

**Community
Integrity
Purpose**



Oklahoma Public Employees Retirement System
ANNUAL COMPREHENSIVE FINANCIAL REPORT

For the Fiscal Years Ended
JUNE 30, 2021 and JUNE 30, 2022

A Component Unit of the State of Oklahoma



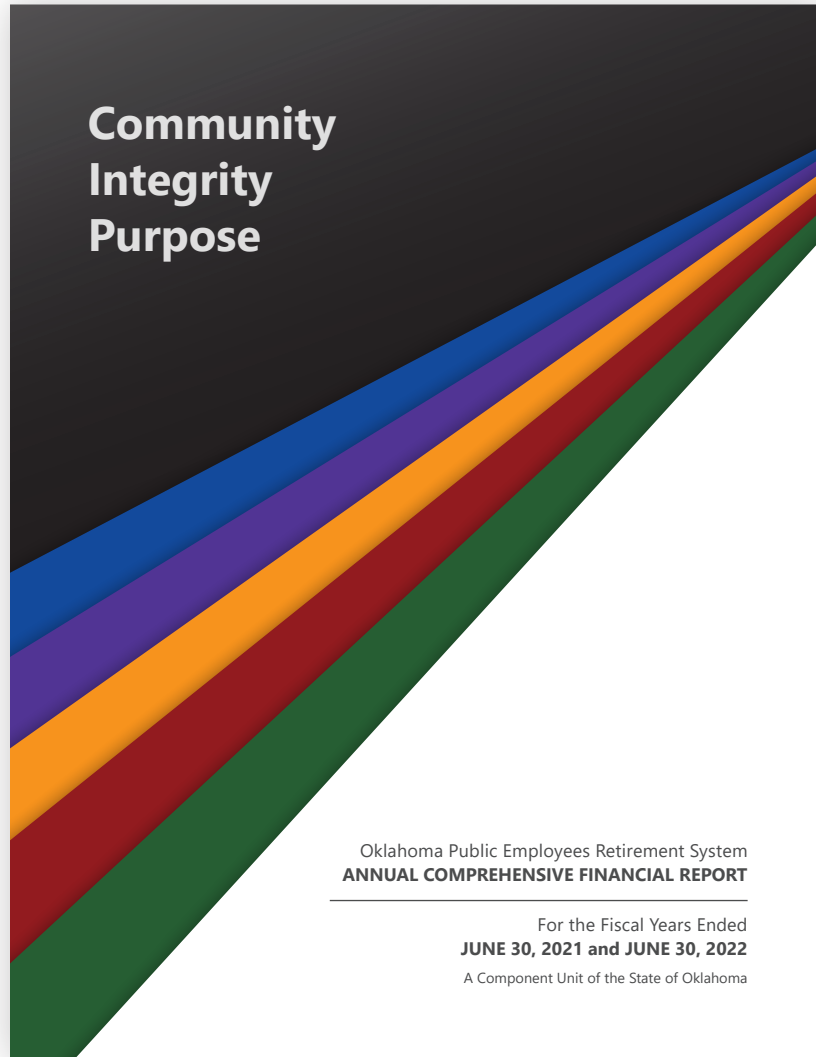
This past year, OPERS embarked on a journey to develop and define our workplace culture: who we are; what we do; and what we value as an organization. These conversations about culture guide us to fully reach our purpose: make the dream work for current and future retirees through building community and acting with integrity.

Through this journey, staff made it a priority to improve internal and external communication, create efficient work processes and expand knowledge. This collaboration generated new ways to engage with our members, each other and our work. By choosing to do what is right for staff, the staff in turn is empowered to make decisions that positively impact our members.

From these meetings, a new guiding principal was created: Ultimately, all our decisions and actions are made in the best interest of our members. This reflects a deep-rooted understanding that being our best and doing our best for our members will lead to successful outcomes.

The Annual Comprehensive Financial Report (ACFR) is published every year to provide transparency and inform our members and stakeholders on the health of the retirement system. This ACFR explores our culture, and each divider section of the report is dedicated to our values. This report and our culture journey are the result of many hours of cross-departmental collaboration. Our updated values replace hollow platitudes with statements defining what we do. Throughout these pages, staff also share personal thoughts on the culture at OPERS.

"Culture happens, whether intentional or not. So why not create a culture we love?" -Joe



This report was prepared by the staff of the Oklahoma Public Employees Retirement System.

This publication is issued by the Oklahoma Public Employees Retirement System as authorized by its Executive Director. Copies have not been printed but are available through the agency website. An electronic version of this publication has been deposited with the Publications Clearinghouse of the Oklahoma Department of Libraries.

2022 ANNUAL COMPREHENSIVE FINANCIAL REPORT

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Do What is Right

Always do the right thing.

Ethical, transparent and accountable to our members, stakeholders and each other.

Keep our promise to provide retirement benefits on time.

"OPERS allows for a work life and family life balance like no other place I have worked for." -Jovee

INTRODUCTION

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Letter of Transmittal

Oklahoma Public Employees Retirement System

P.O. Box 53007
Oklahoma City, Oklahoma 73152-3077

800.733.9008 toll-free
405.848.5946 fax

November 17, 2022

To the Board of Trustees and Members of the Oklahoma Public Employees Retirement System:

State law requires that, after July 1 and before December 1 of each year, the Oklahoma Public Employees Retirement System (the System) publish an annual report that covers the operation of the System during the past fiscal year, including income, disbursements and the financial condition at the end of the fiscal year. This report is published, in part, to fulfill that requirement for the fiscal year ended June 30, 2022.

Management assumes full responsibility for the completeness and reliability of the information contained in this report, based upon a comprehensive framework of internal control that it has established for this purpose. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

Eide Bailly LLP, Certified Public Accountants, has issued an unmodified opinion on the Oklahoma Public Employees Retirement Plan's statement of fiduciary net position as of June 30, 2022, and the related statement of changes in fiduciary net position for the year then ended. The independent auditor's report is located at the front of the Financial Section of this report.

Management's discussion and analysis (MD&A) immediately follows the independent auditor's report and provides a narrative introduction, overview, and analysis of the basic financial statements. MD&A complements this letter of transmittal and should be read in conjunction with it.

Profile of the System

The System is a multiple-employer, cost-sharing public employee retirement plan, which is a defined benefit pension plan. It covers substantially all employees of the State of Oklahoma (the State) except those covered by seven other plans sponsored by the State and also covers employees of participating counties and local agencies. Nearly all new state employees first employed by a System participating employer on or after November 1, 2015, will participate in the State's new defined contribution plan. Therefore, the System is closed to nearly all new State employees, but remains open to new employees of participating counties and local agencies. The employee and employer contribution rates for each member category are established by the Oklahoma Legislature after recommendation by the System's Board of Trustees based on an actuarial calculation which is performed to determine the adequacy of such contribution rates.

Members qualify for full retirement benefits at their specified normal retirement age or, depending upon when they became members, when the sum of the member's age and years of credited service equals 80 or 90. Generally, benefits for

Letter of Transmittal (continued)

state, county, and local agency employees are determined at 2% of the average salary, as defined, multiplied by the number of years of credited service. Members may elect to pay an additional contribution rate to receive benefits using a 2.5% factor for each full year the additional contributions are made. Separate benefit calculations are in effect for elected officials and hazardous duty members.

The System also administers the Health Insurance Subsidy Plan (HISP), a cost-sharing multiple-employer defined benefit other post-employment benefit (OPEB) plan that provides OPEB covering the same categories of employees covered by the pension plan. HISP provides a health insurance premium subsidy for retirees of the System who elect to maintain health insurance with the Oklahoma Employees Group Insurance Division (EGID) or other qualified insurance plan provided by the employer. This subsidy continues until the retiree terminates health insurance coverage with EGID or other qualified plan, or until death. The subsidy is only for the retiree, not joint annuitants or beneficiaries.

The Board of Trustees of the System consists of fourteen appointed members, some by position and some by appointment. Those serving through position are a member of the Corporation Commission or the Commission's designee selected by the Commission, the Director of the Office of Management and Enterprise Services or the Director's designee, the State Insurance Commissioner or the Commissioner's designee, the Director of Human Capital Management of the Office of Management and Enterprise Services, a member of the Tax Commission selected by the Tax Commission, and the State Treasurer or the Treasurer's designee. Of the remaining members, three are appointed by the Governor, one is appointed by the Supreme Court, two are appointed by the Speaker of the House of Representatives and two are appointed by the President Pro Tempore of the Senate. Qualifications for certain of these appointees include a balance of individuals having experience in investment management, pension management, public fund management, the banking profession or a licensed attorney or a licensed accountant.

Each year, OPERS, along with other state agencies, is required to file a budget work program with the Office of Management and Enterprise Services. This work program, as approved by the Board of Trustees, must include a description of all funds available for expenditure and show spending by major program category. OPERS receives no state appropriations and is funded through employee and employer contributions and investment earnings.

Additionally, in each even-numbered year, OPERS, along with other state agencies, must file a strategic plan covering five fiscal years beginning with the next odd-numbered fiscal year. The strategic plan includes a mission statement, the core values and behaviors inherent to operations, and a summary of goals and objectives to be achieved through specific projects outlined for the five-year period. The mission of the OPERS Board and staff is to provide and promote comprehensive, accountable and financially sound retirement services to Oklahoma's public servants in a professional, efficient and courteous manner. The core values and behaviors inherent to the agency's operations are honesty and integrity; excellence in customer experience; quality in service delivery; collaboration and community; and strategic perspective. The summary of goals and objectives outlined in the strategic plan are:

- Create an excellent customer experience for members
- Improve the stability, reliability and security of agency resources and data
- Enhance digital resources to streamline service delivery
- Empower employees and members through knowledge and resources
- Foster a culture of employee development and success

Investments

The standard for OPERS in making investments is to exercise the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character, unless under the circumstances it is clearly prudent not to do so. OPERS' funds are invested solely in the best interest of the members and beneficiaries with the goal of keeping administrative expenses as low as practical. The Board has established an investment policy and guidelines that identify asset allocation as

Letter of Transmittal (continued)

the key determinant of return and risk. Diversification, both by and within asset classes, is the primary risk control element in the portfolio. Passive funds are considered to be suitable investment strategies, especially in highly efficient markets.

The Board engages outside investment managers to manage the various asset classes where OPERS has exposure. At fiscal year end, the investment portfolio of OPERS was actively managed by three fixed income managers, six domestic equity managers and two international equity managers. OPERS' investment portfolio also consisted of passively managed index funds, including one fixed income index fund, two domestic equity index funds and two international equity index funds.

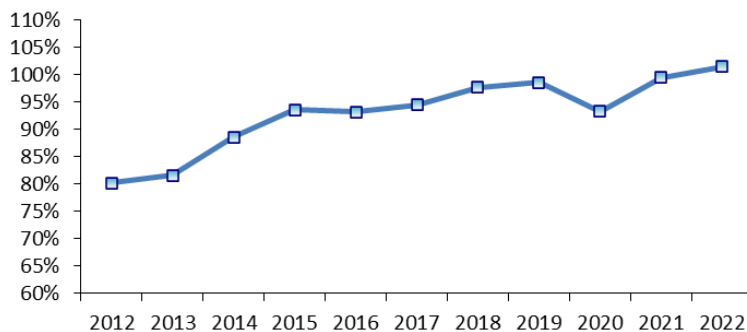
Included in the Investment Section of this report are a summary of the Investment Portfolio by Type and Manager and a comparison of the above amounts to the target allocations, as shown in the Asset Comparison chart. For fiscal year 2022 investments provided a loss of 14.5 percent. The annualized rate of return for OPERS as of June 30, 2022 was 4.6 percent over the last three years and 5.7 percent over the last five years.

Funding

A pension fund is well funded when it has enough money in reserve to meet all expected future obligations to participants. It must also have a revenue source sufficient to keep up with future obligations. The funding objective for OPERS is to meet long-term benefit promises through contributions that remain approximately level as a percent of member payroll. The greater the level of funding, the larger the ratio of assets accumulated to the actuarial accrued liability and the greater the level of investment potential. The advantage of a well-funded plan is that the participants can look at assets that are committed to the payment of benefits. The actuarial accrued liability and actuarial value of assets of OPERS as of July 1, 2022 amounted to \$11.1 billion and \$11.3 billion respectively.

The OPERS funded status increased to 101.5 percent at July 1, 2022. In 2011, the funded ratio significantly increased to 80.7 percent due to the removal of the cost-of-living-adjustment (COLA) assumption, and further increased to 93.6 percent at July 1, 2015. The Legislature addressed the need for increased funding by increasing the employer contribution rate by 1.5 percent effective July 1, 2005. The next year the rate was increased 1.0 percent for state agencies with the continuation of the 1.0 percent increase each year until it was 16.5 percent in fiscal year 2012. The state employee contribution rate has been 3.5 percent of salary since July 1, 2006. Non state agency employers also had a rate increase effective July 1, 2006. The combined employee and employer contribution rate was increased 1.0 percent annually until July 1, 2011 when it reached 20.0 percent where it has remained. The Legislature has provided a statutory requirement that retirement bills be analyzed for actuarial fiscal impact and contain adequate funding sources sufficient to pay the cost of the change. A detailed discussion of funding is provided in the Actuarial Section of this report.

Funded Ratio



Letter of Transmittal (continued)

Awards and Acknowledgements

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Oklahoma Public Employees Retirement System for its annual financial report for the fiscal year ended June 30, 2021. This was the twenty-fifth year OPERS has received this prestigious award. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized annual comprehensive financial report that satisfies both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current annual comprehensive financial report continues to conform to the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

In addition, the Oklahoma Public Employees Retirement System was awarded the Public Pension Standards Award by the Public Pension Coordinating Council, a confederation of the National Association of State Retirement Administrators, the National Conference on Public Employee Retirement Systems, and the National Council on Teacher Retirement. This award is in recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.

The preparation of this report would not have been possible without the efficient and dedicated service of the entire staff of OPERS. We wish to express our appreciation to all staff members who assisted and contributed to the preparation of this report. Credit also must be given to the Board of Trustees for their unfailing support for maintaining the highest standards of professionalism in the financial management of the Oklahoma Public Employees Retirement System.

Respectfully submitted,

Joseph A. Fox
Executive Director

Brian Wolf
Chief Financial Officer and Director of Finance

Chairperson's Letter

Oklahoma Public Employees Retirement System

P.O. Box 53007
Oklahoma City, Oklahoma 73152-3007

800.733.7008 toll-free
405.848.5946 fax

November 17, 2022

Dear OPERS Members:

On behalf of the Board of Trustees of the Oklahoma Public Employees Retirement System (OPERS), I am pleased to present the Annual Comprehensive Financial Report for the fiscal year ending June 30, 2022.

This report is designed to provide a detailed look at the financial, investment and actuarial aspects of OPERS, which continues to be a strong retirement system.

You are encouraged to carefully review this report, as it contains a wealth of information about your retirement system. If you have questions or comments, please feel free to contact us. We can be reached at P.O. Box 53007, Oklahoma City, Oklahoma 73152-3007. Our telephone number is 405-858-6737 (or toll-free 1-800-733-9008).

I also want to thank the OPERS staff for their diligent work in preparing this report and their commitment to continually improve the administrative operations of OPERS.

Sincerely,

Brandy Manek
Chairperson

BOARD OF TRUSTEES



Brandy Manek, Chair
Designee, Director of the
Office of Management and
Enterprise Services



Grant Soderberg, Vice Chair
Appointee, Governor



Bob Anthony
Corporation Commissioner



Jari Askins
Appointee, Supreme Court



Stephen Baldrige
Appointee, Governor



Quyen Do
Appointee, Speaker of the
House of Representatives



John Hastings
Appointee, Governor



Don Kilpatrick
Appointee, President Pro
Tempore of the Senate



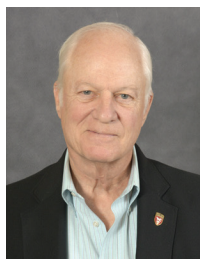
Randy McDaniel
State Treasurer



Glen Mulready
State Insurance
Commissioner



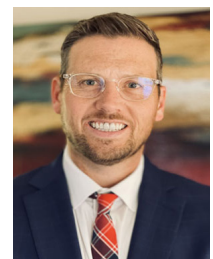
Shelly Paulk
Oklahoma Tax Commission



Edward Peterson
Appointee, President Pro
Tempore of the Senate

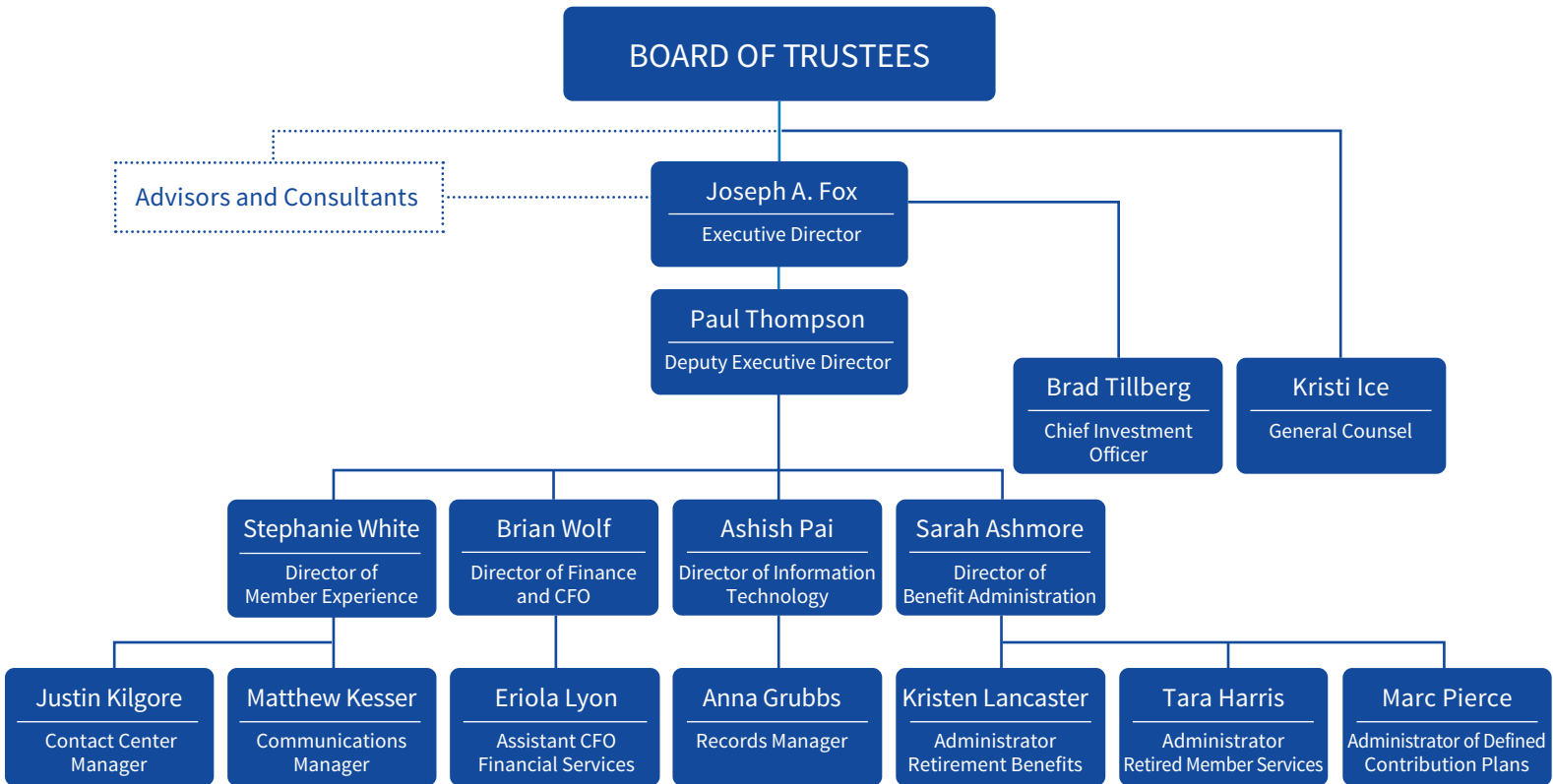


Tracey Ritz
Appointee, Speaker of the
House of Representatives



Jacob Smith
Administrator Human Capital
Management, Office of Management
and Enterprise Services

ORGANIZATIONAL STRUCTURE



ADVISORS AND CONSULTANTS

Master Custodian
 The Northern Trust Company
Chicago, Illinois

| | |
|---|---|
| <p style="text-align: center;">Investment Consultant Verus Advisory, Inc. <i>Seattle, Washington</i></p> | <p style="text-align: center;">Independent Auditors Eide Bailly LLP <i>Oklahoma City, Oklahoma</i></p> |
| <p style="text-align: center;">Actuarial Consultant Cavanaugh Macdonald Consulting, LLC <i>Kennesaw, Georgia</i></p> | <p style="text-align: center;">Internal Auditors Finley & Cook PLLC <i>Shawnee, Oklahoma</i></p> |

*The Schedules of Investment Expenses and Professional/Consultant Fees (pages 58 and 60, respectively) in the Financial Section and the Schedule of Stock Brokerage Commissions Paid (page 79) in the Investment Section provide more information regarding advisors and consultants.



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Oklahoma Public Employees Retirement System

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2021

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2022***

Presented to

Oklahoma 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 black ink that reads 'Alan H. Winkle'.

Alan H. Winkle
Program Administrator

Embrace Change

Seek feedback and data to make informed decisions and drive change.
Focus on the future and actively seek innovative opportunities.
Identify, create and innovate to provide impactful change and outcomes.
Embrace change as an opportunity.

"When I first began to understand the workload, I was a bit overwhelmed. Projects were created to streamline processes and catch up the backlog. [OPERS] continues to research and identify ways to increase efficiency and remove barriers that could stand in the way to continued success." - Debra

FINANCIAL

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CPAs & BUSINESS ADVISORS

Independent Auditor's Report

To the Board of Trustees
Oklahoma Public Employees Retirement System
Oklahoma City, Oklahoma

Report on the Audit of the Financial Statements

Opinions

We have audited the financial statements of the pension and health insurance subsidy plan (HISP) funds of the Oklahoma Public Employees Retirement System (the System), a component unit of the State of Oklahoma, as of and for the years ended June 30, 2022 and 2021, and the related notes to the financial statements which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of Oklahoma Public Employees Retirement System as of June 30, 2022 and 2021, and the respective changes in financial positions for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Oklahoma Public Employees Retirement System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management 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.

What inspires you, inspires us. | eidebailly.com

621 N. Robinson Ave., Ste. 200 | Oklahoma City, OK 73102-6232 | T 405.594.2000 | F 405.594.2053 | EOE

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Oklahoma Public Employees Retirement System's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Oklahoma Public Employees Retirement System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about Oklahoma Public Employees Retirement System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the required supplementary information, as referenced within the table of contents, be presented to supplement the basic 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 Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The other supplementary information is presented for purposes of additional analysis and is not a required part of the financial statements.

The other supplementary information accompanying financial information listed as other supplementary information, as referenced within the table of contents, 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 accompanying financial information listed as supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Eide Bailly LLP

Oklahoma City, Oklahoma
October 11, 2022

Management's Discussion and Analysis (Unaudited)

As management of the Oklahoma Public Employees Retirement System (the System), we offer readers of the System's financial statements this narrative overview and analysis of the financial activities of the System for the fiscal years ended June 30, 2022, 2021, and 2020.

Financial Highlights

- The net position restricted for pension and health insurance subsidy plan (HISP) totaled slightly under \$10.4 billion at June 30, 2022 comparable to the position at June 30, 2021, declining by approximately \$2.1 billion due to a considerable decline in investment income and flows of funds, and \$10.1 billion at June 30, 2020. The net position is available for payment of monthly retirement benefits and other qualified distributions to the System's participants. US Equity and International Equity saw a significant loss in fiscal year (FY) 2022, resulting in a decrease in net investment income which led to a loss in net position restricted for pension/HISP benefits from June 30, 2021 to June 30, 2022 contrary to the prior year where there was a significant gain in net investment income of 28.0% from June 30, 2020 to June 30, 2021.
- At June 30, 2022, 2021, and 2020, the total number of members participating in the System decreased 1.6% for both years and decreased 1.5% in 2020. Membership was 73,015 at June 30, 2022, 74,195 at June 30, 2021, and 75,376 at June 30, 2020. The number of retirees increased by 0.8% as of June 30, 2022, increased by 0.5% as of June 30, 2021, and increased by 0.9% as of June 30, 2020. The total number of retirees was 36,649 at June 30, 2022, 36,351 at June 30, 2021, and 36,179 at June 30, 2020.

Overview of the Financial Statements

The System is a multiple-employer, cost-sharing public employee retirement plan, which is a defined benefit pension plan. The System covers substantially all employees of the state of Oklahoma (the State) except those covered by seven other plans sponsored by the State. The System also covers employees of participating counties and local agencies.

Nearly all new state employees first employed by a System participating employer on or after November 1, 2015 are participating in the State's new defined contribution plan. Therefore, the System is closed to nearly all new State employees but remains open to new employees of participating counties and local agencies.

For most of the System's members, benefits are determined at 2% of the average highest thirty-six months' annual covered compensation multiplied by the number of years of credited service. Members qualify for full retirement benefits at their specified normal retirement age or as adjusted by the provisions of the Oklahoma Statutes as further explained in the notes to the basic financial statements (refer to the note 3(b)).

The System also includes a multiple-employer, cost-sharing public employee other post-employment benefit plan, which is a defined benefit plan. This plan is called the Health Insurance Subsidy Plan (HISP), and it provides a health insurance premium subsidy for retirees of the System who elect to maintain health insurance with the Oklahoma Employees Group Insurance Division (EGID) or other qualified insurance plan provided by the employer. This subsidy continues until the retiree terminates health insurance coverage with EGID or other qualified plan, or until death. The subsidy is only for the retiree, not joint annuitants or beneficiaries.

The System's financial statements are comprised of the Statements of Fiduciary Net Position and Statements of Changes in Fiduciary Net Position for both the pension and HISP, and Notes to Financial Statements. Also included are certain required supplementary information and supplementary information for both the pension and HISP.

Management's Discussion and Analysis (continued) (Unaudited)

The System is administered by the Oklahoma Public Employees Retirement System, a component unit of the State, which together with other similar funds comprise the fiduciary-pension and HISP trust funds of the State.

