Treasurer

Michael Kaplan
Deputy State Treasurer

September 25, 2020

Dear PERS Members:

The Investment Division of the Oregon State Treasury (OST) manages a collection of portfolios on behalf of the State, which help fund many important State objectives including retirement security for public sector employees, academic support for Oregon schoolchildren and compensation claims for injured state workers. In aggregate, the Investment Division oversees assets of approximately \$105.7 billion as of June 30, 2020. This portfolio includes the Oregon Public Employee Retirement Fund (OPERF), which advanced 0.52% last fiscal year, totaled \$74.1 billion at June 30, 2020 and comprised the Oregon Public Employee Retirement System Defined Benefit Pension Plan, the Individual Account Program of the Oregon Public Service Retirement Plan and other post-employment benefit plans.

Consistent with institutional investment standards, OPERF is broadly and deliberately diversified across multiple domains, including, but not limited to, several asset classes and geographies. Moreover, OPERF investment strategies have historically produced good results: annualized net returns for the five- and ten-year periods ended June 30, 2020 were 5.9% and 8.5%, respectively¹. The breadth of diversification that underpins the OPERF portfolio attempts to lower the State's risk in the variability of contribution rates and funded status.

On behalf of all Oregon Public Employee Retirement System beneficiaries, OPERF assets are commingled, invested consistent with a common set of objectives and allocated among the following six, strategic investment categories: public equity; private equity; real estate; fixed income; risk parity; and other "alternative" and "opportunistic" investments. Return expectations and target allocations for each of these six categories are developed between staff and external consultants; moreover, return forecasts contemplate a 20-year investment horizon. Importantly, equity-oriented investments represent OPERF's largest capital allocation. While improving the likelihood of generating an adequate, long-term return, this equity-biased approach also produces higher levels of short-term portfolio volatility.

For example, in bull market conditions (e.g., 2017), OPERF's equity-oriented portfolio will likely generate strong investment results, but during periods of market duress and/or outright asset price declines (e.g., 2008), OPERF's investment performance will lag long-term expectations and may even register negative returns. The year 2020 will be long remembered as a time of market duress due to the widespread infection rate of COVID-19 across the State and our Country. During the month of March 2020, the U.S. stock market (as measured by the Russell 3000 index) lost value in excess of 35%. The subsequent months saw a strong recovery, with the 35% loss during March being fully recovered by August, after fiscal year end. The OPERF portfolio, during this highly volatile period, held up reasonably well, highlighting the benefits of diversification that helps to

¹ All performance figures cited throughout this letter are based on market values and time-weighted return calculations.



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**OREGON
STATE
TREASURY**

Tobias Read
Oregon State Treasurer

Michael Kaplan
Deputy State Treasurer

mitigate short-term asset price volatility and protect against a sharp and/or protracted downturn in any single market, geography or asset category.

The U.S. stock market (as measured by the Russell 3000 index) generated strong returns last fiscal year (FY 2020), advancing 6.5% over the 12-month period ended June 30, 2020. With a net gain of 0.2%, OPERF's U.S. public equity portfolio lagged its Russell 3000 benchmark due to an emphasis on equity "style" factors such as value and small capitalization stocks, a proxy for which (namely, the Russell 2000 Value index) registered a 17.5% decline in FY 2020. Foreign equities lagged domestic stocks in FY 2020, with many countries producing negative returns. OPERF managers investing abroad produced a collective 4.2% loss last fiscal year, better than the 4.7% loss by OPERF's non-U.S. public equity benchmark, the MSCI ACWI Ex-US IMI Net index.

With an estimated fiscal year-end value of \$16.9 billion, OPERF's private equity investments represented 23.1% of total OPERF assets at June 30, 2020, and generated a net gain of 1.1% in FY 2020. This result eclipsed the private equity portfolio's 6.4% negative benchmark return. At 11.8%, average annual returns over the previous 10-year period fell short of the 13.43% return for this same benchmark, the Russell 3000 (lagged one quarter) plus 300 basis points, as public markets assets pushed further into a multi-year trend of outperformance relative to private market equivalents.

In real estate, OPERF capital is allocated across four property or security types: core; value-add; opportunistic; and publicly-traded real estate investment trusts (i.e., REITs). In FY 2020, OPERF's real estate investments generated a 4.6% net return, slightly ahead the 3.9% return on OPERF's real estate benchmark, the NCREIF Fund Index – Open End Diversified Core Equity, lagged one quarter. At fiscal year-end, these real estate investments were valued at \$8.4 billion, and represented 11.5% of total OPERF assets. For the ten-year period ended June 30, 2020, OPERF's real estate portfolio delivered a net 10.6% on an average annual basis, ahead of the benchmark's 10.4% average annual return during that same period.

Bond markets delivered solid results in FY 2020, as the U.S. Federal Reserve dramatically lowered the Federal Funds Rate in response to COVID-19. Investments in fixed income securities comprised 19.4% of total OPERF assets at June 30, 2020, and contributed a 7.8% net return in FY 2020, essentially matching the 7.7% return recorded by OPERF's custom fixed income benchmark.

The OIC added Risk Parity to the asset allocation mix in 2019. Risk parity is an investment strategy that strives to balance the risk from various asset classes such that no single asset class dominates the performance of the portfolio. For example, a traditional stocks and bonds portfolio that is allocated 60% to stocks and 40% to bonds is dominated by the risk from stocks. In a risk parity portfolio, the portfolio would be allocated to have equal risk from both stocks and bonds, which likely means that this portfolio will now have a much greater allocation to bonds than stocks. In order to achieve a similar level of return, risk parity portfolios tend to utilize leverage. The allocation to Risk Parity is in the early stages; and will likely increase over time.

Finally, OPERF investments in "alternative" assets and "opportunistic" strategies contributed mixed results in FY 2020 (-9.8% and -0.3%, respectively), an unfortunate, but expected outcome given the exposure to



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**OREGON
STATE
TREASURY**

Tobias Read
Oregon State Treasurer

Michael Kaplan
Deputy State Treasurer

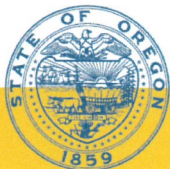
investments such as minerals and mining and systematic hedge funds that were hard hit during the fiscal year and in particular in March. At June 30, 2020, these alternative asset and opportunistic strategies comprised only 12.7% of OPERF's total portfolio, but the Investment Division plans to continue expanding these strategies' combined OPERF allocation given their attractive return and diversification attributes.

Sincerely,

A handwritten signature in blue ink, appearing to be "Rex T. Kim".

Rex T. Kim

Chief Investment Officer



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Investment Objectives

The function of PERS is to provide present and future retirement or survivor benefits for its members. The investment program comprising the Oregon Public Employees Retirement Fund (OPERF), which includes PERS' Defined Benefit Pension Plan, Oregon Public Service Retirement Plan - Individual Account Program, and Other Post Employment Benefit Plans, is managed to provide long-term financial security for PERS members while maintaining the Fund's stability and future productivity. The OIC has established policies that promote and guide investment strategies with the highest probability of achieving PERS Board's approved, actuarial discount rate at a corresponding risk level deemed acceptable for both active and retired PERS members.

Description of Investment Policies

Oregon Revised Statute (ORS) 293.706 established the Oregon Investment Council (OIC), which consists of five voting members. Four members of the council, who are qualified by training and experience in the field of investment or finance, are appointed by the governor subject to state Senate confirmation. The state treasurer serves as the council's remaining voting member. In addition, the director of the Public Employees Retirement System serves as a non-voting OIC member.

ORS 293.701 defines the investment funds over which OIC has responsibility. Included are the OPERF and the Deferred Compensation Fund. OIC establishes policies for the investment and reinvestment of moneys in the investment funds as well as the acquisition, retention, management, and disposition of investments in the investment funds. OIC is also responsible for providing an examination of the effectiveness of the investment program.

OIC ensures moneys in the investment funds are invested and reinvested to achieve the investment objective of making the moneys as productive as possible. Furthermore, the investments of those funds are managed as a prudent investor would do under the prevailing circumstances and in light of the purposes, terms, distribution requirements, and laws governing each investment fund. This standard requires the exercise of reasonable care, skill, and caution, and is applied to investments not in isolation, but in the context of each fund's portfolio as part of an overall investment strategy. The strategy should incorporate risk and return objectives reasonably suitable to the particular investment fund.

When implementing investment decisions, OIC has a duty to diversify the investments of the investment funds unless, under the circumstances, it is not prudent to do so. In addition, OIC must act with prudence when selecting agents and delegating authority. OIC has approved the following asset classes for OPERF: Short-Term Investing, Fixed Income, Real Estate, Public and

Private Equities, and Alternative Investments. In addition, OPERF invests in the Opportunity Portfolio, which may be populated with investment approaches across a wide range of investment opportunities with no limitation as to asset classes or strategies. OIC must approve, in advance, the purchase of investments in a new asset class not described above.

OIC has an open-door policy wherein investment officers employed by the Oregon State Treasury will hear and consider investment proposals and solicitations from any person, firm, or partnership that submits a proposal or solicitation in good faith. However, under no circumstance does this policy require that the Oregon State Treasury purchase the proposed investment.

OIC maintains an equal opportunity policy. When awarding contracts or agreements, OIC does not discriminate because of age, race, color, sex, religion, national origin, marital status, sexual orientation, or disability. Furthermore, OIC encourages firms doing or seeking to do business with OIC to have equal opportunity programs. OIC requires that all written contracts or agreements with OIC incorporate reference that affirms compliance with applicable nondiscrimination, equal opportunity, and contract compliance laws.

In compliance with ORS 192.630-660, OIC holds its meeting in a public forum. Public notice, including a meeting agenda, is provided to interested persons and news media that have requested notice. Written minutes and recordings are taken at all meetings.

OIC regularly reviews various aspects of investment policy, performance of investment managers and accounts, asset allocation, and a large number of investment proposals and recommendations. OIC's statement of Investment Objectives and Policy Framework is available on the Oregon State Treasury website at <https://www.oregon.gov/treasury/invested-for-oregon/Documents/Invested-for-OR-OIC-INV/Invested-for-OR-OIC-INV-1203--Statement-of-Investment-Objectives-and-Policy-Framework.pdf>

Investment Section

Investment Results*

	Periods Ended June 30, 2020		
	1-Year	Annualized	
		3-Year	5-Year
Total Portfolio, Excluding Variable Account OPERF Policy Benchmark ¹	0.52 % 2.60	5.42 % 6.30	5.86 % 6.64
Variable Account Benchmark: MSCI All Country World Investable Market Index Net	1.49 1.17	5.90 5.55	6.51 6.11
Domestic Stocks Benchmark: Russell 3000 Index	0.20 6.53	6.66 10.04	7.67 10.03
International Stocks Benchmark: MSCI All Country World ex-US Investable Market Index Net	(4.21) (4.74)	1.54 0.96	3.10 2.30
Fixed Income Segment Benchmark: Custom Index ²	7.75 7.70	5.06 4.97	4.05 3.78
Risk Parity ³ Benchmark: S&P Risk Parity - 12% Target Volatility	n/a n/a	n/a n/a	n/a n/a
Real Estate Benchmark: Oregon Custom Real Estate Benchmark ⁴	4.57 3.93	6.34 5.85	7.62 7.27
Private Equity ⁵ Benchmark: Russell 3000 Index + 300 bps (Adj.) ⁶	1.07 (6.37)	11.04 7.12	9.91 8.93
Alternatives Portfolio Benchmark: Consumer Price Index + 4%	(9.84) 4.67	(2.85) 5.78	0.20 5.61
Opportunity Portfolio Benchmark: Consumer Price Index + 5%	(0.34) 5.68	3.45 6.80	4.57 6.63

The rates of return reported in the Investment Section are based on a time-weighted rate of return methodology based upon market values, unless disclosed otherwise in the footnotes to the associated tables.

¹ From October 1, 2013 to March 31, 2016, the policy benchmark was 20% Russell 3000+300 Bps quarter lag, 23.5% Oregon Custom FI Benchmark, 12.5% NCREIF Property Index quarter lag, 41.5% MSCI ACWI and 2.5% CPI+4%. From April 1, 2016 to June 30, 2016 the policy benchmark was 20% Russell 3000+300 Bps quarter lag, 23.5% Oregon Custom FI Benchmark, 12.5% Oregon Custom Real Estate Benchmark, 41.5% MSCI AC World Index and 2.5% CPI+4%. From July 1, 2016 to March 31, 2018 the policy benchmark is 20% Russell 3000+300 Bps quarter lag, 22.5% Oregon Custom FI Benchmark, 12.5% Oregon Custom Real Estate Benchmark, 40% MSCI ACWI IMI Net and 5% CPI+4%. From April 1, 2018 to December 31, 2018 the policy benchmark is 19% Russell 3000+300 Bps quarter lag, 22% Oregon Custom FI Benchmark, 12.5% Oregon Custom Real Estate Benchmark, 39% MSCI ACWI IMI Net and 7.5% CPI+4%. From January 1, 2019 to present the policy benchmark is 19% Russell 3000+300 Bps quarter lag, 21% Oregon Custom FI Benchmark, 12.5% Oregon Custom Real Estate Benchmark, 37.5% MSCI ACWI IMI Net and 10% CPI+4%.

² From March 1, 2011 to December 31, 2013, index was 60% Barclays Capital (BC) U.S. Universal Index, 20% S&P/LSTA Leveraged Loan Index, 10% JP Morgan Emerging Market Bond Index Global Index, and 10% Bank of America Merrill Lynch (BofA ML) High Yield Master II Index. From January 1, 2014 to February 29, 2016, index was 40% BC U.S. Aggregate Bond, 40% BC U.S. 1-3 Year Government/Credit Bond Index, 15% S&P LSTA Leveraged Loan Index, and 5% BofA ML High Yield Master II Index. From March 1, 2016 to present, index is 46% Barclays Aggregate Bond, 37% Barclays Treasury, 13% S&P LSTA and 4% BofA ML High Yield Master II.

³ Inception date was May 1, 2020.

⁴ Through March 31, 2016, the Oregon Custom Real Estate Benchmark was made up of the NCREIF Property quarter lag Index. From April 1, 2016, the benchmark, is made up of the NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE) quarter lag Net of Fees. From July 1, 2017, the monthly return is calculated as the geometrically linked monthly-portion of the quarterly return. Returns are not actual monthly, but rather equivalent for all intra-quarter month, in order to match the actual quarterly return.

⁵ Through December 31, 2016, the Private Equity return combines the estimated return from the most recent quarter with a revision component that trues up the past two quarters' reported returns with the past two quarters' actual returns.

⁶ Until June 30, 2017 the index is Russell 3000+300 Bps, quarter lag. From July 1, 2017, the monthly return is calculated as the geometrically linked monthly-portion of the quarterly return. Returns are not actual monthly, but rather equivalent for all intra-quarter months, in order to match the actual quarterly return.

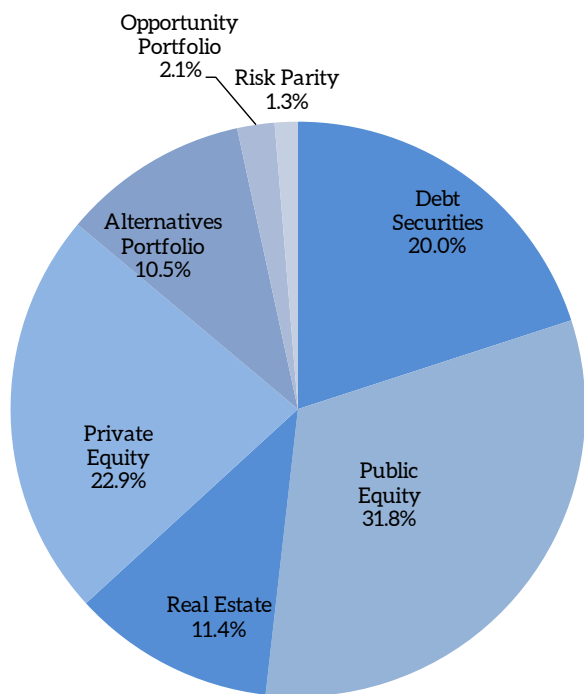
* Investment Results are based upon OIC asset classes as determined by each manager's primary investment type, not the financial statement classification of individual holdings.

OIC Target and Actual Investment Allocation as of June 30, 2020*

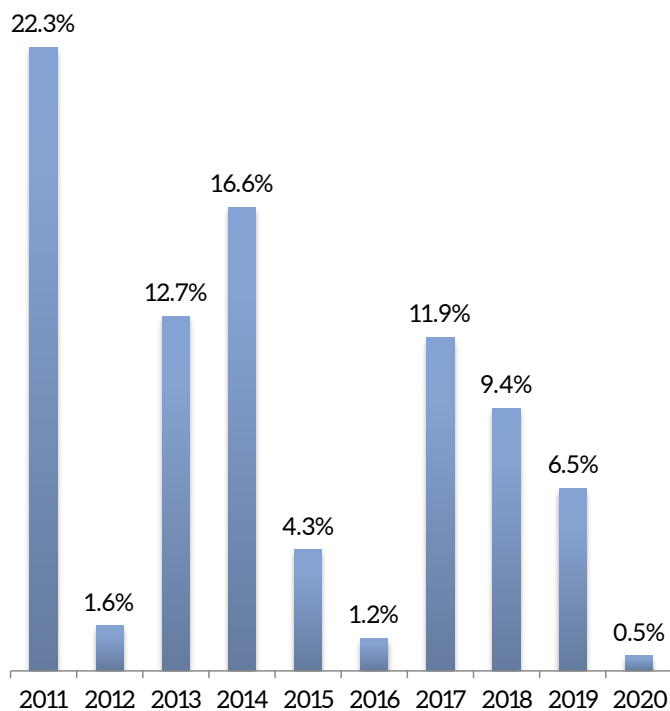
Asset Class/Strategy	OIC Policy Range	OIC Target Allocation	Asset Class/Strategy	Actual Allocation ³
Debt Securities	15.0 - 25.0 %	20.0 %	Debt Securities	20.0 %
Public Equity	27.5 - 37.5	32.5	Public Equity	31.8
Real Estate	9.5 - 15.5	12.5	Real Estate	11.4
Private Equity	14.0 - 21.0	17.5	Private Equity	22.9
Alternatives Portfolio	7.5 - 17.5	15.0	Alternatives Portfolio	10.5
Opportunity Portfolio ¹	0.0 - 3.0	0.0	Opportunity Portfolio	2.1
Risk Parity ²	0.0 - 2.5	2.5	Risk Parity	1.3
Total		100.0 %	Total	100.0 %

¹Opportunity Portfolio is an investment strategy and it may be invested up to 3% of total plan net position.
²Risk Parity is a new investment strategy added to the asset allocation mix in 2019.
³Based on the actual investment value at 6/30/2020.

Investment Mix by Asset Class/Strategy



Total Fund Performance 10-Year Review, One-Year Returns



* The OIC Target Allocations are based on OIC asset classes as determined by each manager's primary investment type, not the financial statement classification of individual holdings. The Target Allocation amounts do not include Deferred Compensation Plan investments. The Actual Investment Allocation is based on the financial statement investment classifications, including Deferred Compensation Plan investments. Risk Parity is included with the Alternatives Portfolio.

Investment Section

List of Largest Assets Held

Largest Stock Holdings (by Fair Value) June 30, 2020

<u>Description</u>	<u>Shares</u>	<u>Fair Value</u>
Microsoft Corporation	2,184,266	\$ 444,519,974
Apple Inc.	930,921	339,599,981
Intel Corporation	4,818,750	288,305,813
Amazon.com, Inc.	85,503	235,887,386
Johnson & Johnson	1,580,212	222,225,214
AT&T Inc.	5,987,371	180,998,225
Verizon Communications Inc.	2,607,476	143,750,152
Roche Holding AG Genusschein	410,005	142,077,085
Alphabet Inc. Class A	94,610	134,161,711
UnitedHealth Group Inc.	450,113	132,760,829

Largest Bond Holdings (by Fair Value) June 30, 2020

<u>Description</u>	<u>Par Value</u>	<u>Fair Value</u>
US Treasury Note 2.250% Due November 15, 2025	\$ 230,000,000	\$ 253,386,329
US Treasury Note 0.500% Due March 15, 2023	180,000,000	181,567,969
US Treasury Note 2.250% Due November 15, 2024	159,420,300	173,313,530
US Treasury Note 2.750% Due November 15, 2047	120,430,300	157,566,113
US Treasury Note 2.125% Due August 15, 2021	153,038,400	156,362,203
US Treasury Note 1.125% Due September 30, 2021	143,517,100	145,221,366
US Treasury Note 4.375% Due November 15, 2039	90,000,000	141,517,969
US Treasury Note 1.625% Due February 15, 2026	122,786,200	131,352,455
US Treasury Note 2.250% Due February 15, 2027	116,348,800	129,969,790
US Treasury Note 2.125% Due December 31, 2022	118,002,200	123,750,198

A complete list of portfolio holdings may be requested from the Oregon State Treasury, 350 Winter Street NE, Suite 100, Salem, OR 97301-3896.