The *Statements of Fiduciary Net Position* present information on the System's assets, liabilities and the resulting *net position restricted for pension and net position restricted for HISP*. These statements reflect the System's investments, at fair value, along with cash and cash equivalents, receivables, and other assets and liabilities.

The *Statements of Changes in Fiduciary Net Position* presents information showing how the System's net position restricted for pension and HISP changed during the years ended June 30, 2022 and 2021. It reflects contributions by members and participating employers along with deductions for retirement benefits, refunds and withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing and securities lending activities.

The *Notes to Financial Statements* provide additional information that is essential to a full understanding of the data provided in the financial statements.

The *Required Supplementary Information* presents a schedule of changes in the net pension (asset) liability, schedule of pension employer contributions, schedules of money-weighted rate of return on pension plan investments, schedule of changes in the net HISP (asset) liability, schedule of HISP employer contributions, and schedules of money-weighted rate of return on HISP investments. Schedules of certain expenses and fees paid are presented as *supplementary information*.

Management's Discussion and Analysis (continued) (Unaudited)

Financial Analysis

The following are the condensed Schedules of Fiduciary Net Position and Changes in Fiduciary Net Position for the Oklahoma Public Employees Retirement System for the fiscal years ended June 30, 2022, 2021 and 2020.

Condensed Schedules of Fiduciary Net Position (\$ millions)

| | 2022 | | | 2021 | | | 2020 | | |
|--------------------------------------|-------------------|-----------------|--------------------|--------------------|-----------------|--------------------|-------------------|-----------------|--------------------|
| | Pension | HISP | Combined | Pension | HISP | Combined | Pension | HISP | Combined |
| Assets: | | | | | | | | | |
| Cash and cash equivalents | \$ 172.4 | \$ 8.9 | \$ 181.3 | \$ 511.7 | \$ 11.6 | \$ 523.3 | \$ 299.2 | \$ 9.4 | \$ 308.6 |
| Receivables | 317.2 | 12.7 | 329.9 | 543.5 | 20.8 | 564.3 | 258.8 | 9.9 | 268.7 |
| Investments | 10,092.0 | 407.8 | 10,499.8 | 12,064.2 | 466.3 | \$ 12,530.5 | 9,632.5 | 374.1 | 10,006.6 |
| Securities lending collateral | 463.1 | 18.7 | 481.8 | 580.4 | 22.4 | \$ 602.8 | 411.2 | 16.0 | 427.2 |
| Other assets | 0.4 | - | 0.4 | 0.8 | 0.1 | \$ 0.9 | 1.0 | 0.1 | 1.1 |
| Total assets | 11,045.1 | 448.1 | 11,493.2 | 13,700.6 | 521.2 | 14,221.8 | 10,602.7 | 409.5 | 11,012.2 |
| Liabilities: | | | | | | | | | |
| Other liabilities | 594.5 | 24.0 | 618.5 | 1,052.5 | 40.7 | 1,093.2 | 469.0 | 18.2 | 487.2 |
| Securities lending collateral | 463.1 | 18.7 | 481.8 | 580.4 | 22.4 | 602.8 | 411.2 | 16.0 | 427.2 |
| Total liabilities | 1,057.6 | 42.7 | 1,100.3 | 1,632.9 | 63.1 | 1,696.0 | 880.2 | 34.2 | 914.4 |
| Ending fiduciary net position | \$ 9,987.5 | \$ 405.4 | \$ 10,392.9 | \$ 12,067.7 | \$ 458.1 | \$ 12,525.8 | \$ 9,722.5 | \$ 375.3 | \$ 10,097.8 |

Condensed Schedules of Changes in Fiduciary Net Position (\$ millions)

| | 2022 | | | 2021 | | | 2020 | | |
|--|-------------------|-----------------|--------------------|--------------------|-----------------|--------------------|-------------------|-----------------|--------------------|
| | Pension | HISP | Combined | Pension | HISP | Combined | Pension | HISP | Combined |
| Member contributions | \$ 66.4 | \$ - | \$ 66.4 | \$ 66.2 | \$ - | \$ 66.2 | \$ 67.8 | \$ - | \$ 67.8 |
| State and local agency contributions | 283.2 | 16.6 | 299.8 | 275.3 | 17.7 | 293.0 | 274.9 | 19.2 | 294.1 |
| Net investment income (loss) | (1,736.6) | (51.9) | (1,788.5) | 2,681.3 | 83.0 | 2,764.3 | 435.3 | 14.5 | 449.8 |
| Total additions | (1,387.0) | (35.3) | (1,422.3) | 3,022.8 | 100.7 | 3,123.5 | 778.0 | 33.7 | 811.7 |
| Retirement, death and survivor benefits | 675.6 | 17.2 | 692.8 | 661.6 | 17.7 | 679.3 | 628.7 | 18.1 | 646.8 |
| Refunds and withdrawals | 11.9 | - | 11.9 | 10.7 | - | 10.7 | 14.4 | - | 14.4 |
| Administrative expenses | 5.7 | 0.2 | 5.9 | 5.3 | 0.2 | 5.5 | 5.5 | 0.2 | 5.7 |
| Total deductions | 693.2 | 17.4 | 710.6 | 677.6 | 17.9 | 695.5 | 648.6 | 18.3 | 666.9 |
| Net increase (decrease) in fiduciary net position | (2,080.2) | (52.7) | (2,132.9) | 2,345.2 | 82.8 | 2,428.0 | 129.4 | 15.4 | 144.8 |
| Beginning of year | 12,067.7 | 458.1 | 12,525.8 | 9,722.5 | 375.3 | 10,097.8 | 9,593.1 | 359.9 | 9,953.0 |
| End of year | \$ 9,987.5 | \$ 405.4 | \$ 10,392.9 | \$ 12,067.7 | \$ 458.1 | \$ 12,525.8 | \$ 9,722.5 | \$ 375.3 | \$ 10,097.8 |

For the year ended June 30, 2022, fiduciary net position decreased by \$2,132.9 million, or 17.0%, from June 30, 2021. Total assets decreased \$2,728.6 million, or 19.2%, due to a 16.2% decrease in investments change in fair value and 20.1% decrease in Securities lending collateral. The System achieved a rate of return of -14.5% which is considerably lower than the prior year of 28.0%. Total liabilities decreased \$595.7 million, or 35.1%, due to a 43.4% decrease in pending purchases of securities.

Fiscal year 2022 resulted in a \$4,545.8 million decrease in total additions and a \$15.1 million increase in total deductions. Compared to the prior year, the decrease in additions was primarily due to a decrease of \$4,552.8 million in net investment income. Deductions increased 2.2% due to a \$13.5 million increase in retirement, death, and survivor benefits.

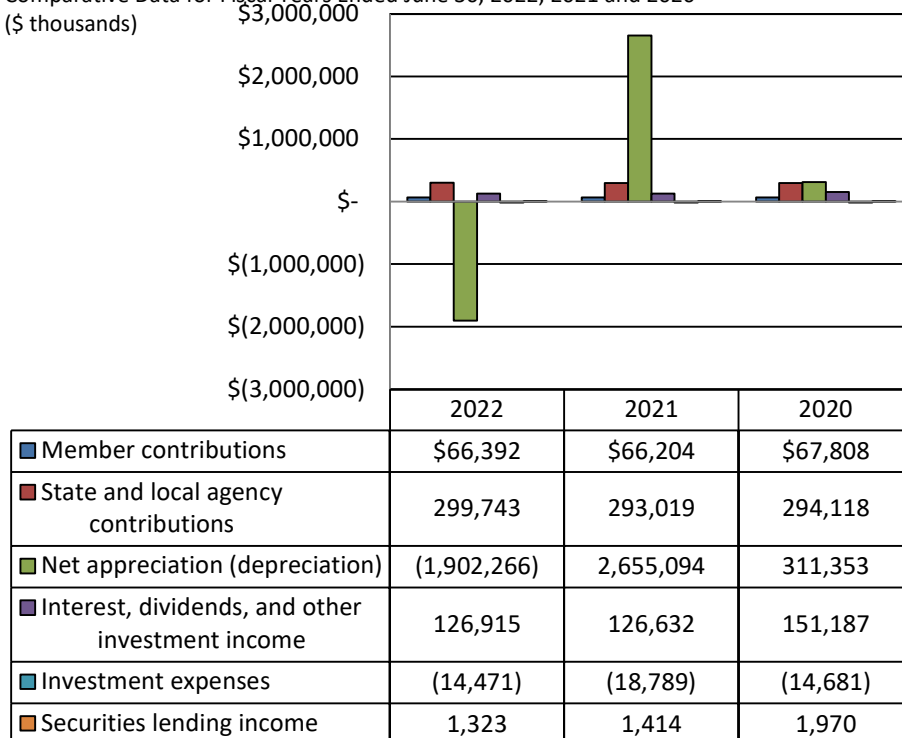
Management’s Discussion and Analysis (continued) (Unaudited)

Additions to Fiduciary Net Position

For the year ended June 30, 2022, total additions to fiduciary net position decreased \$4,545.8 million from the prior year. The net decrease in net investment income of \$4,552.8 million was the result of a much weaker market in 2022 than in the prior year. Interest income increased \$3.3 million, or 5.2%, and dividend income decreased \$2.7 million, or -4.3%. Securities lending net income decreased \$0.09 million or -6.4%. Contributions were \$7.0 million, or 1.9% higher than the prior year due to an increase in contributions.

Additions to Fiduciary Net Position

Comparative Data for Fiscal Years Ended June 30, 2022, 2021 and 2020
(\$ thousands)



For the year ended June 30, 2021, total additions to fiduciary net position increased \$2,311.8 million from the prior year. The net increase in net investment income of \$2,314.5 million was the result of a much stronger market in 2021 than in the prior year. Interest income decreased \$20.2 million, or 24.3%, and dividend income decreased \$3.7 million, or 5.6%. Securities lending net income decreased \$0.6 million or 28.2%. Contributions were \$2.7 million, or 0.7% lower than the prior year due to a decrease in contributions.

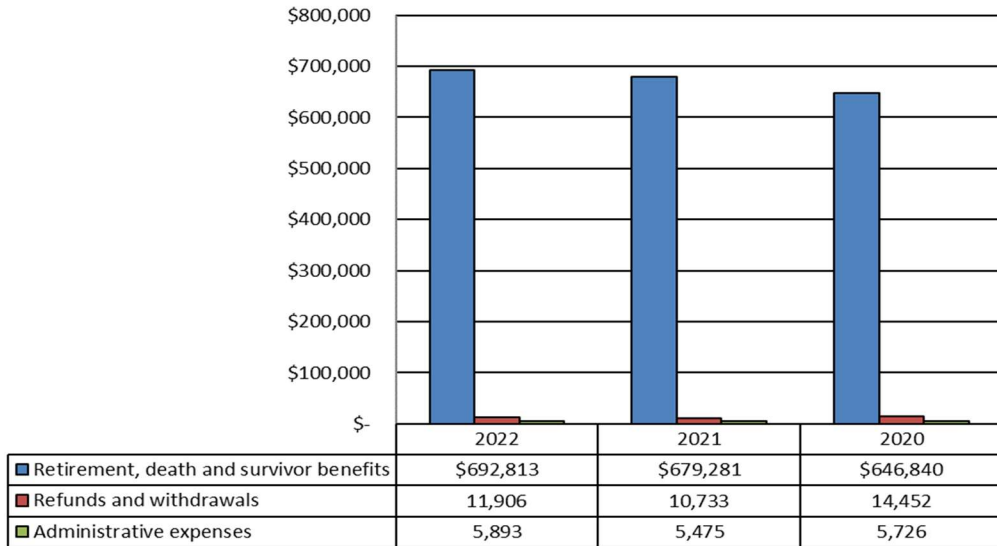
Deductions to Fiduciary Net Position

For the year ended June 30, 2022, total deductions on the following page increased \$15.1 million, or 2.2%, from the prior year. Retirement, death, and survivor benefits increased \$13.5 million, or 2.0%, due to a 0.8% increase in the number of retirees at year end and a 1.4% increase in the average benefit. Refunds and withdrawals increased \$1.2 million, or 10.9%, from prior year followed by a 7.6% increase in administrative costs.

Management’s Discussion and Analysis (continued) (Unaudited)

Deductions to Fiduciary Net Position

Comparative Data for Fiscal Years Ended June 30, 2022, 2021 and 2020
(\$ thousands)



For the year ended June 30, 2021, total deductions increased \$28.6 million, or 4.3%, from the prior year. Retirement, death, and survivor benefits increased \$32.5 million, or 5.0%, due to a 0.5% increase in the number of retirees at year end and a 1.4% increase in the average benefit. Refunds and withdrawals decreased \$3.7 million, or 25.7%, from prior year followed by a 4.4% decrease in administrative costs.

Investments

The investment portfolio is reported in the chart below by the asset class of the investment managers’ portfolios which includes the cash and cash equivalents in those portfolios.

A summary of the System’s cash, cash equivalents, and investments for fiscal years ended June 30, 2022, 2021 and 2020 is as follows:

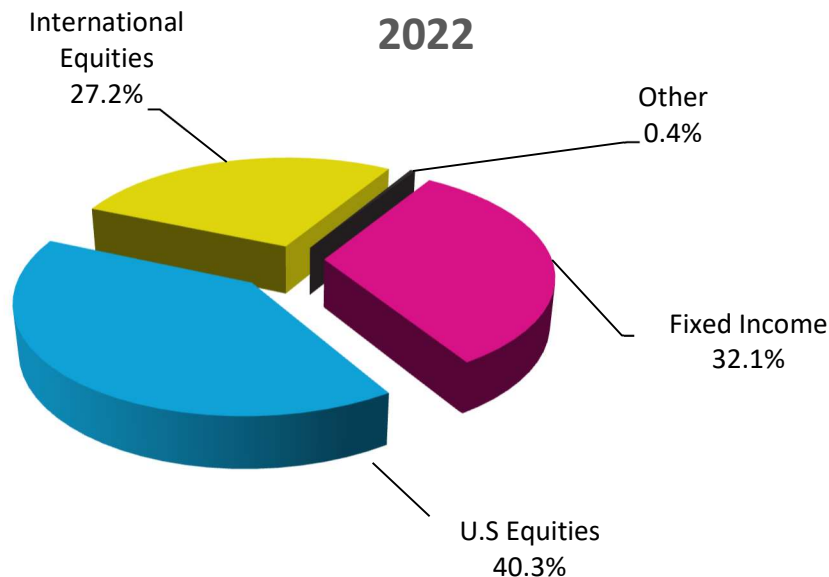
Management’s Discussion and Analysis (continued) (Unaudited)

Cash, Cash Equivalents, and Investment Portfolio (\$ millions)

| | June 30, | | |
|---|-------------|------------|-------------|
| | 2022 | 2021 | 2020 |
| Fixed income | \$ 3,630.9 | \$ 4,280.3 | \$ 3,593.3 |
| U.S. equities | 4,184.9 | 5,167.6 | 4,032.7 |
| International equities | 2,816.0 | 3,559.6 | 2,650.2 |
| Other | 35.0 | 33.5 | 23.8 |
| Total managed investments | 10,666.8 | 13,041.0 | 10,300.0 |
| Cash equivalents on deposit with State | 5.7 | 3.5 | 5.0 |
| Real estate | 8.7 | 9.3 | 10.2 |
| Securities lending collateral | 481.8 | 602.8 | 427.2 |
| Total cash, cash equivalents, and investments | \$ 11,163.0 | \$13,656.6 | \$ 10,742.4 |

The 2022 decrease in the System’s managed investments is reflective of the decrease in domestic and international income markets for the year. The System’s overall return for the year ended June 30, 2022 was -14.5%. U.S. equities plunged this year with a return of -13.1%, followed by a weak international equity with a return of -20.8%. Fixed income showed a negative return of -11.0%. An amount of \$344 million from the portfolio was used to supplement the cash requirements of monthly retiree benefit payments. The change in securities lending collateral is dependent on the securities loaned by the System’s master custodian at year end.

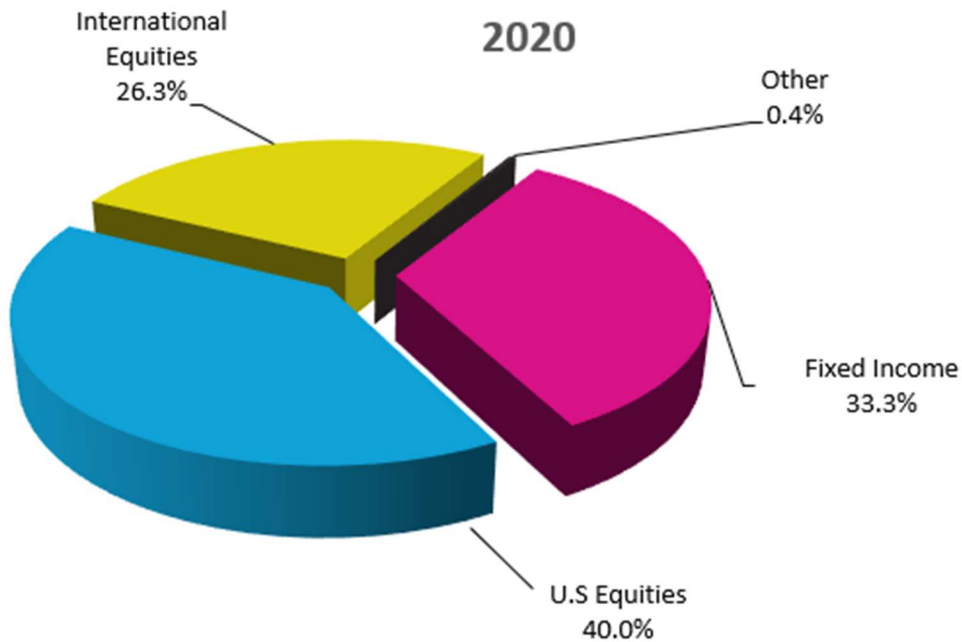
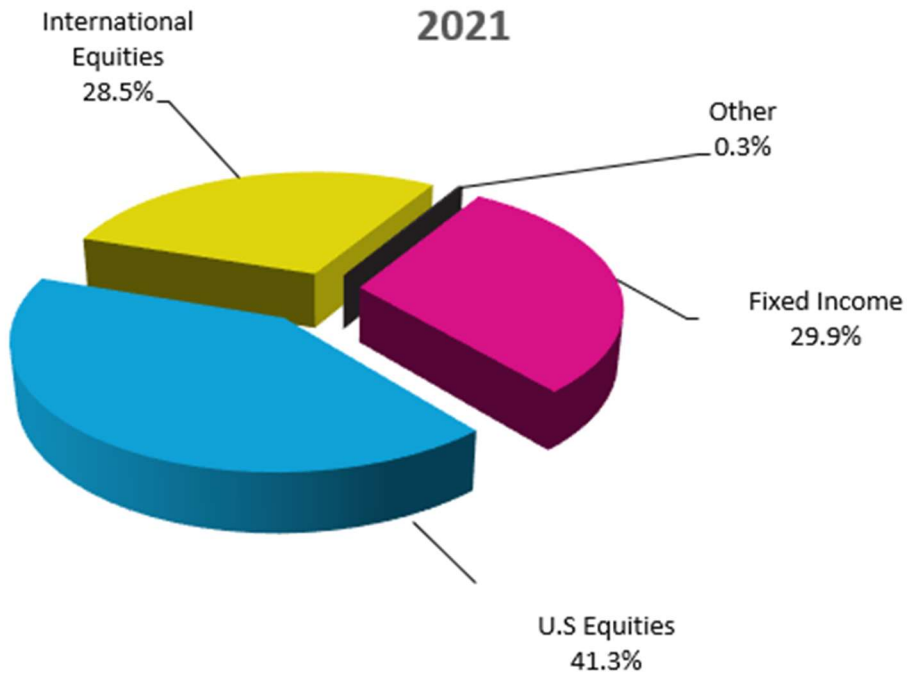
As of June 30, 2022, the distribution of the System’s investments including accrued income and pending trades was as follows:



The 2021 increase in the System’s managed investments is reflective of the increase in domestic and international income markets for the year. The System’s overall return for the year ended June 30, 2021 was 28.0%. U.S. equities showed a significant return of 46.0%, followed by a strong international equity with a return of 36.9%. Fixed income showed a return of 0.1%. An amount of \$344 million from the portfolio was used to supplement the cash requirements of monthly retiree benefit payments. The change in securities lending collateral is dependent on the securities loaned by the System’s master custodian at year end.

Management's Discussion and Analysis (continued)
(Unaudited)

As of June 30, 2021 and 2020 the distribution of the System's investments including accrued income and pending trades was as follows:



Management's Discussion and Analysis (continued)
(Unaudited)

Economic Factors

Ratio of Fiduciary Net Position to Total Pension Liability and to Total HISP

Liability The ratio of fiduciary net position to the total pension liability was as follows:

| | June 30, | | |
|--|-------------------|-------------------|-------------------|
| | 2022 | 2021 | 2020 |
| Total pension liability | \$ 10,828,046,484 | \$ 10,725,571,917 | \$ 10,614,647,291 |
| Plan fiduciary net position | \$ 9,987,481,670 | \$ 12,067,732,648 | \$ 9,722,484,043 |
| Ratio of fiduciary net position to total pension liability | 92.24% | 112.51% | 91.59% |

The ratio of fiduciary net position to the total HISP liability was as follows:

| | June 30, | | |
|---|----------------|----------------|----------------|
| | 2022 | 2021 | 2020 |
| Total HISP liability | \$ 311,838,597 | \$ 320,668,249 | \$ 328,431,762 |
| Plan fiduciary net position | \$ 405,426,213 | \$ 458,150,586 | \$ 375,314,784 |
| Ratio of fiduciary net position to total HISP liability | 130.01% | 142.87% | 114.27% |

The actuarial assumptions used in the July 1, 2022, valuation are based on the results of the most recent actuarial experience study, which covered the three-year period ending June 30, 2019.

Other than changes in the fair value of System assets as may be impacted by the equity and bond markets, no other matters are known by management to have a significant impact on the operations or financial position of the System.

Requests for Information

This financial report is designed to provide a general overview of the System's finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Financial Reporting Division, OPERS, P.O. Box 53007, Oklahoma City, Oklahoma 73152-3007.

Statements of Fiduciary Net Position

As of June 30, 2022

| | Pension Plan | Health Insurance Subsidy Plan | Combined |
|---|------------------|----------------------------------|-------------------|
| Assets | | | |
| Cash equivalents | \$ 172,350,424 | \$ 8,941,330 | \$ 181,291,754 |
| Receivables: | | | |
| Member contributions | 4,091,427 | - | 4,091,427 |
| State and local agency contributions | 13,954,455 | 563,947 | 14,518,402 |
| Due from brokers for securities sold | 277,872,313 | 11,229,426 | 289,101,739 |
| Accrued interest and dividends | 21,307,111 | 861,082 | 22,168,193 |
| Total receivables | 317,225,306 | 12,654,455 | 329,879,761 |
| Investments, at fair value: | | | |
| Short-term investments | 36,570,320 | 1,477,902 | 38,048,222 |
| Government obligations | 2,311,572,294 | 93,415,546 | 2,404,987,840 |
| Corporate bonds | 1,043,047,379 | 42,151,769 | 1,085,199,148 |
| Domestic equities | 3,965,711,656 | 160,262,609 | 4,125,974,265 |
| International equities | 2,726,763,393 | 110,194,297 | 2,836,957,690 |
| Real estate | 8,313,997 | 336,003 | 8,650,000 |
| Securities lending collateral | 463,122,710 | 18,715,752 | 481,838,462 |
| Total investments | 10,555,101,749 | 426,553,878 | 10,981,655,627 |
| Other assets | 402,812 | 16,314 | 419,126 |
| Total assets | 11,045,080,291 | 448,165,977 | 11,493,246,268 |
| Liabilities | | | |
| Due to brokers and investment managers | 594,475,911 | 24,024,012 | 618,499,923 |
| Securities lending collateral | 463,122,710 | 18,715,752 | 481,838,462 |
| Total liabilities | 1,057,598,621 | 42,739,764 | 1,100,338,385 |
| Net position restricted for pension/HISP benefits | \$ 9,987,481,670 | \$ 405,426,213 | \$ 10,392,907,883 |

See accompanying notes to financial statements.

Statements of Fiduciary Net Position

As of June 30, 2021

| | Pension Plan | Health Insurance Subsidy Plan | Combined |
|--|------------------|----------------------------------|------------------|
| Assets | | | |
| cash equivalents | \$ 511,657,514 | \$ 11,637,038 | \$ 523,294,552 |
| Receivables: | | | |
| Member contributions | 4,345,399 | - | 4,345,399 |
| State and local agency contributions | 15,057,774 | 582,046 | 15,639,820 |
| Due from brokers for securities sold | 505,165,463 | 19,526,371 | 524,691,834 |
| Accrued interest and divi dends | 18,981,650 | 733,717 | 19,715,367 |
| Total receivables | 543,550,286 | 20,842,134 | 564,392,420 |
| Investments, at fair value: | | | |
| Short-term investments | 38,499,074 | 1,488,132 | 39,987,206 |
| Government obligations | 2,684,810,439 | 103,777,045 | 2,788,587,484 |
| Corporate bonds | 971,242,583 | 37,541,833 | 1,008,784,416 |
| Domestic equities | 4,920,684,197 | 190,201,008 | 5,110,885,205 |
| International equities Real estate | 3,440,019,452 | 132,968,436 | 3,572,987,888 |
| Securities lending collateral | 8,939,448 | 345,552 | 9,285,000 |
| Securities lending collateral | 580,360,230 | 22,432,880 | 602,793,110 |
| Total investments | 12,644,555,423 | 488,754,886 | 13,133,310,309 |
| Other assets | 816,517 | 31,585 | 848,102 |
| Total assets | 13,700,579,740 | 521,265,643 | 14,221,845,383 |
| Liabilities | | | |
| Due to brokers and investment managers | 1,052,486,862 | 40,682,177 | 1,093,169,039 |
| Securities lending collateral | 580,360,230 | 22,432,880 | 602,793,110 |
| Total liabilities | 1,632,847,092 | 63,115,057 | 1,695,962,149 |
| Net position restricted for pension/H ISP benefits | \$12,067,732,648 | \$ 458,150,586 | \$12,525,883,234 |

See accompanying notes to financial statements.