Schedule of Fees and Commissions For the Fiscal Year Ended June 30, 2020

	Assets Under Management	Fees	Percentage
Investment Managers' Fees:			
Debt Securities Managers	\$ 15,213,720,452	\$ 20,468,792	0.1345 %
Public Equity Managers	26,478,003,098	60,429,729	0.2282
Real Estate Managers	8,731,171,187	66,969,188	0.7670
Private Equity Managers	18,480,372,903	240,246,208	1.3000
Alternatives Portfolio Managers	8,209,320,304	88,132,992	1.0736
Opportunity Portfolio Managers	1,652,118,971	13,997,511	0.8472
Total Assets Under Management	\$ 78,764,706,915		

Other Investment Service Fees:

Investment Consultants	8,318,966
Commissions and Other Fees	347,530,492
Total Investment Service and Managers' Fees	\$846,093,878

Schedule of Broker Commissions For the Fiscal Year Ended June 30, 2020

Broker's Name	Commission	Shares / Par	Commission per Share
Goldman, Sachs & Co.	\$ 1,139,135	\$ 102,324,541	\$ 0.0111
INSTINET, LLC	1,051,579	559,489,638	0.0019
Barclays Capital, Inc.	645,757	175,851,031	0.0037
UBS Securities Inc.	520,897	145,365,179	0.0036
J.P. Morgan	376,448	1,804,345,090	0.0002
Credit Suisse First Boston	316,565	118,164,372	0.0027
HSBC Securities, Inc.	315,879	295,609,125	0.0011
Jefferies & Company, Inc.	303,464	87,027,167	0.0035
Investment Technology Group Inc.	288,507	105,366,247	0.0027
Morgan Stanley Co Incorporated	253,917	76,218,288	0.0033
BofA Securities, Inc.	245,945	69,248,303	0.0036
Citigroup	240,799	95,181,478	0.0025
Société Générale	214,086	151,318,200	0.0014
Merrill Lynch	206,999	103,030,774	0.0020
LIQUIDNET, INC	179,196	20,218,159	0.0089
Virtu Americas LLC	165,886	16,951,820	0.0098
Macquarie Capital	143,138	130,036,938	0.0011
JonesTrading Institutional Services LLC	132,972	21,574,489	0.0062
CLSA	124,995	179,374,419	0.0007
Sanford C Bernstein & Co LLC	124,076	1,662,421,673	0.0001

Brokerage commissions on purchases and sales are too numerous to list; therefore, only the top 20 brokers by amount of commission paid are shown.

Investment Section

Investment Summary

Type of Investment	Fair Value as of June 30, 2020	Percent of Total Fair Value ¹
Debt Securities		
U.S. Government Securities	\$ 5,840,572,075	7.42 %
U.S. Agency Securities	1,408,760,572	1.79
International Debt Securities	896,943,084	1.14
Non-U.S. Government Debt Securities	446,285,721	0.57
Corporate Bonds	3,927,136,055	4.99
Municipal Bonds	58,325,982	0.07
Asset-Backed Securities	714,039,634	0.91
Guaranteed Investment Contracts ²	268,076,165	0.34
Domestic Fixed Income Funds	968,199,810	1.23
Global Fixed Income Funds	685,381,354	0.87
Total Debt Securities	15,213,720,452	19.33
Public Equity		
Domestic Equity Securities	12,210,284,610	15.50
International Equity Securities	8,431,408,849	10.70
Domestic Equity Funds	2,236,301,888	2.84
Global Equity Funds	1,880,976,282	2.39
International Equity Funds	1,030,339,554	1.31
Target Date Funds	688,691,915	0.87
Total Public Equity	26,478,003,098	33.61
Real Estate	8,731,171,187	11.09
Private Equity	18,480,372,903	23.45
Alternatives Portfolio³	8,209,320,304	10.42
Opportunity Portfolio	1,652,118,971	2.10
Total Fair Value	\$ 78,764,706,915	100.00 %

¹ These percentages do not include cash and cash equivalents.

² Guaranteed Investment Contracts are stated at contract value.

³ Includes investments held within risk mitigation strategy.

ACTUARIAL SECTION

OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM





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November 24, 2020

Public Employees Retirement Board
Oregon Public Employees Retirement System

Re: Actuarial Valuation as of December 31, 2019

Dear Members of the Board,

As part of our engagement with the Oregon Public Employees Retirement System (“PERS” or “the System”), we performed an actuarial valuation of PERS as of December 31, 2019. Our findings are set forth in the system-wide December 31, 2019 Actuarial Valuation, issued September 17, 2020. Previously, we published a system-wide December 31, 2018 Actuarial Valuation, which was issued December 12, 2019. Both reports reflect the benefit provisions of the system in effect as of the valuation dates, as well as Senate Bill 1049 signed into law in June 2019.

Both the December 31, 2019 Actuarial Valuation and the December 31, 2018 Actuarial Valuation are used to develop information provided in the Comprehensive Annual Financial Report (CAFR) for Oregon PERS. The December 31, 2019 Actuarial Valuation forms the basis for the *Actuarial Section* of the CAFR. The December 31, 2018 Actuarial Valuation is used to develop the financial reporting results required by Governmental Accounting Standards Board (GASB) Statement No. 67 for the Tier 1/Tier 2 and OPSRP programs and by GASB Statement No. 74 for the RHIA and RHIPA programs.

Actuarial Section of the CAFR

The material included in the *Actuarial Section* of CAFR for Oregon PERS is a subset of the results contained in the December 31, 2019 Actuarial Valuation. The descriptions in that report regarding the actuarial basis of the valuation and the material inputs and limitations of use of the valuation apply to the CAFR exhibits, and are incorporated herein by reference.

Actuarial valuations are performed annually, but only “rate-setting” valuations performed as of the end of each odd-numbered year are used to set actuarially determined biennial contribution rates. Those rates are then considered for adoption by the Public Employees Retirement Board (“PERB”). Interim valuations performed as of the end of each even-numbered year are only advisory in nature, and contribution rates developed in those valuations are not presented to the PERB for adoption.

The PERB has sole authority to determine the actuarial assumptions and methods used for the valuation. The actuarial assumptions and methods used in both the December 31, 2019 Actuarial Valuation and the December 31, 2018 Actuarial Valuation were adopted by the PERB based upon the results of the 2018 Experience Study conducted by Milliman, issued July 24,



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Public Employees Retirement Board
Oregon Public Employees Retirement System
November 24, 2020
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2019. The assumptions and methods were selected in a manner consistent with current Actuarial Standards of Practice.

Milliman prepared the following information that is presented in the *Actuarial Section* of the 2020 Comprehensive Annual Financial Report (CAFR) based on the December 31, 2019 Actuarial Valuation:

- Schedule of Active Member Valuation Data
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Schedules of Funding Progress by Rate Pool
- Solvency Test
- Analysis of Financial Experience
- Schedules of Funding Progress

We understand the *Actuarial Section* of the CAFR will also include summaries of the actuarial methods, actuarial assumptions, and plan provisions valued. These summaries are contained in the December 31, 2019 Actuarial Valuation.

Financial Reporting Under GASB 67 and GASB 74

Under GASB 67 and GASB 74, the required financial reporting schedules present information using a Measurement Date of the System's fiscal year end. The Total Pension Liability (under GASB 67) and Total OPEB Liability (under GASB 74) for the June 30, 2020 fiscal year end were determined based on the results of the December 31, 2018 Actuarial Valuation. The liability calculated at the actuarial valuation date was then adjusted to the Measurement Date using standard actuarial roll-forward procedures. The Total Pension Liability/Total OPEB Liability is compared to the Fiduciary Net Position as of the Measurement Date, as provided by PERS and measured on a fair market value of assets basis, to determine the Net Pension Liability (Asset) under GASB 67 and the Net OPEB Liability (Asset) under GASB 74.

Milliman prepared the following exhibits for GASB 67 to assist PERS in completing the required *Notes to the Financial Statements* and *Required Supplementary Information*:

- Net Pension Liability (Asset)
- Changes in Net Pension Liability (Asset)
- Sensitivity Analysis
- Schedule of Changes in Net Pension Liability (Asset) and Related Ratios
- Long Term Expected Rate of Return

These exhibits, along with a discussion of the actuarial basis underlying the results, are presented in our *GASB 67 Reporting for Fiscal Year End 2020* letter dated November 24, 2020.



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Public Employees Retirement Board
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Milliman prepared the following exhibits for GASB 74 to assist PERS in completing the required *Notes to the Financial Statements and Required Supplementary Information*:

- Net OPEB Liability (Asset)
- Changes in Net OPEB Liability (Asset)
- Sensitivity Analysis
- Schedule of Changes in Net OPEB Liability (Asset) and Related Ratios
- Long Term Expected Rate of Return

These exhibits, along with a discussion of the actuarial basis underlying the results, are presented in our *GASB 74 Reporting for Fiscal Year End 2020* letter dated November 24, 2020. The first four exhibits listed above were provided separately for RHIA and RHIPA.

Funding Policy

The funding policy selected by the PERB is to adopt biennial contribution rates in accordance with the results of a “rate-setting” actuarial valuation performed using the assumptions and methods described in the associated actuarial valuation report. For example, the rates developed in the December 31, 2019 Actuarial Valuation were adopted by the PERB and established employer contributions for the July 1, 2021 to June 30, 2023 biennium. Contribution rates include funding the cost associated with new benefit accruals as well as amortizing any unfunded actuarial liability, determined using the market value of assets, over closed, layered amortization periods that vary from 10 to 20 years, according to the benefit program. In accordance with Senate Bill 1049, the unfunded actuarial liability for Tier 1/Tier 2 was reamortized over 22 years as of December 31, 2019. The contribution rate stabilization method (also known as the “rate collar”) limits rate changes from one biennium to the next, in effect phasing in changes over multiple rate-setting periods if asset or liability experience causes a large movement in the actuarially calculated contribution rate prior to application of the rate collar.

All members hired prior to August 29, 2003, are covered under Chapter 238 and are collectively referred to as Tier 1/Tier 2 members. Their benefit costs are calculated using two experience sharing pool valuations and some independent employer valuations. All school districts pool their Tier 1/Tier 2 experience through the school district pool. State government and some local governments pool their Tier 1/Tier 2 experience through the State and Local Government Rate Pool (SLGRP). As of December 31, 2019, there are also 129 independent employers who do not pool their Tier 1/Tier 2 experience with the other employers except through the Benefits in Force Reserve, which pools the experience of Tier 1/Tier 2 members in payee status across all employers and all other Tier 1/Tier 2 pooling arrangements.

All members hired after August 28, 2003, are covered under Chapter 238A and are referred to as OPSRP members, except for those members who previously established membership under Chapter 238 and meet the statutory requirements to reinstate those benefits. Experience for Chapter 238A members is pooled across all employers regardless of their status under the Chapter 238 arrangements. Chapter 238 benefits and Chapter 238A benefits are parts of a single plan.



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Public Employees Retirement Board
Oregon Public Employees Retirement System
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Finally, some employers made lump sum deposits in addition to their regularly scheduled contributions. These deposits are placed in a “side account” within the legally restricted pension trust and are used to offset a portion of future contribution requirements of the depositing employers via side account transfers. For financial reporting purposes, lump sum deposits are not considered as contributions in relation to the actuarially determined contribution. However, side accounts are included as assets in the Fiduciary Net Position. The Schedule of Funding Progress and Solvency Test also include side accounts as part of the Plan’s assets.

Actuarial Basis

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

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System. The December 31, 2018 and December 31, 2019 valuation results were developed using models that employ standard actuarial techniques for pension valuations.

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

Future actuarial measurements may differ significantly from the current measurements presented in these reports due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System’s funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The PERB has the final decision regarding the appropriateness of the assumptions and adopted them as indicated herein at its October 2019 public meeting.



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Some of the actuarial computations presented in the valuation reports are for purposes of determining contribution rates for System employers. Other actuarial computations presented in the reports under GASB Statements No. 67, 68, 74, and 75 are for purposes of assisting the System and participating employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the reports have been made on a basis consistent with our understanding of the System's funding policy and goals, the System benefit provisions as summarized in the reports, and GASB Statements No. 67, 68, 74, and 75. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in these reports. Accordingly, additional determinations may be needed for other purposes.

Milliman's work has been prepared exclusively for the Oregon Public Employees Retirement System for a specific and limited purpose. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. It is a complex, technical analysis that assumes a high level of knowledge concerning the System's operations, and uses the System's data, which Milliman has not audited. 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 actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. 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.

Sincerely,



Matthew R. Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary



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



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OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Actuarial Methods and Assumptions



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Tier 1/Tier 2 (including Retiree Healthcare)**Actuarial Methods and Valuation Procedures**

In October 2019 the Board adopted the following actuarial methods and valuation procedures for the December 31, 2018 and 2019 actuarial valuations of PERS Tier 1/Tier 2 benefits.

Actuarial cost method

Entry Age Normal. Under the Entry Age Normal (EAN) cost method, each active member's **entry age present value of projected benefits** is allocated over the member's service from the member's date of entry until their assumed date of exit, taking into consideration expected future compensation increases. Thus, the total pension to which each member is expected to become entitled at retirement is broken down into units, each associated with a year of past or projected future credited service. Typically, when this method is introduced, there will be an initial liability for benefits credited for service prior to that date, and to the extent that the liability is not covered by assets of the plan, there is an unfunded accrued liability to be funded over a stipulated period in accordance with an amortization schedule.

A detailed description of the calculation follows:

- An individual member's **entry age present value of projected benefits** is the sum of the present value of the benefit described under the plan at each possible separation date, determined at the member's entry age using the projected compensation and service at each separation date.
- An individual member's **entry age present value of projected salaries** is the sum of the present value of the projected compensation over the member's working career associated with each possible future separation date, determined at the member's entry age.
- An individual member's **present value of projected benefits** is the sum of the present value of the benefit described under the plan at each possible separation date, determined at the valuation date using the projected compensation and service at each separation date.
- An individual member's **normal cost** for a certain year is the member's **entry age present value of projected benefits** divided by the member's **entry age present value of projected salaries** and multiplied by the member's projected compensation for the year following the valuation date.
- An individual member's **actuarial accrued liability** is the member's **present value of projected benefits** less the sum of the present value of the member's **normal costs** for each future year, determined at the valuation date using the projected compensation and service at each future year.
 - The plan's **normal cost** is the sum of the individual member normal costs, and the plan's **actuarial accrued liability** is the sum of the individual members' actuarial accrued liabilities.



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Milliman Actuarial Valuation

Actuarial Methods and Assumptions
Tier 1/Tier 2 (including Retiree Healthcare)

<i>Tier 1/Tier 2 UAL amortization</i>	<p>The Tier 1/Tier 2 UAL amortization period was reset to 20 years as of December 31, 2013. Gains and losses between subsequent odd-year valuations have been amortized as a level percentage of projected combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed 20 year period from the valuation in which they are first recognized.</p> <p>Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.</p>
<i>Retiree Healthcare UAL amortization</i>	<p>The UAL for Retiree Health Care as of December 31, 2007 is amortized as a level percentage of projected combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed 10 year period. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over a closed 10 year period from the valuation in which they are first recognized.</p>
<i>Asset valuation method</i>	<p>The actuarial value of assets equals the market value of assets, excluding the Contingency and Capital Preservation Reserves, and the Rate Guarantee Reserve when it is in positive surplus status.</p> <p>Market values are reported to Milliman by PERS. It is our understanding that select real estate and private equity investments are reported on a three-month lag basis. This valuation report does not attempt to quantify any effects of the reporting lag.</p>
<i>Contribution rate stabilization method</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts rate pool, OPSRP) are confined to a collared range based on the prior contribution rate (prior to application of side accounts, pre-SLGRP liabilities, and 6 percent Independent Employer minimum). The new contribution rate will generally not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the prior contribution rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funded percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>
<i>Offset for Member Redirect Contributions</i>	<p>Under Senate Bill 1049, a portion of the 6% of pay member contribution otherwise made to the IAP is redirected to fund Tier 1/Tier 2 and OPSRP defined benefits beginning July 1, 2020. For Tier 1/Tier 2 members, the redirected amount will be 2.50% of pay, and for OPSRP it will be 0.75% of pay. Members with less than \$2,500 in monthly pay (indexed in future years) will be exempt from the redirection. For employer contribution rates shown in this valuation, member redirect contributions are assumed to offset total contribution rates beginning with the July 2021 – June 2023 biennium. Reflecting the effect of the monthly pay level-based exemption noted above, the offset is assumed to be 2.45% of total payroll for Tier 1/Tier 2 and 0.70% of total payroll for OPSRP.</p>
<i>Allocation of Liability for Service Segments</i>	<p>For active Tier 1/Tier 2 members who have worked for multiple PERS employers over their career, the calculated actuarial accrued liability is allocated among the employers based on a weighted average of the Money Match methodology, which uses account balance, and the Full Formula methodology, which uses service. The allocation is 10% (0% for police & fire) based on account balance with each employer and 90% (100% for police & fire) based on service with each employer.</p> <p>The entire normal cost is allocated to the current employer.</p>



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Milliman Actuarial Valuation

**Actuarial Methods and Assumptions
Tier 1/Tier 2 (including Retiree Healthcare)**

<i>Allocation of Benefits-In-Force (BIF) Reserve</i>	The BIF reserve is allocated to each rate pool in proportion to the retiree liability attributable to the rate pool.
<i>Census Data</i>	<p>PERS staff provided the data on plan members and beneficiaries upon which this valuation is based. Milliman did not audit the data, but did review it for reasonableness and consistency with data provided for previous years, in accordance with Actuarial Standard of Practice No. 23.</p> <p>PERS staff assisted in resolving questions and inconsistencies discovered in the data review, and provided updated records or direction for adjusting data as needed.</p> <p>The final census data is expected to be sufficiently accurate and complete for purposes of the actuarial valuation, and we are not aware of any significant concerns or unresolved issues that would materially affect results.</p>
<i>Internal Revenue Code 415 Benefit Limits</i>	<p>Annual benefit limits under Internal Revenue Code 415 are not explicitly reflected in the valuation.</p> <p>In accordance with ORS 238.488, we understand that members whose benefits are restricted by IRC 415 benefit limits are paid the difference between the unrestricted benefit and the IRC 415-restricted benefit from the Public Employee Benefit Equalization Fund.</p>



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Economic Assumptions

The Board adopted the following economic assumptions for the December 31, 2018 and 2019 actuarial valuations. All assumptions were reviewed and adopted in conjunction with the 2018 Experience Study, published in July 2019. The assumption selection process and rationale is described in detail in that report.

<i>Investment return</i>	7.20% compounded annually
<i>Pre-2014 Interest crediting</i>	8.00% compounded annually on members' regular account balances 8.25% compounded annually on members' variable account balances
<i>Post-2013 Interest crediting</i>	7.20% compounded annually on members' regular account balances 7.20% compounded annually on members' variable account balances
<i>Inflation</i>	2.50% compounded annually
<i>Administrative expenses</i>	\$32.5 million per year is added to the normal cost.
<i>Payroll growth</i>	3.50% compounded annually. This assumption represents the sum of the inflation assumption and a real wage growth assumption of 100 basis points.
<i>Healthcare cost trend</i>	Healthcare cost trend rates are used to estimate increases in the RHIPA Maximum Subsidy. These rates were developed with consideration of the excise tax scheduled to be introduced in 2022 by the Affordable Care Act. The excise tax was repealed in December 2019, and this will be reflected in the trend rates developed with the 2020 Experience Study, and we do not anticipate that update will materially affected calculated rates.

Year ¹	Rate	Year	Rate
2020	5.8%	2046 – 2047	5.5%
2021	5.2	2048 – 2050	5.4
2022 – 2024	5.0	2051 – 2053	5.3
2025	5.1	2054 – 2058	5.2
2026 – 2029	5.0	2059 – 2063	5.1
2030	5.4	2064	5.0
2031 – 2033	5.9	2065	4.9
2034	5.8	2066 – 2067	4.8
2035	5.9	2068	4.7
2036 – 2039	5.8	2069	4.6
2040	5.7	2070	4.5
2041	5.8	2071 – 2072	4.4
2042	5.7	2073	4.3
2043	5.8	2074 – 2093	4.2
2044	5.7	2094+	4.1
2045	5.6		

¹ For valuation purposes, the health cost trend rates are assumed to be applied at the beginning of the plan year.



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Demographic Assumptions

The Board adopted the following demographic assumptions for the December 31, 2018 and 2019 actuarial valuations. All assumptions were reviewed and adopted in conjunction with the 2018 Experience Study, published in July 2019. The study relied on data from an observation period of January 1, 2015 to December 31, 2018, with the exception of the merit scale assumption, which relied on data from 2010 through 2018. Assumptions selected from the study represent an estimate of future experience based on relevant recent experience and reasonable expectations about the future.

Mortality

Healthy Retired Members and Beneficiaries

The following healthy annuitant mortality tables were first adopted in the December 31 valuation of the years shown.

Basic Table	Pub-2010 Healthy Retiree, Sex Distinct, Generational Projection with Unisex Social Security Data Scale	Valuation Year Adopted
School District male	Teachers, no set back	2018
Other General Service male*	General Employees, set back 12 months	2018
Police & Fire male	Public Safety, no set back	2018
School District female	Teachers, no set back	2018
Other General Service female**	General Employees, no set back	2018
Police & Fire female	Public Safety, set back 12 months	2018

* including male beneficiaries of members of all classes

** including female beneficiaries of members of all classes

Disabled Retired Members

The following disabled retiree mortality rates were first adopted for the December 31, 2018 actuarial valuation.

Basic Table	Pub-2010 Disabled Retiree, Sex Distinct, Generational Projection with Unisex Social Security Data Scale
Police & Fire male	Blended 50% Public Safety, 50% Non-Safety, no set back
Other General Service male	Non-Safety, set forward 24 months
Police & Fire female	Blended 50% Public Safety, 50% Non-Safety, no set back
Other General Service female	Non-Safety, set forward 12 months



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Milliman Actuarial Valuation

Actuarial Methods and Assumptions
Tier 1/Tier 2 (including Retiree Healthcare)

Non-Annuitant Members

The following non-annuitant mortality tables were first adopted in the December 31 valuation of the years shown.

Basic Table	Pub-2010 Employee, Sex Distinct, Generational Projection with Unisex Social Security Data Scale	Valuation Year Adopted
School District male	120% of Employee table with same job category and set back as Healthy Retiree assumption	2018
Other General Service male	115% of Employee table with same job category and set back as Healthy Retiree assumption	2018
Police & Fire male	100% of Employee table with same job category and set back as Healthy Retiree assumption	2018
School District female	100% of Employee table with same job category and set back as Healthy Retiree assumption	2018
Other General Service female	125% of Employee table with same job category and set back as Healthy Retiree assumption	2018
Police & Fire female	100% of Employee table with same job category and set back as Healthy Retiree assumption	2018

Retirement Assumptions

The retirement assumptions used in the actuarial valuation include the following:

- Retirement from active status/dormant status
- Probability a member will elect a lump sum option at retirement
- Percentage of members who elect to purchase credited service at retirement.

Rates of Retirement from Active Status

The following retirement rate assumptions were first adopted in the December 31, 2018 valuation.

Age	Police & Fire			General Service			School Districts			Judges
	< 13 yrs	13-24 yrs	25+ yrs	< 15 yrs	15-29 yrs	30+ yrs	< 15 yrs	15-29 yrs	30+ yrs	
Less than 50						15.00%			25.00%	
50	1.50%	2.50%	27.50%			15.00%			25.00%	
51	1.50%	2.50%	21.50%			15.00%			25.00%	
52	1.50%	2.50%	21.50%			15.00%			25.00%	
53	1.50%	2.50%	21.50%			15.00%			25.00%	
54	1.50%	3.50%	21.50%			15.00%			25.00%	
55	3.00%	12.00%	25.00%	1.50%	2.50%	15.00%	1.50%	3.50%	25.00%	
56	3.00%	8.00%	25.00%	1.50%	2.50%	15.00%	1.50%	3.50%	25.00%	
57	3.00%	8.00%	25.00%	1.50%	2.50%	15.00%	1.50%	3.50%	25.00%	
58	6.00%	8.00%	25.00%	1.50%	9.00%	21.00%	1.50%	11.00%	27.50%	
59	6.00%	8.00%	25.00%	3.50%	9.00%	21.00%	4.50%	11.00%	27.50%	



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Age	Police & Fire			General Service			School Districts			Judges
	< 13 yrs	13-24 yrs	25+ yrs	< 15 yrs	15-29 yrs	30+ yrs	< 15 yrs	15-29 yrs	30+ yrs	
60	6.00%	11.00%	25.00%	6.00%	11.00%	21.00%	6.50%	12.50%	27.50%	8.50%
61	6.00%	14.00%	25.00%	6.00%	11.00%	21.00%	6.50%	12.50%	27.50%	8.50%
62	15.00%	25.00%	38.00%	13.00%	19.50%	31.00%	15.00%	23.50%	34.00%	8.50%
63	15.00%	15.00%	28.00%	11.50%	16.50%	23.00%	13.00%	19.50%	26.50%	8.50%
64	15.00%	15.00%	28.00%	12.50%	16.50%	23.00%	13.00%	19.50%	31.50%	8.50%
65	100.00%	100.00%	100.00%	19.50%	28.00%	35.50%	25.50%	33.50%	45.00%	8.50%
66				27.50%	36.00%	40.50%	23.00%	36.50%	45.00%	8.50%
67				22.50%	26.50%	28.50%	21.00%	34.50%	42.00%	16.00%
68				19.50%	26.50%	28.50%	21.00%	28.00%	28.50%	16.00%
69				19.50%	26.50%	28.50%	21.00%	28.00%	28.50%	16.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Retirement from Dormant Status

Dormant members are assumed to retire at Normal Retirement Age (age 58 for Tier 1, age 60 for Tier 2, age 60 for Judges, and age 55 for Police & Fire) or at the first unreduced retirement age (30 years of service, or age 50 with 25 years of service for Police & Fire).

Lump Sum Option at Retirement

Members retiring may elect to receive a full or partial lump sum at retirement. The probability that a retiring member will elect a lump sum at retirement is summarized in the table below. The total lump sum rates were first adopted effective December 31, 2016. The partial lump sum rate was first adopted effective December 31, 2018.

Lump Sum Option at Retirement	
Partial Lump Sum:	3.0% for all years
Total Lump Sum:	1.0% for 2019, declining by 0.5% per year until reaching 0.0%
No Lump Sum:	96.0% in 2019, increasing by 0.5% per year until reaching 97.0%

Purchase of Credited Service at Retirement

The following percentages of members are assumed to purchase service credit at time of retirement for the six-month waiting period that occurs prior to establishing membership in the system. These rates were first adopted effective December 31, 2018.

Purchase of Credited Service at Retirement	
Money Match Retirements:	0%
Non-Money Match Retirements:	70%

The cost of the service purchase is estimated based on assumed salary and contribution rates at entry age.

State Judiciary Member Plan Election

All State Judiciary members are assumed to elect to retire under the provisions of Plan B.



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Disability Assumptions

There are two disability assumptions used in the valuation - duty disability and ordinary (non-duty) disability. Duty disability rates are separated between Police & Fire and General Service, while ordinary disability is the same for all members. The rates for ordinary disability and for duty disability for General Service were first adopted effective December 31, 2018. The rates for duty disability for Police & Fire were first adopted effective December 31, 2012.

Percentage of the 1985 Disability Class 1 Rates	
Duty Disability Police & Fire	20%
Duty Disability General Service	0.8%
Ordinary Disability	30% with 0.18% cap

Ordinary disability rates are not applied until the minimum service requirement for non-duty disability benefits is met. Disability decrement rates continue to be applied after retirement eligibility.

Termination Assumptions

The General Service termination assumptions were first adopted effective December 31, 2018. The School District termination assumptions were first adopted effective December 31, 2016. The Police & Fire termination assumption was first adopted effective December 31, 2014.

Sample termination rates are shown for each group below:

Duration from Hire Date	School District Male	School District Female	General Service Male	General Service Female	Police & Fire
0	16.63%	13.50%	15.00%	15.50%	10.00%
1	14.25%	12.50%	12.50%	14.50%	5.97%
5	6.86%	7.13%	7.19%	8.04%	3.31%
10	3.31%	3.85%	4.13%	4.77%	2.23%
15	2.30%	2.68%	2.93%	3.43%	1.50%
20	1.62%	1.95%	2.08%	2.47%	1.01%
25	1.20%	1.50%	1.47%	1.78%	0.80%
30+	1.20%	1.50%	1.40%	1.40%	0.80%

Termination rates are not applied after a member reaches retirement eligibility. For a complete table of rates, please refer to the 2018 Experience Study report for the System, published in July 2019.

Oregon Residency Post-Retirement

For purposes of determining eligibility for SB 656/HB 3349 benefit adjustments, 85% of retirees are assumed to remain Oregon residents after retirement. This assumption was first adopted effective December 31, 2012.

Police & Fire Unit Purchase

Police & Fire members retiring from active service prior to age 65 are assumed to purchase additional benefit units at an estimated employer matching cost of \$4,000.



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Salary Increase Assumptions

The salary increase assumptions reflected in the actuarial valuation include:

- Merit scale increases in addition to the payroll growth increase
- Unused Sick Leave adjustments
- Vacation Pay adjustments

Merit Scale Increases

Merit scale increases are based on duration of service for the following groups with sample rates shown in the following table. These rates were first adopted effective December 31, 2018, except for the Police & Fire assumption, which was adopted December 31, 2016.

Duration	School District	Other General Service	Police & Fire
0	3.72%	3.70%	4.44%
1	3.43%	3.37%	3.95%
5	2.34%	2.24%	2.39%
10	1.14%	1.21%	1.23%
15	0.17%	0.54%	0.69%
20	-0.53%	0.16%	0.52%
25	-0.89%	0.01%	0.44%
30+	-0.95%	0.00%	0.21%

The assumed merit scale increase for active State Judiciary members is 0.0%.

For a complete table of rates, please refer to the 2018 Experience Study for the System, published in July 2019.

Unused Sick Leave

Members covered by the provision allowing unused sick leave to be used to increase final average salary at time of retirement are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits. Effective dates for the current assumption are shown in the table.

Unused Sick Leave	Valuation year adopted
Actives	
• State General Service Male	7.00% 2018
• State General Service Female	3.75% 2010
• School District Male	7.75% 2018
• School District Female	5.75% 2012
• Local General Service Male	5.25% 2018
• Local General Service Female	3.50% 2018
• State Police & Fire	4.00% 2018
• Local Police & Fire	7.25% 2016
Dormant Members	3.25% 2016



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Vacation Pay

Members eligible to include a lump sum payment of unused vacation pay in their final average salary calculation at time of retirement are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits. These rates were adopted December 31, 2018, except the school district rates which were adopted effective December 31, 2012.

Vacation Pay	
Tier 1	
• State General Service	2.25%
• School District	0.25%
• Local General Service	3.25%
• State Police & Fire	2.75%
• Local Police & Fire	4.25%
Tier 2	
	0.00%

Retiree Healthcare Participation

The following percentages of eligible retiring members are assumed to elect RHIPA and RHIA coverage:

Retiree Healthcare Participation	
RHIPA	
• 8 – 9 years of service	10.0%
• 10 – 14 years of service	10.0%
• 15 – 19 years of service	15.0%
• 20 – 24 years of service	19.0%
• 25 – 29 years of service	26.0%
• 30+ years of service	34.0%
RHIA	
• Healthy Retired	32.0%
• Disabled Retired	20.0%

The RHIA disabled retired rate was first adopted December 31, 2008. The RHIA healthy retired rate and RHIPA rates for 15 or more years of service were adopted December 31, 2018. RHIPA Rates up through 14 years of service were first adopted effective December 31, 2012

Spouse Assumptions

Non-annuitant death benefits are valued assuming all members are married. Future participants in RHIA and RHIPA are assumed to have eligible spouses. For these purposes, the spouse is assumed to be three years younger than a male member or three years older than a female member.

Actuarial Equivalence Assumptions

Early retirement factors and optional form conversion factors are assumed to remain level in all future years.

For members with pop-up annuities, the future amount payable if the spouse predeceases the member is estimated based on an assumed 0.90 optional form conversion factor for 100% contingent annuities and an assumed 0.94 optional form conversion factor for 50% contingent annuities.

OPSRP

Most of the methods and assumptions adopted for the OPSRP valuation are the same as those used for Tier 1/Tier 2. The methods and assumptions that differ for OPSRP are summarized below. The Board adopted the following methods, procedures and assumptions for the December 31, 2018 and December 31, 2019 actuarial valuations.

Actuarial Methods and Valuation Procedures

<i>OPSRP UAL amortization</i>	The UAL as of December 31, 2007 is amortized as a level percentage of projected combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed period 16 year period. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over 16 years from the valuation in which they are first recognized.
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Economic Assumptions

<i>Administrative expenses</i>	\$8.0 million per year is added to the normal cost.
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Demographic Assumptions

Rates of Retirement from Active Status

Age	Police & Fire			General Service			School Districts		
	< 13 yrs	13-24 yrs	25+ yrs	< 15 yrs	15-29 yrs	30+ yrs	< 15 yrs	15-29 yrs	30+ yrs
50	0.50%	1.50%	5.50%						
51	0.50%	1.50%	5.50%						
52	0.50%	1.50%	5.50%						
53	0.50%	1.50%	25.00%						
54	0.50%	1.50%	21.50%						
55	2.00%	5.00%	25.00%	1.00%	2.50%	5.00%	1.00%	2.50%	5.00%
56	2.00%	5.00%	25.00%	1.00%	2.50%	5.00%	1.00%	2.50%	5.00%
57	2.00%	5.00%	25.00%	1.00%	2.50%	7.50%	1.00%	2.50%	7.50%
58	5.00%	5.00%	25.00%	1.50%	3.00%	30.00%	1.50%	3.00%	30.00%
59	5.00%	5.00%	25.00%	2.00%	3.00%	25.00%	1.50%	3.00%	25.00%
60	5.00%	15.00%	25.00%	3.00%	3.75%	20.00%	2.50%	3.75%	20.00%
61	5.00%	8.50%	25.00%	3.00%	5.00%	20.00%	3.00%	5.00%	20.00%
62	10.00%	25.00%	38.00%	8.00%	12.00%	30.00%	6.00%	12.00%	30.00%
63	7.00%	15.00%	28.00%	7.00%	10.00%	20.00%	6.00%	10.00%	20.00%
64	7.00%	15.00%	28.00%	7.00%	10.00%	20.00%	6.00%	10.00%	20.00%
65	100.00%	100.00%	100.00%	14.50%	35.00%	20.00%	11.50%	35.00%	20.00%
66				18.50%	33.00%	20.00%	12.50%	33.00%	20.00%
67				17.00%	22.00%	30.00%	11.00%	22.00%	30.00%
68				13.00%	17.00%	20.00%	9.00%	17.00%	20.00%
69				13.00%	17.00%	20.00%	9.00%	17.00%	20.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%	100.00%



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Retirement from Dormant Status

Dormant members are assumed to retire at their Normal Retirement Age.

Disability Assumptions

Assumed disability rates are not applied to OPSRP members after they reach Normal Retirement Age.

Cost of living increases for the adjusted salary used to calculate retirement benefits for disabled OPSRP members are estimated based on the valuation inflation assumption.

Changes in Actuarial Methods and Assumptions — Tier 1/Tier 2 and OPSRP

A summary of key changes implemented since the December 31, 2018 valuation are described briefly below.

Changes in Actuarial Methods and Allocation Procedures

There were no changes to actuarial methods and procedures since the December 31, 2018 actuarial valuation.

Changes in Economic Assumptions

There were no changes to economic assumptions since the December 31, 2018 actuarial valuation.

Changes in Demographic Assumptions

There were no changes to demographic assumptions since the December 31, 2018 actuarial valuation.

Schedule of Active Member Valuation Data

Valuation Date	Count	Annual Payroll (in Thousands)	Average Annual Pay	% Increase in Average Pay	Number of Participating Employers
12/31/2010	193,569	\$ 8,750,064	\$ 45,204	-5.2%	787
12/31/2011	170,972	\$ 8,550,511	\$ 50,011	10.6%	791
12/31/2012	167,103	\$ 8,590,879	\$ 51,411	2.8%	798
12/31/2013	162,185	\$ 8,671,835	\$ 53,469	4.0%	799
12/31/2014	164,859	\$ 9,115,767	\$ 55,294	3.4%	802
12/31/2015	168,177	\$ 9,544,132	\$ 56,751	2.6%	804
12/31/2016	172,483	\$ 9,872,557	\$ 57,238	0.9%	805
12/31/2017	173,002	\$ 10,098,889	\$ 58,374	2.0%	802
12/31/2018	176,763	\$ 10,851,980	\$ 61,393	5.2%	798
12/31/2019	180,757	\$ 11,533,740	\$ 63,808	3.9%	802

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Annual Allowances are shown in thousands.

Valuation Date	Added to Rolls		Removed from Rolls		Rolls - End of Year		% Increase in Annual Allowances ²	Average Annual Allowances
	Count	Annual Allowances ¹	Count	Annual Allowances	Count	Annual Allowances		
12/31/2010	³ 6,359	\$ 217,424	3,512	\$ 51,627	114,988	\$ 2,992,048	5.9%	\$ 26,021
12/31/2011	³ 8,715	\$ 282,098	3,679	\$ 55,633	120,024	\$ 3,218,514	7.6%	\$ 26,816
12/31/2012	³ 7,023	\$ 235,917	4,875	\$ 59,353	122,172	\$ 3,395,079	5.5%	\$ 27,789
12/31/2013	9,724	\$ 307,551	3,644	\$ 66,607	128,252	\$ 3,636,023	7.1%	\$ 28,351
12/31/2014	⁴ 6,910	\$ 235,250	3,524	\$ 66,621	131,638	\$ 3,804,651	4.6%	\$ 28,902
12/31/2015	⁴ 8,566	\$ 304,818	3,781	\$ 73,305	136,423	\$ 4,036,165	6.1%	\$ 29,586
12/31/2016	⁴ 6,413	\$ 242,372	3,931	\$ 80,903	138,905	\$ 4,197,633	4.0%	\$ 30,219
12/31/2017	⁴ 10,075	\$ 385,197	3,878	\$ 83,921	145,102	\$ 4,498,910	7.2%	\$ 31,005
12/31/2018	7,856	\$ 297,542	3,933	\$ 90,107	149,025	\$ 4,706,345	4.6%	\$ 31,581
12/31/2019	8,200	\$ 322,057	4,124	\$ 95,486	153,101	\$ 4,932,915	4.8%	\$ 32,220

¹ Additions to annual allowances reflect the combined effects of new retirements and COLA increases since the previous valuation date.

² Since last valuation date.

³ Annual allowances reflect estimated adjustments to retiree benefits due to the implementation of the *Strunk v. PERB, et al.* and *City of Eugene v. State of Oregon, PERB, et al.* decisions.

⁴ Annual allowances reflect estimated adjustments to retiree benefits for the *Moro v. State of Oregon* decision for records that were not already adjusted in the data provided.

Schedules of Funding Progress by Rate Pool

(dollar amounts in millions)

Actuarial Valuation Date	Actuarial Value of Assets ^{1,2} (a)	Actuarial Accrued Liability (AAL) ² (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll ³ (c)	UAAL as a % of Covered Payroll ((b-a)/c)
Tier 1/Tier 2 State & Local Government Rate Pool						
12/31/2014	\$ 31,162.6	\$ 37,169.9	\$ 6,007.3	83.8%	\$ 2,827.9	212.4%
12/31/2015	\$ 30,185.3	\$ 38,396.8	\$ 8,211.5	78.6%	\$ 2,691.8	305.1%
12/31/2016	\$ 30,417.6	\$ 40,351.3	\$ 9,933.7	75.4%	\$ 2,546.7	390.1%
12/31/2017	\$ 33,366.0	\$ 42,150.7	\$ 8,784.7	79.2%	\$ 2,410.6	364.4%
12/31/2018	\$ 31,798.9	\$ 43,149.3	\$ 11,350.4	73.7%	\$ 2,299.5	493.6%
12/31/2019	\$ 34,060.0	\$ 44,122.1	\$ 10,062.1	77.2%	\$ 2,183.5	460.8%
Tier 1/Tier 2 School District Rate Pool						
12/31/2014	\$ 23,361.2	\$ 27,059.9	\$ 3,698.7	86.3%	\$ 1,626.0	227.5%
12/31/2015	\$ 22,728.9	\$ 27,670.7	\$ 4,941.8	82.1%	\$ 1,578.8	313.0%
12/31/2016	\$ 22,870.2	\$ 29,152.2	\$ 6,282.0	78.5%	\$ 1,532.7	409.9%
12/31/2017	\$ 24,934.4	\$ 29,677.4	\$ 4,743.1	84.0%	\$ 1,443.7	328.5%
12/31/2018	\$ 23,557.9	\$ 29,898.4	\$ 6,340.6	78.8%	\$ 1,401.2	452.5%
12/31/2019	\$ 25,091.5	\$ 30,274.5	\$ 5,183.0	82.9%	\$ 1,330.2	389.6%
Tier 1/Tier 2 Independent Employers and Judiciary						
12/31/2014	\$ 4,967.4	\$ 6,104.9	\$ 1,137.4	81.4%	\$ 479.2	237.4%
12/31/2015	\$ 4,807.6	\$ 6,327.1	\$ 1,519.5	76.0%	\$ 460.3	330.1%
12/31/2016	\$ 4,856.6	\$ 6,690.8	\$ 1,834.3	72.6%	\$ 437.3	419.5%
12/31/2017	\$ 5,018.2	\$ 6,536.3	\$ 1,518.1	76.8%	\$ 392.6	386.7%
12/31/2018	\$ 4,756.2	\$ 6,736.3	\$ 1,980.1	70.6%	\$ 375.4	527.5%
12/31/2019	\$ 5,061.3	\$ 6,916.0	\$ 1,854.7	73.2%	\$ 360.3	514.8%
OPSRP Rate Pool						
12/31/2014	\$ 2,024.6	\$ 3,064.1	\$ 1,039.5	66.1%	\$ 4,182.7	24.9%
12/31/2015	\$ 2,389.1	\$ 3,742.5	\$ 1,353.5	63.8%	\$ 4,813.3	28.1%
12/31/2016	\$ 3,021.4	\$ 4,717.0	\$ 1,695.6	64.1%	\$ 5,355.8	31.7%
12/31/2017	\$ 4,116.5	\$ 5,634.7	\$ 1,518.2	73.1%	\$ 5,852.0	25.9%
12/31/2018	\$ 4,783.0	\$ 6,738.0	\$ 1,955.0	71.0%	\$ 6,775.9	28.9%
12/31/2019	\$ 6,190.4	\$ 8,082.2	\$ 1,891.8	76.6%	\$ 7,659.8	24.7%
Postemployment Healthcare Benefits - Retirement Health Insurance Account						
12/31/2014	\$ 395.9	\$ 468.4	\$ 72.5	84.5%	\$ 4,933.1	1.5%
12/31/2015	\$ 419.3	\$ 465.6	\$ 46.3	90.0%	\$ 4,730.8	1.0%
12/31/2016	\$ 465.0	\$ 463.7	\$ (1.3)	100.3%	\$ 4,516.7	(0.0%)
12/31/2017	\$ 553.3	\$ 437.6	\$ (115.7)	126.4%	\$ 4,246.9	(2.7%)
12/31/2018	\$ 570.7	\$ 411.7	\$ (159.1)	138.6%	\$ 4,076.1	(3.9%)
12/31/2019	\$ 644.1	\$ 403.9	\$ (240.3)	159.5%	\$ 3,873.9	(6.2%)
Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account						
12/31/2014	\$ 7.2	\$ 70.5	\$ 63.3	10.2%	\$ 1,406.3	4.5%
12/31/2015	\$ 11.2	\$ 67.8	\$ 56.6	16.5%	\$ 1,339.4	4.2%
12/31/2016	\$ 19.1	\$ 67.9	\$ 48.8	28.1%	\$ 1,276.0	3.8%
12/31/2017	\$ 29.8	\$ 69.4	\$ 39.5	43.0%	\$ 1,212.2	3.3%
12/31/2018	\$ 38.5	\$ 62.7	\$ 24.3	61.3%	\$ 1,159.5	2.1%
12/31/2019	\$ 51.9	\$ 59.3	\$ 7.4	87.5%	\$ 1,120.6	0.7%

Notes:

¹ Side account assets are included with Tier 1/Tier 2 assets.