Statements of Changes in Fiduciary Net Position

As of June 30, 2022

| | Pension Plan | Health Insurance Subsidy Plan | Combined |
|--|------------------------|----------------------------------|------------------------|
| Additions | | | |
| Contributions: | | | |
| Members | \$ 66,392,310 | \$ - | \$ 66,392,310 |
| State and local agencies | 283,159,221 | 16,584,000 | 299,743,221 |
| Total contributions | 349,551,531 | 16,584,000 | 366,135,531 |
| Investment income: | | | |
| From investing activities: | | | |
| Net depreciation in fair value of investments | (1,847,044,336) | (55,222,088) | (1,902,266,424) |
| Interest | 64,239,865 | 1,958,446 | 66,198,311 |
| Dividends | 58,885,137 | 1,760,521 | 60,645,658 |
| Real estate | 69,055 | 2,065 | 71,120 |
| Total investment income (loss) | (1,723,850,279) | (51,501,056) | (1,775,351,335) |
| Less – Investment expenses | (14,051,086) | (420,093) | (14,471,179) |
| Income from investing activities | (1,737,901,365) | (51,921,149) | (1,789,822,514) |
| From securities lending activities: | | | |
| Securities lending income | 2,071,220 | 61,924 | 2,133,144 |
| Securities lending expenses: | | | |
| Borrower rebates | (560,889) | (16,769) | (577,658) |
| Management fees | (225,473) | (6,741) | (232,214) |
| Income from securities lending activities | 1,284,858 | 38,414 | 1,323,272 |
| Net investment income (loss) | (1,736,616,507) | (51,882,735) | (1,788,499,242) |
| Total additions | (1,387,064,976) | (35,298,735) | (1,422,363,711) |
| Deductions | | | |
| Retirement, death and survivor benefits | 675,558,744 | 17,254,579 | 692,813,323 |
| Refunds and withdrawals | 11,905,764 | - | 11,905,764 |
| Administrative expenses | 5,721,494 | 171,059 | 5,892,553 |
| Total deductions | 693,186,002 | 17,425,638 | 710,611,640 |
| Net decrease in net position | (2,080,250,978) | (52,724,373) | (2,132,975,351) |
| Net position restricted for pension/HISP benefits | | | |
| Beginning of year | 12,067,732,648 | 458,150,586 | 12,525,883,234 |
| End of year | \$ 9,987,481,670 | \$ 405,426,213 | \$ 10,392,907,883 |

See accompanying notes to financial statements.

Statements of Changes in Fiduciary Net Position

As of June 30, 2021

| | Pension Plan | Health Insurance Subsidy Plan | Combined |
|--|----------------------|----------------------------------|----------------------|
| Additions | | | |
| Contributions: | | | |
| Members | \$ 66,204,166 | \$ - | \$ 66,204,166 |
| State and local agencies | 275,342,730 | 17,676,000 | 293,018,730 |
| Total contributions | 341,546,896 | 17,676,000 | 359,222,896 |
| Investment income: | | | |
| From investing activities: | | | |
| Net appreciation in fair value of investments | 2,575,406,922 | 79,686,626 | 2,655,093,548 |
| Interest | 60,962,267 | 1,945,086 | 62,907,353 |
| Dividends | 61,486,443 | 1,902,475 | 63,388,918 |
| Real estate | 325,514 | 10,072 | 335,586 |
| Total investment income | 2,698,181,146 | 83,544,259 | 2,781,725,405 |
| Less – Investment expenses | (18,225,569) | (563,924) | (18,789,493) |
| Income from investing activities | 2,679,955,577 | 82,980,335 | 2,762,935,912 |
| From securities lending activities: | | | |
| Securities lending income | 1,265,359 | 39,152 | 1,304,511 |
| Securities lending expenses: | | | |
| Borrower rebates | 347,670 | 10,757 | 358,427 |
| Management fees | (241,675) | (7,478) | (249,153) |
| Income from securities lending activities | 1,371,354 | 42,431 | 1,413,785 |
| Net investment income | 2,681,326,931 | 83,022,766 | 2,764,349,697 |
| Total additions | 3,022,873,827 | 100,698,766 | 3,123,572,593 |
| Deductions | | | |
| Retirement, death and survivor benefits | 661,582,309 | 17,698,655 | 679,280,964 |
| Refunds and withdrawals | 10,732,584 | - | 10,732,584 |
| Administrative expenses | 5,310,329 | 164,309 | 5,474,638 |
| Total deductions | 677,625,222 | 17,862,964 | 695,488,186 |
| Net increase in net position | 2,345,248,605 | 82,835,802 | 2,428,084,407 |
| Net position restricted for pension/HISP benefits | | | |
| Beginning of year | 9,722,484,043 | 375,314,784 | 10,097,798,827 |
| End of year | \$ 12,067,732,648 | \$ 458,150,586 | \$ 12,525,883,234 |

See accompanying notes to financial statements.

Notes to Financial Statements June 30, 2022 and 2021

(1) Reporting Entity

The Oklahoma Public Employees Retirement System (OPERS)(the System) is a defined benefit cost-sharing multiple employer plan consisting of a retirement plan and a cost-sharing multiple employer health insurance subsidy plan (HISP) both held in irrevocable trusts. The System, together with other similar fiduciary pension trust funds of the state of Oklahoma (the State), is a component unit of the State. The System is administered by the Oklahoma Public Employees Retirement System. As set forth in Title 74 of the Oklahoma Statutes, at Section 921, administrative expenses are paid with funds provided by operations of the System.

(2) Summary of Significant Accounting Policies

The following are the significant accounting policies followed by the System.

(a) Basis of Accounting

The financial statements are prepared using the economic resources measurement focus and the accrual basis of accounting under which expenses are recorded when the liability is incurred, revenues are recorded in the accounting period in which they are earned and become measurable, and investment purchases and sales are recorded as of their trade dates. Member and employer contributions are established by statute as a percentage of salaries and are recognized when due, pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the System.

(b) Investments

The System's investments are presented at fair value. Purchases and sales are recorded at the trade date. At month end, there may be certain pending trades that were initiated by managers but not confirmed and, therefore, are not included in the fair value of investments. The System is authorized to invest in eligible investments as approved by the Board of Trustees (the Board) as set forth in its investment policy.

System investments are reported at fair value, which is the price that would be received if the investments were sold in an orderly transaction between a willing buyer and a willing seller. Short-term investments include bills and notes, commercial paper, and international foreign currency contracts. Short-term investments, debt securities, and equity securities are reported at fair value, as determined by the System's custodial agent, using pricing services or prices quoted by independent brokers based on the latest reported sales prices at current exchange rates for securities traded on national or international exchanges. The fair value of the pro rata share of units owned by the System in equity index and commingled trust funds is determined by the respective fund trustee based on quoted sales prices of the underlying securities. The investment in real estate is valued using an annual third-party appraisal.

Cash equivalents include investments in money market funds and investment pools and are reported at amortized cost.

Notes to Financial Statements (continued)

Net investment income (loss) includes net appreciation (depreciation) in the fair value of investments, interest income, dividend income, securities lending income and expenses, and investment expenses, which include investment management and custodial fees and all other significant investment related costs. Foreign currency translation gains and losses are reflected in the net appreciation (depreciation) in the fair value of investments.

The System's international investment managers may enter into forward foreign exchange contracts to protect against fluctuation in exchange rates between the trade date and the settlement date of foreign investment transactions. Any gains and losses on these contracts are included in income in the period in which the exchange rates change.

The System's investment policy provides for investments in combinations of stocks, bonds, fixed income securities, and other investment securities along with investments in commingled, mutual, and index funds. Investment securities and investment securities underlying commingled or mutual fund investments are exposed to various risks, such as interest rate and credit risks. Due to the risks associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities may occur in the near term, and those changes could materially affect the amounts reported in the statements of fiduciary net position.

(c) Use of Estimates

Management of the System has made a number of estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities to prepare these financial statements in conformity with U.S. generally accepted accounting principles (GAAP), note disclosures and required supplementary information (RSI). Actual results could differ from these estimates.

(d) Risk and Uncertainties

Contributions to the System and the actuarial information included in Note (6) Net Pension (Asset) Liability, Net HISP Asset and Actuarial Information and the RSI are reported based on certain assumptions pertaining to interest rates, inflation rates, and employee compensation and demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions may occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the financial statements.

(e) Composition of Board of Trustees

The Board of Trustees of OPERS consists of fourteen appointed members, some by position and some by association. Those serving through position are a member of the Corporation Commission as selected by the Corporation Commission, a member of the Tax Commission as selected by the Tax Commission, the Administrator of the Office of Personnel Management or designee, the State Insurance Commissioner or designee, the Director of State Finance or designee, and the State Treasurer or designee. Of the remaining members, three are appointed by the Governor, one is appointed by the Supreme Court, two are appointed by the Speaker of the House of Representatives and two are appointed by the President Pro Tempore of the Senate. Qualifications for certain of these appointees include a balance of individuals having experience in investment management, pension management, public fund management, the banking profession or a licensed attorney or a licensed accountant.

Notes to Financial Statements (continued)

(3) System Description and Contribution Information

The following brief description of the System is provided for general information purposes only. Participants should refer to Title 74 of the Oklahoma Statutes, Sections 901 through 932 and 935, as amended, for more complete information.

(a) General

The System is a multiple-employer, cost-sharing public employee retirement plan, which is a defined benefit pension plan covering substantially all state employees except employees covered by seven other plans sponsored by the State. It also covers employees of participating county and local agencies. Nearly all new state employees first employed by a System participating employer on or after November 1, 2015, will participate in the State's new defined contribution plan. Therefore, the System is closed to nearly all new State employees, but remains open to new employees of participating counties and local agencies. Agencies and/or participants not included in the System are as follows: teachers, municipal police, municipal firefighters, judicial, wildlife, state law enforcement and nearly all State employees first employed on or after November 1, 2015.

The System also administers the Health Insurance Subsidy Plan, a cost-sharing multiple-employer defined benefit OPEB (Other Post Employee Benefit) plan that provides OPEB covering the same categories of employees covered by the pension plan.

The supervisory authority for the management and operation of the System and HISP is the Board, which acts as a fiduciary for investment of the funds and the application of System interpretations. At June 30, the System's membership consisted of:

| | 2022 | 2021 |
|--|---------------|---------------|
| Inactive members or their beneficiaries currently receiving benefits | 36,649 | 36,351 |
| Inactive members entitled to but not yet receiving benefits | 6,454 | 6,133 |
| Active members | <u>29,912</u> | <u>31,711</u> |
| Total | <u>73,015</u> | <u>74,195</u> |

Of the inactive members or their beneficiaries currently receiving benefits 13,468 and 13,820 are retirees and beneficiaries in the HISP as of June 30, 2022 and 2021, respectively. The Plan also includes 58,803 and 57,140 nonvested terminated members entitled to a refund of their member contributions as of June 30, 2022 and 2021, respectively.

For purposes of the discussion on benefits and contributions, the members are described in the following categories: hazardous duty members, which includes certain employees of the Department of Corrections who are classified as correction officers, probation and parole officers, and fugitive apprehension agents along with Oklahoma Military Department firefighters; elected officials, which includes elected officials who serve the State and participating counties; and State, county, and local agency employees, which includes all other employees previously described. If the member category is not specifically identified, the attributes of the System discussed apply to all members.

Notes to Financial Statements (continued)

(b) Benefits

Pensions

Members qualify for full retirement benefits at their specified normal retirement age or, for any person who became a member prior to July 1, 1992, when the sum of the member's age and years of credited service equals or exceeds 80 (Rule of 80), and for any person who became a member after June 30, 1992, when the member's age and years of credited service equals or exceeds 90 (Rule of 90). Normal retirement date is further qualified to require that all members employed on or after January 1, 1983 must have six or more years of full-time equivalent employment with a participating employer before being eligible to receive benefits. Credited service is the sum of participating and prior service. Prior service includes nonparticipating service before January 1, 1975, or the entry date of the employer and active wartime military service.

A member with a minimum of ten years of participating service may elect early retirement with reduced benefits beginning at age 55 if the participant became a member prior to November 1, 2011, or age 60 if the participant became a member on or after November 1, 2011.

Disability retirement benefits are available for members having eight years of credited service whose disability status has been certified as being within one year of the last day on the job by the Social Security Administration. Disability retirement benefits are determined in the same manner as retirement benefits, but payable immediately without an actuarial reduction.

Health Insurance Subsidy Plan

HISP provides a health insurance premium subsidy for retirees of the System who elect to maintain health insurance with the Oklahoma Employees Group Insurance Division (EGID) or other qualified insurance plan provided by the employer. This subsidy continues until the retiree terminates health insurance coverage with EGID or other qualified plan, or until death. The subsidy is only for the retiree, not joint annuitants or beneficiaries.

The following are various benefit attributes for each member category:

State, County, and Local Agency Employees

Benefits are determined at 2% of the average annual salary received during the highest thirty-six months of the last ten years of participating service, but not to exceed the applicable annual salary cap, multiplied by the number of years of credited service. Members who join OPERS on or after July 1, 2013, will have their salary averaged over the highest 60 months of the last ten years. Normal retirement age under the System is 62 or Rule of 80/90 if the participant became a member prior to November 1, 2011, or age 65 or Rule of 90 if the participant became a member on or after November 1, 2011.

Members who elect to pay the additional contribution rate, which became available in January 2004, will receive benefits using a 2.5% computation factor for each full year the additional contributions are made. In 2004, legislation was enacted to provide an increased benefit to retiring members who were not yet eligible for Medicare. The Medicare Gap benefit option became available to members under age 65 who retired on or after May 1, 2006. Members may elect to receive a temporary increased benefit to cover the cost of health insurance premiums until the member is eligible to receive Medicare. After the member becomes eligible for Medicare, the retirement benefit will be permanently reduced by an actuarially determined amount. The option is irrevocable, must be chosen prior to retirement, and is structured to have a neutral actuarial cost to the System.

Notes to Financial Statements (continued)

Members become eligible to vest fully upon termination of employment after attaining eight years of credited service, or the members' contributions may be withdrawn upon termination of employment.

Elected Officials

Benefits are determined as the greater of the calculation described in the preceding section or, based on the official's contribution election, either 1.9% or 4.0% of the highest annual covered compensation received as an elected official, but not to exceed the applicable annual salary cap, multiplied by the number of years of credited service. For members elected prior to November 1, 2011, normal retirement age under the System is 60 with six years of participation as an elected official or Rule of 80. For members elected on or after November 1, 2011, the normal retirement age is 62 with 10 years of participation as an elected official or 65 with eight years of participation as an elected official. Members elected prior to November 1, 2011 become eligible to vest fully upon termination of employment after attaining six years of participating service as an elected official. Members elected on or after November 1, 2011 become eligible to vest fully upon termination of employment after attaining eight years of participating service as an elected official. The members' contributions may be withdrawn upon termination of employment.

Hazardous Duty Members

Benefits are determined at (a) 2.5% of the final average compensation up to the applicable annual salary cap multiplied by the number of years of service as a hazardous duty member not to exceed 20 years and (b) 2.0% of the final average compensation multiplied by the number of years of service in excess of 20 years and any other years of service creditable. Normal retirement age under the System is 62 or at completion of 20 years of creditable service as a hazardous duty member or Rule of 80/90 if participant became a member prior to November 1, 2011, or age 65 or at completion of 20 years of creditable service as a hazardous duty member or Rule of 90 if participant became a member on or after November 1, 2011.

Military Department firefighters are not restricted to a maximum of 20 years of hazardous duty for the 2.5% computation.

However, members who contributed prior to July 1, 1990 but do not qualify for normal retirement as a hazardous duty member shall receive benefits computed at 2.5% of the final compensation for those full time years as a hazardous duty member after July 1, 1990, 2.25% before July 1, 1990, and 2.0% for all other years of credited service. Members become eligible to vest fully after 20 years of full-time service as a hazardous duty member.

Upon the death of an active member, the accumulated contributions of the member are paid to the member's named beneficiary(ies) in a single lump sum payment. If a retired member elected a joint annuitant survivor option or an active member was eligible to retire with either reduced or unreduced benefits or eligible to vest the retirement benefit at the time of death, benefits can be paid in monthly payments over the life of the spouse if the spouse so elects.

Benefits are payable to the surviving spouse of an elected official only if the elected official had at least six years of participating elected service and was married at least three years immediately preceding death. Survivor benefits are terminated upon death of the named survivor and, for elected officials, remarriage of the surviving spouse. Upon the death of a retired member, with no survivor benefits payable, the member's beneficiary(ies) are paid the excess, if any, of the member's accumulated contributions over the sum of all retirement benefit payments made.

Notes to Financial Statements (continued)

Upon the death of a retired member, the System will pay a \$5,000 death benefit to the member's beneficiary or estate of the member if there is no living beneficiary. The death benefit will be paid in addition to any excess employee contributions or survivor benefits due to the beneficiary. Death benefits paid for the years ended June 30, 2022 and 2021 totaled approximately \$6,288,000 and \$6,446,000, respectively.

Legislation was enacted in 1999 which provided a limited additional benefit for certain terminated members eligible to vest as of July 1, 1998. This limited benefit is payable as an additional \$200 monthly benefit upon the member's retirement up to the total amount of certain excess contributions paid by the participant to the System. In April 2001, limited benefit payments began for qualified retired members.

Benefits are established and may be amended by the State Legislature from time to time.

(c) Contributions

The contribution rates for each member category of the System are established by the Oklahoma Legislature after recommendation by the Board based on an actuarial calculation, which is performed to determine the adequacy of such contribution rates. An actuarially determined portion of the total contributions to the System is set aside to finance the cost of the benefits of the HISP in accordance with provisions of the Internal Revenue Code.

Each member participates based on their qualifying gross salary earned, excluding overtime. There is no cap on the qualifying gross salary earned, subject to Internal Revenue Service (IRS) limitations on compensation. Only employers contribute to the HISP.

The following contribution rates were in effect:

State, County, and Local Agency Employees

For 2022 and 2021, *state agency employers* contributed 16.5% on all salary, and *state employees* contributed 3.5% on all salary.

For 2022 and 2021, contributions of *participating county and local agencies* totaled 20.0% of salary composed of a minimum employee contribution rate of 3.5% up to a maximum of 8.5% and a minimum employer contribution rate of 11.5% up to a maximum of 16.5%.

Members have the option to elect to increase the benefit computation factor for all future service from 2.0% to 2.5%. The election is irrevocable, binding for all future employment under OPERS, and applies only to full years of service. Those who make the election pay the standard contribution rate plus an additional contribution rate, 2.91% which is actuarially determined. The election is available for all state, county, and local government employees, except for elected officials and hazardous duty members.

Elected Officials

Elected officials' employee contributions are based on the maximum compensation levels set for all members, and the participating employers are required to contribute on the elected officials' covered salary using the same percentage and limits as applicable for state agencies. Members elected prior to November 1, 2011 must select an employee contribution rate of 4.5%, 6.0%, 7.5%, 8.5%, 9.0% or 10.0%. Members elected on or after November 1, 2011 have a contribution rate of 3.5%.

Notes to Financial Statements (continued)

Effective July 1, 1999, elected officials must affirmatively elect or decline participation in the System within 90 days after taking office. This decision is irrevocable, and failure of an elected official to decline to participate in the System will be deemed as an irrevocable election to participate and contribute at the highest rate (currently 3.5% for officials elected on or after November 1, 2011). All current elected officials who had not elected to participate in the System must have either elected, including selecting a contribution rate, or declined to participate in the System on or before December 1, 1999.

Elected officials who are first elected or appointed to an elected office between November 1, 2010 and October 31, 2011 may only select one of two benefit computation factors - 1.9% or 4.0% - with the respective employee contribution rates of 4.5% or 10.0%.

Effective November 1, 2011, elected officials who are first elected or appointed to an elected office participate with a benefit computation factor of 2.0% with an employee contribution rate of 3.5%.

Hazardous Duty Members

For 2022 and 2021, hazardous duty members contributed 8.0%, and their employer agencies contributed 16.5% on all salary.

(d) Participating Employers

At June 30, the number of participating employers for the pension plan and the HISP plan was as follows:

| | 2022 | 2021 |
|-----------------------------------|-------------|-------------|
| State agencies | 117 | 117 |
| County governments | 75 | 75 |
| Local government towns and cities | 29 | 29 |
| Other local governmental units | 67 | 66 |
| Total | 288 | 287 |

(e) Defined Contribution System created for New Members

House Bill 2630 and Senate Bill 2120 directed OPERS to establish a defined contribution retirement system for members first employed by a participating employer of the system on or after November 1, 2015, including statewide elected officials and legislators. The provisions of this bill are not applicable to hazardous duty members, district attorneys, assistant district attorneys or other employees of the district attorney's office who will continue to participate in the defined benefit plan. Also excluded from the plan are employees of a county, county elected officials, county hospital, city or town, conservation district, circuit engineering district, and any public or private trust in which a county, city or town participates and is the primary beneficiary.

This new defined contribution plan was created and implemented during the year ended June 30, 2016. Under this new plan, participating employees contribute a minimum of 4.5% of their compensation. Participating employers match employee contributions up to 7.0%. In addition to the matching contributions, participating employers are required to remit to OPERS the difference between the matching contributions for defined contribution plan members and the amount the participating employer would have contributed for a defined benefit plan member.

Notes to Financial Statements (continued)

(4) Cash Equivalents

Cash and cash equivalents represent short-term investment funds held by the Office of the State Treasurer (State Treasurer) and the System's custodial agent, and foreign currency.

At June 30, cash and cash equivalents were:

| | 2022 | 2021 |
|--|-----------------------|----------------------|
| Cash equivalents | | |
| State Treasurer | \$ 5,730,617 | \$ 3,544,905 |
| Custodial agent | 172,595,785 | 518,267,631 |
| Foreign currency | 2,965,352 | 1,482,016 |
| Total cash and cash equivalents | \$ 181,291,754 | \$523,294,552 |

Cash is deposited to *OK INVEST*, an internal investment pool of the State Treasurer with holdings limited to obligations of the U.S. Government, its agencies and instrumentalities, agency senior debt and mortgage-backed pass-through securities, tri-party repurchase agreements, money market mutual funds, collateralized certificates of deposit, commercial paper, obligations of state and local governments, and State of Israel Bonds. Participants are limited to qualifying agencies and funds within the State's reporting entity, and each participant maintains an interest in the underlying investments of *OK INVEST* and shares the risk of loss on the fund in proportion to the respective investment in the fund. The custodial agent cash equivalents consist of temporary investments in commingled trust funds of the System's custodial agent. The fund is composed of high-grade money market instruments with short maturities. Each participant in the fund shares the risk of loss on the fund in proportion to the respective investment in the fund.

Deposits are exposed to custodial credit risk if they are not covered by depository insurance and the deposits are uncollateralized, collateralized with securities held by the pledging financial institution, or collateralized with securities held by the pledging financial institution's trust department or agency but not in the depositor-government's name. At June 30, 2022 and 2021, the cash equivalents in *OK INVEST* and the System's custodial agent cash equivalents were not exposed to custodial credit risk because their existence cannot be evidenced by securities that exist in physical or book entry form.

The System holds foreign currency in banks outside the United States as a result of transactions of international investment managers. The foreign currency is in accounts in the name of the System's custodial agent and is uncollateralized, and the System is exposed to custodial credit risk. At June 30, 2022 and 2021, the foreign currency holdings were \$2,965,352 and \$1,482,016, respectively. The System's exposure to foreign currency risk is detailed in the section entitled Investments, Foreign Currency Risk.

(5) Investments

(a) General

Investments are pooled for administrative purposes and then allocated to the pension plan and HISP based on actuarial data, inflows and outflows. The OPERS Statement of Investment Policy states that the Board believes that System assets should be managed in a fashion that reflects the System's unique liabilities and funding resources, incorporating accepted investment theory and reliable empirical evidence. Specifically, the Board has adopted the following principles:

- Asset allocation is the key determinant of return, and therefore, commitments to asset allocation targets will be maintained through a disciplined rebalancing program.
- Diversification, both by and within asset classes, is the primary risk control element.

Notes to Financial Statements (continued)

- Passive fund portfolios are suitable investment strategies, especially in highly efficient markets. These index funds which are externally managed by professional investment management firms selected through due diligence of the Board are deemed to be actively managed accounts within the meaning of Section 909.1(D) of Title 74 of the Oklahoma Statutes.

The investment policy, guidelines, and objectives which govern the investment of System and HISP assets shall be developed and adopted by the Board of Trustees at a regularly scheduled public Board meeting, at least annually, prior to August 1 of each year. Changes to the investment policy may be made, as necessary, at any public meeting of the Board of Trustees, in compliance with the Open Meeting Act. During 2015, the investment policy was modified to allow investments in certain real estate-related assets.

The asset allocation guidelines established by policy at June 30, 2022 and 2021, were U.S. equities – 40%, international equities – 28% and domestic fixed income – 32%. The guidelines also establish minimum and maximum percentages for each asset class allocation, and when allocations move outside these limits, portfolios are rebalanced.

The fair value of investments held by the System at June 30 was as follows:

| | 2022 | 2021 |
|---|--------------------------|--------------------------|
| U.S. Treasury notes/bonds | \$ 1,097,903,588 | \$ 1,459,778,749 |
| U.S. TIPS index fund | 404,365,667 | 426,092,846 |
| Government agencies | 37,771,967 | 11,950,913 |
| Government mortgage-backed securities | 812,347,271 | 860,734,999 |
| Foreign bonds | 34,239,652 | 22,917,093 |
| Municipal bonds | 18,359,694 | 7,112,883 |
| Corporate bonds | 833,285,027 | 811,311,063 |
| Asset-backed securities | 132,791,523 | 114,682,690 |
| Commercial mortgage-backed securities | 94,297,124 | 80,790,022 |
| Non government backed collateralized mortgage obligations | 61,035,247 | 41,435,432 |
| Other fixed income | 1,843,553 | 551,758 |
| Domestic equities | 2,116,624,322 | 2,574,880,397 |
| U.S. equity index fund | 2,009,349,942 | 2,536,004,809 |
| International equities | 906,295,021 | 1,166,458,502 |
| International equity index funds | 1,930,657,567 | 2,406,530,043 |
| Real estate | 8,650,000 | 9,285,000 |
| Securities lending collateral | 481,838,462 | 602,793,110 |
| Total investments | \$ 10,981,655,627 | \$ 13,133,310,309 |

The System participates in fixed income and international and domestic equity index funds managed by BlackRock Institutional Trust Company, N.A. (BTC). BTC, a subsidiary of BlackRock Inc., is a national banking association and operates as a limited purpose trust company. Its primary regulator is the Office of the Comptroller of the Currency (OCC), the agency of the U.S. Treasury Department that regulates United States national banks. Each fund is a collective fund which is a group trust and an entity separate from BTC, other funds, and the investing participants. BTC is trustee of each of the collective fund trusts and holds legal title to each trust's assets for the exclusive benefit of the System. The fair value of the System's position in the pool is the same as the value of the pool shares. As of June 30, 2022 and 2021, the System was invested in two domestic equity index funds, two international equity index funds, and a fixed income index fund.

Notes to Financial Statements (continued)

The System shares the risk of loss in these funds with other participants in proportion to its respective investment. Because the System does not own any specific identifiable investment securities of these funds, the risk associated with any derivative investments held in these funds is not apparent. The degree of risk depends on the underlying portfolios of the funds, which were selected by the System in accordance with its investment policy guidelines including risk assessment.

The international funds invest primarily in equity securities of entities outside the United States and may enter into forward contracts to purchase or sell securities at specified dates in the future at a guaranteed price in a foreign currency to protect against fluctuations in exchange rates of foreign currency.

Securities Lending

The System's investment policy provides for its participation in a securities lending program. The program is administered by the System's master custodian, and there are no restrictions on the amount of loans that can be made. During 2022 and 2021, the types of securities loaned were primarily U.S. Government and corporate bonds, domestic equity securities, and international equity securities. Certain securities of the System are loaned to participating brokers, who must provide collateral in the form of cash, U.S. Treasury or Government Agency securities, or letters of credit issued by approved banks.

Under the terms of the securities lending agreement, collateral is required to be provided in the amount of 102% of the fair value of U.S. securities loaned and 105% of the fair value of non-U.S. securities loaned. At June 30, 2022 and 2021, the System had no credit risk exposure to borrowers because the amounts the System owes the borrowers exceed the amounts the borrowers owe the System. The market values of the cash and non-cash collateral for those securities on loan were \$481,838,462 and \$342,502,842 in FY2022 and \$602,793,110 and \$445,198,311 in FY2021. The master custodian provides for full indemnification to the System for any losses that might occur in the program due to the failure of a broker to return a security that was borrowed (and if the collateral is inadequate to replace the securities lent) or failure to pay the System for income of the securities while on loan. The loan premium paid by the borrower of the securities is apportioned between the System and its custodial agent in accordance with the securities lending agreement. All securities loans can be terminated on demand by either the lender or the borrower.

| Securities On Loan | 2022 | % | 2021 | % |
|--|----------------|------|------------------|------|
| Collateralized by Cash Collateral | \$ 466,686,486 | 58% | \$ 588,592,321 | 58% |
| Collateralized by non- Cash Collateral | 332,933,197 | 42% | 433,335,692 | 42% |
| Total | \$ 799,619,683 | 100% | \$ 1,021,928,013 | 100% |

The securities lending agreement provides that cash collateral be invested in the custodial agent's short-term investment pool and sets forth credit-quality standards, acceptable investments, diversification standards, and maturity and liquidity constraints for the investment fund. The System's investment guidelines do not require a matching of investment maturities with loan maturities but do establish minimum levels of liquidity and other investment restrictions designed to minimize the interest rate risk associated with not matching the maturities of the investments with the loans. At June 30, 2022 and 2021, the cash collateral investments had an average weighted maturity of 13 and 31 days, respectively, and the relationship between the maturities of the custodial agent's investment pool and the System's loans is affected by the maturities of the securities loans made by other entities that use the agent's pool, which the System cannot determine.

Notes to Financial Statements (continued)

The System's non-cash collateral is represented by its allocated share of a pool administered by the agent for the System and other pool participants and the System cannot pledge or sell them unless the borrower defaults and thus, is not included in the statements of fiduciary net position.

(b) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will default or will otherwise not fulfill its obligations.

The System's investment guidelines provide for the domestic fixed income managers to follow one of four investment styles and specifies quality guidelines for each style.

The *Constrained Core* manager will invest in a broadly diversified portfolio with characteristics similar to a broad fixed income market index, such as the Barclays Capital Aggregate Bond Index. The total portfolio minimum quality should be single-A as rated by a nationally recognized statistical rating organization (NRSRO). The portfolio should primarily consist of investment grade securities, with a minimum quality rating for any issue of triple-B minus rating by at least one NRSRO. In the event that a credit rating is downgraded below this minimum, the investment manager shall immediately notify OPERS staff and provide an evaluation and recommended course of action.

The *Core Plus* manager will invest in a broadly diversified portfolio with characteristics similar to the Constrained Core manager and will add a "plus" of limited exposure to high yield bonds. The total portfolio minimum quality should be single-A as rated by an NRSRO. No more than 20% of the portfolio shall consist of non-investment grade issues. The minimum quality rating for any issue is single-B rating by at least one NRSRO, and no more than 5% of a portfolio shall be invested in issues rated below double-B rating by at least one NRSRO. In the event that a credit rating is downgraded below this minimum, the investment manager shall immediately notify OPERS staff and provide an evaluation and recommended course of action.

The *Interest Rate Anticipator* manager follows a style that seeks to correctly forecast the long-term trend in interest rates and adjust the portfolio duration accordingly. The total portfolio minimum quality should be single-A as rated by an NRSRO, and the portfolio should consist of investment grade securities only.

The *Passive* fixed income style consists of a Treasury Inflation-Protection Securities (TIPS) index fund. TIPS are securities issued by the U.S. Government that are designed to protect the purchasing power of the investor.

At June 30, 2022, the domestic fixed income portfolio consisted of a constrained core fixed income portfolio, a core plus fixed income portfolio, a rate anticipator portfolio, and a passive U.S. TIPS Index fund. All components met the stated policy restrictions except the core fixed income portfolio, which held \$12,104,973 in issues rated below triple-B minus, and the core plus fixed income portfolio, which held \$16,550,358 in issues rated below single-B. The System's investment managers have advised retention of the securities after having assessed their risk/reward profiles. At June 30, 2021, the domestic fixed income portfolio consisted of a constrained core fixed income portfolio, a core plus fixed income portfolio, a rate anticipator portfolio, and a passive U.S. TIPS Index fund. All components met the stated policy restrictions except the core fixed income portfolio, which held \$15,770,097 in issues rated below triple-B minus, and the core plus fixed income portfolio, which held \$23,116,211 in issues rated below single-B. The System's investment managers have advised retention of the securities after having assessed their risk/reward profiles.

Notes to Financial Statements (continued)

Investments issued by or explicitly guaranteed by the U.S. Government are not considered to have credit risk. At June 30, 2022, the System held 31.6% of fixed income investments that were not considered to have credit risk and 11.5% in a U.S. TIPS index fund made up of explicitly guaranteed U.S. Treasury Inflation-Protected Securities. At June 30, 2021, the System held 41.9% of fixed income investments that were not considered to have credit risk and 11.1% in a U.S. TIPS index fund made up of explicitly guaranteed U.S. Treasury Inflation-Protected Securities. Implicitly guaranteed investments primarily refer to bonds issued by a government sponsored entity (GSE) which is a government-chartered corporation. This government charter implies that the government is unlikely to allow a GSE to default on its bond payments.

The System's exposure to credit risk at June 30, 2022 is presented below, in thousands, by investment category as rated by an NRSRO.

| | Triple-A | Double-A | Single-A | Triple-B | Double-B | Single-B | Triple-C | Double-C | Not Rated or Rating Not Available | Total |
|---|-------------------|------------------|-------------------|-------------------|------------------|------------------|-----------------|---------------|--|---------------------|
| Government agencies | \$ 901 | \$ 513 | \$ 457,00 | \$ 2,310 | \$ 728,00 | \$ - | \$ - | \$ - | \$ - | \$ 4,909 |
| Municipal bonds | 2,148 | 11,968 | 3,859 | 385 | - | - | - | - | - | 18,360 |
| Foreign government bonds | 1,529 | 1,012 | 2,267 | 21,530 | 7,738 | 164 | - | - | - | 34,240 |
| Corporate bonds | 38,253 | 15,383 | 255,299 | 500,697 | 15,645 | 5,308 | - | - | 2,700 | 833,285 |
| Asset-backed securities | 107,231 | 14,425 | 4,203 | - | 562 | 4,517 | 1,233 | 620 | - | 132,791 |
| Commercial mortgage-backed securities | 81,504 | 8,431 | 1,594 | 831 | 1,937 | - | - | - | - | 94,297 |
| Non government backed collateralized mortgage obligations | 46,499 | 3,617 | 105 | 2,835 | 2,608 | 3,162 | 2,209 | - | - | 61,035 |
| Other fixed Income | - | - | 844 | 1,000 | - | - | - | - | - | 1,844 |
| Total fixed income securities exposed to credit risk | \$ 278,065 | \$ 55,349 | \$ 268,628 | \$ 529,588 | \$ 29,218 | \$ 13,151 | \$ 3,442 | \$ 620 | \$ 2,700 | \$ 1,180,761 |
| Percent of total fixed income portfolio | 7.9% | 1.6% | 7.6% | 15.0% | 0.8% | 0.4% | 0.1% | 0.0% | 0.1% | 33.5% |

The System's exposure to credit risk at June 30, 2021 is presented below, in thousands, by investment category as rated by an NRSRO.

| | Triple-A | Double-A | Single-A | Triple-B | Double-B | Single-B | Triple-C | Not Rated or Rating Not Available | Total |
|---|-------------------|------------------|-------------------|-------------------|------------------|------------------|-----------------|--|---------------------|
| Government agencies | \$ - | \$ - | \$ - | \$ 3,999 | \$ 827 | \$ - | \$ - | \$ - | \$ 4,826 |
| Municipal bonds | 512 | 5,736 | 360 | 505 | - | - | - | - | 7,113 |
| Foreign government bonds | - | - | 1,284 | 16,301 | 5,331 | - | - | - | 22,916 |
| Corporate bonds | 1,003 | 21,799 | 203,135 | 503,150 | 34,381 | 5,214 | 2,108 | 524 | 771,314 |
| Asset-backed securities | 90,568 | 9,803 | 4,590 | - | 69 | 7,348 | 2,305 | - | 114,683 |
| Commercial mortgage-backed securities | 72,356 | 4,670 | 512 | - | 826 | - | - | 2,425 | 80,789 |
| Non government backed collateralized mortgage obligations | 17,052 | 5,204 | 4,460 | 3,977 | 3,482 | 4,117 | 3,144 | - | 41,436 |
| Other Fixed Income | - | - | 552 | - | - | - | - | - | 552 |
| Total fixed income securities exposed to credit risk | \$ 181,491 | \$ 47,212 | \$ 214,893 | \$ 527,932 | \$ 44,916 | \$ 16,679 | \$ 7,557 | \$ 2,949 | \$ 1,043,629 |
| Percent of total fixed income portfolio | 4.7% | 1.2% | 5.6% | 13.8% | 1.2% | 0.4% | 0.2% | 0.1% | 27.2% |

The exposure to credit risk of the underlying investments of the System's cash equivalents at June 30 is 100% invested in Double-A credit rating at June 30, 2022 and 2021.

Notes to Financial Statements (continued)

(c) *Concentration of Credit Risk*

Investments can be exposed to concentration of credit risk if significant amounts are invested in any one issuer. The System's investment policy states that portfolios managed on behalf of the System should not hold more than 5% of the outstanding securities of any single issuer. As of June 30, 2022, and 2021, the System did not have 5% or more of its total investments in any single issuer.

(d) *Interest Rate Risk*

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment or a deposit. Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates based upon the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. Effective duration estimates the sensitivity of a bond's price to interest rate changes and makes assumptions regarding the most likely timing and amounts of variable cash flows arising from investments, such as callable bonds, collateralized mortgage obligations, and other mortgage-backed securities.

At June 30, the System's exposure to interest rate risk as measured by effective duration is listed below by investment category.

| | 2022 | | 2021 | |
|---|------------------|-----------------------------|------------------|-----------------------------|
| | Fair Value | Effective duration in years | Fair Value | Effective duration in years |
| U.S. Treasury notes/bonds | \$ 1,097,903,588 | 10.3 | \$ 1,459,778,749 | 10.4 |
| U.S. TIPS index fund | 404,365,667 | 6.9 | 426,092,846 | 7.5 |
| Government agencies | 37,771,967 | 3.7 | 11,950,913 | 8.0 |
| Government mortgage-backed securities | 812,347,271 | 7.8 | 860,734,999 | 3.8 |
| Foreign bonds | 34,239,652 | 7.2 | 22,917,093 | 8.8 |
| Municipal bonds | 18,359,694 | 10.1 | 7,112,883 | 15.5 |
| Corporate bonds | 833,285,027 | 6.0 | 811,311,063 | 7.4 |
| Asset-backed securities | 132,791,523 | 1.4 | 114,682,690 | 2.3 |
| Commercial mortgage-backed securities | 94,297,124 | 3.0 | 80,790,022 | 4.1 |
| Non government backed collateralized mortgage obligations | 61,035,247 | 3.0 | 41,435,432 | 2.4 |
| Other fixed income | 1,843,553 | 5.8 | 551,758 | 8.7 |
| Total fixed income | \$ 3,528,240,313 | | \$ 3,837,358,448 | |
| Portfolio duration | | 7.5 | | 7.5 |

The System does not have a formal investment policy on interest rate risk. Interest rate risk is controlled through diversification of portfolio management styles.

Some investments' sensitivity to changing interest rates may derive from prepayment options embedded in an investment. Asset-backed securities, mortgage-backed securities, and collateralized mortgage obligations are pass-through securities that represent pooled debt obligations repackaged as securities that pass income and principal from debtors through the intermediary to investors.

Notes to Financial Statements (continued)

Asset-backed securities are bonds or notes backed by loan paper or accounts receivable originated by banks, credit card companies, or other providers of credit and often enhanced by a bank letter of credit or by insurance coverage proved by an institution other than the issuer. At June 30, 2022 and 2021, the System held \$132,791,523 and \$114,682,690, respectively, in asset-backed securities.

Mortgage-backed securities are securities backed by mortgages issued by public and private institutions. At June 30, 2022 and 2021, the System held \$812,347,271 and \$860,734,999, respectively, in government mortgage-backed securities issued by the Federal Home Loan Mortgage Corporation (FHLMC), Government National Mortgage Association (GNMA), and Federal National Mortgage Association (FNMA) as well as \$94,297,124 and \$80,790,022, respectively, in commercial mortgage-backed securities.

Collateralized mortgage obligations (CMOs) are mortgage-backed bonds that allocate mortgage cash flows (interest and principal) into different maturity classes, called tranches. This is accomplished by dedicating mortgage cash flows to specific tranches and paying each tranche off in turn by prespecified rules. CMOs provide investors with increased security about the life of their investment compared to purchasing a pass-through mortgage-backed security. If mortgage rates drop (rise) sharply, prepayment rates will increase (decrease), and CMO tranches may be repaid before (after) the expected maturity. At June 30, 2022 and 2021, the System held \$61,035,247 and \$41,435,432, respectively, in non-government backed CMOs.

The exposure to interest rate risk of the underlying investments of the System's cash equivalents at June 30 is as follows:

| Maturities | | |
|-------------------|-------------|-------------|
| (in days) | 2022 | 2021 |
| 0 - 14 | 33.3 % | 47.4 % |
| 15 - 30 | 7.1 | 4.3 |
| 31 - 60 | 11.3 | 9.7 |
| 61 - 90 | 18.1 | 17.7 |
| 91 - 180 | 9.2 | 9.2 |
| 181 - 364 | 20.0 | 11.2 |
| 365 - 730 | 1.0 | 0.5 |
| | 100.0 % | 100.0 % |

(e) 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. The OPERS Statement of Investment Policy addresses foreign currency risk by stating that the primary sources of value-added for international equity investment managers will be issue and country selection, with currency management focused on limiting losses due to fluctuations in currency values.

Notes to Financial Statements (continued)

The System's exposure to foreign currency risk by asset class at June 30, 2022 is as follows:

| Currency | Short-term | | | Total | Percent |
|---|-------------------------|----------------------|---------------------|-------------------------|----------------|
| | Equities | Investments | Cash | | |
| Australian dollar | \$ 11,942,427 | \$ - | \$ - | \$ 11,942,427 | 0.4 % |
| Brazilian real | 10,198,532 | - | - | 10,198,532 | 0.4 |
| British pound sterling | 138,757,369 | (486,551) | 1,318,043 | 139,588,861 | 4.8 |
| Danish krone | 2,682,919 | - | - | 2,682,919 | 0.1 |
| Euro | 191,554,748 | 1,840,498 | 95,477 | 193,490,723 | 6.7 |
| Hong Kong dollar | 117,955,233 | (987,766) | 90,542 | 117,058,009 | 4.1 |
| Indonesian rupiah | 4,351,271 | - | - | 4,351,271 | 0.2 |
| Japanese yen | 186,936,214 | (217,404) | 736,767 | 187,455,577 | 6.5 |
| Mexican peso | 4,753,169 | 319,052 | - | 5,072,221 | 0.2 |
| Polish zloty | - | - | 368 | 368 | 0.0 |
| Singapore dollar | 20,906,942 | (11,142) | 11,142 | 20,906,942 | 0.7 |
| South Korean won | 28,950,026 | 931,966 | - | 29,881,992 | 1.0 |
| Swedish krona | 25,482,374 | (177,653) | 144,992 | 25,449,713 | 0.9 |
| Swiss franc | 23,782,608 | - | - | 23,782,608 | 0.8 |
| International portfolio exposed to foreign currency risk | 768,253,832 | 1,211,000 | 2,397,331 | 771,862,163 | 26.8 |
| International portfolio in U.S. dollars | 2,068,703,858 | 36,837,222 | 5,075,148 | 2,110,616,228 | 73.2 |
| Total international portfolio | \$ 2,836,957,690 | \$ 38,048,222 | \$ 7,472,479 | \$ 2,882,478,391 | 100.0 % |

The System's exposure to foreign currency risk by asset class at June 30, 2021 is as follows:

| Currency | Short-term | | | Total | Percent |
|---|-------------------------|---------------|---------------------|-------------------------|----------------|
| | Equities | Investments | Cash | | |
| Australian dollar | \$ 17,909,251 | \$ - | \$ - | \$ 17,909,251 | 0.5 % |
| Brazilian real | 12,981,941 | - | - | 12,981,941 | 0.4 |
| British pound sterling | 172,403,608 | (49,506) | 87,770 | 172,441,872 | 4.8 |
| Canadian dollar | 8,579,678 | - | - | 8,579,678 | 0.2 |
| Danish krone | 7,742,299 | - | - | 7,742,299 | 0.2 |
| Euro | 255,418,097 | (15,770) | 15,770 | 255,418,097 | 7.1 |
| Hong Kong dollar | 138,708,225 | 328,814 | 26,618 | 139,063,657 | 3.9 |
| Indonesian rupiah | 3,152,027 | - | - | 3,152,027 | 0.1 |
| Japanese yen | 223,586,463 | (133,345) | 680,320 | 224,133,438 | 6.3 |
| Mexican peso | 4,449,580 | - | - | 4,449,580 | 0.1 |
| Polish zloty | - | - | 435 | 435 | 0.0 |
| Singapore dollar | 22,916,549 | (103,082) | 103,082 | 22,916,549 | 0.6 |
| South African rand | 7,073,870 | - | - | 7,073,870 | 0.2 |
| South Korean won | 35,844,897 | - | - | 35,844,897 | 1.0 |
| Swedish krona | 37,886,030 | - | - | 37,886,030 | 1.1 |
| Swiss franc | 20,433,378 | - | - | 20,433,378 | 0.6 |
| International portfolio exposed to foreign currency risk | 969,085,893 | 27,111 | 913,995 | 970,026,999 | 27.1 |
| International portfolio in U.S. dollars | 2,603,901,995 | (26,455) | 6,142,106 | 2,610,017,646 | 72.9 |
| Total international portfolio | \$ 3,572,987,888 | \$ 656 | \$ 7,056,101 | \$ 3,580,044,645 | 100.0 % |

The System's actively-managed international equity securities are recorded at fair value, which includes foreign currency gains and losses attributable to fluctuations in the exchange rate between the foreign denominated currency of the investment and the U.S. dollar. This translation gain or loss is calculated based on month-end exchange rates. Cumulative unrealized translation losses at June 30, 2022 and 2021 were approximately \$91.9 and \$11.2 million, respectively.

Notes to Financial Statements (continued)

(f) Rate of Return

For the year ended June 30, 2022 and 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was -14.61% and 28.05% respectively, and the annual money-weighted rate of return on HISP plan investments, net of HISP plan investment expenses, was -11.30% and 22.10% respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

(g) Fair Value Measurement

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to quoted prices in active markets for identical assets (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The inputs to the three levels of the fair value hierarchy are described as follows:

- Level 1:** Quoted prices in active markets for identical assets or liabilities
- Level 2:** Significant other observable inputs, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets in markets that are not active and other market corroborated inputs
- Level 3:** Significant unobservable inputs

Investments in equity securities classified in level 1 are valued directly from a predetermined primary external pricing vendor using published prices. Investments in debt securities classified as level 2 are obtained from using an alternative pricing source due to lack of information by the primary vendor. The investment in real estate is classified as level 3 due to lack of observable pricing inputs and is valued using annual appraisals.

Notes to Financial Statements (continued)

Assets measured at fair value and net asset value on June 30, 2022 are as follows:

| Investments by Fair Value Level | 6/30/2022 | 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) |
| Short-term investment fund | \$ 168,088,658 | \$ - | \$ 168,088,658 | \$ - |
| Debt Securities | | | | |
| U.S. Treasury notes/bonds | 1,097,903,588 | - | 1,097,903,588 | - |
| Government agencies | 37,771,967 | - | 37,771,967 | - |
| Government mortgage-backed securities | 812,347,271 | - | 812,347,271 | - |
| Foreign bonds | 34,239,652 | - | 34,239,652 | - |
| Municipal bonds | 18,359,694 | - | 18,359,694 | - |
| Corporate bonds | 833,285,027 | - | 833,285,027 | - |
| Asset-backed securities | 132,791,523 | - | 132,791,523 | - |
| Commercial mortgage-backed securities | 94,297,124 | - | 94,297,124 | - |
| Non government backed collateralized mortgag | 61,035,247 | - | 61,035,247 | - |
| Other fixed income | 1,843,553 | - | 1,843,553 | - |
| Total Debt Securities | 3,123,874,646 | - | 3,123,874,646 | - |
| Equity Securities | | | | |
| International equities | 906,295,021 | 906,295,021 | - | - |
| U.S. common and preferred stock | 2,116,624,322 | 2,116,624,322 | - | - |
| Total Equity Securities | 3,022,919,343 | 3,022,919,343 | - | - |
| Real estate | | | | |
| Real estate | 8,650,000 | - | - | 8,650,000 |
| Total Investments by Fair Value Level | \$ 6,155,443,989 | \$ 3,022,919,343 | \$ 3,123,874,646 | \$ 8,650,000 |
| Investments Measured at the Net Asset Value (NAV) | | | | |
| U.S. TIPS index fund | \$ 404,365,667 | | | |
| International equity index funds | 1,930,657,567 | | | |
| U.S. equity index fund | 2,009,349,942 | | | |
| Total Investments Measured at NAV | 4,344,373,176 | | | |
| Securities lending collateral | 481,838,462 | | | |
| Total Investments | \$ 10,981,655,627 | | | |

Notes to Financial Statements (continued)

Assets measured at fair value and net asset value on June 30, 2021 are as follows:

| Investments by Fair Value Level | 6/30/2021 | 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) |
| Short-term investment fund | \$ 512,693,547 | \$ - | \$ 512,693,547 | \$ - |
| Debt Securities | | | | |
| U.S. Treasury notes/bonds | 1,459,778,749 | - | 1,459,778,749 | - |
| Government agencies | 11,950,913 | - | 11,950,913 | - |
| Government mortgage-backed securities | 860,734,999 | - | 860,734,999 | - |
| Foreign bonds | 22,917,093 | - | 22,917,093 | - |
| Municipal bonds | 7,112,883 | - | 7,112,883 | - |
| Corporate bonds | 811,311,063 | - | 811,311,063 | - |
| Asset-backed securities | 114,682,690 | - | 114,682,690 | - |
| Commercial mortgage-backed securities | 80,790,022 | - | 80,790,022 | - |
| Non government backed collateralized mortgage obligations | 41,435,432 | - | 41,435,432 | - |
| Other fixed income | 551,758 | - | 551,758 | - |
| Total Debt Securities | 3,411,265,602 | - | 3,411,265,602 | - |
| Equity Securities | | | | |
| International equities | 1,166,458,502 | 1,166,458,502 | - | - |
| U.S. common and preferred stock | 2,574,880,397 | 2,574,880,397 | - | - |
| Total Equity Securities | 3,741,338,899 | 3,741,338,899 | - | - |
| Real estate | | | | |
| Real estate | 9,285,000 | - | - | 9,285,000 |
| Total Investments by Fair Value Level | \$ 7,161,889,501 | \$ 3,741,338,899 | \$ 3,411,265,602 | \$ 9,285,000 |
| Investments Measured at the Net Asset Value (NAV) | | | | |
| U.S. TIPS index fund | \$ 426,092,846 | | | |
| International equity index funds | 2,406,530,043 | | | |
| U.S. equity index fund | 2,536,004,809 | | | |
| Total Investments Measured at NAV | 5,368,627,698 | | | |
| Securities lending collateral | 602,793,110 | | | |
| Total Investments | \$ 13,133,310,309 | | | |

There have been no significant changes in valuation techniques during the fiscal years ended June 30, 2022 and 2021.