² Excludes effect of Multnomah Fire District (net UAAL of \$142 million as of 12/31/2019).

³ Covered payroll shown is for members of the rate pool benefiting from the specified program. For example, Tier 1/Tier 2 School District payroll is only payroll for Tier 1/Tier 2 members and excludes OPSRP. However, UAAL is amortized using combined Tier 1/Tier 2 and OPSRP payroll.

⁴ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective January 1 following the valuation date.

⁵ The 12/31/2014 valuation reflects benefit changes from the Oregon Supreme Court's ruling in *Moro v. State of Oregon*, which overturned portions of Senate Bills 822 and 861.

Analysis of Financial Experience

(dollar amounts in millions)

Tier 1/Tier 2 Pension Program	\$ Gain (or Loss) for Year	
	2019	2018
Type of Activity		
Retirements from Active Status	\$ (119.0)	\$ (82.2)
Active Mortality and Withdrawal	(14.6)	(10.8)
Pay Increases	(75.5)	(74.4)
Contributions	60.8	143.1
Interest Crediting Experience	(85.7)	88.5
Investment Income	3,207.6	(3,641.3)
Retirement, Mortality and Lump Sums from Dormant Status	4.4	(8.0)
Retiree and Beneficiary Mortality	3.5	(42.3)
New Entrants	(4.3)	(1.1)
Other	68.4	5.8
Gain (or Loss) During Year From Financial Experience	\$ 3,045.5	\$ (3,622.6)
Non-Recurring Items		
Assumption Changes	0.0	60.0
Plan Changes	0.0	41.0
Composite Gain (or Loss) During Year	\$ 3,045.5	\$ (3,521.6)

OPSRP Pension Program	\$ Gain (or Loss) for Year	
	2019	2018
Retirements from Active Status	\$ (0.3)	\$ (5.4)
Active Mortality and Withdrawal	(23.8)	(27.2)
Pay Increases	(137.9)	(81.4)
Contributions	45.7	61.0
Investment Income	301.8	(300.2)
Retirement, Mortality and Lump Sums from Dormant Status	2.5	3.7
Retiree and Beneficiary Mortality	1.6	0.8
New Entrants ¹	(106.0)	(81.5)
Other	(0.5)	(4.3)
Gain (or Loss) During Year From Financial Experience	\$ 83.2	\$ (434.6)
Non-Recurring Items		
Assumption Changes	0.0	(13.7)
Plan Changes	0.0	11.1
Composite Gain (or Loss) During Year	\$ 83.2	\$ (437.2)

¹ Accrued liability associated with new entrants is shown. For a full assessment of the new entrant effect on UAL, this would need to be combined with contributions associated with new entrants.

Analysis of Financial Experience

Gains and losses in Unfunded Accrued Liability resulting from differences between assumed experience and actual experience and assumption changes

(dollar amounts in millions)

Pension and Retiree Healthcare Plans	\$ Gain (or Loss) for Year	
	2019	2018
Type of Activity		
Retirements from Active Status	\$ (119.4)	\$ (87.6)
Active Mortality and Withdrawal	(38.4)	(38.0)
Pay Increases	(213.4)	(155.9)
Contributions	111.8	208.3
Interest Crediting Experience	(85.7)	88.5
Investment Income	3,547.4	(3,982.7)
Retirement, Mortality and Lump Sums from Dormant Status	7.0	(4.3)
Retiree and Beneficiary Mortality	5.1	(41.5)
New Entrants ¹	(110.3)	(82.6)
Other	79.1	15.2
Gain (or Loss) During Year From Financial Experience	\$ 3,183.2	\$ (4,080.5)
Non-Recurring Items		
Assumption Changes	0.0	67.3
Plan Changes	0.0	52.1
Composite Gain (or Loss) During Year	\$ 3,183.2	\$ (3,961.1)

¹ Accrued liability associated with new entrants is shown. For a full assessment of the new entrant effect on UAL, this would need to be combined with contributions associated with new entrants.

Retiree Healthcare Programs	\$ Gain (or Loss) for Year			
	RHIA		RHIPA	
	2019	2018	2019	2018
Contributions	\$ 4.3	3.2	\$ 1.0	\$ 0.9
Investment Income	35.7	(38.6)	2.3	(2.5)
Other	6.4	11.7	4.8	1.9
Gain (or Loss) During Year From Financial Experience	\$ 46.4	\$ (23.7)	\$ 8.1	\$ 0.4
Non-Recurring Items				
Assumption Changes	0.0	14.7	0.0	6.4
Plan Changes	0.0	0.0	0.0	0.0
Composite Gain (or Loss) During Year	\$ 46.4	\$ (9.0)	\$ 8.1	\$ 6.8

Actuarial Section

Solvency Test

(dollar amounts in millions)

Tier 1/Tier 2 Pension

Valuation Date ²	Actuarial Accrued Liability ¹			Valuation Assets ^{1,3}	Portion of Actuarial Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retired Members and Beneficiaries	Other Members		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
12/31/2012 ⁴	\$ 7,704.9	\$ 36,377.3	\$ 14,527.4	\$ 53,594.0	100%	100%	65%
12/31/2013 ⁵	\$ 7,120.1	\$ 39,116.2	\$ 14,114.1	\$ 58,384.0	100%	100%	86%
12/31/2014 ⁶	\$ 6,950.4	\$ 46,113.5	\$ 17,331.0	\$ 59,370.6	100%	100%	36%
12/31/2015 ⁵	\$ 6,476.8	\$ 48,641.5	\$ 17,335.7	\$ 57,611.0	100%	100%	14%
12/31/2016	\$ 6,168.1	\$ 51,655.5	\$ 18,429.6	\$ 58,037.6	100%	100%	1%
12/31/2017 ⁵	\$ 5,585.9	\$ 54,967.4	\$ 17,868.1	\$ 63,209.7	100%	100%	15%
12/31/2018	\$ 5,153.6	\$ 56,534.9	\$ 18,148.3	\$ 60,019.3	100%	97%	0%
12/31/2019 ⁵	\$ 4,907.4	\$ 58,567.8	\$ 17,888.4	\$ 64,121.8	100%	100%	4%

¹ Includes effect of Multnomah Fire District (net UAAL of \$142 million as of 12/31/2019).

² An extensive revision of the actuarial assumptions occurs prior to each even-year valuation; therefore, the figures are not directly comparable.

³ Includes the value of UAL Lump Sum Side Accounts.

⁴ The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861, as well as a change in cost method to Entry Age Normal.

⁵ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective January 1 following the valuation date.

⁶ The 12/31/2014 valuation reflects benefit changes from the Oregon Supreme Court's ruling in *Moro v. State of Oregon*, which overturned portions of Senate Bills 822 and 861.

OPSRP Pension

Valuation Date ¹	Actuarial Accrued Liability			Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retired Members and Beneficiaries	Other Members		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
12/31/2012 ²	\$ 0.0	\$ 28.6	\$ 1,766.9	\$ 1,190.0	100%	100%	66%
12/31/2013	\$ 0.0	\$ 51.2	\$ 2,192.1	\$ 1,630.2	100%	100%	72%
12/31/2014 ³	\$ 0.0	\$ 92.4	\$ 2,971.6	\$ 2,024.6	100%	100%	65%
12/31/2015	\$ 0.0	\$ 144.6	\$ 3,597.9	\$ 2,389.1	100%	100%	62%
12/31/2016	\$ 0.0	\$ 201.1	\$ 4,515.9	\$ 3,021.4	100%	100%	62%
12/31/2017	\$ 0.0	\$ 310.1	\$ 5,324.5	\$ 4,116.5	100%	100%	71%
12/31/2018	\$ 0.0	\$ 419.0	\$ 6,318.9	\$ 4,783.0	100%	100%	69%
12/31/2019	\$ 0.0	\$ 554.3	\$ 7,527.9	\$ 6,190.4	100%	100%	75%

¹ An extensive revision of the actuarial assumptions occurs prior to each even-year valuation; therefore, the figures are not directly comparable.

² The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861, as well as a change in cost method to Entry Age Normal.

³ The 12/31/2014 valuation reflects benefit changes from the Oregon Supreme Court's ruling in *Moro v. State of Oregon*, which overturned portions of Senate Bills 822 and 861.

Solvency Test

(dollar amounts in millions)

Retiree Health Insurance Account (RHIA)								
Actuarial Accrued Liability								
Valuation Date ¹	Active Member Contributions	Retired Members and Beneficiaries	Other Members	Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets			
	(1)	(2)	(3)		(1)	(2)	(3)	
12/31/2012 ²	\$ 0.0	\$ 338.3	\$ 133.5	\$ 291.6	100%	86%	0%	
12/31/2013	\$ 0.0	\$ 348.0	\$ 125.6	\$ 353.5	100%	100%	4%	
12/31/2014	\$ 0.0	\$ 355.1	\$ 113.3	\$ 395.9	100%	100%	36%	
12/31/2015	\$ 0.0	\$ 357.7	\$ 107.9	\$ 419.3	100%	100%	57%	
12/31/2016	\$ 0.0	\$ 361.7	\$ 102.0	\$ 465.0	100%	100%	101%	
12/31/2017	\$ 0.0	\$ 343.9	\$ 93.7	\$ 553.3	100%	100%	224%	
12/31/2018	\$ 0.0	\$ 329.8	\$ 81.8	\$ 570.7	100%	100%	294%	
12/31/2019	\$ 0.0	\$ 326.9	\$ 77.0	\$ 644.1	100%	100%	412%	

¹ An extensive revision of the actuarial assumptions occurs prior to each even-year valuation; therefore, the figures are not directly comparable.² The 12/31/2012 valuation reflects a change in cost method to Entry Age Normal.

Retiree Health Insurance Premium Account (RHIPA)								
Actuarial Accrued Liability								
Valuation Date ¹	Active Member Contributions	Retired Members and Beneficiaries	Other Members	Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets			
	(1)	(2)	(3)		(1)	(2)	(3)	
12/31/2012 ²	\$ 0.0	\$ 15.1	\$ 45.3	\$ 4.4	100%	29%	0%	
12/31/2013	\$ 0.0	\$ 16.1	\$ 45.1	\$ 5.2	100%	33%	0%	
12/31/2014	\$ 0.0	\$ 15.7	\$ 54.9	\$ 7.2	100%	46%	0%	
12/31/2015	\$ 0.0	\$ 14.9	\$ 52.9	\$ 11.2	100%	75%	0%	
12/31/2016	\$ 0.0	\$ 14.4	\$ 53.5	\$ 19.1	100%	100%	9%	
12/31/2017	\$ 0.0	\$ 14.4	\$ 53.5	\$ 19.1	100%	100%	9%	
12/31/2018	\$ 0.0	\$ 14.0	\$ 48.8	\$ 38.5	100%	100%	50%	
12/31/2019	\$ 0.0	\$ 12.1	\$ 47.2	\$ 51.9	100%	100%	84%	

¹ An extensive revision of the actuarial assumptions occurs prior to each even-year valuation; therefore, the figures are not directly comparable.² The 12/31/2012 valuation reflects a change in cost method to Entry Age Normal.

Actuarial Section

Schedules of Funding Progress

(dollar amounts in millions)

Actuarial Valuation Date	Actuarial Value of Assets ¹ (a)	Actuarial Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
Pension Benefits - Tier 1/Tier 2 and OPSRP²						
12/31/2010	\$ 51,583.6	\$ 59,329.5	\$ 7,746.0	86.9%	\$ 8,750.1	88.5%
12/31/2011	³ \$ 50,168.2	\$ 61,198.4	\$ 11,030.2	82.0%	\$ 8,550.5	129.0%
12/31/2012	⁴ \$ 54,784.1	\$ 60,405.2	\$ 5,621.1	90.7%	\$ 8,590.9	65.4%
12/31/2013	³ \$ 60,014.1	\$ 62,593.6	\$ 2,579.5	95.9%	\$ 8,671.8	29.7%
12/31/2014	⁵ \$ 61,395.2	\$ 73,458.9	\$ 12,063.7	83.6%	\$ 9,115.8	132.3%
12/31/2015	³ \$ 60,000.1	\$ 76,196.6	\$ 16,196.5	78.7%	\$ 9,544.1	169.7%
12/31/2016	\$ 61,059.0	\$ 80,970.3	\$ 19,911.2	75.4%	\$ 9,872.6	201.7%
12/31/2017	³ \$ 67,326.1	\$ 84,056.1	\$ 16,730.0	80.1%	\$ 10,098.9	165.7%
12/31/2018	\$ 64,802.3	\$ 86,574.7	\$ 21,772.4	74.9%	\$ 10,852.0	200.6%
12/31/2019	³ \$ 70,312.3	\$ 89,445.7	\$ 19,133.5	78.6%	\$ 11,533.7	165.9%
Postemployment Healthcare Benefits - Retirement Health Insurance Account						
12/31/2010	\$ 232.3	\$ 547.1	\$ 314.8	42.5%	\$ 8,750.1	3.6%
12/31/2011	\$ 239.6	\$ 461.1	\$ 221.5	52.0%	\$ 8,550.5	2.6%
12/31/2012	\$ 291.6	\$ 471.8	\$ 180.2	61.8%	\$ 8,590.9	2.1%
12/31/2013	\$ 353.5	\$ 473.6	\$ 120.0	74.7%	\$ 8,671.8	1.4%
12/31/2014	\$ 395.9	\$ 468.4	\$ 72.5	84.5%	\$ 9,115.8	0.8%
12/31/2015	\$ 419.3	\$ 465.6	\$ 46.3	90.0%	\$ 9,544.1	0.5%
12/31/2016	\$ 465.0	\$ 463.7	\$ (1.3)	100.3%	\$ 9,872.6	(0.0%)
12/31/2017	\$ 553.3	\$ 437.6	\$ (115.7)	126.4%	\$ 10,098.9	(1.1%)
12/31/2018	\$ 570.7	\$ 411.7	\$ (159.1)	138.6%	\$ 10,852.0	(1.5%)
12/31/2019	\$ 644.1	\$ 403.9	\$ (240.3)	159.5%	\$ 11,533.7	(2.1%)
Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account						
12/31/2010	\$ 5.7	\$ 33.9	\$ 28.2	16.8%	\$ 2,379.7	1.2%
12/31/2011	\$ 4.5	\$ 34.4	\$ 29.9	13.2%	\$ 2,376.9	1.3%
12/31/2012	\$ 4.4	\$ 60.3	\$ 55.9	7.4%	\$ 2,432.4	2.3%
12/31/2013	\$ 5.2	\$ 61.2	\$ 55.9	8.6%	\$ 2,531.5	2.2%
12/31/2014	\$ 7.2	\$ 70.5	\$ 63.3	10.2%	\$ 2,718.9	2.3%
12/31/2015	\$ 11.2	\$ 67.8	\$ 56.6	16.5%	\$ 2,831.8	2.0%
12/31/2016	\$ 19.1	\$ 67.9	\$ 48.8	28.1%	\$ 2,881.4	1.7%
12/31/2017	\$ 29.8	\$ 69.4	\$ 39.5	43.0%	\$ 2,984.5	1.3%
12/31/2018	\$ 38.5	\$ 62.7	\$ 24.3	61.3%	\$ 3,211.6	0.8%
12/31/2019	\$ 51.9	\$ 59.3	\$ 7.4	87.5%	\$ 3,479.8	0.2%

Notes:

¹ Side account assets are included with pension assets.

² Includes UAAL for Multnomah Fire District (\$142 million as of 12/31/2019).

³ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective January 1 following the valuation date.

⁴ The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861, as well as a change in cost method to Entry Age Normal.

⁵ The 12/31/2014 valuation reflects benefit changes from the Oregon Supreme Court's ruling in *Moro v. State of Oregon*, which overturned portions of Senate Bills 822 and 861.

Plan Summary

OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Summary of Plan Provisions



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Summary of Plan Provisions

The following section summarizes the plan provisions considered in the actuarial valuation. A more detailed description of plan provisions is available from PERS.

<i>Membership</i>	All employees of public employers participating in this System who are in qualifying positions become members of the System after completing six months of service except those who are eligible for and have elected to participate in an optional retirement plan. Different benefit provisions of the plan apply based on date of hire.	
	Tier 1	Hired prior to 1996
	Tier 2	Hired after 1995 and before August 29, 2003
	OPSRP	Hired after August 28, 2003, and neither a judge nor a former Tier 1/Tier 2 member eligible to reestablish Tier 1/Tier 2 membership
	Judges	Members of the State Judiciary
<i>Member Contributions</i>	Judges	7% of salary
	All others	None as of valuation date Prior to January 1, 2004, Tier 1/Tier 2 members contributed 6% of salary to member accounts. Effective July 1, 2020: 2.5% of salary for Tier 1/Tier 2 members and 0.75% of salary for OPSRP members (only applicable to members earning at least \$2,500 per month, indexed for inflation) will be contributed to Employee Pension Stability Accounts (EPSA). EPSA balances will not affect the calculation of Money Match or Formula Plus Annuity benefits.
<i>Employer Contributions</i>	Set by the PERS Board based on actuarial calculations that follow Board rate-setting policies for employers.	



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Summary of Chapter 238 Provisions — Tier 1/Tier 2 and Judges

<i>Normal Retirement Date</i>	Police and Fire	Age 55
	Judges	Age 65
	Tier 1 General Service	Age 58
	Tier 2 General Service	Age 60

Normal Retirement Allowance

For Members who are not Judges, the greatest of the Full Formula benefit, the Money Match benefit, or the Formula Plus Annuity benefit (only available to Members who made contributions before August 21, 1981). For Members with 15 or more years of creditable service, the benefit will not be less than the minimum service retirement allowance of \$100 per month, as described in ORS 238.310.

Full Formula The percentage multiplier from the table below multiplied by final average salary and years of creditable service plus a prior service pension, if applicable.

Percentage Multiplier	Membership Classification
2.00%	Fire, Police and Legislators
1.67%	All other members

Money Match The Member's account balance and a matching employer amount converted to an actuarially equivalent annuity.

Formula Plus Annuity The Member's account balance converted to an actuarially equivalent cash refund annuity plus the percentage multiplier from the table below multiplied by final average salary and years of creditable service, plus a prior service pension, if applicable.

Percentage Multiplier	Membership Classification
1.35%	Fire, Police and Legislators
1.00%	All other members

Judges Final average salary multiplied by the first percentage multiplier from the table below for up to 16 years of service plus the second percentage multiplier for any service in excess of 16 years, but not to exceed the maximum percentage of final average salary also shown below. Judges must elect Plan A or Plan B no later than age 60. A "Plan B" judge must serve as a pro tem judge for a total of 175 days postretirement.

Plan	Percentage Factor (up to 16 years)	Percentage Factor (after 16 years)	Maximum Percentage of Final Average Salary
A	2.8125%	1.67%	65%
B	3.75%	2.00%	75%



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<i>Final Average Salary</i>	<p>The greater of:</p> <ul style="list-style-type: none"> Average salary earned during the three calendar years in which the member was paid the highest salary, even if one of those years is less than a full calendar year. Total salary earned over the last 36 months of employment divided by the actual months of service during that 36 month period. <p>Covered salary for this purpose includes the value of member contributions assumed and paid by employers, any payment due to an employer's participation in the Unused Sick Leave program, and, for Tier 1 members, lump sum payment of unused vacation time. For Tier 2 members, covered salary is limited by Internal Revenue Code 401(a)(17). The limit was \$280,000 in 2019. Tier 1 members are not subject to this limit.</p> <p>Under Senate Bill 1049, passed during the 2019 legislative session, the salary included in the determination of Final Average Salary will be limited for all members beginning in 2020. The limit will be equal to \$195,000 in 2020, and will be indexed with inflation in later years. For this purpose, payment due to the unused sick leave program will not be affected by the Final Average Salary limit. However, lump sum payments of unused vacation time for Tier 1 members will be included in total salary subject to the limit.</p>																												
<i>Creditable Service</i>	The number of years and months an active Member is paid a salary by a participating PERS employer and PERS benefits are being funded.																												
<i>Prior Service Pension</i>	Benefits payable on account of Prior Service Credit for a member's service with a participating employer prior to the employer's participation in PERS, as described in ORS 238.442.																												
<i>SB 656/HB 3349 Adjustment</i>	<p>All members receive an increase to their monthly retirement benefit equal to the greater of the increase under Senate Bill 656 (SB 656) or House Bill 3349 (HB 3349). The adjustment for SB 656 only applies to members who established membership prior to July 14, 1995. Senate Bill 822, enacted in 2013, limits eligibility for these adjustments to only PERS beneficiaries who pay Oregon state income tax.</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">SB 656 Increase</th> <th style="text-align: center;">Years of Service</th> <th style="text-align: center;">General Service</th> <th style="text-align: center;">Police & Fire</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">0-9</td> <td style="text-align: center;">0.0%</td> <td style="text-align: center;">0.0%</td> </tr> <tr> <td></td> <td style="text-align: center;">10-14</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">1.0</td> </tr> <tr> <td></td> <td style="text-align: center;">15-19</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">1.0</td> </tr> <tr> <td></td> <td style="text-align: center;">20-24</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">2.5</td> </tr> <tr> <td></td> <td style="text-align: center;">25-29</td> <td style="text-align: center;">3.0</td> <td style="text-align: center;">4.0</td> </tr> <tr> <td></td> <td style="text-align: center;">30 & Over</td> <td style="text-align: center;">4.0</td> <td style="text-align: center;">4.0</td> </tr> </tbody> </table> <p>HB 3349 Increase</p> $\left(\frac{1}{1 - \text{maximum Oregon personal income tax rate (limited to 9\%)}} - 1 \right) \times \frac{\text{Service prior to October 1, 1991}}{\text{All Service}}$	SB 656 Increase	Years of Service	General Service	Police & Fire		0-9	0.0%	0.0%		10-14	1.0	1.0		15-19	1.0	1.0		20-24	2.0	2.5		25-29	3.0	4.0		30 & Over	4.0	4.0
SB 656 Increase	Years of Service	General Service	Police & Fire																										
	0-9	0.0%	0.0%																										
	10-14	1.0	1.0																										
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Milliman Actuarial Valuation

Summary of Plan Provisions

<i>Early Retirement Eligibility</i>	Police and Fire	Age 50 or 30 years of service
	Judges	Age 60
	General Service	Age 55 or 30 years of service
<i>Early Retirement Allowance</i>	Normal retirement allowance, actuarially reduced to early retirement age. However, there is no reduction applied if a member has completed 30 years of service (25 years for police & fire members) or for judges in Plan B.	
<i>Vesting</i>	Contributions made in any part of five calendar years or attainment of age 50 (45 for police & fire) while working in a qualifying position.	
<i>Termination Benefits</i>	Non-Vested	Payment of member's account balance.
	Vested	Same as normal (or early) retirement allowance, but commencement is deferred to normal (or early) retirement date.
<i>Optional Forms of Retirement Allowance</i>	The normal form of benefit is a cash refund annuity (joint and two-thirds survivor contingent annuity for a married judge). All optional amounts are adjusted to be actuarially equivalent.	
	Options Available <ul style="list-style-type: none"> • Life annuity • Cash refund annuity • Life annuity guaranteed 15 years • Joint and 50% or 100% survivor contingent annuity, with or without pop-up feature • Partial Lump Sum: Refund of member contribution account balance plus a pension (under any optional form) of employer-paid portion of the Full Formula or Money Match annuity. • Total Lump Sum: Refund of member contribution account plus a matching employer amount. 	
<i>Preretirement Death Benefit Eligibility</i>	Judges	Six or more years of service.
	All others	Death occurring while the member is an employee of a participating employer or within 120 days of termination provided the employee does not withdraw the account balance or retire, or a result of injuries received while in the service of a participating employer.
<i>Preretirement Death Benefit</i>	Judges	The spouse shall receive a life pension equal to two-thirds of the service retirement allowance. The beneficiary of an unmarried judge shall receive the member's accumulated contributions with interest.
	All others	The member's account balance plus a matching employer amount.
<i>Additional Police & Fire Death Benefits</i>	Upon the death of a retired police officer or firefighter, the surviving spouse or dependent children under age 18 will receive a monthly benefit based on 25% of the cash refund retirement allowance due to police and fire service.	
<i>Disability Benefit Eligibility</i>	Duty	Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service.
	Non-Duty	Disablement occurring after ten years of service (six years, if a judge), but prior to normal retirement eligibility.



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<i>Disability Benefits</i>	The normal retirement allowance calculated based on the service credit that would have been earned if the member had continued working to age 58 (age 55 for police and fire, age 65 for judge members) payable commencing immediately.
	Fire and Police Members' Alternative
	In lieu of the above, firefighters and police officers who qualify for duty disability may elect to receive a benefit of 50% of final average monthly salary at the time of disablement.
	Minimum Monthly Retirement Allowance
	Judges 45% of final average monthly salary.
	All others \$100 for a member with at least 15 years of creditable service, actuarially reduced if an optional form of benefit is chosen.
	Reduction of Benefits
	Whenever a disabled employee's disability benefit and earned income for any month exceed the monthly salary received at the time of disablement or \$400, if greater, the disability benefit will be reduced by the excess.
	For Tier Two members, the disability benefit may not exceed the member's salary at the time of disablement.
<i>Waiting Time Service Purchases</i>	Members with at least 10 years of combined credited and/or prior service under PERS may elect to purchase service credit for the six-month "waiting time" period worked prior to establishing membership in the system. The waiting time purchase is interest-free and must be purchased in one payment prior to retirement.
<i>Police & Fire Unit Purchases</i>	Police & fire members may purchase 60-month annuity benefits (up to \$80 per month) that must be paid out by age 65 and cannot commence prior to the earliest retirement age. The amount purchased by the member is matched by the employer. In certain situations, such as termination of employment prior to retiring, or working beyond age 65, the employer's matching purchase is forfeited.
<i>Automatic Postretirement Cost of Living Adjustments (COLAs)</i>	All monthly pension and annuity benefits except unit purchases are eligible for postretirement adjustments. As a result of the Senate Bills 822 and 861 and the Oregon Supreme Court decision in <i>Moro v. State of Oregon</i> , automatic postretirement adjustments are based on a blended COLA as described below.
	<p>Automatic COLA prior to SB 822 and SB 861 Benefits were adjusted annually to reflect the increase or decrease in the Consumer Price Index (Portland area - all items) as published by the Bureau of Labor Statistics.</p> <p>The maximum adjustment to be made for any year was 2% of the previous year's benefit. Any CPI change in excess of the limit was accumulated for future benefit adjustments which would otherwise be less than the limit. No benefit was decreased below its original amount.</p>
	<p>Automatic Adjustments Provided by Senate Bills 822 and 861 This legislation, passed in 2013, provided for that benefits would be increased annually based on a marginal rate schedule. The increase is calculated as 1.25% on the first \$60,000 of annual benefit and 0.15% on amounts above \$60,000 of annual benefit.</p>



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Milliman Actuarial Valuation

Summary of Plan Provisions

	Blended COLA after Moro decision	The Supreme Court decision in <i>Moro</i> requires that members “will be entitled to receive during retirement a blended COLA rate that reflects the different COLA provisions applicable to benefits earned at different times.” The Supreme Court did not articulate a specific methodology for determining the blended COLA. For purposes of this valuation, we have determined the blend based on creditable service earned before and after October 2013. This approach is consistent with OAR 459-005-0510 adopted by the PERS Board in September 2015.
<i>Ad Hoc Adjustments</i>		From time to time, as granted by the Legislature, retired members and beneficiaries have received increases in their monthly benefits.
<i>Variable Annuity Program</i>	Contributions	Prior to January 1, 2004, a member could elect to have 25, 50 or 75 percent of his or her contributions invested in the variable account.
	Benefit	At retirement, a member may elect to receive a variable annuity with the funds accumulated in his or her variable account. Alternatively, a member may elect to have all or a portion of the funds in his or her variable account transferred back to the regular account and receive an annuity from the System as though no variable annuity program existed. The employer-provided benefit, however, is based on the earnings the member would have received in the regular account.
<i>Interest Credit on Member Accounts</i>	Tier 1 Regular	Actuarially assumed rate of return until the rate guarantee reserve has been fully funded for three consecutive years and the Board elects to credit additional interest.
	Tier 2 Regular	Amount determined by the Board based on actual investment earnings of the regular account.
	Variable	Actual earnings in variable account.
<i>Retiree Healthcare – Medicare Supplement (RHIA)</i>	Retiree Eligibility	All of the following must be met: <ul style="list-style-type: none"> (a) Currently receiving a retirement allowance from the System, (b) Covered for eight years before retirement, (c) Enrolled in a PERS-sponsored health plan, and (d) Enrolled in both Medicare Part A and Part B.
	Surviving Spouse or Dependent Eligibility	A surviving spouse or dependent of a deceased RHIA-eligible retiree is eligible for RHIA benefits if they are enrolled in both Medicare Part A and Part B, and <i>either</i> of the following criteria are met: <ul style="list-style-type: none"> (a) Currently receiving a retirement allowance from the System, or (b) The surviving spouse or dependent was covered under the eligible retiree’s PERS-sponsored health insurance at the time of the retiree’s death and the deceased retiree retired before May 1, 1991.



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	Benefit Amount	A monthly contribution of up to \$60 per retiree is applied to PERS-sponsored Medicare supplemental insurance costs.																
<i>Retiree Healthcare – Under Age 65 (RHIPA)</i>	Retiree Eligibility	Retired PERS members who were state employees at the time of retirement, are enrolled in a PERS-sponsored health plan, and are not eligible for Medicare.																
	Surviving Spouse or Dependent Eligibility	A surviving spouse or dependent of a deceased RHIPA-eligible retiree is eligible for RHIPA benefits if they are not yet eligible for Medicare, and <i>either</i> of the following criteria are met: (a) Currently receiving a retirement allowance from the System, or (b) The surviving spouse or dependent was covered under the eligible retiree’s PERS-sponsored health plan at the time of the retiree’s death and the deceased retiree retired on or after September 29, 1991.																
	Benefit	A percentage (as shown in the table below) of the maximum monthly subsidy based on years of service. The maximum monthly subsidy is calculated annually as the average difference between the health insurance premiums paid by active state employees and the premium retirees would pay if they were rated separately from active state employees. The maximum monthly subsidy for 2020 is \$428.17 per month.																
		<table border="1"> <thead> <tr> <th>Years of Service with State Employer</th> <th>Subsidized Amount</th> </tr> </thead> <tbody> <tr> <td>Under 8</td> <td>0%</td> </tr> <tr> <td>8-9</td> <td>50%</td> </tr> <tr> <td>10-14</td> <td>60%</td> </tr> <tr> <td>15-19</td> <td>70%</td> </tr> <tr> <td>20-24</td> <td>80%</td> </tr> <tr> <td>25-29</td> <td>90%</td> </tr> <tr> <td>30 & Over</td> <td>100%</td> </tr> </tbody> </table>	Years of Service with State Employer	Subsidized Amount	Under 8	0%	8-9	50%	10-14	60%	15-19	70%	20-24	80%	25-29	90%	30 & Over	100%
Years of Service with State Employer	Subsidized Amount																	
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20-24	80%																	
25-29	90%																	
30 & Over	100%																	

Changes in Plan Provisions There were no changes in the Tier 1/Tier 2 benefit provisions reflected since the December 31, 2018 actuarial valuation.



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Summary of Chapter 238A Provisions — OPSRP

<i>Normal Retirement Date</i>	<p>Police & Fire Age 60 or age 53 with 25 years of retirement credit</p> <p>General Service Age 65 or age 58 with 30 years of retirement credit</p> <p>School Districts Age 65 or age 58 with 30 calendar years of active membership</p>
<i>Normal Retirement Allowance</i>	A single life annuity equal to final average salary times years of retirement credit attributable to service as fire and police times 1.8% plus final average salary times all other years of retirement credit times 1.5%.
<i>Final Average Salary</i>	<p>The greater of:</p> <ul style="list-style-type: none"> • Average salary earned during the three calendar years in which the member was paid the highest salary, even if one of those years is less than a full calendar year. • Total salary earned over the last 36 months of employment divided by the actual months of service during that 36 month period. <p>Covered salary for this purpose includes base pay, plus overtime up to an average amount, plus bonuses, plus member contributions paid by the employer on a salary reduction basis. Excludes payments of unused vacation or accumulated sick leave at retirement, and member contributions “assumed and paid” by the employer.</p> <p>For OPSRP members, covered salary is limited by Internal Revenue Code 401(a)(17). The limit was \$280,000 in 2019.</p> <p>Under Senate Bill 1049 passed during the 2019 legislative session, the salary included in the determination of Final Average Salary will be limited for all members beginning in 2020. The limit will be equal to \$195,000 in 2020, and will be indexed with inflation in later years.</p>
<i>Early Retirement Eligibility</i>	<p>Police & Fire Age 50 and 5 years of vesting service</p> <p>General Service Age 55 and 5 years of vesting service</p>
<i>Early Retirement Allowance</i>	Normal retirement allowance, actuarially reduced to early retirement age.
<i>Vesting</i>	Five years or attainment of normal retirement age.
<i>Vested Termination Benefit</i>	Same as normal (or early) retirement allowance, but commencement is deferred to normal (or early) retirement date.
<i>Optional Forms of Retirement Benefit</i>	<p>The normal form of benefit is a life annuity. All optional amounts are adjusted to be actuarially equivalent.</p> <p>Options Available</p> <ul style="list-style-type: none"> • Life annuity • Joint and 50% or 100% survivor contingent benefit, with or without pop-up feature • Lump sum if monthly normal retirement benefit is less than \$200 or if lump sum value is less than \$5,000.
<i>Preretirement Death Benefit Eligibility</i>	Death of a vested member before retirement benefits begin.



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<i>Preretirement Death Benefit</i>	If member was eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant was eligible to receive at date of death. If member was not eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant would have been eligible to receive if he terminated employment on his date of death and retired at the earliest possible date.	
<i>Disability Benefit Eligibility</i>	Duty	Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service.
	Non-Duty	Disablement occurring after ten years of service, but prior to normal retirement eligibility.
<i>Disability Benefit Amounts</i>	Preretirement Benefit	45% of salary during last full month of employment before disability, reduced if the total benefit exceeds 75% of salary. Benefit is payable monthly until normal retirement age.
	Retirement Benefit	Same formula as Normal Retirement Benefit, except: Final average salary is adjusted to reflect cost-of-living increases from date of disability to normal retirement age, and Retirement credits continue to accrue from date of disability to normal retirement age.
<i>Postretirement Adjustments</i>	All monthly pension and annuity benefits except unit purchases are eligible for postretirement adjustments. As a result of the Senate Bills 822 and 861 and the Oregon Supreme Court decision in <i>Moro v. State of Oregon</i> , automatic postretirement adjustments are based on a blended COLA as described below.	
	Automatic COLA prior to SB 822 and SB 861	Benefits were adjusted annually to reflect the increase or decrease in the Consumer Price Index (Portland area - all items) as published by the Bureau of Labor Statistics. The maximum adjustment to be made for any year was 2% of the previous year's benefit. Any CPI change in excess of the limit was accumulated for future benefit adjustments which would otherwise be less than the limit. No benefit was decreased below its original amount.
	Automatic Adjustments Provided by Senate Bills 822 and 861	This legislation, passed in 2013, provided for that benefits would be increased annually based on a marginal rate schedule. The increase is calculated as 1.25% on the first \$60,000 of annual benefit and 0.15% on amounts above \$60,000 of annual benefit.
<i>Changes in Plan Provisions</i>	There were no changes in the OPSRP benefit provisions reflected since the December 31, 2018 actuarial valuation.	



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OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



STATISTICAL SECTION

OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



Statistical Notes

The statistical section of the Oregon Public Employees Retirement System (PERS or the System) CAFR presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the System's overall financial health. The data presented was extracted from the PERS' information systems.

Financial Trends

These schedules contain trend information to help the reader understand how the System's financial performance and wellbeing have changed over time. Financial information is presented on an accrual basis.

The Schedules of Additions by Source, Deductions by Type, and Changes in Fiduciary Net Position are presented on both a fiscal and calendar year basis. The System prepares its financial statements on a fiscal-year basis but has its actuarial valuations performed on a calendar-year basis.

The Schedule of Earnings and Crediting at December 31 shows earnings available for crediting net of administrative expenses and the rates approved by the Board for the programs it administers.

The Schedule of Benefit Expenses by Type provides additional detail of benefit expense for fiscal years reported in the aggregate in the Schedules of Deductions by Type.

Operating Information

These schedules contain data to help illustrate how the information in the System's financial reports relates to the services the System provides and the activities it performs.

The Schedule of Average OPEB Benefits for Retirement Health Insurance Account and Schedule of Average OPEB Benefits for Retiree Health Insurance Premium Account show the average monthly other postemployment healthcare benefits, and the number of retirees receiving benefits under each plan.

The Schedule of Average Defined Benefit Pension Payments presents average monthly benefits, final average salary, and number of retirees still receiving benefits, by year of retirement.

The Schedule of Benefit Recipients by Benefit Type shows retired members by benefit level, benefit type, and payment option selected.

The Schedule of Retirement System Membership shows demographics of membership over a period of time. The fiscal year schedule shows membership over the last eight years. The calendar-year schedule is in five-year increments going back to 1985.

The Schedule of Principal Participating Employers shows the 10 employers with the largest number of current employees, along with aggregate information for the remaining employers with current employees.

The Schedule of Participating Employers lists all employers as of June 30, 2020, to show public employers of the state of Oregon participating in PERS.

Statistical Section

Additions by Source - Retirement Programs For the Last Ten Fiscal Years Ended June 30:

Defined Benefit Pension Plan

Fiscal Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total ¹
		Dollars ¹	Percent of Annual Covered Payroll		
2011	\$ 14,024,484	\$ 424,101,414	5.30 %	\$ 10,931,390,952	\$ 11,369,516,850
2012	16,534,650	1,455,729,689	9.69	380,749,755	1,853,014,094
2013	16,985,722	834,161,587	10.26	6,949,742,064	7,800,889,373
2014	15,319,270	915,236,878	10.54	9,886,700,639	10,817,256,787
2015	13,785,439	1,123,256,703	12.25	2,364,479,372	3,501,521,514
2016	14,214,341	977,332,329	10.37	413,915,853	1,405,462,523
2017	13,177,984	1,022,201,249	10.18	7,660,055,575	8,695,434,808
2018	12,558,631	1,390,111,534	13.84	6,247,472,490	7,650,142,655
2019	11,354,366	1,720,183,341	16.21	4,010,048,029	5,741,585,736
2020	10,179,238	2,299,006,203	18.99	923,260,755	3,232,446,196

Oregon Public Service Retirement Plan Individual Account Program

Fiscal Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2011	\$ 513,715,949	\$ N/A	N/A %	\$ 735,695,057	\$ 1,249,411,006
2012	516,174,983	N/A	N/A	71,535,911	587,710,894
2013	510,796,006	N/A	N/A	635,350,054	1,146,146,060
2014	527,303,202	N/A	N/A	977,439,367	1,504,742,569
2015	563,417,649	N/A	N/A	276,949,224	840,366,873
2016	566,450,233	N/A	N/A	76,509,002	642,959,235
2017	605,277,281	N/A	N/A	948,360,842	1,553,638,123
2018	622,296,460	N/A	N/A	772,501,114	1,394,797,574
2019	647,139,479	N/A	N/A	565,351,952	1,212,491,431
2020	711,193,387	N/A	N/A	242,628,243	953,821,630

Deferred Compensation Plan

Fiscal Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2011	\$ 73,291,691	\$ N/A	N/A %	\$ 176,999,516	\$ 250,291,207
2012	80,632,698	N/A	N/A	9,841,830	90,474,528
2013	74,248,188	N/A	N/A	135,572,819	209,821,007
2014	92,174,335	N/A	N/A	203,181,598	295,355,933
2015	99,796,739	N/A	N/A	48,617,428	148,414,167
2016	107,286,636	N/A	N/A	3,166,856	110,453,492
2017	121,701,967	N/A	N/A	189,041,478	310,743,445
2018	134,259,568	N/A	N/A	169,577,769	303,837,337
2019	139,543,729	N/A	N/A	104,963,768	244,507,497
2020	150,478,458	N/A	N/A	73,406,068	223,884,526

¹Amounts and balance restated for fiscal year 2012 due to a prior period adjustment.