Certain investments that do not have a readily determinable fair value are measured at NAV (or its equivalent), such as member units or an ownership interest. NAV per share is calculated as of the System's year-end and is provided by the investment manager. Redemption information for investments measured at the NAV per share, or equivalent, is presented in the table below.

| Investments Measured at the Net Asset Value | 6/30/2022 | 6/30/2021 | Redemption Frequency | Redemption Notice Period |
|---|------------------|------------------|-------------------------|-----------------------------|
| U.S. TIPS index fund (1) | \$ 404,365,667 | \$ 426,092,846 | Daily | 2 days |
| International equity index funds (2) | 1,930,657,567 | 2,406,530,043 | Daily | 2 days |
| U.S. equity index fund (3) | 2,009,349,942 | 2,536,004,809 | Daily | 1 day |
| | \$ 4,344,373,176 | \$ 5,368,627,698 | | |

Notes to Financial Statements (continued)

⁽¹⁾ **U.S. TIPS index fund** – The US Treasury Inflation Protected Securities fund is an index fund that establishes an objective of delivering investment performance approximating the rate of return for outstanding US Treasury inflation protected securities with a maturity of one year or greater. The investment is valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

⁽²⁾ **International Equity Index Funds** – The International equity funds consist of index funds that are designed to track various segments of non-US equity markets. Those index funds include the ACWI ex-US Index Fund and the ACWI ex-US Growth Index Fund. The index funds are invested and reinvested in portfolios of non-US developed and emerging markets equity securities, with the objective of approximating the capitalization-weighted return of each respective market segment for publicly traded equity securities. The investment is valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

⁽³⁾ **U.S. Equity Index Fund** – The US equity fund consist of an index fund that is designed to track various segments of US equity markets. That index fund is the Russell 1000 Index Fund. The index fund is invested and reinvested in portfolios of US equity securities, with the objective of approximating the capitalization-weighted return of each respective market segment for publicly traded equity securities. The investment is valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

(6) Net Pension (Asset) Liability, Net HISP Asset and Actuarial Information

(a) Net Pension (Asset) Liability and Net HISP Asset of Participating Agencies

The components of the net pension (asset) liability of the employers' at June 30 were as follows:

| | 2022 | 2021 |
|--|-----------------------|---------------------------|
| Total pension liability | \$ 10,828,046,484 | \$ 10,725,571,917 |
| Plan fiduciary net position | 9,987,481,670 | 12,067,732,648 |
| Employers' net pension (asset) liability | <u>\$ 840,564,814</u> | <u>\$ (1,342,160,731)</u> |
| Plan fiduciary net position as a percentage of the total pension liability | 92.24% | 112.51% |

The components of the net HISP asset of the employers' at June 30 were as follows:

| | 2022 | 2021 |
|---|------------------------|-------------------------|
| Total HISP liability | \$ 311,838,597 | \$ 320,668,249 |
| HISP plan fiduciary net position | 405,426,213 | 458,150,586 |
| Employers' net HISP (asset) | <u>\$ (93,587,616)</u> | <u>\$ (137,482,337)</u> |
| Plan fiduciary net position as a percentage of the total HISP liability | 130.01% | 142.87% |

Notes to Financial Statements (continued)

(b) Actuarial Methods and Assumptions

The total pension liability and total HISP liability, both as of June 30, 2022 and 2021, were determined based on actuarial valuations prepared as of July 1, 2022, using the following actuarial assumptions:

- Investment return – 6.50% for 2022 and 2021 compounded annually net of investment expense and including inflation
- Salary increases, including price inflation – 3.25% to 9.25% for 2022 and 2021
- Mortality rates – In 2022 and 2021, Pub-2010 Below Media, General Membership Active/Retiree Healthy Mortality Table with base rates projected to 2030 using Scale MP-2019. Male rates are unadjusted, and female rates are set forward two year.
- No annual post-retirement benefit increases
- Assumed inflation rate – 2.50% for 2022 and 2021
- Payroll growth – 3.25% for 2022 and 2021
- Actuarial cost method – Entry age
- Select period for the termination of employment assumptions – 10 years

The actuarial assumptions used in the July 1, 2022, valuation are based on the results of the most recent actuarial experience study, which covered the three-year period ending June 30, 2019. The experience study report is dated May 13, 2020.

The long-term expected rate of return on pension plan investments and HISP plan investments was determined using a log-normal distribution analysis in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The HISP represents a subsidy that is capped at \$105 per month per retiree.

The target asset allocation and best estimates of arithmetic real rates of return for each major class, as used in the June 30, 2019 experience study, are summarized in the following table:

| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return |
|------------------------|-------------------|---|
| U.S. Large Cap Equity | 34.0% | 4.7% |
| U.S. Small Cap Equity | 6.0% | 5.8% |
| Int'l Developed Equity | 23.0% | 6.5% |
| Emerging Market Equity | 5.0% | 8.5% |
| Core Fixed Income | 25.0% | 0.5% |
| Long Term Treasuries | 3.5% | 0.0% |
| US TIPS | 3.5% | 0.3% |
| Total | 100.0% | |

Notes to Financial Statements (continued)

(c) *Discount rate*

The discount rate used to measure the total pension liability and the total HISP liability was 6.50%, net of investment expenses, for 2022 and 2021. The projection of cash flows used to determine the discount rate assumed that contributions from System members and the employers will be made at the current contribution rate as set out in state statute. Based on those assumptions, the pension plan's fiduciary net position and the HISP's fiduciary net position were projected to be available to make all projected future benefit payments of current System members. Therefore, the long-term expected rate of return on pension plan and HISP plan investments was applied to all periods of projected benefit payments to determine the total pension liability and total HISP liability. The discount rate determined does not use a municipal bond rate.

Sensitivity of the net pension asset and net HISP asset to changes in the discount rate

The following presents the net pension (asset) liability of the employer calculated using the discount rate of 6.50% for 2022 and 2021, as well as what the System's net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

| | June 30, 2022 | | | June 30, 2021 | | |
|-------------------------------|------------------------|----------------------------------|------------------------|------------------------|----------------------------------|---------------------|
| | 1% Decrease (5.50%) | Current Discount Rate (6.50%) | 1% Increase (7.50%) | 1% Decrease (5.50%) | Current Discount Rate (6.50%) | 1% Increase (7.50%) |
| Net pension liability (asset) | \$ 2,060,228,380 | \$ 840,564,814 | \$ (190,917,136) | \$ (124,603,241) | \$ (1,342,160,731) | \$ (2,371,285,064) |

The following presents the net HISP asset or liability of the employer calculated using the discount rate of 6.50% for 2022 and 2021 as well as what the System's net HISP (asset) liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

| | June 30, 2022 | | | June 30, 2021 | | |
|----------------------------|------------------------|----------------------------------|------------------------|------------------------|----------------------------------|------------------------|
| | 1% Decrease (5.50%) | Current Discount Rate (6.50%) | 1% Increase (7.50%) | 1% Decrease (5.50%) | Current Discount Rate (6.50%) | 1% Increase (7.50%) |
| Net HISP liability (asset) | \$ (60,410,410) | \$ (93,587,616) | \$ (122,014,741) | \$ (103,378,854) | \$ (137,482,337) | \$ (166,712,874) |

Due to the structure of the HISP, healthcare cost trend rate sensitivity analysis is not meaningful.

(7) **Federal Income Tax Status**

Pursuant to a determination by the IRS, the System is qualified under the Internal Revenue Code of 1986, as amended and, therefore, is exempt from federal income taxes. The latest determination letter is dated October 28, 2014 and was a favorable determination for the Oklahoma Public Employees Retirement Plan. The System has been amended since receiving the determination letter; however, the System administrator believes that the System is designed and is currently being operated in substantial compliance with the applicable requirements of the Internal Revenue Code and will retain its status as a qualified plan.

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT PLAN
Administered by the Oklahoma Public Employees Retirement System

Required Supplementary Information

(Unaudited)

June 30, 2022

Schedule 1

Schedule of Changes in the Net Pension (Asset) Liability (\$ in Thousands)

| Year Ended June 30, | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|----------------------|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Total Pension Liability | | | | | | | | | |
| Service cost | \$ 166,411 | \$ 170,303 | \$ 158,748 | \$ 162,170 | \$ 170,490 | \$ 177,082 | \$ 178,523 | \$ 175,809 | \$ 184,835 |
| Interest | 675,171 | 668,446 | 658,714 | 647,009 | 640,881 | 639,266 | 653,306 | 635,975 | 621,990 |
| Benefit changes | - | - | 182,977 | - | 8,929 | - | - | - | - |
| Difference between expected and actual experience | (51,644) | (55,509) | (7,442) | (2,065) | (110,269) | (117,283) | (52,745) | (11,228) | (89,172) |
| Changes of assumptions | - | - | 538,446 | - | - | 238,225 | 233,874 | - | 15,413 |
| Benefit payments | (675,559) | (661,582) | (628,669) | (621,409) | (592,726) | (573,962) | (565,412) | (542,488) | (520,641) |
| Refunds of contributions | (11,906) | (10,733) | (14,452) | (15,369) | (15,957) | (15,950) | (15,862) | (15,611) | (14,878) |
| Net change in total pension liability | 102,473 | 110,925 | 888,322 | 170,336 | 101,348 | 347,378 | 431,684 | 242,457 | 197,547 |
| Total pension liability - beginning | 10,725,573 | 10,614,648 | 9,726,326 | 9,555,990 | 9,454,642 | 9,427,810 | 8,996,126 | 8,753,669 | 8,556,122 |
| Adoption of GASB 74 | - | - | - | - | - | (320,546) | - | - | - |
| Total pension liability - ending (a) | \$ 10,828,046 | \$ 10,725,573 | \$ 10,614,648 | \$ 9,726,326 | \$ 9,555,990 | \$ 9,454,642 | \$ 9,427,810 | \$ 8,996,126 | \$ 8,753,669 |
| Plan Fiduciary Net Position | | | | | | | | | |
| Contributions - employer | \$ 283,159 | \$ 275,343 | \$ 274,882 | \$ 263,730 | \$ 258,907 | \$ 269,511 | \$ 296,249 | \$ 292,185 | \$ 280,047 |
| Contributions - member | 66,392 | 66,204 | 67,808 | 66,566 | 66,930 | 70,276 | 73,801 | 73,145 | 70,524 |
| Net investment income | (1,736,616) | 2,681,327 | 435,320 | 544,237 | 734,976 | 1,013,868 | 15,756 | 264,289 | 1,317,980 |
| Benefit payments | (675,559) | (661,582) | (628,669) | (621,409) | (592,726) | (573,962) | (565,412) | (542,488) | (520,641) |
| Administrative expense | (5,722) | (5,310) | (5,543) | (5,564) | (5,162) | (5,214) | (5,395) | (5,183) | (4,709) |
| Refunds of contributions | (11,906) | (10,733) | (14,452) | (15,369) | (15,957) | (15,950) | (15,862) | (15,611) | (14,878) |
| Net change in plan fiduciary net position | (2,080,252) | 2,345,249 | 129,346 | 232,191 | 446,968 | 758,529 | (200,863) | 66,337 | 1,128,323 |
| Plan fiduciary net position - beginning | 12,067,733 | 9,722,484 | 9,593,138 | 9,360,947 | 8,913,979 | 8,435,579 | 8,636,442 | 8,570,105 | 7,441,782 |
| Adoption of GASB 74 | - | - | - | - | - | (280,129) | - | - | - |
| Plan fiduciary net position - ending (b) | 9,987,481 | 12,067,733 | 9,722,484 | 9,593,138 | 9,360,947 | 8,913,979 | 8,435,579 | 8,636,442 | 8,570,105 |
| Net pension (asset) liability - ending (a) - (b) | \$ 840,565 | \$ (1,342,160) | \$ 892,164 | \$ 133,188 | \$ 195,043 | \$ 540,663 | \$ 992,231 | \$ 359,684 | \$ 183,564 |

Schedule of the Net Pension (Asset) Liability (\$ in Thousands)

| Year Ended June 30, | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|-------------------|-----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total pension liability | \$ 10,828,046 | \$ 10,725,573 | \$ 10,614,648 | \$ 9,726,326 | \$ 9,555,990 | \$ 9,454,642 | \$ 9,427,810 | \$ 8,996,126 | \$ 8,753,669 |
| Plan fiduciary net position | 9,987,481 | 12,067,733 | 9,722,484 | 9,593,138 | 9,360,947 | 8,913,979 | 8,435,579 | 8,636,442 | 8,570,105 |
| Net pension (asset) liability | \$ 840,565 | \$ (1,342,160) | \$ 892,164 | \$ 133,188 | \$ 195,043 | \$ 540,663 | \$ 992,231 | \$ 359,684 | \$ 183,564 |
| Ratio of plan fiduciary net position to total pension liability | 92.24% | 112.51% | 91.59% | 98.63% | 97.96% | 94.28% | 89.48% | 96.00% | 97.90% |
| Covered payroll | \$ 1,556,561 | \$ 1,571,954 | \$ 1,584,631 | \$ 1,601,075 | \$ 1,688,544 | \$ 1,790,810 | \$ 1,808,973 | \$ 1,744,042 | \$ 1,695,348 |
| Net pension liability as a % of covered payroll | 54.00% | -85.38% | 56.30% | 8.32% | 11.55% | 30.19% | 54.85% | 20.62% | 10.83% |

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the information included is for those years for which information is available.

Required Supplementary Information

Schedule of Pension Employer Contributions (\$ in Thousands)

(Unaudited)

June 30, 2022

Schedule 2

| Year Ended June 30, | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|--|--------------|-------------|--------------|--------------|-------------|-------------|--------------|-------------|-------------|
| Actuarially determined employer contribution | \$ 116,791 | \$ 224,843 | \$ 118,083 | \$ 129,707 | \$ 168,494 | \$ 176,016 | \$ 164,600 | \$ 200,784 | \$ 258,879 |
| Actual employer contributions | 283,159 | 275,343 | 274,882 | 263,730 | 258,907 | 269,511 | 296,249 | 292,185 | 280,047 |
| Annul contribution (excess) | \$ (166,368) | \$ (50,500) | \$ (156,799) | \$ (134,023) | \$ (90,413) | \$ (93,495) | \$ (131,649) | \$ (91,401) | \$ (21,168) |
| Covered payroll* | \$1,556,561 | \$1,571,954 | \$1,584,631 | \$1,601,075 | \$1,688,544 | \$1,790,810 | \$1,808,973 | \$1,744,042 | \$1,695,348 |
| Actual contributions as a percentage of covered payroll* | 18.19% | 17.52% | 17.35% | 16.47% | 15.33% | 15.05% | 16.38% | 16.75% | 16.52% |

* Covered payroll beginning in 2017 is for the defined benefit plan members only although employer contributions toward the net pension liability are being received on behalf of defined contribution plan members. Note: 2017 was the first year to exclude the health insurance subsidy.

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the information included is for those years for which information is available.

Notes to Schedule

Valuation date:

Actuarially determined contributions are calculated as of the beginning of the fiscal year in which contributions are reported

Methods and assumptions used to determine contribution rates:

| | |
|---------------------------------------|---|
| Actuarial cost method | Entry age |
| Amortization method | Level percentage of payroll, closed |
| Remaining amortization period | 6 years |
| Asset valuation method | 5-year moving average |
| Inflation | 2.50% for 2022, 2021 and 2020, and 2.75% 2019, 2018 and 2017, and 3.00% for 2016 |
| Salary increases, including inflation | 3.25% to 9.25% |
| Investment rate of return | 6.50% for 2022, 2021 and 2020, 7.00% for 2019, 7.00% for 2018 and 2017, and 7.25% for 2016, compounded annually, net of investment expense and including inflation |
| Retirement age | Age 65 for all members hired on or after November 1, 2011, age 62 for members hired prior to November 1, 2011 |
| Mortality | For 2022 and 2021 - Pub-2010 Below Median, General membership Active/ Retiree Healthy Mortality table with base rates projected to 2030 using Scale MP-2019. For 2022 and 2021, males rates are unadjusted, and female rates are set forward two years. For 2020 males rates are set back one year, and female rates are set forward one year. For 2019 and 2018, active participants and nondisabled pensioners – RP-2014 Mortality Table projected to 2025 by Scale MP-2016 (disabled pensioners set forward 12 years). For 2016, Active participants and nondisabled pensioners – RP-2000 Mortality Table projected to 2010 by Scale AA (disabled pensioners set forward 15 years) |

Other information:

The plan has been amended by House Bill 2630 in 2014 which states that effective November 1, 2015, OPERS shall create a defined contribution plan for most people first employed by a participating employer. Exemptions from the new defined contribution plan include hazardous duty members and district attorneys, assistant district attorneys and employees of the district attorney's office. Each employer shall send to OPERS the difference between the required employer contribution to OPERS and the amount required to match the participating employee's contribution in the defined contribution plan.

Senate Bill 2120, also enacted in 2014, amends House Bill 2630 to further exempt from the new defined contribution plan county elected officials and employees of a county, county hospital, city or town, conservation district, circuit engineering district, and any public or private trust in which a county, city or town participates. Senate Bill 2120 also states that employees who participate in the defined contribution system are excluded from the \$105 health subsidy.

New employees specifically exempted from the defined contribution plan will participate in the existing defined benefit plan.

Required Supplementary Information

Schedule of Money-Weighted Rate of Return on Pension Plan Investments

(Unaudited)

June 30, 2022

Schedule 3

| Annual money-weighted rate of return, net of investment expense | |
|--|---------|
| Year Ended June 30, 2022 | -14.61% |
| Year Ended June 30, 2021 | 28.05% |
| Year Ended June 30, 2020 | 4.61% |
| Year Ended June 30, 2019 | 5.91% |
| Year Ended June 30, 2018 | 8.38% |
| Year Ended June 30, 2017 | 12.64% |
| Year Ended June 30, 2016 | 0.18% |
| Year Ended June 30, 2015 | 3.12% |
| Year Ended June 30, 2014 | 17.96% |

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the information included is for those years for which information is available.

Required Supplementary Information

(Unaudited)

June 30, 2022

Schedule 4

Schedule of Changes in the Net HISP (Asset) Liability (\$ in Thousands)

| Year Ended June 30, | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|--|--------------------|---------------------|--------------------|--------------------|--------------------|-------------------|
| Total HISP Liability | | | | | | |
| Service cost | \$ 7,599 | \$ 7,988 | \$ 7,567 | \$ 7,909 | \$ 8,367 | \$ 8,550 |
| Interest | 20,291 | 20,782 | 21,848 | 22,332 | 22,240 | 22,563 |
| Difference between expected and actual experience | (19,466) | (18,835) | (18,882) | (18,780) | (10,599) | (16,757) |
| Changes of assumptions | - | - | 15,022 | - | - | 11,073 |
| Benefit payments | (17,254) | (17,699) | (18,171) | (18,556) | (18,840) | (18,999) |
| Net change in total HISP liability | (8,830) | (7,764) | 7,384 | (7,095) | 1,168 | 6,430 |
| Total HISP liability - beginning | 320,668 | 328,432 | 321,048 | 328,143 | 326,975 | 320,545 |
| Total HISP liability - ending (a) | \$ 311,838 | \$ 320,668 | \$ 328,432 | \$ 321,048 | \$ 328,143 | \$ 326,975 |
| Plan Fiduciary Net Position | | | | | | |
| Contributions - employer | \$ 16,584 | \$ 17,676 | \$ 19,236 | \$ 18,744 | \$ 19,080 | \$ 18,828 |
| Net investment income | (51,883) | 83,022 | 14,510 | 18,841 | 25,502 | 35,747 |
| Benefit payments | (17,254) | (17,699) | (18,171) | (18,555) | (18,840) | (18,999) |
| Administrative expense | (171) | (164) | (183) | (191) | (179) | (184) |
| Net change in plan fiduciary net position | (52,724) | 82,835 | 15,392 | 18,839 | 25,563 | 35,392 |
| Plan fiduciary net position - beginning | 458,150 | 375,315 | 359,923 | 341,084 | 315,521 | 280,129 |
| Plan fiduciary net position - ending (b) | 405,426 | 458,150 | 375,315 | 359,923 | 341,084 | 315,521 |
| Net HISP (asset) liability - ending (a) - (b) | \$ (93,588) | \$ (137,482) | \$ (46,883) | \$ (38,875) | \$ (12,941) | \$ 11,454 |

Schedule of the Net HISP (Asset) Liability (\$ in Thousands)

| Year Ended June 30, | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|--|--------------------|---------------------|--------------------|--------------------|--------------------|------------------|
| Total HISP liability | \$ 311,838 | \$ 320,668 | \$ 328,432 | \$ 321,048 | \$ 328,143 | \$ 326,975 |
| Plan fiduciary net position | 405,426 | 458,150 | 375,315 | 359,923 | 341,084 | 315,521 |
| Net HISP (asset) liability | \$ (93,588) | \$ (137,482) | \$ (46,883) | \$ (38,875) | \$ (12,941) | \$ 11,454 |
| Ratio of plan fiduciary net position to total HISP (asset) liability | 130.01% | 142.87% | 114.27% | 112.11% | 103.94% | 96.50% |
| Covered payroll* | N/A | N/A | N/A | N/A | N/A | N/A |
| Net HISP liability as a percentage of covered payroll | N/A | N/A | N/A | N/A | N/A | N/A |

*Covered Payroll is not meaningful to formulate a ratio of net HISP liability as a percentage of covered payroll. Contributions are only received from employers.

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the information included is for those years for which information is available.

Required Supplementary Information

Schedule of HISP Employer Contributions (\$ in Thousands)

(Unaudited)

June 30, 2022

Schedule 5

| Year Ended June 30, | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Actuarially determined employer contribution | \$ 3,363 | \$ 6,722 | \$ 3,654 | \$ 4,281 | \$ 5,786 | \$ 6,087 |
| Actual employer contributions | 16,584 | 17,676 | 19,236 | 18,744 | 19,080 | 18,828 |
| Annul contribution (excess) | \$ (13,221) | \$ (10,954) | \$ (15,582) | \$ (14,463) | \$ (13,294) | \$ (12,741) |
| Covered payroll* | N/A | N/A | N/A | N/A | N/A | N/A |
| Actual contributions as a % of covered payroll* | N/A | N/A | N/A | N/A | N/A | N/A |

*Covered Payroll is not meaningful to formulate a ratio of net HISP liability (asset) as a percentage of covered payroll. Contributions are only received from employers.

Notes to Schedule

Valuation date:

Actuarially determined contributions are calculated as of the beginning of the fiscal year in which contributions are reported

Methods and assumptions used to determine contribution rates:

| | |
|---------------------------------------|--|
| Actuarial cost method | Entry age |
| Amortization method | Level percentage of payroll, closed |
| Remaining amortization period | 6 years |
| Asset valuation method | 5-year moving average |
| Inflation | 2.50% for 2022, 2021 and 2020, 2.75% for 2019, 2018 and 2017, 3.00% for 2016 and 2015 |
| Salary increases, including inflation | 3.25% to 9.25% for FY22, FY21 and FY20, 3.75% for 2019, 2018 and 2017, 5.00% for 2016 and 2015, including inflation |
| Investment rate of return | 6.50% for 2022, 2021 and 2020, 7.00% for 2019, 2018 and 2017, 7.25% for 2016 and 7.50% for 2015, compounded annually, net of investment expense and including inflation |
| Retirement age | Age 65 for all members hired on or after November 1, 2011, age 62 for members hired prior to November 1, 2011 |
| Mortality | For 2022 and 2021 - Pub-2010 Below Median, General membership Active/ Retiree Healthy Mortality table with base rates projected to 2030 using Scale MP-2019. Males rates are unadjusted, and female rates are set forward two years. |

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the information included is for those years for which information is available.

Required Supplementary Information

Schedule of Money-Weighted Rate of Return on HISP Investments

(Unaudited)

June 30, 2022

Schedule 6

| Annual money-weighted rate of return, net of investment expense | |
|--|---------|
| Year Ended June 30, 2022 | -11.30% |
| Year Ended June 30, 2021 | 22.10% |
| Year Ended June 30, 2020 | 4.03% |
| Year Ended June 30, 2019 | 5.52% |
| Year Ended June 30, 2018 | 8.08% |
| Year Ended June 30, 2017 | 12.76% |

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the information included is for those years for which information is available.

Supplementary Information

Schedule of Investment Expenses

Years Ended June 30, 2022 and 2021

Schedule 7

| | 2022 | 2021 |
|--|---------------|---------------|
| Investment management fees | | |
| Fixed Income Managers: | | |
| BlackRock Financial Management, Inc. | \$ 1,415,920 | \$ 1,328,222 |
| Hoisington Investment Management | 474,251 | 470,537 |
| Metropolitan West Asset Management, LLC | 546,298 | 2,041,729 |
| BlackRock Institutional Trust Company, N.A. - TIPS | 36,697 | 31,837 |
| U.S. Equity Managers: | | |
| Barrow, Hanley, Mewhinney & Strauss, Inc. | 1,212,148 | 1,265,195 |
| BlackRock Institutional Trust Company, N.A. | 154,171 | 139,137 |
| DePrince Race & Zollo, Inc. | 4,840,293 | 730,517 |
| Newton Investment Management North America, LLC | 62,500 | 62,500 |
| State Street Global Advisors | 226,774 | 195,887 |
| UBS Global Asset Management | 712,158 | 4,197,708 |
| Westfield Capital Management | 401,713 | 366,576 |
| International Equity Managers: | | |
| Baillie Gifford Overseas Limited | 782,494 | 4,568,295 |
| BlackRock Institutional Trust Company, N.A. | 590,113 | 561,830 |
| Mondrian Investment Partners, Ltd | 2,475,578 | 2,307,293 |
| Total investment management fees | 13,931,109 | 18,267,263 |
| Investment consultant fees | | |
| Verus Investment Advisory Group | 241,828 | 244,494 |
| Investment custodial fees | | |
| Northern Trust Company | 43,495 | 37,595 |
| Other investment related expenses | | |
| | 254,747 | 240,141 |
| Total investment expenses | \$ 14,471,179 | \$ 18,789,493 |

Supplementary Information
Schedule of Administrative Expenses
Year Ended June 30, 2022 and 2021
Schedule 8

| | 2022 | 2021 |
|--|--------------|--------------|
| Staff salaries | \$ 3,793,160 | \$ 3,426,959 |
| Social Security | 282,718 | 255,234 |
| Retirement | 631,021 | 594,769 |
| Insurance | 641,164 | 626,065 |
| Temporary employees | - | 249 |
| Total personnel services | 5,348,063 | 4,903,276 |
| Actuarial | 97,850 | 97,850 |
| Audit | 250,511 | 319,733 |
| IT Consulting | 186,570 | 172,340 |
| Legal | 24,841 | 13,766 |
| Total professional services | 559,772 | 603,689 |
| Printing | 58,807 | 42,842 |
| Telephone | 24,758 | 24,236 |
| Postage and mailing expenses | 105,276 | 87,950 |
| Travel | 20,914 | 9,493 |
| Information Technology | 377,640 | 265,471 |
| Total communication | 587,395 | 429,992 |
| Office space | 259,736 | 259,736 |
| Equipment leasing | 15,161 | 14,530 |
| Total rentals | 274,897 | 274,266 |
| Supplies | 8,002 | 5,340 |
| Maintenance | 66,355 | 56,280 |
| Depreciation | 67,304 | 70,385 |
| Other | 99,637 | 92,602 |
| Total miscellaneous | 241,298 | 224,607 |
| Total administrative expenses | 7,011,425 | 6,435,830 |
| Administrative expenses allocated | | |
| Uniform Retirement System for Justices and Judges (URSJJ) | (200,219) | (181,425) |
| Oklahoma State Employees Deferred Compensation Plan (DCP) | (518,401) | (485,311) |
| Oklahoma State Employees Deferred Savings Incentive Plan (SIP) | (136,848) | (125,968) |
| Pathfinder 401(a) Defined Contribution Plan | (232,639) | (149,339) |
| Pathfinder 457 Defined Contribution Plan | (30,765) | (19,149) |
| Total administrative expenses allocated | (1,118,872) | (961,192) |
| Net administrative expenses | \$ 5,892,553 | \$ 5,474,638 |

Note to Schedule of Administrative Expenses

Administrative overhead expenses, including personnel and other supporting services costs, which are paid for by the Plan, are allocated to three other retirement funds also administered by OPERS. The allocation is based on OPERS' estimate of the cost of service provided by the Plan to the other funds.