Deductions by Type - Retirement Programs
For the Last Ten Fiscal Years Ended June 30:

Defined Benefit Pension Plan

Fiscal Year	Benefits	Administrative Expenses¹	Refunds	Total¹
2011	\$ 3,203,938,769	\$ 29,256,747	\$ 26,487,226	\$ 3,259,682,742
2012	3,295,709,818	33,102,667	34,020,450	3,362,832,935
2013	3,556,059,999	33,505,928	17,439,568	3,607,005,495
2014	3,837,870,411	31,247,350	25,560,094	3,894,677,855
2015	3,927,167,032	35,739,837	16,481,215	3,979,388,084
2016	4,193,307,712	40,567,225	13,154,578	4,247,029,515
2017	4,346,282,735	43,546,184	15,961,744	4,405,790,663
2018	4,642,717,844	37,751,319	13,876,294	4,694,345,457
2019	4,815,058,600	38,403,320	11,903,642	4,865,365,562
2020	5,045,931,154	52,083,371	18,855,297	5,116,869,822

Oregon Public Service Retirement Plan
Individual Account Program

Fiscal Year	Benefits	Administrative Expenses	Refunds	Total
2011	\$ 133,970,603	\$ 6,810,487	\$ N/A	\$ 140,781,090
2012	224,729,644	7,698,098	N/A	232,427,742
2013	241,326,511	7,093,871	N/A	248,420,382
2014	330,535,801	6,934,980	N/A	337,470,781
2015	319,978,740	7,565,611	N/A	327,544,351
2016	364,549,091	8,478,008	N/A	373,027,099
2017	417,119,098	9,481,014	N/A	426,600,112
2018	546,866,343	12,309,768	N/A	559,176,111
2019	490,459,364	12,568,466	N/A	503,027,830
2020	611,602,249	11,828,627	N/A	623,430,876

Deferred Compensation Plan

Fiscal Year	Benefits	Administrative Expenses	Refunds	Total
2011	\$ 55,929,452	\$ 1,326,224	\$ N/A	\$ 57,255,676
2012	61,465,377	417,776	N/A	61,883,153
2013	70,550,942	874,584	N/A	71,425,526
2014	89,652,030	997,202	N/A	90,649,232
2015	84,177,564	1,018,468	N/A	85,196,032
2016	91,351,490	1,202,786	N/A	92,554,276
2017	97,089,531	1,330,947	N/A	98,420,478
2018	116,331,317	1,469,816	N/A	117,801,133
2019	123,057,988	2,278,273	N/A	125,336,261
2020	118,349,853	2,071,770	N/A	120,421,623

¹Amounts and balance restated for fiscal year 2012 due to a prior period adjustment.

Statistical Section

Changes in Fiduciary Net Position - Retirement Programs
For the Last Ten Fiscal Years Ended June 30:

Defined Benefit Pension Plan

Fiscal Year	Additions	Deductions	Net Change	Net Position ¹	
				Beginning of Year	End of Year
2011	\$ 11,369,516,850	\$ 3,259,682,742	\$ 8,109,834,108	\$ 47,685,014,587	\$ 55,794,848,695
2012	1,853,014,094	3,362,832,935	(1,509,818,841)	55,794,848,695	54,285,029,854
2013	7,800,889,373	3,607,005,495	4,193,883,878	54,285,029,854	58,478,913,732
2014	10,817,256,787	3,894,677,855	6,922,578,932	58,478,913,732	65,401,492,664
2015	3,501,521,514	3,979,388,084	(477,866,570)	65,401,492,664	64,923,626,094
2016	1,405,462,523	4,247,029,515	(2,841,566,992)	64,923,626,094	62,082,059,102
2017	8,695,434,808	4,405,790,663	4,289,644,145	62,082,059,102	66,371,703,247
2018	7,650,142,655	4,694,345,457	2,955,797,198	66,371,703,247	69,327,500,445
2019	5,741,585,736	4,865,365,562	876,220,174	69,327,500,445	70,203,720,619
2020	3,232,446,196	5,116,869,822	(1,884,423,626)	70,203,720,619	68,319,296,993

Oregon Public Service Retirement Plan
Individual Account Program

Fiscal Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2011	\$ 1,249,411,006	\$ 140,781,090	\$ 1,108,629,916	\$ 2,928,206,732	\$ 4,036,836,648
2012	587,710,894	232,427,742	355,283,152	4,036,836,648	4,392,119,800
2013	1,146,146,060	248,420,382	897,725,678	4,392,119,800	5,289,845,478
2014	1,504,742,569	337,470,781	1,167,271,788	5,289,845,478	6,457,117,266
2015	840,366,873	327,544,351	512,822,522	6,457,117,266	6,969,939,788
2016	642,959,235	373,027,099	269,932,136	6,969,939,788	7,239,871,924
2017	1,553,638,123	426,600,112	1,127,038,011	7,239,871,924	8,366,909,935
2018	1,394,797,574	559,176,111	835,621,463	8,366,909,935	9,202,531,398
2019	1,212,491,431	503,027,830	709,463,601	9,202,531,398	9,911,994,999
2020	953,821,630	623,430,876	330,390,754	9,911,994,999	10,242,385,753

Deferred Compensation Plan

Fiscal Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2011	\$ 250,291,207	\$ 57,255,676	\$ 193,035,531	\$ 911,940,725	\$ 1,104,976,256
2012	90,474,528	61,883,153	28,591,375	1,104,976,256	1,133,567,631
2013	209,821,007	71,425,526	138,395,481	1,133,567,631	1,271,963,112
2014	295,355,933	90,649,232	204,706,701	1,271,963,112	1,476,669,813
2015	148,414,167	85,196,032	63,218,135	1,476,669,813	1,539,887,948
2016	110,453,492	92,554,276	17,899,216	1,539,887,948	1,557,787,164
2017	310,743,445	98,420,478	212,322,967	1,557,787,164	1,770,110,131
2018	303,837,337	117,801,133	186,036,204	1,770,110,131	1,956,146,335
2019	244,507,497	125,336,261	119,171,236	1,956,146,335	2,075,317,571
2020	223,884,526	120,421,623	103,462,903	2,075,317,571	2,178,780,474

¹Balances are restated for fiscal year 2012 due to prior period adjustments.

Additions by Source - OPEB

For the Last Ten Fiscal Years Ended June 30:

Retirement Health Insurance Account

Fiscal Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2011	N/A	\$ 22,176,966	0.29 %	\$ 47,359,659	\$ 69,536,625
2012	N/A	46,464,958	0.54	3,023,553	49,488,511
2013	N/A	47,294,060	0.57	35,636,711	82,930,771
2014	N/A	48,253,398	0.56	56,194,217	104,447,615
2015	N/A	53,648,437	0.59	15,606,876	69,255,313
2016	N/A	44,587,963	0.47	4,246,552	48,834,515
2017	N/A	49,785,501	0.50	57,566,224	107,351,725
2018	N/A	47,997,918	0.48	50,869,212	98,867,130
2019	N/A	49,615,345	0.47	35,959,368	85,574,713
2020	N/A	6,359,609	0.06	8,595,287	14,954,896

Retiree Health Insurance Premium Account

Fiscal Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2011	N/A	\$ 1,428,453	0.08 %	\$ 1,135,114	\$ 2,563,567
2012	N/A	3,378,230	0.13	16,723	3,394,953
2013	N/A	3,443,805	0.14	499,279	3,943,084
2014	N/A	6,149,608	0.24	739,056	6,888,664
2015	N/A	6,887,258	0.25	266,949	7,154,207
2016	N/A	10,966,837	0.39	228,057	11,194,894
2017	N/A	11,863,776	0.39	2,027,506	13,891,282
2018	N/A	13,290,145	0.45	2,383,184	15,673,329
2019	N/A	14,009,075	0.45	2,455,173	16,464,248
2020	N/A	11,241,801	0.32	772,391	12,014,192

Deductions by Type - OPEB

For the Last Ten Fiscal Years Ended June 30:

Retirement Health Insurance Account

Fiscal Year	Benefits¹	Administrative Expenses	Refunds	Total
2011	\$ 29,251,771	\$ 1,039,603	N/A	\$ 30,291,374
2012	29,935,920	963,843	N/A	30,899,763
2013	30,777,470	1,149,475	N/A	31,926,945
2014	34,112,567	1,044,937	N/A	35,157,504
2015	31,922,820	1,279,427	N/A	33,202,247
2016	33,602,540	1,256,017	N/A	34,858,557
2017	31,186,802	1,288,059	N/A	32,474,861
2018	32,503,140	1,281,744	N/A	33,784,884
2019	32,234,400	1,312,229	N/A	33,546,629
2020	31,827,780	1,272,953	N/A	33,100,733

Retiree Health Insurance Premium Account

Fiscal Year	Benefits¹	Administrative Expenses	Refunds	Total
2011	\$ 3,024,382	\$ 161,559	N/A	\$ 3,185,941
2012	3,885,769	71,981	N/A	3,957,750
2013	4,093,736	169,137	N/A	4,262,873
2014	4,925,743	170,901	N/A	5,096,644
2015	4,230,808	188,598	N/A	4,419,406
2016	4,682,975	259,850	N/A	4,942,825
2017	4,327,944	285,895	N/A	4,613,839
2018	4,659,536	277,596	N/A	4,937,132
2019	4,486,752	318,425	N/A	4,805,177
2020	4,112,640	252,995	N/A	4,365,635

¹ Benefit payments paid by RHIA and RHIPA consisted of Healthcare Premium Subsidies exclusively.

Changes in Plan Fiduciary Net Position - OPEB
For the Last Ten Fiscal Years Ended June 30:

Retirement Health Insurance Account

Fiscal Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2011	\$ 69,536,625	\$ 30,291,374	\$ 39,245,251	\$ 208,745,778	\$ 247,991,029
2012	49,488,511	30,899,763	18,588,748	247,991,029	266,579,777
2013	82,930,771	31,926,945	51,003,826	266,579,777	317,583,603
2014	104,447,615	35,157,504	69,290,111	317,583,603	386,873,714
2015	69,255,313	33,202,247	36,053,066	386,873,714	422,926,780
2016	48,834,515	34,858,557	13,975,958	422,926,780	436,902,738
2017	107,351,725	32,474,861	74,876,864	436,902,738	511,779,602
2018	98,867,130	33,784,884	65,082,246	511,779,602	576,861,848
2019	85,574,713	33,546,629	52,028,084	576,861,848	628,889,932
2020	14,954,896	33,100,733	(18,145,837)	628,889,932	610,744,095

Retiree Health Insurance Premium Account

Fiscal Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2011	\$ 2,563,567	\$ 3,185,941	\$ (622,374)	\$ 5,744,553	\$ 5,122,179
2012	3,394,953	3,957,750	(562,797)	5,122,179	4,559,382
2013	3,943,084	4,262,873	(319,789)	4,559,382	4,239,593
2014	6,888,664	5,096,644	1,792,020	4,239,593	6,031,613
2015	7,154,207	4,419,406	2,734,801	6,031,613	8,766,414
2016	11,194,894	4,942,825	6,252,069	8,766,414	15,018,483
2017	13,891,282	4,613,839	9,277,443	15,018,483	24,295,926
2018	15,673,329	4,937,132	10,736,197	24,295,926	35,032,123
2019	16,464,248	4,805,177	11,659,071	35,032,123	46,691,194
2020	12,014,192	4,365,635	7,648,557	46,691,194	54,339,751

Statistical Section

Additions by Source - Retirement Programs For the Last Ten Years Ended December 31¹:

Defined Benefit Pension Plan

Calendar Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2010	\$ 14,327,206	\$ 411,590,742	4.61 %	\$ 6,018,828,853	\$ 6,444,746,801
2011	15,771,376	593,451,757	6.85	1,189,044,156	1,798,267,289
2012	14,148,372	862,934,319	10.99	7,201,022,711	8,078,105,402
2013	18,664,061	1,496,033,607	17.68	8,595,803,270	10,110,500,938
2014	13,200,528	937,788,619	10.48	4,342,718,450	5,293,707,597
2015	14,362,049	1,127,799,421	12.25	1,232,493,098	2,374,654,568
2016	13,085,105	976,297,293	10.17	4,290,378,888	5,279,761,286
2017	14,668,384	1,179,420,962	10.77	9,343,076,932	10,537,166,278
2018	10,447,081	1,745,401,831	16.96	226,842,118	1,982,691,030
2019	11,373,682	2,019,260,325	18.27	8,608,031,425	10,638,665,432

Oregon Public Service Retirement Plan Individual Account Program

Calendar Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2010	\$ 502,322,036	\$ N/A	N/A	\$ 400,883,000	\$ 903,205,036
2011	518,199,449	N/A	N/A	96,058,972	614,258,421
2012	499,094,923	N/A	N/A	623,896,684	1,122,991,607
2013	542,566,655	N/A	N/A	814,928,040	1,357,494,695
2014	511,048,423	N/A	N/A	450,087,155	961,135,578
2015	596,936,756	N/A	N/A	140,226,970	737,163,726
2016	597,188,543	N/A	N/A	518,172,223	1,115,360,766
2017	613,683,342	N/A	N/A	1,213,845,362	1,827,528,704
2018	638,930,679	N/A	N/A	(61,712,368)	577,218,311
2019	687,121,432	N/A	N/A	1,247,407,081	1,934,528,513

Deferred Compensation Plan

Calendar Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2010	\$ 67,994,065	\$ N/A	N/A	\$ 82,812,783	\$ 150,806,848
2011	75,619,604	N/A	N/A	35,406,816	111,026,420
2012	78,115,678	N/A	N/A	105,067,553	183,183,231
2013	88,901,454	N/A	N/A	207,310,080	296,211,534
2014	92,495,435	N/A	N/A	102,188,822	194,684,257
2015	97,373,493	N/A	N/A	15,087,160	112,460,653
2016	109,040,225	N/A	N/A	83,913,037	192,953,262
2017	120,454,924	N/A	N/A	212,359,507	332,814,431
2018	144,365,735	N/A	N/A	62,553,479	206,919,214
2019	144,923,289	N/A	N/A	217,040,897	361,964,186

¹Calendar year-end information is provided because earnings are distributed as of December 31.

Deductions by Type - Retirement Programs
For the Last Ten Years Ended December 31¹:

Defined Benefit Pension Plan

Calendar		Administrative			
Year	Benefits	Expenses	Refunds	Total	
2010	\$ 3,053,863,566	\$ 29,126,521	\$ 17,996,148	\$ 3,100,986,235	
2011	3,351,517,947	29,244,166	38,369,101	3,419,131,214	
2012	3,351,430,408	31,807,897	17,970,250	3,401,208,555	
2013	3,708,827,767	34,271,919	25,529,913	3,768,629,599	
2014	3,888,166,333	35,187,183	17,850,587	3,941,204,103	
2015	4,068,416,728	37,333,754	15,932,985	4,121,683,467	
2016	4,248,984,127	41,936,746	14,931,267	4,305,852,140	
2017	4,495,375,698	41,149,466	14,404,077	4,550,929,241	
2018	4,737,604,779	36,802,183	13,668,587	4,788,075,549	
2019	4,908,681,141	44,666,591	10,664,553	4,964,012,285	

Oregon Public Service Retirement Plan
Individual Account Program

Calendar		Administrative			
Year	Benefits	Expenses	Refunds	Total	
2010	\$ 95,293,228	\$ 7,822,430	\$ N/A	\$ 103,115,658	
2011	196,350,366	8,363,154	N/A	204,713,520	
2012	218,180,975	5,528,973	N/A	223,709,948	
2013	301,297,929	7,164,598	N/A	308,462,527	
2014	332,722,945	7,315,352	N/A	340,038,297	
2015	343,688,428	7,746,075	N/A	351,434,503	
2016	386,689,618	9,106,820	N/A	395,796,438	
2017	497,309,999	9,958,373	N/A	507,268,372	
2018	508,929,082	13,454,299	N/A	522,383,381	
2019	545,539,814	12,321,208	N/A	557,861,022	

Deferred Compensation Plan

Calendar		Administrative			
Year	Benefits	Expenses	Refunds	Total	
2010	\$ 46,759,679	\$ 804,345	\$ N/A	\$ 47,564,024	
2011	60,816,774	963,874	N/A	61,780,648	
2012	65,498,582	783,755	N/A	66,282,337	
2013	79,075,903	982,625	N/A	80,058,528	
2014	92,995,075	998,023	N/A	93,993,098	
2015	82,398,740	1,050,769	N/A	83,449,509	
2016	81,073,521	1,374,662	N/A	82,448,183	
2017	101,419,280	1,390,830	N/A	102,810,110	
2018	131,272,865	1,483,023	N/A	132,755,888	
2019	120,101,006	2,705,025	N/A	122,806,031	

¹Calendar year-end information is provided because earnings are distributed as of December 31.

Statistical Section

Changes in Fiduciary Net Position - Retirement Programs For the Last Ten Years Ended December 31¹:

Defined Benefit Pension Plan

Calendar Year	Additions	Deductions ²	Net Change	Net Position ³	
				Beginning of Year	End of Year
2010	\$ 6,444,746,801	\$ 3,100,986,235	\$ 3,343,760,566	\$ 49,421,753,496	\$ 52,765,514,062
2011	1,798,267,289	3,419,131,214	(1,620,863,925)	52,765,514,062	51,144,650,137
2012	8,078,105,402	3,401,208,555	4,676,896,847	51,144,650,137	55,821,546,984
2013	10,110,500,938	3,768,629,599	6,341,871,339	55,821,546,984	62,163,418,323
2014	5,293,707,597	3,941,204,103	1,352,503,494	62,163,400,642	63,515,904,136
2015	2,374,654,568	4,116,424,013	(1,741,769,445)	63,515,904,136	61,774,134,691
2016	5,279,761,286	4,305,852,140	973,909,146	61,774,134,691	62,748,043,837
2017	10,537,166,278	4,551,871,595	5,985,294,683	62,748,043,837	68,733,338,520
2018	1,982,691,030	4,788,075,549	(2,805,384,519)	68,733,338,520	65,927,954,001
2019	10,638,665,432	4,964,012,285	5,674,653,147	65,927,954,001	71,602,607,148

Oregon Public Service Retirement Plan Individual Account Program

Calendar Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2010	\$ 903,205,036	\$ 103,115,658	\$ 800,089,378	\$ 2,755,765,429	\$ 3,555,854,807
2011	614,258,421	204,713,520	409,544,901	3,555,854,807	3,965,399,708
2012	1,122,991,607	223,709,948	899,281,659	3,965,399,708	4,864,681,367
2013	1,357,494,695	308,462,527	1,049,032,168	4,864,681,367	5,913,713,535
2014	961,135,579	340,038,297	621,097,282	5,913,713,535	6,534,810,817
2015	737,163,726	351,434,503	385,729,223	6,534,810,817	6,920,540,040
2016	1,115,360,766	395,796,438	719,564,328	6,920,540,040	7,640,104,368
2017	1,827,528,704	507,268,372	1,320,260,332	7,640,104,368	8,960,364,700
2018	577,218,311	522,383,381	54,834,930	8,960,364,700	9,015,199,630
2019	1,934,528,513	557,861,022	1,376,667,491	9,015,199,630	10,391,867,121

Deferred Compensation Plan

Calendar Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2010	\$ 150,806,848	\$ 47,564,024	\$ 103,242,824	\$ 916,702,476	\$ 1,019,945,300
2011	111,026,420	61,780,648	49,245,772	1,019,945,300	1,069,191,072
2012	183,183,231	66,282,337	116,900,894	1,069,191,072	1,186,091,966
2013	296,211,535	80,058,528	216,153,007	1,186,091,966	1,402,244,973
2014	194,684,257	93,993,098	100,691,159	1,402,244,973	1,502,936,132
2015	112,460,653	83,449,509	29,011,144	1,502,936,132	1,531,947,276
2016	192,953,262	82,448,183	110,505,079	1,531,947,276	1,642,452,355
2017	332,814,431	102,810,110	230,004,321	1,642,452,355	1,872,456,676
2018	206,919,214	132,755,888	74,163,326	1,872,456,676	1,946,620,002
2019	361,964,186	122,806,031	239,158,155	1,946,620,002	2,185,778,157

¹Calendar year-end information is provided because earnings are distributed as of December 31.

²Balances are restated for calendar years 2010 to 2015 due to prior period adjustments.

³Balances restated for calendar years 2013, 2014, and 2017 to correct amounts.