Supplementary Information
Schedule of Professional/Consultant Fees
Year Ended June 30, 2022 and 2021
Schedule 9

| | | 2022 | 2021 |
|---|------------------|-------------------|-------------------|
| Professional/Consultant | Service | | |
| Cavanaugh Macdonald Consulting, Inc. | Actuarial | \$ 97,850 | \$ 97,850 |
| Eide Bailly LLP | External Auditor | 73,000 | 72,300 |
| Arledge & Associates | External Auditor | 34,500 | 40,000 |
| Finley & Cook, PLLC | Internal Auditor | 143,011 | 207,433 |
| Gartner Inc. | IT Consulting | 150,405 | 146,465 |
| True Digital Security | IT Consulting | 36,165 | 25,875 |
| Ice Miller LLP | Legal | 24,841 | 13,666 |
| Michael Mitchelson | Legal | - | 100 |
| Total professional/consultant fees | | \$ 559,772 | \$ 603,689 |

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Go above and beyond for our members and service partners.

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Take pride in delivering accurate and beneficial information.

"Our members' questions about retirement are as diverse as the members themselves. Knowing that we are prepared to provide relevant answers to a member during their retirement journey no matter how challenging, is the magic formula. We treat each member like they are family." - Tonda

INVESTMENT

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Investment Consultant's Report

Investment Objectives

The primary financial objective for Oklahoma Public Employees' Retirement System (OPERS) is to earn a long-term return sufficient to avoid deterioration in funded status. The System's actuary estimates this return requirement to be 6.5% while its investment consultant estimates the return requirement to be 4.9% for the fiscal year ended June 30, 2022. It is important to note that Verus uses a 10-year investment horizon whereas actuarial consultants use a much longer time horizon in developing forecasts, typically 30 years.

The secondary goals for OPERS are to outperform the asset allocation-weighted benchmark and to rank in the top fortieth percent of a universe of large public pension funds.

Asset Allocation

The System's Investment Philosophy stresses the following key points:

1. Asset allocation is the key determinant of return. Therefore, commitments to asset allocation targets are maintained through a disciplined rebalancing program.
2. Diversification, both by and within asset classes, is the primary tool for risk control.
3. Passive instruments (index funds) are suitable strategies in highly efficient markets.

| ASSET CLASS | 6/30/22 ALLOCATION | LOW | TARGET | HIGH | % PASSIVE OR SEMI-PASSIVE |
|--------------|-----------------------|-------|--------|-------|------------------------------|
| U.S. EQUITY | 40.4% | 40.4% | 40.0% | 42.7% | 78.1% |
| FIXED INCOME | 32.1% | 29.6% | 32.0% | 32.1% | 61.1% |
| INT'L EQUITY | 27.2% | 27.2% | 28.0% | 28.0% | 68.5% |
| REAL ESTATE | 0.1% | 0.1% | 0.0% | 0.1% | 0.0% |
| CASH | 0.3% | 0.3% | 0.0% | 0.3% | 0.0% |

Review of Fiscal Year 2022 Investment Environment

Market Environment

The broad story was a tale of two halves over the fiscal year, as global markets delivered mildly positive returns in the latter half of 2021, with below-average volatility, spurred by easy monetary policy, pandemic reopening demand, and a resurgence in economic growth. The reopening story painted a more optimistic picture in advanced economies, while emerging economies struggled due to less access to quality vaccines and more stringent pandemic lockdown measures, specifically within China. However, this optimism began to fade as inflation surged and central banks turned more hawkish.

The first half of 2022 proved to be an incredibly different environment from what was experienced during 2021. The persistence of inflation was a driving narrative, as the supply

shocks coming from Russia's invasion of Ukraine and supply chain issues from China's continued zero-covid policy accelerated already fast price growth. Central banks, keen to lower inflation, reacted more aggressively as a result. The quick, but relatively small, tightening cycle hurt both equities and bonds alike. Nearly all asset classes have produced losses year-to-date—a somewhat rare occurrence which left most diversified portfolios materially in the red. The spur of tightening also increased fears of recession and possibly stagflation, as inflation ceased to moderate (U.S. headline CPI hit 9.1% in June—a four-decade high).

U.S. Equity

While the S&P 500 delivered a fantastic 11.7% return in the second half of 2021, the first half of 2022 saw a significant reversal of -20%, qualifying as a technical market correction. In an effort to curb four-decade high inflation within the U.S., the Federal Reserve raised their policy rate by 25 bps, 50 bps, and 75 bps at their respective March, May, and June meetings. It's important to note that although the pace of rate hikes has been rapid compared to most previous tightening cycles, the overall magnitude of tightening has been small.

Investors began recognizing the potential for recession in the second quarter of 2022, as economic data indicated a slowdown alongside Federal Reserve tightening. Persistent inflation in the face of multiple rate hikes impacted company revenues and profits. On the sales front, declines in real purchasing power slashed consumer sentiment and impacted discretionary spending. With regard to corporate profits, higher expenses, particularly for companies unable to pass through prices, have resulted in earnings compression (MSCI U.S. Profit Margins down from 12.9% in December 2021 to 12.2% in June 2022). Ultimately, U.S. equities have faced a tough environment in the first half of 2022, with the S&P 500 falling 20.0% as of June 30th.

Briefly looking at size and style, the Value factor outperformed the Growth factor during the fiscal year (Russell 1000 Value -7.4%, Russell 1000 Growth -19.0%). The Russell 1000 Value Index has declined -12.9% versus -28.1% for the Russell 1000 Growth Index year-to-date. As expected, rising rates inflicted more pain on duration-sensitive growth equities. From a size perspective, small-cap equities underperformed significantly during the fiscal year (Russell 2000 -25.2%, Russell 1000 -13.0%).

International Equity

International developed equities lagged U.S. equities over the fiscal year, as the MSCI EAFE Index returned -17.8% relative to the S&P 500 -10.6% return. Dollar strength hurt U.S. investors with unhedged foreign currency exposure, as the Bloomberg Dollar Spot Index advanced 10.3% during the period. Despite the underperformance over the full fiscal year, both developed and emerging market equities outperformed U.S. shares on a year-to-date basis through June 30th, as the MSCI EAFE and MSCI EM Indices returned -19.6% and -17.6%, respectively.

Emerging market equities underperformance during the fiscal year was primarily due to the large drop in Chinese equities (MSCI China -31.8%), as the country locked down major cities and cracked down on sectors including technology, education, and real estate. This narrative switched gears during the first half of 2022, as news of potential easing of government

restrictions and the reopening of several large cities boosted share prices of the largest country constituent in the MSCI EM Index (35.4%). While being the worst performer over the full fiscal year, emerging market equities ended the first half of 2022 as the best performing market.

Developed economies faced a similar equity environment to that of the United States. Positive performance in the second half of 2021 due to reopening growth was reversed in the first half of 2022, as rising inflation was amplified by Russia's invasion of Ukraine in late February. Ensuing sanctions against Russian petroleum exports from the West squeezed energy prices upward, forcing the Bank of England and European Central Bank to shift gears in terms of monetary policy. The MSCI EAFE Index fell -19.6% over the year-to-date, wiping out the 2.3% gain seen during the second half of 2021. International developed equities continue to be challenged, as the energy crisis escalates, and consumer strength remains less resilient than that of the U.S.

Fixed Income

Core fixed income suffered losses of -10.3% over the full fiscal year (BBgBarc U.S. Aggregate), though losses occurred in the first half of 2022. All eyes have been on inflation, which has forced central bankers to tighten conditions while attempting to avoid pushing their economies into recession. Rate hikes and forward guidance from central banks have hammered equity and bond markets alike, created a rare environment of sharp losses across both asset classes.

The magnitude of expected rate hikes has jumped materially since late 2021. During December 2021, Fed funds futures contracts suggested the Fed Funds Rate would end 2022 at 0.82% (only three 25 bps rate hikes expected). By the end of March 2022, markets were pricing in a total of *nine* 25 bps rate hikes. This placed the implied Fed Funds Rate at 2.39% by the end of 2022. The trend continued in Q2, as inflation remained persistent. The Federal Reserve pushed through an additional 50 bps hike in May and a 75 bps hike in June (the largest single meeting hike since 1994). Going forward, markets are pricing in an additional seven rate hikes (not including the six previously implemented) by the end of 2022, bringing the year-end implied rate in line with the Fed's expectation of 3.4%. Many countries currently face similar problems, as inflation remains a challenge.

The impact of policy tightening on duration-sensitive assets has been significant. Performance was negative across all fixed income asset classes over the year-to-date, as rates jumped from historically low levels. The Bloomberg Global Treasury Index returned -14.8% in dollar terms over the year-to-date. In the U.S., the Bloomberg Universal Index suffered its worst quarterly loss in Q1 2022—down -6.1%—while the Bloomberg Aggregate Index fell -5.9% (its third worst quarterly loss, dating back to 1976). Performance during Q2 was also negative, with the Universal and Aggregate Indices down -5.1% and -4.7%, respectively. Longer duration assets underperformed. The Bloomberg U.S. Long Treasury Index fell -21.3% year-to-date, compared to the -3.0% decline of the Bloomberg U.S. Treasury 1-3 Year index.

Looking at credit, spreads significantly widened over the course of 2022. Investment grade spreads widened by 63 bps, moving from 0.92% to 1.55% at the end of June. High yield spreads also jumped, starting the year at 283 bps before moving to 569 bps over the same period.

Spread movements widely reflected the risk off tone and growing concerns over a slowing economy. Despite spread expansion, default rates for par weighted U.S. high yield and bank loans ended Q2 at 0.76% and 0.74%—far below the longer-term historical averages of 3.2% and 3.1%.

Commodities

Commodities were the best performing asset class over the fiscal year, with the Bloomberg Commodity Index returning 24.3%. Commodities moved higher in Q3 2021, driven by supply chain imbalances and rising signs of inflation. These gains tailed off towards the end of 2021, as signals of tighter monetary policy crimped global economic growth expectations.

The real story emerged in the first quarter of 2022, specifically following Russia’s invasion of Ukraine. Both Russia and Ukraine being large suppliers of energy and grain commodities spiked prices, propelling inflation higher. Natural gas and WTI Crude Oil prices shot up +58.4% and 38.3%, while Wheat and Corn bounced 29.6% and 26.3%, respectively. Despite the sharp tick up in prices, commodities have begun to normalize, as recession fears have cut demand forecasts, shipping costs have moved down, and supply chain pressures have started to ease.

Currency

A strong dollar remained the biggest currency story in 2022, as the dollar continued its 2021 trend. The Bloomberg Dollar Spot Index returned +7.4% over the year-to-date, driven by higher relative interest rates, a relatively strong economic outlook, and safe-haven currency status. The dollar performed well against major pairs, as currency impacts were significant within the international developed equities space.

Outlook

A key question going forward is whether global central banks will be able to bring inflation under control without dragging their respective economies into recession. This task is perhaps more difficult than past inflationary regimes, given the war in Ukraine, lockdowns in China, and acute pandemic-related supply shortages which have led to high prices that perhaps cannot be brought down via traditional central bank policy. Within the U.S, the possibility of a “soft landing” for the economy seems to be off the table, as the economy appears to be in recession, or at least very close to one. Uncertainty remains high, although the recent drawdown of most major asset classes has reversed the “low return environment” dynamic that has been common for nearly a decade. Many asset classes now appear to offer robust yields and prospective returns relative to past years—perhaps a silver lining in an environment which has proved challenging for investors with diversified portfolios.

Portfolio Review

The Board maintained its existing strategic asset allocation in fiscal year 2022 as well as its portfolio structure and manager line up. In the coming fiscal year, OPERS is due to conduct its triennial asset/liability study which may result in modest changes to the Plan.

Performance Review

At quarterly intervals, the System reviews performance at the total fund, asset class and individual manager levels. At each level, returns are evaluated versus appropriate indexes and peers. Index comparisons have as return objectives various after-fee return premiums with risk (standard deviation) not exceeding 125%-150% of the underlying index. OPERS targets returns within the top fortieth percentile of peer comparisons over longer time periods.

Investment returns achieved through June 30, 2022, have been calculated using a time-weighted rate of return methodology based upon market values. As shown in the following table, for the 1-year time period ended June 30, 2022, the U.S. Equity asset class outperformed its benchmark on a relative basis and outperformed the blended index for the 3 and 5-year annualized periods. For all periods, asset class performance was above median compared to the US equity peer group. The majority of OPERS' active and enhanced index U.S equity managers beat their benchmarks on a relative basis for the fiscal year. The Non-U.S. Equity asset class underperformed the benchmark for fiscal year which negatively impacted 3- and 5-year annualized returns as well. Longer-term annualized time period returns were in line with the benchmark. Non-U.S. Equity ranked as slightly below median versus the peer group for most time periods, which is partially driven by a sizeable passive allocation that is extremely cost effective but tends to lag active international equity returns. The Fixed Income asset class performed below the benchmark for the fiscal year but above the benchmark for all annualized time periods measured as of June 30, 2022. During the fiscal year, bonds lost value as yields rose significantly off of historic lows. The Fixed Income composite was in the bottom quartile of the peer group over the fiscal year and slightly above or below median over annualized periods. OPERS' fixed income structure is more conservative compared to many large plan peers and has dedicated long duration exposure which is atypical and negatively impacted fiscal year returns.

The total OPERS Plan performed slightly above its Policy Benchmark on a relative basis for the 1-year period and at or above the benchmark for annualized time periods ended June 30, 2022. The total OPERS Plan ranked in the bottom quartile of the peer universe of Public Funds greater than \$1 Billion for all periods, driven by its asset allocation which is heavier in public markets equity than many peers and lacks exposure to private markets which outperformed public markets asset classes substantially over the fiscal year. Private markets are subject to lagged pricing; thus, peer comparisons may change as pricing is updated through June 30, 2022.

| PERIODS ENDED 6/30/22 | ONE YEAR | THREE YEARS | FIVE YEARS |
|--|----------|-------------|------------|
| Domestic Equity | -13.1% | 9.9% | 10.4% |
| <i>85% Russell 1000 / 15% Russell 2000</i> | -14.9% | 9.3% | 10.2% |
| Rank* | 49 | 14 | 30 |
| Non-U.S. Equity | -20.8% | 1.6% | 2.8% |
| <i>MSCI ACWI ex-U.S.</i> | -19.0% | 1.8% | 3.0% |
| Rank* | 57 | 59 | 35 |
| Fixed Income | -11.0% | -0.1% | 1.6% |
| <i>78% BC Agg./11% Citi 20+ Year Tsy./11% BC U.S. TIPS</i> | -10.7% | -0.7% | 1.1% |
| Rank* | 78 | 57 | 36 |



| PERIODS ENDED 6/30/22 | ONE YEAR | THREE YEARS | FIVE YEARS |
|-----------------------------------|----------|-------------|------------|
| Total Fund | -14.5% | 4.6% | 5.7% |
| <i>Policy Benchmark**</i> | -14.6% | 4.4% | 5.6% |
| Public Fund > \$1 Billion Median* | -7.4% | 6.5% | 6.9% |
| Rank* | 97 | 87 | 87 |

* Ranking 1 is best, 100 is worst. Rankings source is Investment Metrics (formerly called InvestorForce).

** Policy Benchmark is:
40% Custom Domestic Equity Benchmark (85% Russell 1000/ 15% Russell 2000)/
32% Custom Fixed Income Benchmark (78% BB U.S. Aggregate/ 11% Citi 20-Year+ Treasury/ 11% BC U.S. TIPS)/28% MSCI ACWI ex-U.S. Index

Verus continues to believe that OPERS is managed in a prudent and cost-effective manner. Despite a very challenging fiscal year, we believe that the sound and disciplined policies that have been implemented by OPERS for decades will continue to enable to Plan to meet its investment objectives over the long term.

Yours truly,

Margaret S. Jadallah
Managing Director

Chief Investment Officer's Report

Oklahoma Public Employees Retirement System

P.O. Box 53007
Oklahoma City, Oklahoma 73152-3007

800.733.9008 toll-free
405.848.5946 fax

Dear Members:

The Fund's total return for the fiscal year reflected the tumult experienced in the global capital markets, especially in the final two quarters of the fiscal year. The Fund experienced a loss of 14.55% (gross of fees) for fiscal year 2022, compared to a gain of 27.99% for the prior fiscal year. This result was well below the 6.5% long-term actuarial return target. As disappointing as the result was, it did manage to modestly outperform the Policy portfolio return of -14.57% for the period. The recent bull market run of the stock market in the U.S. ended abruptly. The capital markets declined dramatically in the last half of the fiscal year as investor sentiment turned decidedly negative on geopolitical events, intensifying inflationary pressure, and concerns about economic growth. U.S. bond market returns reflected an increasingly hawkish Federal Reserve stance and corresponding actions, as it attempted to orchestrate a "soft landing" for the economy in an effort to tame spiking inflation. Stock market returns outside the U.S. likewise reflected the concerns that negatively impacted U.S. markets. There was simply nowhere to hide in the public capital markets as performance for the fiscal year posted decidedly negative returns for risk-seeking and more risk-averse investors alike.

We endeavor to build a durable portfolio that will weather tumultuous market conditions. Maintaining diversification among asset classes and geographical regions is a critical component of that effort. We also de-emphasize active management in the portfolio, as demonstrated by our large holdings of passive index funds. This year's letter, which covers the 2022 fiscal year, will follow the same format as in years past. First, I will discuss the general economic environment and the performance of various markets throughout the fiscal year. Next, I will focus on the Fund by reviewing the investment performance and the asset allocation. Then, I will offer an investment outlook and discuss recent events at the Fund. Finally, I will review the Fund's investment philosophy and guiding principles because both are critically important to the investment decision-making process.

Economic Environment

Gross Domestic Product (GDP), the primary gauge for economic activity in the U.S., decreased by 0.6% on an annualized basis during the second quarter of 2022 (per the second revision as of the date of this report). This reduction on overall economic activity followed the first quarter 2022 reduction of 1.6% on an annualized basis. These results showed a slowdown in retail and government spending and contrasted sharply with the prior fiscal year's economic activity, which featured a strong rebound in consumer spending as the economy emerged from the pandemic-related malaise. The National Bureau of Economic Research, which is the organization responsible for dating the business cycle, has yet to officially declare the U.S. had experienced a recession as of the writing of this report. While two quarters of consecutive contraction in the economy has been a key component of the official declaration in the past, parts of the economy continue to exhibit strength. Economists have pointed to solid consumer and business spending, rising incomes, and low unemployment as factors that may indicate the economy may not meet the threshold needed to declare an official recession. The labor market remained robust, as the unemployment rate dropped to 3.6% for June 2022, very near levels last seen before the pandemic. However, pandemic-related supply chain issues have continued and were exacerbated by geopolitical events during the fiscal year. Inflationary pressures intensified on everything from food to energy, which negatively impacted consumer sentiment and the general outlook for the economy. The Federal Reserve's rhetoric and actions became increasingly more hawkish towards fighting inflation over the last half of the fiscal year. The Federal Reserve raised rates in May and more aggressively raised rates in June in an attempt to slow inflationary pressures without

Chief Investment Officer’s Report (continued)

plunging the economy into recession. The debate on whether the Federal Reserve can orchestrate a “soft landing” for the economy while still taming inflation continues to this day. Given the generally pessimistic economic data and geopolitical concerns regarding the Russian invasion of the Ukraine in February, the U.S. dollar strengthened relative to the basket of non-U.S. developed market currencies. Note that a stronger dollar makes U.S. exports more expensive to other countries and negatively impacts U.S. dollar-based investor returns in foreign markets.

The negative headwinds facing the U.S. economy were not limited by geographic boundaries during the fiscal year. The International Monetary Fund (IMF) downgraded the prospects for global economic growth, but particularly in the world’s largest economies. The IMF expects global economic activity to grow by 3.2% this year; a sharp decline from previous estimates due to supply shocks from the war in the Ukraine, surging inflationary pressures, and tighter monetary policy around the world. In the Eurozone, Germany reported a rare trade deficit indicating high energy prices were squeezing manufacturers. In the U.K., inflation rose to a 40-year high on high energy prices that pressured consumers. In the first half of this year, the Chinese economy grew by 2.5%, well below the 5.5% target set by the government, as it experienced months of limited economic activity due to COVID-related lockdowns, a regulatory crackdown on business (especially the tech sector), and pressures in the real estate market.

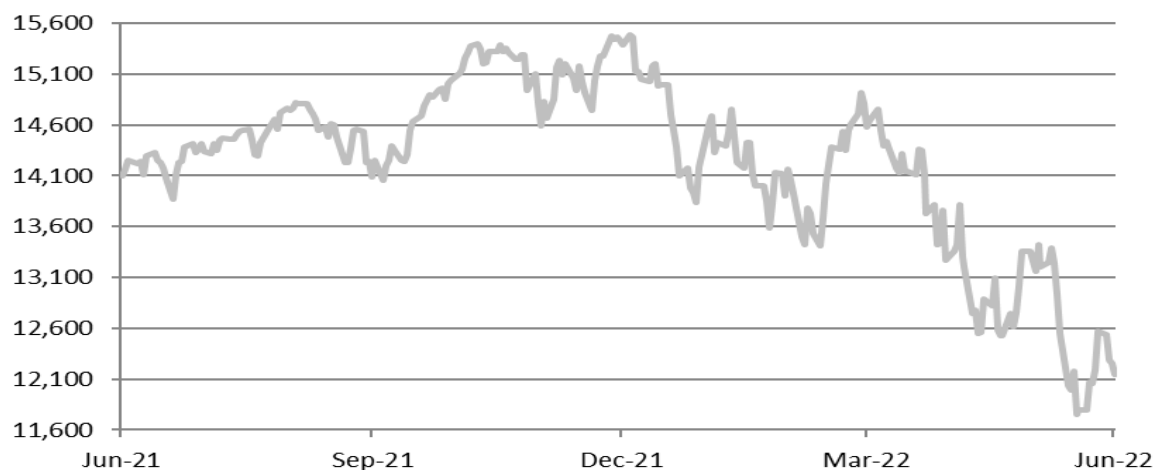
U.S. and Global Stock Markets

The U.S. stock market, as measured by the Russell 3000 Index, exhibited pronounced volatility during the fiscal year—especially in the second half. The Russell 3000 Index is one of the broadest domestic equity indices available and a good proxy for the U.S. equity market as a whole. The performance of the U.S. equity markets reflected investor concerns regarding geopolitical risk, rising inflation, and rising recessionary forecasts in the U.S.

Change in the Russell 3000 Index during the fiscal year ended June 30, 2022

Value at 6/30/21 14,098.8

Value at 6/30/22 12,143.9



Source: FTSE Russell

The Russell 3000 ended the one-year period through June 30, 2022, down 13.9%, as a result of a remarkable sell-off that intensified with Russia’s invasion of the Ukraine in February of 2022. These geopolitical concerns exacerbated investor fears of an economic slowdown, and the greater possibility of a recession in the U.S. Within the Russell 1000 index (used to represent domestic large capitalization stocks), the sectors that generally had been “left behind” by the prior year’s rally were the only sectors to post positive returns for the period. The energy sector surged nearly 40% for the one-year period ending June 30, 2022, while the consumer staples and healthcare sectors posted returns of 5.3% and 0.4%, respectively.

Chief Investment Officer’s Report (continued)

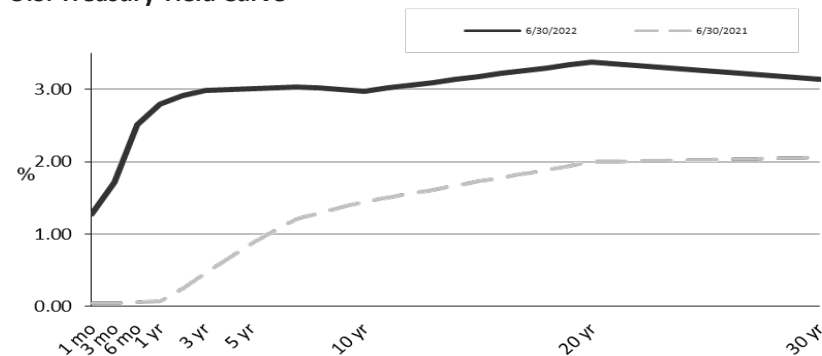
Investors gravitated towards the relative safety of large capitalization stocks during the period, as the small capitalization index, as represented by the Russell 2000 index, lost over 25% for the one-year period ending June 30. Equity style (i.e., market capitalization size, growth, value) leadership favored large capitalization and value-oriented stocks during the fiscal year. The value index handily outperformed the growth index in both large capitalization and small capitalization space. However, assuming equity risk in the markets, except that associated with the energy and healthcare sectors, proved detrimental for diversified portfolio returns for the period.

The rest of the developed world continued to underperform the U.S. equity market on a U.S. dollar basis. The MSCI All Country World Index ex-U.S. (ACWI ex-U.S. Index net), which includes public equities from both developed and emerging markets, lost over 19% in U.S. dollar terms for the fiscal year. The U.S. dollar strengthened considerably relative to many other foreign currencies, which compounded losses experienced by U.S. dollar investors in foreign markets. Returns to the ACWI x-U.S. index outperformed the Russell 3000 index in local currency terms, but dramatically underperformed the U.S. market when translated into U.S. dollars. Emerging market returns in U.S. dollar terms performed worse than non-U.S. developed markets, having lost over 25% for the period. Emerging market local returns underperformed non-U.S. developed markets, but the negative impact of a strong U.S. dollar was less pronounced on the Emerging Markets index. The stock market in China lost almost 32% in U.S. dollar terms, as investors lost confidence due to pandemic-related lockdowns, regulatory tightening on technology companies, and a worsening real estate crisis. The theme for the rest of the world certainly followed that of the U.S. markets, which was that the greater the equity risk assumed by investors, the greater the loss incurred for the period.

Interest Rates

The chart below depicts the U.S. Treasury term structure of interest rates. The yield curve is a graphical representation of yield levels across the spectrum of bond maturities. As shown, yields rose markedly across the entire curve over the course of the fiscal year. The Federal Funds Rate began the fiscal year at a range of 0%-0.25%, where it had been since March of 2020. Prices paid by consumers continued to skyrocket during the fiscal year, as Core CPI, the preferred measure of inflation by the Federal Reserve, accelerated to an annual rate of 5.9% in June. The overall inflation rate, which includes food and energy prices paid by consumers, increased to 9.1% over the year ending June 30, 2022. These levels of inflation reached levels not seen in over 40 years and were driven primarily by rising food and gas prices. The Federal Reserve responded to these rising inflationary pressures with increasingly aggressive monetary policy moves. The Federal Reserve raised rates by 25 basis points in March, 50 basis points in May, and 75 basis points in June. The three-quarters of a percentage point increase by the Federal Reserve in June was the most aggressive since 1994. The Federal Open Market Committee stated it was “strongly committed to returning inflation to its 2% objective” while the economy faced pandemic-related supply and demand imbalances, rising food and energy prices, and broader price pressures. The Federal Funds Rate ended the fiscal year at a range of 1.50%-1.75%. The Federal Reserve is attempting to orchestrate a balancing act with its aggressive moves: containing spiraling inflationary pressures at the risk of curtailing economic activity broadly and deeply. In the Eurozone, the European Central Bank (ECB) signaled that rate hikes were imminent as “inflation is undesirably high and is expected to remain above our target for some time” according to ECB President Christine Lagarde.

U.S. Treasury Yield Curve



Source: U.S. Treasury

Chief Investment Officer's Report (continued)

Investment Returns Through June 30, 2022

| U.S. Equity | Style | 1 Year | 3 Years | 5 Years |
|--|------------------------------|----------------|----------------|----------------|
| Russell 3000 | Broad U.S. Equity | -13.87% | 9.77% | 10.60% |
| S&P 500 | Large Cap Equity | -10.62% | 10.60% | 11.31% |
| Russell 1000 | Large Cap Equity | -13.04% | 10.17% | 11.00% |
| Russell 1000 Growth | Large Cap Growth | -18.77% | 12.58% | 14.29% |
| Russell 1000 Value | Large Cap Value | -6.82% | 6.87% | 7.17% |
| Russell 2000 | Small Cap Equity | -25.20% | 4.21% | 5.17% |
| Russell 2000 Growth | Small Cap Growth | -33.43% | 1.40% | 4.80% |
| Russell 2000 Value | Small Cap Value | -16.28% | 6.18% | 4.89% |
| Oklahoma Public Employees Retirement System | Broad U.S. Equity | -13.09% | 9.89% | 10.44% |
| U.S. Fixed Income | Style | 1 Year | 3 Years | 5 Years |
| ML 3-Month T-Bill | Cash | 0.18% | 0.57% | 1.05% |
| Bloomberg Barclays U.S. Aggregate | Core Bonds | -10.29% | -0.93% | 0.88% |
| Citigroup 20-year Treasury Average | Long Term Bonds | -18.61% | -2.88% | 0.57% |
| Bloomberg Barclays Corporate High Yield | High Yield Bonds | -12.81% | 0.21% | 2.10% |
| Oklahoma Public Employees Retirement System | Domestic Fixed Income | -10.96% | -0.13% | 1.60% |
| International Equity | Style | 1 Year | 3 Years | 5 Years |
| MSCI ACWI Ex-US (net) | Broad Non-US Equity | -19.42% | 1.35% | 2.50% |
| MSCI EAFE (net) | Developed Non-US Equity | -17.77% | 1.07% | 2.20% |
| MSCI Emerging Market (net) | Emerging Non-US Equity | -25.28% | 0.57% | 2.18% |
| Oklahoma Public Employees Retirement System | Non-U.S. Equity | -20.77% | 1.63% | 2.82% |
| Oklahoma Public Employees Retirement System | Total Fund | -14.55% | 4.63% | 5.67% |

Source: Various index providers, including FTSE Russell, S&P, Bloomberg Barclays, FTSE, and MSCI. OPERS returns were calculated using the BAI Iterative method (as such returns are time-weighted) and are gross of investment fees. International Equity Indices shown are net.

Investment Performance

Investor sentiment changed; brutal market ensued

Given the fear that overwhelmed the capital markets in the last half of the fiscal year, the Fund produced a nominal total return loss of 14.55% for the period gross of fees (-14.68% net of fees). The Fund managed to modestly outperform the policy benchmark portfolio by two basis points (gross of fees) for the period. As shown by the table above, all asset classes in which OPERS invests recorded negative total returns for the fiscal year. The humbling overall results were led downward by the allocation to the international equity asset class. This asset class suffered from broad-based negative local market returns (returns to markets outside of the U.S.) which were then exacerbated by the strong dollar, when translating those returns into U.S. dollar terms. The U.S. equity markets also contributed negatively to overall results, given the sell-off in the U.S. equity markets experienced in the last half of the fiscal year. Lastly, the bond portfolio negatively contributed to the total return of the Fund, due to rising interest rates and the widening of non-government bond spreads over the period.

The Fund performed largely in-line with the Policy portfolio for the fiscal year, having outperformed the Policy by two basis points. The Fund's overweight positioning to U.S. and non-U.S. equities detracted from Policy-relative performance. However, the Fund's active management in the U.S. equity class proved highly beneficial and was able to compensate for

Chief Investment Officer's Report (continued)

the adverse portfolio positioning going into the fiscal year and unfavorable results from active management in other asset classes.

U.S. Equity

The Fund continues to use a mix of passive and active investment management within the domestic equity portfolio structure, with a high proportion of U.S. equity assets managed in a passive style. Equity markets in the U.S. sold off as investor concerns about inflation, recession, and geopolitical risk turned into outright fear. In aggregate, the domestic equity portfolio produced a total return loss of over 13% for the fiscal year. In a year that desperately needed it, active management exposure proved its worth, in both the large capitalization and small capitalization mandates. The managers that emphasized value-oriented factor exposures in the domestic equity portfolio all outperformed their respective indices. Only one U.S. equity manager underperformed its benchmark for the year, and that manager was associated with large capitalization growth exposure. For the fiscal year, the Fund benefited from active exposures associated with the quantitative managers, whose value exposure had been a drag on performance for some time. The Fund's two quantitatively oriented managers both produced returns more than 2.5% versus the Russell 1000 index. The benchmark-relative performance of the small cap managers was striking. All three small capitalization managers outperformed their respective indices. As a group, the small capitalization portion of the portfolio delivered a loss of 17.4% for the fiscal year, which does not sound great, until compared to the Russell 2000 index loss of over 25% for the fiscal year. The active contribution from the Fund's managers, especially stock-picking in small capitalization space, contributed positively to results relative to the Policy benchmark, in what was otherwise a woeful year for nominal returns.

Fixed Income

The Fund's bond portfolio contributed negatively to overall total returns for the period, having lost 10.96% at the asset class level. As mentioned above, the total return of the asset class was negatively impacted by quickly rising interest rates across the yield curve. Compounding these market value losses due to interest rate movements was the general widening of spreads in non-government sectors, which put pressure on active manager returns. From a contribution to total return perspective, the worst performance was associated with the manager who emphasizes long-duration U.S. Treasury securities. This manager lost more than 20% for the period as long-term rates rose 1.4-1.5 percentage points across the longer end of the maturity spectrum (15 years and above). The managers who emphasize the broader areas of the bond market also delivered unfavorable results, due to the general rise in interest rates and the emphasis on non-government sectors (including high yield bond holdings for the core plus manager) that were adversely impacted from widening spreads over the second half of the year. Bonds are maintained in the portfolio for their volatility-dampening effect when combined with exposure to the equity markets. The total return of the bond market in general was surprisingly poor and compounded by the risk aversion that exemplified the capital markets in general in the last half of the fiscal year. Unlike the results in the U.S. equity markets, active management (bond picking and duration positioning) produced unfavorable results for the Fund, causing this portion of the portfolio to underperform the Policy benchmark for the period.

Non-U.S. Equity

The non-U.S. equity segment was the worst performing asset class on a nominal basis, having lost almost 21% in U.S. dollar terms for the period. The U.S. dollar strengthened relative to many other foreign currencies, which exacerbated losses experienced by U.S. dollar investors in foreign markets. Much like the U.S. equity portfolio, a high proportion of these Fund assets are managed in a passive style. Within the non-U.S. equity segment of the asset allocation, two active managers are used. One of the active managers emphasizes the value area of the international equity market, and the other manager emphasizes the growth area. Unlike the experience in the U.S. equity markets, however, stock picking by both non-U.S. managers detracted from benchmark-relative returns. The manager focusing on the international value area of the equity markets underperformed its benchmark; the benchmark itself was down over 12.1% in U.S. dollar terms for the period. The advisor who emphasizes the growth style more dramatically underperformed its benchmark, as the stocks that fueled the rally in fiscal year 2021 fell back to Earth. With both active managers having underperformed their respective indices due to adverse stock picking results, and particularly poor active results associated with the growth style of investing, this portion of the portfolio underperformed the Policy benchmark for the fiscal year.

Chief Investment Officer’s Report (continued)

Asset Allocation

Diversification Reduces Volatility

Diversification is the most effective defense against the risks associated with any one individual security or asset class. Risks are controlled by allocating the Fund’s assets across various asset classes and sectors within asset classes. There were no changes to the Policy asset allocation during the fiscal year.

| Asset Class | Min | 6/30/2022 | Target | Max |
|-----------------------|------------|------------------|---------------|------------|
| Cash and Real Estate | 0.0% | 0.4% | 0.0% | 0.0% |
| Domestic Fixed Income | 27.5% | 32.1% | 32.0% | 36.5% |
| U.S. Equity | 34.4% | 40.4% | 40.0% | 45.6% |
| Non-U.S. Equity | 25.0% | 27.2% | 28.0% | 31.0% |
| Total Fund | | 100% | 100% | |

May not equal 100% due to rounding

Outlook and Recent Events

Outlook

If you’ve read this report in previous years, you know that I begin this section on a cautionary note regarding the accuracy of forecasted market returns. Correctly and consistently forecasting the market’s behavior is impossible and taking any forecast as fact is sheer folly. We build the Fund according to the tenets set forth in our Investment Policy while making diversification a priority with respect to different asset classes and within each asset class. We endeavor to structure the Fund so it may benefit from strong returns in relatively riskier asset classes but are ever mindful to maintain a level of diversification to dampen the return volatility that can result during more volatile periods.

The outlook for the global economic environment turned decidedly sour during the fiscal year, on continued supply chain pressures due to the global pandemic, surging inflation rates (especially energy prices), and geopolitical risks. World-wide economic activity has experienced downward revisions and high inflation has prompted Central Banks in the U.S. and Europe to raise rates in an attempt to tame those pressures. The U.S. has experienced two consecutive quarters of economic contraction as of the writing of this report. While consumer sentiment is low, the employment picture is much more conducive to a healthier economy. The inflationary pressures felt by consumers is significant in the U.S., as energy and food prices continue to climb. Those pressures are magnified in Europe, as energy prices are heavily impacted by the geopolitical risks associated with the invasion of the Ukraine by Russia. The durability of consumers is being tested across the globe. The balancing act that Central Banks around the world face is taking action that will be aggressive enough to curtail inflationary pressures, but not aggressive enough to induce recessions in their respective economies. Last year, I said the timing of the withdrawal of highly successful monetary global programs was the key to the outlook going forward. The timing of the withdrawal of the Federal Reserve’s support, and indeed, the more aggressive implementation of restrictive policy measures took the market by surprise. This year, I believe the ability of Central Banks across the world to exhibit meaningful progress towards taming inflation is the key driver of the short-term economic outlook.

My largest concern continues to be the prospect of generating and maintaining long-term investment results that match or exceed the actuarial assumed rate of return of 6.5%. Interest rates have risen dramatically as the Federal Reserve attempts to control inflation, but rates remain relatively low on a historical basis. Returns to a diversified portfolio are ultimately a function of the performance of the markets in which that portfolio is invested. The global equity markets have been roiled and the overall performance of the Fund reflects that fact. Negative total return results for the portfolio from equity exposures have been compounded by a quickly rising interest rate environment, which negatively impacted bond market returns. Rising rates will eventually prove beneficial to the fund, but there will likely be more pain from the riskier and even the less risky asset classes in the short term.

Chief Investment Officer's Report (continued)

Fixed Income

Over a long period of time, the total return of the bond market *tends* to resemble the yield of years past. Over short periods, interest rate movements may have a profound impact on the capital gains (or losses) experienced by bond investors. Given the dramatic increase in U.S. Treasury yields (sell-off of bonds) during the fiscal year, the total return of the bond market was negative. Despite this increase in the general level of interest rates, yields in the market continue to be relatively low and unlikely to contribute to portfolio returns at a level that would have a positive impact on the Fund in the short-term. In addition, the Federal Reserve has been increasingly aggressive in raising rates and will continue to do so until a more acceptable level of inflation is attained. The capital losses incurred from a quickly rising rate environment overpowered the yield earned on fixed income investments during the year, leading to negative total returns for the asset class. This dynamic is likely to continue over the course of the next fiscal year, and the expectation for fixed income total returns may well be below the level of current yields, like what we experienced in fiscal 2022. Bonds are a necessary part of a diversified portfolio, but are unlikely to contribute as significantly to the total return of the Fund as the asset class has in the past until rates rise even further from current levels.

Equity

Equity markets are impossible to predict with any type of precision. Over short periods of time, market sentiment and technical factors (buying and selling) have an overwhelming impact on returns experienced by investors. **Over a long period of time**, the real return from the equity markets can be attributable to three main sources: dividends on stocks, the growth rate of corporate earnings, and changes in the valuation ratios. Generally, the growth rate of earnings depends on the economic environment. The outlook for the global economy has dimmed considerably, given the high inflationary pressures facing the world. Until recently, corporate earnings have been surprisingly strong but inflationary forces will likely continue to pressure corporate earnings. Market volatility continues to remain high and is likely to stay elevated over the foreseeable future as investors struggle with uncertainty caused by geopolitical risks (and the impacts on specific economic sectors), rising inflation rates (and the Central Banks' responses), and continued pandemic-related supply chain issues. Pessimism regarding these economic concerns guided the markets down for this fiscal year from the all-time highs. While the mere suggestion of a market recovery may seem improbable at times like this, it is important to remember the history of equity market returns is one that has survived numerous shocks. This means that maintaining discipline with respect to the Fund's strategic equity exposure is essential for recovering from the losses incurred this fiscal year.

Recent Events

There were no changes to the Fund's strategic asset location or managers that comprise the Fund during the fiscal year. It is in years like the one we just experienced, where there were no places to hide (i.e., no "safe" asset classes), that demonstrates the discipline of maintaining the strategic asset allocation is of great importance in achieving the Fund's long-term objectives. As I've mentioned before, we built the portfolio to be able to withstand periods of volatility and tumult, in order to live to fight another day. That's about the best I can say for the Fund's performance in a difficult and ultimately disappointing year.

Investment Philosophy and Guiding Principles

The investment philosophy and the principles that guide the stewardship of the Fund have remained consistent and are listed below. A pension fund has the longest of investment horizons and, therefore, rightly focuses on factors impacting long-term results:

- Asset allocation is the key factor determining long-term results.
- Disciplined rebalancing toward the desired asset allocation maintains diversification and controls risk.
- Diversification within and across asset classes is the most effective tool for controlling risk.
- Passive investment management is commonly the most effective approach in efficient markets; active investment management can succeed in less efficient markets.

Chief Investment Officer's Report (continued)

For a complete discussion of the investment portfolio and policies thereof, please see the Statement of Investment Policy. A copy of the policy is posted on the OPERS website, www.OPERS.OK.gov/Investments. If you have any questions about this report or the management of the Fund's investments, please contact me. Thank you.

Regards,

Brad Tillberg, CFA
Chief Investment Officer

Largest Holdings

The Plan's ten largest fixed income and stock holdings at June 30, 2022, are described in the following schedules. The Plan invests in various index and commingled funds which are separately presented.

Ten Largest Fixed Income Holdings (By Fair Value):

| Security | Par | Fair Value |
|--|-------------|----------------|
| U.S. Treasury notes 2.875% due 06-15-2025 | 118,395,000 | \$ 117,923,269 |
| FNMA Single Family Mortgage 0% 30 Years Settles July | 96,024,100 | 88,511,924 |
| U.S. Treasury bonds 2.5% due 05-15-2046 REG | 80,560,000 | 68,280,893 |
| U.S. Treasury notes 3.25% 06-30-2027 | 66,420,000 | 67,068,632 |
| U.S. Treasury bonds 2% 11-15-2041 | 83,822,000 | 66,573,004 |
| FNMA Single Family Mortgage 0% 30 Years Settles August | 70,663,129 | 64,811,124 |
| U.S. Treasury bonds 2.5% due 02-15-2046 REG | 72,410,000 | 61,398,589 |
| U.S. Treasury bonds 1.375% 08-15-2050 | 89,690,000 | 59,037,742 |
| U.S. Treasury notes 1.125% 01-15-2025 | 58,446,000 | 55,738,307 |
| U.S. Treasury bonds 2.25% due 08-15-2046 | 58,600,000 | 47,250,828 |

Ten Largest Stock Holdings (By Fair Value):

| Security | Shares | Fair Value |
|---|---------|----------------|
| Apple Inc. Common Stock | 771,918 | \$ 105,536,629 |
| Microsoft Corporation Common Stock | 358,292 | 92,020,134 |
| Alphabet Inc. Common Stock | 24,746 | 53,927,968 |
| Amazon.com, Inc. Common Stock | 395,860 | 42,044,291 |
| Tesla Inc Com | 42,088 | 28,342,901 |
| United Health Group Inc Com | 51,103 | 26,248,034 |
| Alphabet Inc. Cap STK | 11,894 | 26,017,530 |
| Meta Platforms Inc | 155,169 | 25,021,001 |
| Visa Inc. Common Stock | 125,230 | 24,656,535 |
| Taiwan Semiconductor Manufacturing Common Stock | 295,706 | 24,173,966 |

Investments in Funds (By Fair Value):

| Fund | Units | Fair Value |
|--|------------|------------------|
| BlackRock Russell 1000 Index Fund | 5,550,138 | \$ 1,691,106,191 |
| BlackRock ACWI ex-U.S. Index Fund | 54,978,272 | 1,622,064,259 |
| BlackRock U.S. TIPS Index Fund | 15,919,931 | 404,365,667 |
| BlackRock Russell 1000 Value Index Fund | 1,859,520 | 318,243,752 |
| BlackRock ACWI ex-U.S. Growth Index Fund | 16,346,801 | 308,592,676 |

A complete list of portfolio holdings is available upon request from the OPERS Investment Accounting and Financial Reporting Department.

Investment Portfolio by Type and Manager

At June 30, 2022, the investment portfolio of OPERS was allocated by type and style as follows:

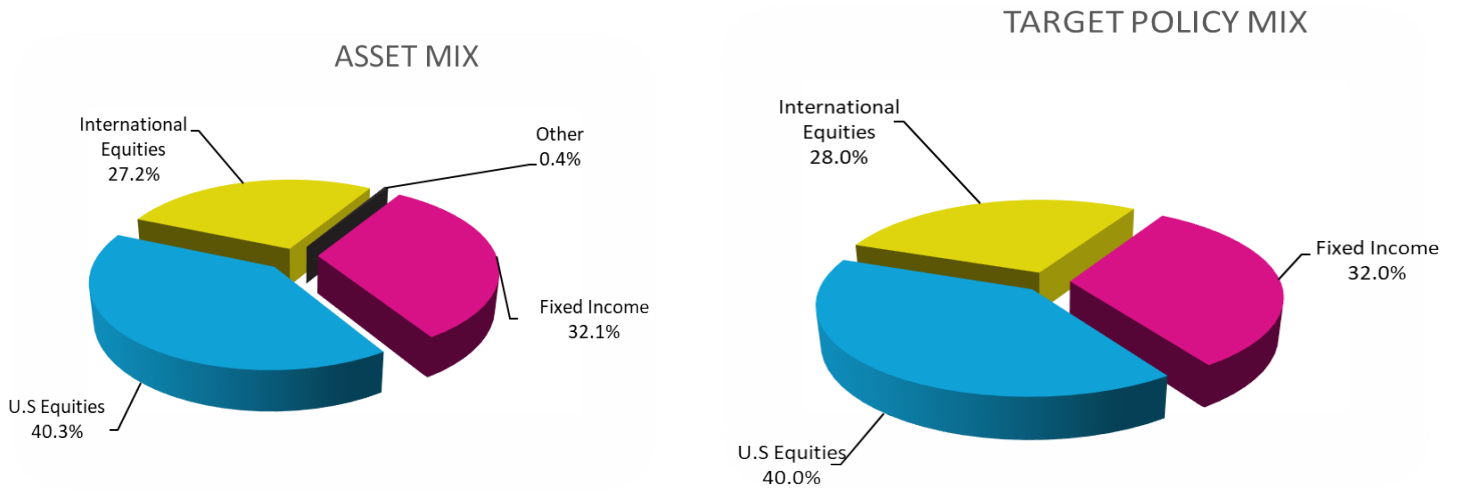
| Investment Type and Manager | Style | Fair Value* | Percent of Total Fair Value |
|---|-------------------------------------|----------------|-----------------------------|
| | | (000's) | |
| Fixed Income: | | | |
| Blackrock Financial Management, Inc. | Constrained Core | \$ 1,724,094 | 16.2% |
| Hoisington Investment Management | Interest Rate Anticipation | 304,430 | 2.9% |
| BlackRock Institutional Trust Company | Index Fund – U.S. TIPS | 404,371 | 3.8% |
| Metropolitan West Asset Management | Core Plus | 1,198,041 | 11.2% |
| Total Fixed Income | | 3,630,936 | 34.1% |
| U.S. Equities: | | | |
| BlackRock Institutional Trust Company | Index Fund – Russell 1000 and Value | 2,009,350 | 18.7% |
| Newton Capital Management | Large cap – Enhanced Index | 629,615 | 5.9% |
| State Street Global Advisors | Large cap – Enhanced Index | 627,173 | 5.9% |
| Westfield Capital Management | Large cap – Growth | 306,266 | 2.9% |
| UBS Global Asset Management | Small cap – Growth | 171,989 | 1.6% |
| Barrow, Hanley, Mewhinney & Strauss, Inc. | Small cap – Value | 212,310 | 2.0% |
| DePrince, Race & Zollo, Inc. | Small cap – Value | 228,153 | 2.1% |
| Total U.S. Equities | | 4,184,856 | 39.1% |
| International Equities: | | | |
| Baillie Gifford Overseas Ltd. | International Growth | 263,617 | 2.5% |
| Mondrian Investment Partners, Ltd. | International Value | 621,687 | 5.8% |
| BlackRock Institutional Trust Company | Index Fund – ACWI ex-U.S. Growth | 308,594 | 2.9% |
| BlackRock Institutional Trust Company | Index Fund – ACWI ex-U.S. | 1,622,067 | 15.2% |
| Total International Equities | | 2,815,965 | 26.4% |
| Short-term Investment Funds | | Operating Cash | 34,973 |
| Total Managed Investments | | 10,666,730 | 99.9% |
| Real Estate | | 8,650 | |
| Securities Lending Collateral | | 481,838 | |
| Cash Equivalents on Deposit with State | | 5,730 | |
| Total Investments and Cash Equivalents | | \$ 11,162,948 | |
| Statement of Fiduciary Net Position | | | |
| Cash Equivalents | | 181,292 | |
| Investments | | 10,981,656 | |
| Total Investments and Cash Equivalents | | \$ 11,162,948 | |

* Manager fair values include their respective cash and cash equivalents.