Additions by Source - OPEB

For the Last Ten Years Ended December 31¹:

Retirement Health Insurance Account

Calendar Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2010	\$ N/A	\$ 22,156,216	0.31 %	\$ 26,075,309	\$ 48,231,525
2011	N/A	32,610,644	0.25	5,474,204	38,084,848
2012	N/A	48,118,569	0.38	35,088,054	83,206,623
2013	N/A	47,729,940	0.59	46,420,994	94,150,934
2014	N/A	49,466,294	0.56	25,754,870	75,221,164
2015	N/A	48,846,297	0.55	7,995,269	56,841,566
2016	N/A	48,339,520	0.59	31,003,380	79,342,900
2017	N/A	49,167,576	0.50	72,787,020	121,954,596
2018	N/A	49,483,717	0.48	1,768,069	51,251,786
2019	N/A	30,090,293	0.27	76,707,399	106,797,692

Retiree Health Insurance Premium Account

Calendar Year	Member Contributions	Employer Contributions		Net Investment and Other Income	Total
		Dollars	Percent of Annual Covered Payroll		
2010	\$ N/A	\$ 1,458,105	0.08 %	\$ 659,794	\$ 2,117,899
2011	N/A	2,347,710	0.06	158,742	2,506,452
2012	N/A	3,450,509	0.10	557,438	4,007,947
2013	N/A	4,708,305	0.15	588,465	5,296,770
2014	N/A	6,378,015	0.19	361,915	6,739,930
2015	N/A	8,747,711	0.24	131,852	8,879,563
2016	N/A	11,621,895	0.25	933,866	12,555,761
2017	N/A	12,646,688	0.40	2,915,300	15,561,988
2018	N/A	13,587,039	0.45	(36,367)	13,550,672
2019	N/A	12,766,276	0.37	5,311,670	18,077,946

¹Calendar year-end information is provided because earnings are distributed as of December 31.

Statistical Section

Deductions by Type - OPEB

For the Last Ten Years Ended December 31¹:

Retirement Health Insurance Account

Calendar Year	Benefits	Administrative Expenses	Refunds	Total
2010	\$ 29,066,220	\$ 973,329	\$ N/A	\$ 30,039,549
2011	29,524,122	1,283,144	N/A	30,807,266
2012	30,375,640	837,282	N/A	31,212,922
2013	31,132,920	1,095,853	N/A	32,228,773
2014	31,636,379	1,167,459	N/A	32,803,838
2015	32,273,928	1,223,215	N/A	33,497,143
2016	32,385,680	1,206,654	N/A	33,592,334
2017	32,438,822	1,275,297	N/A	33,714,119
2018	32,422,620	1,374,059	N/A	33,796,679
2019	32,074,620	1,311,208	N/A	33,385,828

Retiree Health Insurance Premium Account

Calendar Year	Benefits	Administrative Expenses	Refunds	Total
2010	\$ 2,664,123	\$ 106,791	\$ N/A	\$ 2,770,914
2011	3,547,400	124,769	N/A	3,672,169
2012	3,968,267	134,246	N/A	4,102,513
2013	4,323,159	172,485	N/A	4,495,644
2014	4,615,612	180,524	N/A	4,796,136
2015	4,680,196	214,500	N/A	4,894,696
2016	4,340,503	288,507	N/A	4,629,010
2017	4,578,655	273,005	N/A	4,851,660
2018	4,608,776	290,534	N/A	4,899,310
2019	4,365,646	297,957	N/A	4,663,603

¹Calendar year-end information is provided because earnings are distributed as of December 31.

Change in Fiduciary Net Position - OPEB
For the Last Ten Years Ended December 31¹:

Retirement Health Insurance Account

Calendar Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2010	\$ 48,231,525	\$ 30,039,549	\$ 18,191,976	\$ 214,140,956	\$ 232,332,932
2011	38,084,848	30,807,266	7,277,582	232,332,932	239,610,514
2012	83,206,623	31,212,922	51,993,701	239,610,514	291,604,215
2013	94,150,934	32,228,773	61,922,161	291,604,215	353,526,376
2014	75,221,164	32,803,838	42,417,326	353,526,376	395,943,702
2015	56,841,566	33,497,143	23,344,423	395,943,702	419,288,125
2016	79,342,900	33,592,334	45,750,566	419,288,125	465,038,691
2017	121,954,596	33,714,119	88,240,477	465,038,691	553,279,168
2018	51,251,786	33,796,679	17,455,107	553,279,168	570,734,275
2019	106,797,692	33,385,828	73,411,864	570,734,275	644,146,139

Retiree Health Insurance Premium Account

Calendar Year	Additions	Deductions	Net Change	Net Position	
				Beginning of Year	End of Year
2010	\$ 2,117,899	\$ 2,770,914	\$(653,015)	\$ 6,358,133	\$ 5,705,118
2011	2,506,452	3,672,169	(1,165,717)	5,705,118	4,539,401
2012	4,007,946	4,102,513	(94,567)	4,539,401	4,444,834
2013	5,296,770	4,495,644	801,126	4,444,834	5,245,960
2014	6,739,930	4,796,136	1,943,794	5,245,960	7,189,754
2015	8,879,563	4,894,696	3,984,867	7,189,754	11,174,621
2016	12,555,761	4,629,010	7,926,751	11,174,621	19,101,372
2017	15,561,988	4,851,660	10,710,328	19,101,372	29,811,700
2018	13,550,672	4,899,310	8,651,362	29,811,700	38,463,062
2019	18,077,946	4,663,603	13,414,343	38,463,062	51,877,405

¹Calendar year-end information is provided because earnings are distributed as of December 31.

Statistical Section

Schedule of Earnings and Crediting at December 31¹:

Calendar Year	Credited					
	Tier One Earnings/(Loss) Available for Crediting	Tier One	Tier Two	Variable Earnings/ (Loss) Credited	Individual Account Program	
2010	12.65 %	8.00 %	12.44 %	15.17 %	12.13 %	
2011	2.21	8.00	2.21	(7.80)	2.15	
2012	14.53	8.00	14.68	18.43	14.09	
2013	15.76	8.00	15.62 ²	25.74 ³	15.59	
2014	7.24	7.75	7.24	4.29	7.05	
2015	1.87	7.75	1.87	(1.61)	1.85	
2016	7.15	7.50	7.15	8.76	7.13	
2017	15.23	7.50	15.23	26.48	14.72	
2018	0.23	7.20	0.23	(10.03)	(0.63)	
2019	13.27	7.20	13.27	28.80	13.35	

¹Calendar year-end information is provided because earnings are credited as of December 31.

²Earnings rate includes allocation from settlement of *Murray v. PERB* litigation.

³Earnings rate includes allocation from settlement of *White, et al. v. PERB* litigation.

Schedule of Benefit Expenses by Type - Defined Benefit Pension Plan For the Fiscal Years Ended June 30:

Fiscal Year	Service Benefits	Disability Benefits		Retirement Benefit Totals	Death Benefits	Refunds		Total
		Duty	Non-Duty			Normal	Death	
2011	\$ 3,074,390,373	\$ 15,967,087	\$ 105,974,442	\$ 3,196,331,902	\$ 7,606,867	\$ 17,203,318	\$ 9,283,908	\$ 3,230,425,995
2012	3,166,918,154	16,449,589	108,423,907	3,291,791,650	3,918,168	27,966,120	6,054,330	3,329,730,268
2013	3,422,618,167	17,242,718	111,616,337	3,551,477,222	4,582,777	10,074,038	7,365,530	3,573,499,567
2014	3,701,010,685	17,739,646	113,317,283	3,832,067,614	5,802,797	13,614,833	11,945,261	3,863,430,505
2015	3,790,050,384	17,943,338	113,129,130	3,921,122,852	6,044,180	7,283,720	9,197,495	3,943,648,247
2016	4,045,951,252	18,896,881	118,534,433	4,183,382,566	9,925,146	6,342,385	6,812,193	4,206,462,290
2017	4,204,153,060	18,965,495	118,479,583	4,341,598,137	4,684,598	6,589,962	9,371,782	4,362,244,479
2018	4,497,671,956	19,356,946	120,819,135	4,637,868,037	4,849,807	5,145,792	8,730,502	4,656,594,138
2019	4,666,793,109	20,360,781	123,821,174	4,810,975,064	4,083,536	3,356,265	8,547,377	4,826,962,242
2020	4,894,294,688	21,041,469	124,420,605	5,039,756,762	6,174,392	8,105,287	10,750,010	5,064,786,451

Schedule of Average OPEB Benefits for Retirement Health Insurance Account¹ For the Fiscal Year Ended June 30, 2020:

Years Credited Service	8+
Average Monthly Benefit	\$60.00
Final Average Salary	N/A
Number of Active Retirees	43,797

Schedule of Average OPEB Benefits for Retiree Health Insurance Premium Account¹ For the Fiscal Year Ended June 30, 2020:

	Years Credited Service						Total
	8 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +	
Average Monthly Benefit	\$ 214	\$ 257	\$ 300	\$ 343	\$ 385	\$ 428	\$ 400
Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of Active Retirees	6	12	39	81	166	499	803

¹Effective years of retirement and final average salary are not available for OPEB.

Schedule of Average Defined Benefit Pension Payments

Retirement Effective Dates July 1, 2010 to June 30, 2020	Years Credited Service							Total
	0-5	6-10	11-15	16-20	21-25	26-30	31+	
2011 Average Monthly Benefit	\$691	\$1,029	\$1,396	\$1,895	\$2,678	\$4,080	\$5,578	\$2,701
Final Average Salary	\$3,270	\$3,634	\$4,072	\$4,642	\$5,252	\$5,901	\$6,275	\$4,939
Number of Active Retirees	286	768	914	1,080	1,124	1,240	778	6,190
2012 Average Monthly Benefit	\$658	\$1,021	\$1,442	\$1,868	\$2,591	\$3,883	\$5,347	\$2,602
Final Average Salary	\$3,566	\$3,881	\$4,381	\$4,894	\$5,688	\$6,266	\$6,976	\$5,294
Number of Active Retirees	322	861	1,010	1,055	1,238	1,204	875	6,565
2013 Average Monthly Benefit	\$707	\$1,068	\$1,480	\$1,948	\$2,613	\$3,850	\$5,489	\$2,608
Final Average Salary	\$3,642	\$3,828	\$4,439	\$5,020	\$5,921	\$6,616	\$6,950	\$5,389
Number of Active Retirees	378	953	1,101	1,112	1,342	1,163	940	6,989
2014 Average Monthly Benefit	\$759	\$1,072	\$1,405	\$1,791	\$2,518	\$3,620	\$5,302	\$2,464
Final Average Salary	\$3,574	\$3,629	\$4,366	\$4,996	\$5,899	\$6,385	\$6,955	\$5,291
Number of Active Retirees	396	1,037	1,130	1,236	1,442	1,240	928	7,409
2015 Average Monthly Benefit	\$603	\$827	\$1,246	\$1,742	\$2,347	\$3,466	\$5,179	\$2,258
Final Average Salary	\$3,901	\$3,801	\$4,494	\$5,147	\$5,771	\$6,524	\$7,347	\$5,382
Number of Active Retirees	301	842	1,023	1,113	1,155	1,102	643	6,179
2016 Average Monthly Benefit	\$708	\$866	\$1,241	\$1,759	\$2,337	\$3,425	\$5,145	\$2,352
Final Average Salary	\$3,593	\$3,818	\$4,516	\$5,280	\$5,878	\$6,811	\$7,347	\$5,543
Number of Active Retirees	331	860	1,006	1,134	1,247	1,303	800	6,681
2017 Average Monthly Benefit	\$677	\$975	\$1,285	\$1,753	\$2,469	\$3,417	\$5,248	\$2,464
Final Average Salary	\$3,689	\$3,851	\$4,537	\$5,443	\$6,192	\$7,036	\$8,085	\$5,815
Number of Active Retirees	379	916	1,098	1,198	1,178	1,379	1,030	7,178
2018 Average Monthly Benefit	\$1,011	\$1,050	\$1,252	\$1,699	\$2,478	\$3,326	\$4,965	\$2,394
Final Average Salary	\$3,921	\$3,950	\$4,394	\$5,437	\$6,387	\$7,085	\$8,014	\$5,837
Number of Active Retirees	367	955	1,055	1,330	1,207	1,483	948	7,345
2019 Average Monthly Benefit	\$800	\$926	\$1,218	\$1,773	\$2,548	\$3,469	\$4,883	\$2,298
Final Average Salary	\$3,786	\$3,914	\$4,563	\$5,562	\$6,519	\$7,422	\$8,334	\$5,869
Number of Active Retirees	411	966	1,002	1,199	1,090	1,257	737	6,662
2020 Average Monthly Benefit	\$774	\$935	\$1,173	\$1,714	\$2,643	\$3,676	\$4,896	\$2,402
Final Average Salary	\$3,956	\$4,180	\$4,599	\$5,444	\$6,853	\$7,917	\$8,534	\$6,151
Number of Active Retirees	401	887	1,085	1,142	1,252	1,217	891	6,875

Statistical Section

Schedule of Benefit Recipients by Benefit Type For the Fiscal Year Ended June 30, 2020

Monthly Benefit Amount	Number of Retirees	Type of Retirement *					Refund Annuity	Annuity Options **				Lump-Sum Options **		
		1	2	3	4	5		1	2	3	4	1	2	3
\$ 1-500	17,469	14,096	51	85	2,753	484	1,156	5,811	5,111	990	797	1,785	1,473	346
501-1000	21,572	17,828	94	488	2,424	738	2,031	7,497	7,000	1,825	1,156	978	855	230
1001-1500	18,154	15,065	82	596	1,786	625	1,652	5,934	6,336	1,760	851	715	701	205
1501-2000	15,758	13,203	63	561	1,441	490	1,408	4,710	5,801	1,666	752	572	688	161
2001-2500	13,717	11,693	69	493	1,097	365	1,215	3,994	5,081	1,504	570	541	670	142
2501-3000	11,715	10,222	57	370	816	250	1,047	3,232	4,509	1,287	451	451	617	121
3001-3500	9,935	8,763	53	272	677	170	832	2,719	3,919	1,225	371	341	433	95
3501-4000	8,616	7,794	48	171	501	102	744	2,342	3,540	1,150	320	184	276	60
4001-4500	7,541	6,908	36	140	405	52	608	2,000	3,336	1,023	276	117	131	50
4501-5000	6,451	6,017	31	70	298	35	459	1,652	2,916	965	253	76	98	32
5001-5500	5,674	5,328	14	46	261	25	384	1,445	2,665	860	194	32	71	23
5501-6000	4,478	4,205	14	33	213	13	327	1,151	2,095	681	145	25	48	6
6000+	12,542	11,799	25	61	624	33	676	2,736	6,051	2,529	377	51	97	25
Totals	153,622	132,921	637	3,386	13,296	3,382	12,539	45,223	58,360	17,465	6,513	5,868	6,158	1,496

* Type of Retirement

- 1 - Normal
- 2 - Duty Disability
- 3 - Non-Duty Disability
- 4 - Survivor Payment
- 5 - Alternate Payee

** Annuity and Lump-Sum Options

- 1 - No benefit for beneficiary
- 2 - Beneficiary receives same monthly benefit for life
- 3 - Beneficiary receives half the monthly benefit for life
- 4 - 15-year certain

Schedule of Retirement System Membership at December 31:

Five Year Increments	Five Year Increments						
	1985	1990	1995	2000	2005	2010	2015
State Agencies	37,824	46,187	45,068	42,434	38,076	48,018	47,331
School Districts	47,590	48,144	55,734	63,133	56,756	79,798	66,184
Political Subdivisions	26,238	33,177	40,635	53,291	50,085	65,332	54,662
Inactive Members	15,920	23,225	32,033	44,830	47,289	40,481	42,849
Total Non-Retired	127,572	150,733	173,470	203,688	192,206	233,629	211,026
Retired Members and Beneficiaries	46,181	55,540	64,796	82,355	101,213	110,573	136,298
Total Membership	173,753	206,273	238,266	286,043	293,419	344,202	347,324
Administrative Expense ¹	\$2,905,072	\$8,901,091	\$13,500,677	\$24,358,550	\$40,056,600	\$38,029,071	\$47,934,435
Pension Roll (one month)	\$18,083,614	\$33,175,888	\$58,457,531	\$122,467,087	\$202,633,214	\$265,490,496	\$333,044,107

¹Fiduciary Funds only.

Schedule of Retirement System Membership at June 30:

	2013	2014	2015	2016	2017	2018	2019	2020
State Agencies	45,019	45,774	47,620	47,868	48,099	48,320	49,699	49,506
School Districts	63,297	64,824	66,434	68,648	69,510	71,238	73,164	72,258
Political Subdivisions ²	54,943	54,376	54,536	55,160	55,696	56,439	53,464	56,913
Inactive Members	44,819	43,646	44,786	45,925	45,709	45,993	48,786	46,530
Total Non-Retired	208,078	208,620	213,376	217,601	219,014	221,990	225,113	225,207
Retired Members and Beneficiaries	123,827	129,138	132,506	136,435	136,435	145,863	149,386	153,622
Total Membership	331,905	337,758	345,882	354,036	355,449	367,853	374,499	378,829
Administrative Expense ¹	\$42,792,995	\$40,395,370	\$45,791,942	\$51,763,886	\$55,931,659	\$53,090,243	\$54,880,713	\$63,911,998
Pension Roll (one month)	\$299,997,147	\$303,834,899	\$317,090,746	\$337,405,252	\$355,414,652	\$376,397,537	\$382,187,402	\$399,447,944

¹Fiduciary Funds only.

²Includes Community Colleges

Schedule of Principal Participating Employers
Current Fiscal Year and Nine Years Ago

	2020			2011		
	Number of Current Employees	Rank	Percent of Total System	Number of Current Employees	Rank	Percent of Total System
State of Oregon	49,506	1	27.71 %	46,739	1	25.55 %
Portland Public Schools	6,001	2	3.36	5,742	2	3.14
Portland, City of	5,438	3	3.04	5,071	5	2.77
Salem-Keizer Public Schools	5,379	4	3.01	5,401	4	2.95
Multnomah County	4,921	5	2.75	4,503	7	2.46
Beaverton School District	4,599	6	2.57	4,695	6	2.57
Oregon Health & Science University	3,674	7	2.06	5,736	3	3.14
Hillsboro School District #1J	2,340	8	1.31	2,652	8	1.45
Portland Community College	2,333	9	1.31	1,810	(a)	0.99
North Clackamas School District #12	2,082	10	1.17	2,085	10	1.14
All Others*	92,405		51.72	98,498		53.84
Total	178,678		100.00 %	182,932		100.00 %

* "All Others" consisted of:

Counties	13,586		7.60 %	13,822		7.56 %
Municipalities	13,605		7.62	13,313		7.28
School Districts	51,858		29.03	53,113		29.03
Community Colleges	5,496		3.08	9,952		5.44
Other Political Subdivisions	7,860		4.40	8,298		4.54
Total All Others	92,405		51.72 %	98,498		53.84 %

(a) Portland Community College was not ranked in the top ten principal participating employers in 2011.

Statistical Section

Schedule of Participating Employers (901)

State (108)

Appraiser Certification and Licensure Board
Board of Accountancy
Board of Architect Examiners
Board of Chiropractic Examiners
Board of Examiners for Engineering and Land Surveying
Board of Geologist Examiners
Board of Optometry
Board of Parole and Post-Prison Supervision
Board of Pharmacy
Bureau of Labor and Industries
Commission on Indian Services
Commission on Judicial Fitness and Disability
Construction Contractors Board
Department of Administrative Services
Department of Agriculture
Department of Aviation
Department of Consumer and Business Services
Department of Corrections
Department of Education
Department of Energy
Department of Environmental Quality
Department of Human Services
Department of Justice
Department of Land Conservation and Development
Department of Military-Federal Employees
Department of Revenue
Department of State Lands
Department of State Police
Department of Transportation
Department of Veterans' Affairs
Higher Education Coordinating Commission
District Attorneys Department
Eastern Oregon University
Employment Department
Employment Relations Board
Forestry Department
Geology and Mineral Industries
Health Related Licensing Boards
Judicial Department
Land Use Board of Appeals
Landscape Contractors Board
Legislative Administration Board (Committee)
Legislative Assembly
Legislative Committees
Legislative Fiscal Office
Legislative Policy & Research Committee
Long Term Care Ombudsman
Mental Health Regulatory Agency
Military Department
Office of Legislative Counsel
Office of the Governor

Office of the State Treasurer
Oregon Advocacy Commissions Office
Oregon Beef Council
Oregon Board of Dentistry
Oregon Board of Massage Therapists
Oregon Board of Medical Examiners
Oregon Business Development Department
Oregon Commission for the Blind
Oregon Corrections Enterprises
Oregon Criminal Justice Commission
Oregon Dairy Products Commission
Oregon Department of Fish and Wildlife
Oregon Dungeness Crab Commission
Oregon Education Investment Board
Oregon Film and Video
Oregon Forest Resources Institute
Oregon Government Ethics Commission
Oregon Health Authority
Oregon Hop Commission
Oregon Housing and Community Services
Oregon Institute of Technology
Oregon Liquor Control Commission
Oregon Parks and Recreation Department
Oregon Patient Safety Commission
Oregon Potato Commission
Oregon Racing Commission
Oregon Salmon Commission
Oregon State Bar
Oregon State Bar Professional Liability Fund
Oregon State Board of Nursing
Oregon State Library
Oregon State University
Oregon Tourism Commission
Oregon Trawl Commission
Oregon Watershed Enhancement Board
Oregon Wheat Commission
Oregon Youth Authority
Physical Therapist Licensing Board
Portland State University
Psychiatric Security Review Board
Public Defense Services Commission
Public Employees Retirement System
Public Safety Standards and Training
Public Utility Commission
Real Estate Agency
Secretary of State
Southern Oregon University
State Accident Insurance Fund
State Board of Clinical Social Workers
State Board of Tax Practitioners
State Lottery Commission
State Marine Board
Teacher Standards and Practices Commission
Travel Information Council
University of Oregon
Water Resources Department
Western Oregon University

Political Subdivisions (480)

Adair Village, City of
Albany, City of
Amity Fire District
Amity, City of
Applegate Valley RFPD 9
Arch Water/Sanitary District
Ashland Parks Commission
Ashland, City of
Astoria, City of
Athena, City of
Aumsville RFPD
Aumsville, City of
Aurora RFPD
Aurora, City of
Baker County
Baker County Library District
Baker Valley Irrigation District
Baker City, City of
Bandon, City of
Banks Fire District 13
Banks, City of
Bay City, City of
Beaverton, City of
Bend Metropolitan Park and Recreation District
Bend, City of
Benton County
Black Butte Ranch RFPD
Black Butte Ranch Service District
Boardman RFPD
Boardman, City of
Brookings, City of
Brownsville RFPD
Burns, City of
Burnt River Irrigation District
Butte Falls, Town of
Canby FPD 62
Canby Utility Board
Canby, City of
Cannon Beach RFPD
Cannon Beach, City of
Canyon City, Town of
Canyonville, City of
Carlton, City of
Cascade Locks, City of
Cave Junction, City of
Central Cascades Fire and EMS
Central Oregon Coast Fire and Rescue District
Central Oregon Intergovernmental Council
Central Oregon Irrigation District
Central Oregon Regional Housing Authority
Central Point, City of
Charleston RFPD
Chetco Community Public Library Board
Chiloquin, City of

Chiloquin-Agency Lake RFPD	Durham, City of	Hubbard, City of
City County Insurance Services	Eagle Point, City of	Huntington, City of
City of Forest Grove	East Fork Irrigation District	Ice Fountain Water District
Clackamas County	East Umatilla County RFPD	Idanha-Detroit Rural Fire Protection District
Clackamas County Fair	Echo, City of	Illinois Valley RFPD
Clackamas County Fire District 1	Elgin, City of	Imbler RFPD
Clackamas County Vector Control District	Elkton, City of	Imbler, City of
Clackamas River Water	Enterprise, City of	Independence, City of
Clackamas River Water Providers	Estacada Cemetery Maintenance District	Irrigon, City of
Clatskanie Library District	Estacada RFD 69	Jackson County
Clatskanie People's Utility District	Estacada, City of	Jackson County Fire District 3
Clatskanie RFPD	Eugene Water and Electric Board	Jackson County Fire District 4
Clatskanie, City of	Eugene, City of	Jackson County Fire District 5
Clatsop County	Fairview Water District	Jackson County Fire District 6
Clean Water Services	Fairview, City of	Jackson County Vector Control District
Cloverdale RFPD	Falls City, City of	Jacksonville, City of
Coburg RFPD	Farmers Irrigation District	Jefferson County
Coburg, City of	Fern Ridge Community Library	Jefferson County EMS District
Colton RFPD 70	Florence, City of	Jefferson County Library District
Columbia City, City of	Fossil, City of	Jefferson County RFPD 1
Columbia County	Garibaldi, City of	Jefferson County SWCD
Columbia County 911 Communications District	Gaston RFPD	Jefferson RFPD
Columbia Drainage Vector Control District	Gaston, City of	Jefferson, City of
Columbia River Fire and Rescue	Gearhart, City of	John Day, City of
Columbia River PUD	Gervais, City of	Jordan Valley, City of
Community Services Consortium	Gilliam County	Joseph, City of
Condon, City of	Gladstone, City of	Josephine County
Coos Bay, City of	Glide RFPD	Juntura Road District
Coos County	Gold Beach, City of	Junction City RFPD
Coos County Airport District	Gold Hill, City of	Junction City, City of
Coquille, City of	Goshen RFPD	Keizer RFPD
Corbett Water District	Grant County	Keizer, City of
Cornelius, City of	Grant County Emergency Communications	Keno Rural Fire Protection District
Corvallis, City of	Grants Pass Irrigation District	King City, City of
Cottage Grove, City of	Grants Pass, City of	Klamath County
Crescent RFPD	Greater St. Helens Aquatic District	Klamath County Emergency Communications
Creswell, City of	Greater Toledo Pool Recreation District	Klamath County Fire District 1
Crook County	Green Sanitary District	Klamath Falls, City of
Crook County RFPD 1	Gresham, City of	Klamath Housing Authority
Crooked River Ranch RFPD	Halsey, City of	Klamath Vector Control District
Crystal Springs Water District	Halsey-Shedd RFPD	Knappa Svensen Burnside RFPD
Culver, City of	Happy Valley, City of	La Grande Rural Fire Protection District
Curry County	Harbor Water PUD	La Grande, City of
Curry Public Library District	Harney County	La Pine RFPD
Dallas, City of	Harney Health District	Lafayette, City of
Dayton, City of	Harrisburg Fire and Rescue	Lake Chinook Fire And Rescue District
Depoe Bay RFPD	Harrisburg, City of	Lake County
Depoe Bay, City of	Helix, City of	Lake County Library District
Deschutes County	Heppner, City of	Lake Health District
Deschutes Public Library District	Hermiston, City of	Lake Oswego, City of
Deschutes Valley Water District	High Desert Park and Recreation District	Lakeside Water District
Dexter RFPD	Hillsboro, City of	Lakeside, City of
Douglas County	Hines, City of	Lakeview, Town of
Douglas County RFPD 2	Hood River County	Lane Council of Governments
Douglas County Soil and Water Conservation District	Hood River, City of	Lane County
Drain, City of	Hoodland RFD 74	Lane Fire Authority
Dufur, City of	Horsefly Irrigation District	League of Oregon Cities
Dundee, City of	Housing Authority of Clackamas County	Lebanon Aquatic District
Dunes City, City of	Housing Authority of Jackson County	Lebanon RFPD
	Home Forward	Lebanon, City of
	Hubbard RFPD	Lincoln City, City of

Statistical Section

Lincoln County	Netarts Water District	Portland Development Commission
Linn County	Netarts-Oceanside RFPD	Portland, City of
Linn-Benton Housing Authority	Netarts-Oceanside Sanitary District	Powers, City of
Lowell, City of	Newberg, City of	Prairie City, City of
Lowell RFPD	Newport, City of	Prineville, City of
Lyons, City of	North Bend City Housing Authority	Rainbow Water District
Lyons Fire District	North Bend, City of	Rainier Cemetery District
Madras, City of	North Central Public Health District	Rainier, City of
Malheur County	North Clackamas County Water Commission	Redmond Area Park and Recreation District
Malin, City of	North Douglas County Fire and EMS	Redmond Fire and Rescue
Manzanita, City of	North Lincoln Fire & Rescue District 1	Redmond, City of
Mapleton Water District	Marion Area Multi-Agency Emergency Telecom	Reedsport, City of
Marion County	North Morrow Vector Control District	Riddle, City of
Marion County Fire District 1	North Plains, City of	Rockaway Beach, City of
Marion County Housing Authority	North Powder, City of	Rockwood Water PUD
Maupin, City of	North Wasco County Parks & Recreation District	Rogue River RFPD
McKenzie RFPD	Northeast Oregon Housing Authority	Rogue River Valley Irrigation District
McMinnville Water and Light Department	Northern Oregon Corrections	Rogue River, City of
McMinnville, City of	Northwest Senior and Disability Services	Roseburg Urban Sanitary Authority
Medford Irrigation District	Nyssa Road Assessment District 2	Roseburg, City of
Medford Water Commission	Nyssa, City of	Rural Road Assessment District 3
Medford, City of	Oak Lodge Water Services District	Salem Housing Authority
Merrill, City of	Oakland, City of	Salem, City of
Metolius, City of	Oakridge, City of	Salmon Harbor Marina
METRO	Ochoco Irrigation District	Sandy RFPD 72
Metropolitan Area Communication Commission	Odell Sanitary District	Sandy, City of
Mid-Columbia Center for Living	Ontario, City of	Scappoose Public Library District
Mid-Columbia Fire And Rescue	Oregon Cascades West COG	Scappoose RFPD
Mid-Valley Behavioral Care Network	Oregon City, City of	Scappoose, City of
Mill City RFPD	Oregon Community College Association	Scio RFPD
Mill City, City of	Oregon Health & Science University	Seal Rock RFPD
Millersburg, City of	Oregon Municipal Electric Utilities Association	Seal Rock Water District
Millington RFPD	Oregon School Boards Association	Shady Cove, City of
Milton-Freewater, City of	Oregon Trail Library District	Sheridan Fire District
Milwaukie, City of	Owyhee Irrigation District	Sheridan, City of
Mist-Birkenfeld RFPD	Parkdale RFPD	Sherman County
Mohawk Valley RFD	Pendleton, City of	Sherwood, City of
Molalla RFPD 73	Philomath Fire and Rescue	Siletz Rural Fire Protection District
Molalla, City of	Philomath, City of	Silver Falls Library District
Monmouth, City of	Phoenix, City of	Silverton RFPD 2
Monroe RFPD	Pilot Rock, City of	Silverton, City of
Monroe, City of	Pleasant Hill Goshen Fire and Rescue	Sisters and Camp Sherman RFPD
Moro, City of	Pleasant Hill RFPD	Sisters, City of
Mosier Fire District	Polk County	Siuslaw Public Library District
Mt. Angel Fire District	Polk County Fire District 1	Siuslaw RFPD 1
Mt. Angel, City of	Polk Soil and Water Conservation District	South Fork Water Board
Mt. Vernon, City of	Port of Astoria	South Lane County Fire and Rescue
Mulino Water District 23	Port of Cascade Locks	South Suburban Sanitary District
Multnomah County	Port of Columbia County	Southwest Lincoln County Water District
Multnomah County Drainage District 1	Port of Coos Bay, International	Springfield, City of
Multnomah County RFPD 14	Port of Garibaldi	St. Helens, City of
Myrtle Creek, City of	Port of Hood River	Stanfield, City of
Myrtle Point, City of	Port of Newport	Stayton RFPD
Nehalem Bay Fire and Rescue	Port of Portland	Stayton, City of
Nehalem Bay Health District	Port of The Dalles	Sublimity RFPD
Nehalem Bay Wastewater Agency	Port of Tillamook Bay	Suburban East Salem Water District
Nesika Beach - Ophir Water District	Port of Umatilla	Sunrise Water Authority
Neskowin Regional Sanitary Authority	Port Orford Public Library	Sunriver Service District
Neskowin Regional Water District	Port Orford, City of	Sutherlin Water Control District
Nestucca RFPD		Sutherlin, City of
		Sweet Home Cemetery Maintenance District

Sweet Home Fire and Ambulance District	Winchester Bay Sanitary District	Clackamas CSD 115
Sweet Home, City of	Winston, City of	Clackamas CSD 12
Talent Irrigation District	Winston-Dillard Fire District	Clackamas CSD 3
Talent, City of	Winston-Dillard Water District	Clackamas CSD 35
Tangent RFPD	Wood Village, City of	Clackamas CSD 46
Tigard, City of	Woodburn Fire District	Clackamas CSD 53
Tillamook County Emergency	Woodburn, City of	Clackamas CSD 62
Communications District	Wy'East Fire District	Clackamas CSD 7J
Tillamook County Soil and Water	Yachats RFPD	Clackamas CSD 86
Conservation District	Yachats, City of	Clackamas Charter Alliance 2
Tillamook Fire District	Yamhill Communications Agency	Clatskanie School District 6J
Tillamook People's Utility District	Yamhill County	Clatsop CSD 10
Tillamook, City of	Yamhill Fire Protection District	Clatsop CSD 1C
Toledo, City of	Yamhill, City of	Clatsop CSD 30
Tri-City Water and Sanitary Authority	Yoncolla, City of	Clatsop CSD 4
Tri-County Cooperative Weed Management		Clatsop CSD 8
Area	Community Colleges (17)	Coburg Community Charter School
Troutdale, City of	Blue Mountain Community College	Columbia CSD 13
Tualatin Valley Fire and Rescue	Central Oregon Community College	Columbia CSD 47 J
Tualatin Valley Irrigation District	Chemeketa Community College	Columbia CSD 502
Tualatin Valley Water District	Clackamas Community College	Columbia Gorge Education Service District
Tualatin, City of	Clatsop Community College	Condon Admin. School District 25J
Turner, City of	Columbia Gorge Community College	Coos CSD 13
Umatilla County	Klamath Community College	Coos CSD 31
Umatilla County Fire District #1	Lane Community College	Coos CSD 41
Umatilla County Soil and Water District	Linn-Benton Community College	Coos CSD 54
Umatilla County Special Library District	Mt. Hood Community College	Coos CSD 8
Umatilla RFPD 7-405	Oregon Coast Community College	Coos CSD 9
Umatilla, City of	Portland Community College	Crater Lake Charter Academy
Umatilla-Morrow Radio and Data District	Rogue Community College	Crook CSD
Vale, City of	Southwestern Oregon Community College	Curry CSD 17C
Valley View Cemetery Maintenance District	Tillamook Bay Community College	Curry CSD 2CJ
Veneta, City of	Treasure Valley Community College	Dallas Community School
Vernonia RFPD	Umpqua Community College	Dayton School District 8
Vernonia, City of		Desert Sky Montessori
Waldport, City of	School Districts (296)	Deschutes CSD 1
Wallowa County	Alliance Charter Academy	Deschutes CSD 2J
Wallowa, City of	Amity School District	Deschutes CSD 6
Warrenton, City of	Arco Iris Spanish Immersion Charter School	Douglas County ESD
Wasco County	Armadillo Technical Institute	Douglas CSD 1
Wasco County Soil and Water Conservation	Baker CSD 16J	Douglas CSD 105
District	Baker CSD 30 J	Douglas CSD 116
Washington County	Baker CSD 5J	Douglas CSD 12
Washington County Consolidated	Baker CSD 61	Douglas CSD 130
Communications Agency	Baker Web Academy	Douglas CSD 15
West Extension Irrigation District	Beaverton School District 48J	Douglas CSD 19
West Linn, City of	Bend International School	Douglas CSD 21
West Multnomah Soil and Water	Bennett Pearson Academy Charter School	Douglas CSD 22
Conservation District	Benton CSD 17J	Douglas CSD 32
West Side Fire District	Benton CSD 1J	Douglas CSD 34
West Slope Water District	Benton CSD 509J	Douglas CSD 4
West Valley Fire District	Benton CSD 7J	Douglas CSD 70
West Valley Housing Authority	Bridge Charter Academy	Douglas CSD 77
Western Lane Fire and EMS Authority	Cannon Beach Academy	EagleRidge High School
Westfir, City of	Cascade Heights Public Charter School	Eddyville Charter School
Weston Cemetery District	Center For Advanced Learning	Eola Hills Charter School
Weston, City of	Central Curry School District 1	Estacada Web and Early College Academy 1
Wheeler, City of	City View Charter School	Forest Grove Community School
Wickiup Water District	Clackamas Charter Alliance 1	Fossil School District 21J
Willamina, City of	Clackamas County ESD	Four Rivers Community School
Wilsonville, City of	Clackamas CSD 108	Frontier Charter Academy

Statistical Section

Gilliam CSD 3	Lane CSD 32	North Central ESD
Grant County ESD	Lane CSD 40	North Powder School District
Grant CSD 16J	Lane CSD 45J3	North Santiam School District 29J
Grant CSD 17	Lane CSD 4J	North Wasco CSD 21
Grant CSD 4	Lane CSD 52	Northwest Regional ESD
Grant CSD 8	Lane CSD 66	Opal School
Grant School District 3	Lane CSD 68	Oregon Charter Academy
Greater Albany Public Schools 8J	Lane CSD 69	Oregon Family School
Harmon Academy	Lane CSD 71	Oregon Virtual Academy
Harney CSD 10	Lane CSD 76	Oregon Virtual Education East
Harney CSD 13	Lane CSD 79J	Oregon Virtual Education West
Harney CSD 16	Lane CSD 90	Personalized Learning, Inc.
Harney CSD 28	Lane CSD 97J	Phoenix School, The
Harney CSD 3	Le Monde Immersion Charter School	Polk CSD 13J
Harney CSD 4	Lewis and Clark Montessori Charter School	Polk CSD 2
Harney CSD 5	Lincoln CSD	Polk CSD 21
Harney CSD 7	Linn Benton Lincoln ESD	Polk CSD 57
Harney CSD UH1J	Linn CSD 129J	Portland Village School
Harney ESD Region 17	Linn CSD 55	Powell Butte Community Charter School
Harrisburg School District 7	Linn CSD 552C	Renaissance Public Academy
High Desert Education Service District	Linn CSD 9	Ridgeline Montessori Public Charter School
Hillsboro School District 1J	Linn CSD 95C	River's Edge Academy Charter School
Hood River CSD	Logos Public Charter School	Sage Community School
Hope Chinese Charter School	Lourdes Charter School	Sand Ridge Charter School
Howard Street Charter School, Inc.	Luckiamute Valley Charter School	Sauvie Island Academy
Inavale Community Partners	Madrone Trail Public Charter School	Scappoose School District 1J
Insight School Of Oregon Charter	Malheur CSD 12	Sheridan AllPrep Academy
Intermountain ESD	Malheur CSD 26C	Sheridan Japanese School Foundation
Ione School District	Malheur CSD 29	Sherman CSD
Jackson CSD 35	Malheur CSD 61	Sherwood Charter School
Jackson CSD 4	Malheur CSD 66	Siletz Valley Early College Academy
Jackson CSD 5	Malheur CSD 81	Siletz Valley School
Jackson CSD 549C	Malheur CSD 84	Sisters Web and Early College Academy #3
Jackson CSD 59	Malheur CSD 8C	South Coast ESD Region 7
Jackson CSD 6	Malheur ESD Region 14	South Columbia Family School
Jackson CSD 9	Marion CSD 1	South Harney School District 33
Jackson CSD 91	Marion CSD 103C	South Wasco County School District 1
Jackson CSD 94	Marion CSD 14CJ	Southern Oregon ESD
Jefferson County ESD	Marion CSD 15	Southwest Charter School
Jefferson CSD 4	Marion CSD 24J	Springfield Academy Of Arts & Academics
Jefferson CSD 41	Marion CSD 45	Springwater Environmental Sciences School
Jefferson CSD 509J	Marion CSD 4J	Summit Learning Center
Jefferson CSD 8	Marion CSD 5	Sunny Wolf Charter School
Jordan Valley School District 3	Marion CSD 91	Sweet Home Charter School
Josephine County UJ School District	Mastery Learning Institute	The Emerson School
Josephine CSD 7	Metro East Web Academy	The Ivy School
Kairos PDX	Molalla River Academy	The Lighthouse School
Kings Valley Charter School	Morrow CSD	The Valley School of Southern Oregon
Klamath CSD CU	Mosier Community School	The Village School
Klamath Falls City Schools	Multisensory Institute Teaching Children	Three Rivers Charter School
Knova Learning Oregon	Multnomah Learning Academy	Tillamook CSD 101
Lake County ESD	Multnomah County ESD	Tillamook CSD 56
Lake CSD 11C	Multnomah CSD 1	Tillamook CSD 9
Lake CSD 14	Multnomah CSD 10	Trillium Charter School
Lake CSD 18	Multnomah CSD 28-302 JT	Umatilla County Administrative School
Lake CSD 21	Multnomah CSD 3	District 1R
Lake CSD 7	Multnomah CSD 39	Umatilla CSD 16R
Lane County ESD	Multnomah CSD 51JT	Umatilla CSD 29RJ
Lane CSD 1	Multnomah CSD 7	Umatilla CSD 2R
Lane CSD 19	Multnomah CSD R-40	Umatilla CSD 5
Lane CSD 28J	Nixyaawii Community School	Umatilla CSD 61R

Umatilla CSD 6R
Umatilla CSD 7
Umatilla CSD 80R
Umatilla CSD 8R
Union CSD 1
Union CSD 11
Union CSD 15
Union CSD 23
Union CSD 5
Wahtonka Community School
Wallowa County Region 18 ESD
Wallowa CSD 12

Wallowa CSD 21
Wallowa CSD 54
Wallowa CSD 6
Wasco CSD 29
Washington CSD 13
Washington CSD 15
Washington CSD 23J
Washington CSD 511JT
Washington CSD 88J
West Lane Technical Learning Center
Wheeler CSD 1

Wheeler CSD 55U
Willamette Connections Academy
Willamette ESD
Woodland Charter School
Yamhill CSD 1
Yamhill CSD 29JT
Yamhill CSD 30-44-63J
Yamhill CSD 40
Yamhill CSD 48J
Yamhill CSD 4J

OREGON

PERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM