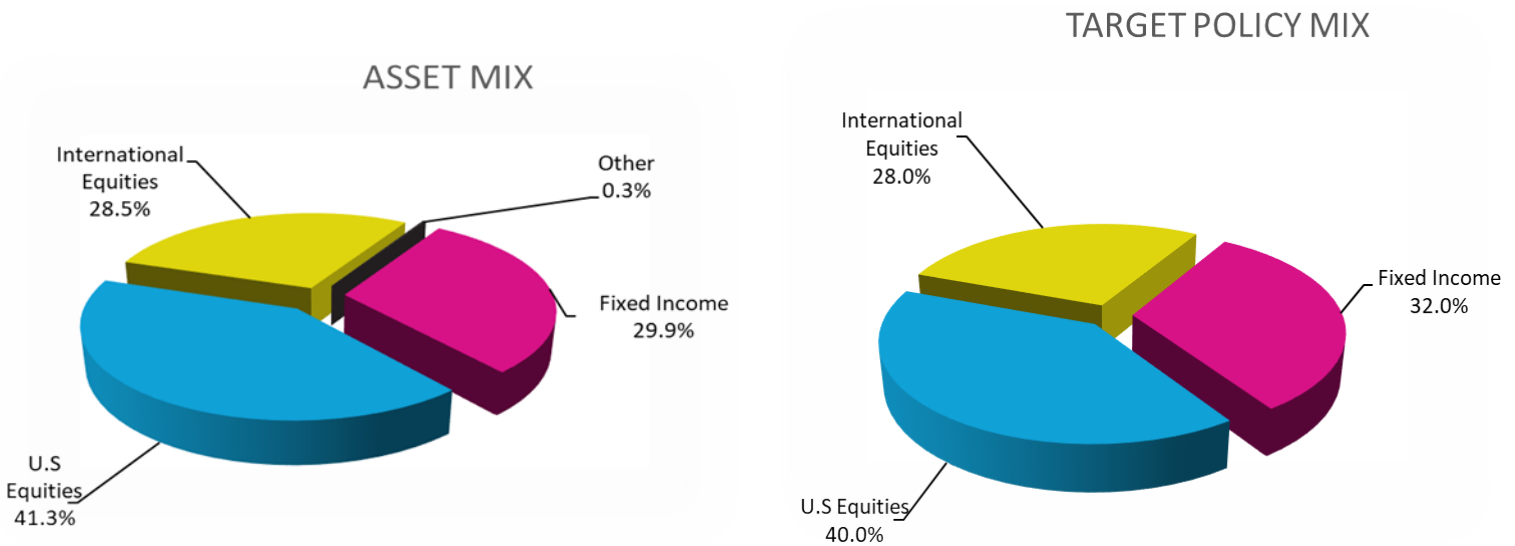
Asset Comparison

A comparison of the actual investment distribution at June 30, 2022 and 2021, based on the net investment manager holdings, including accrued income, payables and receivables, compared to the target allocation for each year is as follows:

2022



2021



Schedule of Stock Brokerage Commissions Paid

Year Ended June 30, 2022

| Brokerage Firm | Shares Traded | Dollar Volume of Trades | Commission | |
|-------------------------------------|--------------------|-------------------------|---------------------|--------------|
| | | | Dollar Amount | Per Share |
| Jonestrading Institutional Services | 6,393,669 | \$ 190,561,966 | \$ 200,904 | 0.031 |
| Goldman Sachs | 8,605,388 | 622,610,426 | 114,203 | 0.013 |
| Stifel, Nicolaus & Company | 2,814,890 | 78,603,017 | 103,828 | 0.037 |
| Instinet | 4,317,578 | 141,144,092 | 94,895 | 0.022 |
| Morgan Stanley | 7,708,598 | 576,886,495 | 84,025 | 0.011 |
| Jefferies | 21,775,669 | 94,354,083 | 79,008 | 0.004 |
| Keybanc Capital Markets | 1,920,094 | 65,047,134 | 75,810 | 0.039 |
| Bofa | 5,853,178 | 425,208,111 | 68,601 | 0.012 |
| Robert W. Baird | 1,776,992 | 57,725,298 | 64,061 | 0.036 |
| Credit Suisse | 4,551,312 | 296,640,897 | 37,965 | 0.008 |
| J.P. Morgan | 4,416,309 | 169,350,130 | 34,184 | 0.008 |
| Raymond James & Associates | 810,121 | 29,287,422 | 31,560 | 0.039 |
| Piper Jaffray | 905,638 | 22,192,906 | 30,911 | 0.034 |
| Stephens | 731,874 | 28,759,374 | 28,045 | 0.038 |
| Merrill Lynch | 3,268,756 | 55,629,843 | 27,027 | 0.008 |
| CJS | 609,797 | 13,834,565 | 21,343 | 0.035 |
| Oneil | 577,398 | 24,494,785 | 20,524 | 0.036 |
| RBC Capital Market | 480,850 | 23,198,282 | 18,979 | 0.039 |
| Liquidnet | 967,680 | 51,198,594 | 18,531 | 0.019 |
| Loop Capital Markets | 1,244,217 | 88,587,181 | 17,913 | 0.014 |
| Other | 31,485,594 | 790,072,093 | 251,486 | 0.008 |
| Total | 111,215,602 | \$ 3,845,386,693 | \$ 1,423,800 | 0.013 |

Provide a First-Class Member Experience

Approach every action with a member-experience focus.

Strive to exceed member expectations.

Foster lifelong relationships and support our members' during retirement decisions.

Provide education and resources to empower members to achieve their retirement goals.

"I love my job. I get some of the most positive people going through the worst situations and gives me hope and inspiration. Sometimes I am able to pass that hope on to the next person to uplift them. It's just a good feeling when you know you have made someone's day better." - Kari

ACTUARIAL

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November 9, 2022

Board of Trustees
Oklahoma Public Employees Retirement System
5400 N Grand Boulevard, Suite 400
P.O. Box 53007
Oklahoma City, OK 73112-5625

Members of the Board:

In this report are submitted the results of the annual valuation of the assets and liabilities of the State of Oklahoma Public Employees Retirement System (“OPERS” or “System”), prepared as of July 1, 2022.

The purpose of this report is to provide a summary of the funded status of the System as of July 1, 2022 and to provide the actuarially determined rate. While not verifying the data at the source, the actuary performed tests for consistency and reasonability. There have been no changes to the actuarial assumptions or methods since the last valuation. However, the Board adopted a new amortization policy that is first reflected in the July 1, 2022 valuation.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. A five-year market-related value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded actuarial accrued liability (UAAL) that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 3.25% annually.

As in recent valuations, liabilities have been calculated without considering future cost of living adjustments (COLAs) and/or stipends in keeping with House Bill 2132 (2011). Should funding of future COLAs and/or stipends be provided by the System, the COLAs and/or stipends should be included in the actuarial valuation. In addition, House Bill 2630 (2014) closes the plan to most new employees hired after November 1, 2015.

We have prepared the Schedule of Funding Progress and Trend Information shown in the financial section of the Annual Comprehensive Financial Report.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems, that the valuation was prepared for funding purposes with assumptions and methods that meet the parameters of the Actuarial Standards of Practice, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results. Future actuarial results may differ significantly from the current results presented in this report due to factors such as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Because the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The Annual Comprehensive Financial Report (ACFR) contains several exhibits that disclose the actuarial position of the System. We have also reviewed the supplemental medical benefits provided by the System under Section 401(h) of the Internal Revenue Code and have determined that these benefits are subordinate to the retirement benefits as required. This annual report, prepared as of July 1, 2022, provides data and tables that we prepared for use in the following sections of the ACFR:

Actuarial Section:

- Analysis of Financial Experience
- Solvency Test
- Schedule of Active Member Valuation Data
- Schedule of Retirants, Disabled Retirants, and Beneficiaries Added to and Removed from Rolls

Statistical Section:

- Member Statistics
- Distribution of Retirees and Beneficiaries
- Summary of Active Members

In our opinion, in order for the System to meet all the benefit obligations of the plan for current active and retired members, contributions equal to at least the actuarially determined rate are necessary for future fiscal years. Assuming these contributions are made to the System, from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated. Because the statutory contribution exceeds the actuarially determined rate in this valuation, we recommend the statutory contribution be used to pay the UAAL down faster than under the current schedule and to protect against future investment and experience losses.

Respectfully submitted,



Alisa Bennett, FSA, EA, FCA, MAAA
President



Brent Banister, PhD, FSA, EA, FCA, MAAA
Chief Actuary

Summary of Results

| | 7/1/2022 Valuation | 7/1/2021 Valuation | % |
|--|-----------------------|-----------------------|---------|
| | | | Change |
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 29,912 | 31,711 | (5.7) |
| Retired and Disabled Members and Beneficiaries | 36,649 | 36,351 | 0.8 |
| Inactive Members | 6,454 | 6,133 | 5.2 |
| Total Members | 73,015 | 74,195 | (1.6) |
| Projected Annual Salaries of Active Members | \$ 1,527,059,370 | \$ 1,556,561,344 | (1.9) |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 675,895,605 | \$ 661,011,030 | 2.3 |
| 2. ASSETS AND LIABILITIES | | | |
| Total Actuarial Accrued Liability | \$ 11,139,885,081 | \$ 11,046,240,166 | 0.8 |
| Market Value of Assets | \$ 10,392,907,883 | \$ 12,525,883,234 | (17.0) |
| Actuarial Value of Assets | \$ 11,311,760,330 | \$ 10,991,205,271 | 2.9 |
| Unfunded Actuarial Accrued Liability | \$ (171,875,249) | \$ 55,034,895 | (412.3) |
| Funded Ratio | 101.54% | 99.50% | 2.1 |
| 3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL | | | |
| Normal Cost Rate | 10.81% | 10.83% | |
| Amortization of Unfunded Actuarial Accrued Liability | (0.41%) | 0.52% | |
| Budgeted Expenses | 0.56% | 0.48% | |
| Total Actuarially Determined Contribution Rate | 10.96% | 11.83% | |
| Less Estimated Member Contribution Rate | 4.28% | 4.25% | |
| Employer Actuarially Determined Contribution Rate | 6.68% | 7.58% | |
| Less Statutory State Employer Contribution Rate | 16.50% | 16.50% | |
| Contribution Shortfall/(Surplus) | (9.82%) | (8.92%) | |

Analysis of Financial Experience

**Gains & Losses in Actuarial Accrued Liability During the Year Ended June 30, 2022
Resulting from Differences Between Assumed Experience & Actual Experience**

| <u>Type of Activity</u> | <u>(Gain) or Loss for Year End 2022</u> |
|--|---|
| 1. Age & Service Retirements. Generally, if members retire at older ages or with smaller benefits than assumed, there is a gain. If they retire at younger ages or have higher average pays, a loss occurs. | \$ (4,600,000) |
| 2. Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss. | 900,000 |
| 3. Deaths. If more deaths occur than assumed, there is a gain. If fewer, there is a loss. | (33,000,000) |
| 4. Withdrawal from Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss. | (32,900,000) |
| 5. Pay Increases. If there are smaller pay increase than assumed, there is a gain. If greater increases, a loss. | 14,200,000 |
| 6. New Entrants. All new entrants to the System create a loss. | 21,000,000 |
| 7. Other. Miscellaneous gains and losses resulting from data adjustments, employee transfers, valuation methods, etc. | (36,700,000) |
| 8. (Gain) or Loss During Year from Financial Experience. | <u>38,400,000</u> |
| 9. Composite (Gain) or Loss During Year. | <u>\$ (32,700,000)</u> |

Solvency Test

The OPERS funding objective is to be able to pay long-term benefit promises through contributions that remain approximately level from year to year as a percent of salaries earned by members. In this way, members and employers in each year pay their fair share for retirement service accrued in that year by OPERS members.

If the retirement system follows level contribution rate financing principles, the system will pay all promised benefits when due – the ultimate test of financial soundness.

A short-term solvency test is one means of monitoring OPERS funding progress. In a short-term solvency test, the retirement System’s present valuation assets are compared with: 1) active member contributions on deposit, 2) the liabilities for future benefits to persons who have retired and the liabilities for terminated employees with vested benefits, and 3) the liabilities for service already rendered by active members. In a system that has been following the discipline of level contribution rate financing, the liabilities for member contributions on deposit (liability 1), the liabilities for future benefits to present retirees and the liabilities for future benefits for terminated employees (liability 2) will be fully covered by present assets, except in rare circumstances.

In addition, the liabilities for service already rendered by members (liability 3) will be partially covered by the remainder of present assets. Generally, if the system has been using level contribution rate financing, the funded portion of liability 3 will increase over time; however, a decrease generally occurs in those years when substantial benefit improvements are granted by the Legislature. It is unusual for liability 3 to be fully funded. The funded ratio of the System based on total actuarial accrued liabilities (1 + 2 + 3) provides an indication of how well the System is funded.

The schedule below illustrates the progress of funding the actuarial accrued liabilities of OPERS.

| Date | Actuarial Accrued Liability and Valuation Assets (in thousands) | | | | | Portion of Actuarial Accrued Liability Covered by Reported Assets | | | |
|--------------|---|---|---|-----------------------------|------------------------------|---|-----|-------|---|
| | Active Member Contributions (Liability 1) | Retirees, Beneficiaries and Terminated Vested Members (Liability 2) | Employer Financed Portion of Active Members (Liability 3) | Total Liability (1 + 2 + 3) | Reported Assets ¹ | (1) | (2) | (3) | Funded Ratio of Total Accrued Actuarial Liability |
| July 1, 2013 | 517,653 | 5,032,769 | 3,005,700 | 8,556,122 | 6,978,873 | 100 | 100 | 47.5 | 81.6 |
| July 1, 2014 | 534,081 | 5,184,818 | 3,034,770 | 8,753,669 | 7,759,258 | 100 | 100 | 67.2 | 88.6 |
| July 1, 2015 | 537,046 | 5,417,604 | 3,041,476 | 8,996,126 | 8,420,307 | 100 | 100 | 81.1 | 93.6 |
| July 1, 2016 | 545,020 | 5,757,019 | 3,125,771 | 9,427,810 | 8,790,886 | 100 | 100 | 79.6 | 93.2 |
| July 1, 2017 | 549,211 | 6,131,997 | 3,100,409 | 9,781,617 | 9,241,292 | 100 | 100 | 82.6 | 94.5 |
| July 1, 2018 | 550,806 | 6,312,792 | 3,020,536 | 9,884,134 | 9,658,126 | 100 | 100 | 92.5 | 97.7 |
| July 1, 2019 | 549,813 | 6,463,941 | 3,033,620 | 10,047,374 | 9,909,684 | 100 | 100 | 95.5 | 98.6 |
| July 1, 2020 | 561,222 | 7,061,087 | 3,320,770 | 10,943,079 | 10,212,241 | 100 | 100 | 78.0 | 93.3 |
| July 1, 2021 | 566,231 | 7,153,298 | 3,326,711 | 11,046,240 | 10,991,205 | 100 | 100 | 84.0 | 99.5 |
| July 1, 2022 | 562,043 | 7,255,971 | 3,321,871 | 11,139,885 | 11,311,760 | 100 | 100 | 100.0 | 101.5 |

¹Actuarial value of assets based on the smoothing technique adopted by Board.

Schedule of Active Member Valuation Data

| Valuation Date | Number | Annual Payroll | Annual Average Pay | % Increase in Average Pay |
|----------------|--------|-----------------|--------------------|---------------------------|
| July 1, 2022 | 29,912 | \$1,527,059,370 | \$51,052 | 4.01 |
| July 1, 2021 | 31,711 | 1,556,561,344 | 49,086 | 3.40 |
| July 1, 2020 | 33,115 | 1,571,954,116 | 47,470 | 3.46 |
| July 1, 2019 | 34,536 | 1,584,630,994 | 45,883 | 4.11 |
| July 1, 2018 | 36,329 | 1,601,074,591 | 44,072 | 1.46 |
| July 1, 2017 | 38,873 | 1,688,543,856 | 43,437 | 1.40 |
| July 1, 2016 | 41,806 | 1,790,809,603 | 42,836 | 3.82 |
| July 1, 2015 | 43,843 | 1,808,972,785 | 41,260 | 3.97 |
| July 1, 2014 | 43,947 | 1,744,041,536 | 39,685 | 1.29 |
| July 1, 2013 | 43,273 | 1,695,347,809 | 39,178 | 2.08 |

Schedule of Retirants, Disabled Retirants, and Beneficiaries Added to and Removed from Rolls

| Year Ended | Added to Rolls | | Removed from Rolls | | Rolls – End of Year | | % Increase in Annual Allowances | Average Annual Allowances |
|---------------|----------------|-------------------|--------------------|-------------------|---------------------|-------------------|---------------------------------|---------------------------|
| | Number | Annual Allowances | Number | Annual Allowances | Number | Annual Allowances | | |
| June 30, 2022 | 1,540 | \$33,720,630 | 1,242 | \$ 17,557,131 | 36,649 | \$ 675,895,605 | 2.25 | \$18,442 |
| June 30, 2021 | 1,533 | 32,437,822 | 1,361 | 18,575,689 | 36,351 | 661,011,030 | 1.90 | 18,184 |
| June 30, 2020 | 1,475 | 29,864,562 | 1,165 | 15,376,187 | 36,179 | 648,673,669 | 5.55 | 17,930 |
| June 30, 2019 | 1,692 | 33,093,583 | 1,083 | 13,816,679 | 35,869 | 614,578,512 | 3.24 | 17,134 |
| June 30, 2018 | 1,692 | 31,763,873 | 1,011 | 13,010,324 | 35,260 | 595,301,608 | 3.25 | 16,883 |
| June 30, 2017 | 1,846 | 35,653,217 | 1,016 | 12,736,245 | 34,579 | 576,548,059 | 4.14 | 16,673 |
| June 30, 2016 | 1,986 | 37,356,248 | 991 | 12,505,069 | 33,749 | 553,631,087 | 4.70 | 16,404 |
| June 30, 2015 | 1,898 | 35,731,879 | 977 | 11,895,298 | 32,754 | 528,779,908 | 4.72 | 16,144 |
| June 30, 2014 | 1,667 | 28,477,713 | 969 | 11,707,809 | 31,833 | 504,943,327 | 3.44 | 15,862 |
| June 30, 2013 | 1,767 | 31,633,122 | 895 | 10,184,240 | 31,135 | 488,173,423 | 4.60 | 15,679 |

Supplementary Information

The schedule of changes in the net pension and OPEB liabilities present a schedule of funding progress for each of the ten most recent years based on the actuarial methods and assumptions used for funding purposes. These schedules are intended to show a 10-year trend and additional years will be reported as they become available. 2017 was the first year to exclude the Medical Supplement.

GASB 67 Paragraph 36.b. Schedule of Changes in the Net Pension Liability/(Asset)

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------|
| Total Pension Liability | \$10,828,046,484 | \$10,725,571,917 | \$10,614,647,291 | \$9,726,326,176 | \$9,555,990,069 | \$9,454,641,808 | \$9,427,809,623 | \$8,996,125,901 | \$8,753,669,153 | |
| Plan Fiduciary Net Position | <u>9,987,481,670</u> | <u>12,067,732,648</u> | <u>9,722,484,043</u> | <u>9,593,138,099</u> | <u>9,360,947,061</u> | <u>8,913,978,627</u> | <u>8,435,578,907</u> | <u>8,636,441,984</u> | <u>8,570,104,910</u> | |
| Net Pension Liability | \$840,564,814 | (\$1,342,160,731) | \$892,163,248 | \$133,188,077 | \$195,043,008 | \$540,663,181 | \$992,230,716 | \$359,683,917 | \$183,564,243 | |
| Ratio of Plan Fiduciary Net Position to Total Pension Liability | 92.24% | 112.51% | 91.59% | 98.63% | 97.96% | 94.28% | 89.48% | 96.00% | 97.90% | |
| Covered payroll | \$1,556,561,000 | \$1,571,954,000 | \$1,584,631,000 | \$1,601,075,000 | \$1,688,544,000 | \$1,790,809,603 | \$1,808,972,785 | \$1,744,041,536 | \$1,695,347,809 | |
| Net Pension Liability as a percentage of covered payroll | 54.00% | -85.38% | 56.30% | 8.32% | 11.55% | 30.19% | 54.85% | 20.62% | 10.83% | |

GASB 74 Paragraph 36.b. Schedule of Changes in the Net OPEB Liability/(Asset)

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|--|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------|------|------|
| Total OPEB Liability | | \$311,838,597 | \$320,668,249 | \$328,431,762 | \$321,048,037 | \$328,143,546 | \$326,975,262 | | | |
| Plan Fiduciary Net Position | | <u>405,426,213</u> | <u>458,150,586</u> | <u>375,314,784</u> | <u>359,922,778</u> | <u>341,084,506</u> | <u>315,521,246</u> | | | |
| Net OPEB Liability | | (\$93,587,616) | (\$137,482,337) | (\$46,883,022) | (\$38,874,741) | (\$12,940,960) | \$11,454,016 | | | |
| Ratio of Plan Fiduciary Net Position to Total OPEB Liability | | 130.01% | 142.87% | 114.27% | 112.11% | 103.94% | 96.50% | | | |
| Covered payroll | | N/A | N/A | N/A | N/A | N/A | N/A | | | |
| Net OPEB Liability as a percentage of covered payroll | | N/A | N/A | N/A | N/A | N/A | N/A | | | |

Summary of System Provisions

Effective Date: The System became effective January 1, 1964. The fiscal year is July 1 to June 30.

Employees Included: All permanent employees of the State of Oklahoma, and any other employer such as a county, county hospital, city or town, conservation districts, circuit engineering districts, and any trust in which a county, city, or town participates and is the primary beneficiary, are eligible to join if:

- the employee is not eligible for or participating in another retirement system authorized under Oklahoma law, is covered by Social Security and not participating in the U.S. Civil Service Retirement System,
- the employee is scheduled for 1,000 hours per year and salary is not less than the hourly rate of the monthly minimum wage for State employees (for employees of local government employers, not less than the hourly rate of the monthly minimum wage for such employees).

Membership is mandatory for new eligible employees on the first of the month following employment. Beginning November 1, 2015, most new state employees are excluded from participating in the defined benefit plan.

Employee and Employer Contributions: 3.5% of pay for most State employees and 16.5% for employers. Local employees, elected officials, members covered by the Department of Corrections Hazardous Duty provisions, and members who elect the step up provision contribute at varying rates.

Final Average Compensation: Generally the highest annual average of any thirty-six months within the last ten years of participating service. For members hired on or after July 1, 2013, the highest annual average of any sixty months within the last ten years of participating service.

Retirement Date:
Normal: Age 62 (age 60 for elected officials), 80 age/service points if hired before July 1, 1992, 90 age/service points if hired on or after July 1, 1992.

For non-elected employees hired on or after November 1, 2011, the retirement age is age 65 or 90 age/service points if at least 60. For elected officials hired on or after November 1, 2011, age 65 with 8 years of service or 62 with 10 years of service.

Summary of System Provisions (continued)

| | |
|--|---|
| | 20 years of service for certain members covered by the Department of Corrections Hazardous Duty provisions, Grand River Dam Authority Public Safety Officers Provisions, and certain Oklahoma Military Department Firefighters. |
| <i>Early:</i> | Age 55 with 10 years of service. |
| <i>Normal Retirement Benefit:</i> | General formula is 2% of final average compensation multiplied by years of credited service. |
| <i>Disability Benefit:</i> | After eight years of service, provided the member qualifies for disability benefits as certified either by the Social Security Administration or the Railroad Retirement Board. Benefit is determined by the normal retirement formula based on service and salary history at date of disability. The benefit is payable immediately without actuarial reduction. |
| <i>In-service Death Benefit:</i> | <p>If the deceased member was vested, the benefit that would have been paid the member had he retired and elected the joint and 100% survivor option (Option B).</p> <p>For elected officials, it is 50% of the benefit that would have been paid the member had he retired.</p> |
| <i>Postretirement Death Benefit:</i> | \$5,000 lump-sum. |
| <i>Forms of Payment:</i> | Life annuity, joint and 50% survivor, joint and 100% survivor annuity, life annuity with a minimum of 120 monthly payments, and Medicare Gap Benefit option. |
| <i>Supplemental Medical Insurance Premium:</i> | The System will contribute the lesser of \$105 per month or the Medicare Supplement Premium to the Office of Management and Enterprise Services, Employees Group Insurance Division (or other eligible employer health plans) for members receiving retirement benefits. |

Summary of Actuarial Assumptions and Methods

1. The investment return rate used in the valuation was 6.50 percent per year, net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of return in excess of the inflation rate. Considering other financial assumptions, the 6.50 percent investment return rate translates to an assumed real rate of return of 4.00 percent.
2. Pub-2010 Below Median, General Membership Active/Retiree Healthy Mortality Table with base rates projected to 2030 using Scale MP-2019. Male rates are unadjusted and female rates are set forward two years.
3. The probabilities of withdrawal from service, together with individual pay increase assumptions, are shown in Schedule 1.
4. The probabilities of retirement with an age and service allowance are shown in Schedules 2A, 2B and 2C.
5. Because of the passage of House Bill 2132, benefits are not assumed to increase due to future ad hoc cost-of-living increases.
6. The individual entry-age normal actuarial cost method of valuation was used in determining actuarial accrued liability and normal cost. The unfunded actuarial accrued liability as of July 1, 2021 is amortized as a level percent of payroll over a 20-year closed period commencing July 1, 2007. New experience bases due to assumption changes or actual experience gains/losses will be established each year and amortized over closed 15-year periods.
7. The actuarial value of assets is based on a five-year moving average of expected actuarial values and market values. A preliminary expected value is determined equal to the prior year's actuarial value of assets plus net cash flow for the year ending on the valuation date, assuming the valuation investment return. The expected actuarial asset value is equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous fiscal year. Twenty percent (20%) of the gain/loss as measured by the difference between the expected actuarial value and the market value at the valuation date is added to the preliminary expected actuarial value plus twenty percent (20%) of the unrecognized gains or losses for the four preceding fiscal years. The final result is constrained to a value no less than 80% and no more than 120% of the market value at the valuation date.
8. The actuarial assumptions and methods used in the valuation were adopted by the Board based on System experience from July 1, 2016 through June 30, 2019.

Summary of Actuarial Assumptions and Methods (continued)

Schedule 1

Withdrawal From Active Employment Before Age & Service Retirement and Individual Pay Increase Assumptions

| Sample Service Values | Withdrawal | Sample Ages | Percent Increase in Individual's Pay During Next Year |
|-----------------------|------------|-------------|---|
| 1 | 22.00% | 25 | 7.55% |
| 5 | 10.50 | 30 | 6.05 |
| 10 | 6.00 | 35 | 5.25 |
| 15 | 4.30 | 40 | 4.95 |
| 20 | 3.00 | 45 | 4.55 |
| 25 | 1.80 | 50 | 4.25 |
| | | 55 | 4.05 |
| | | 60 | 3.55 |
| | | 65 | 3.25 |

Schedule 2A

Percent of Regular Non-Elected Members Retiring Within Next Year

| Retirement Ages | Hired Prior to 11/1/2011 | | Hired on or After 11/1/2011 | |
|-----------------|--------------------------|----------------------|-----------------------------|----------------------|
| | Eligible for Unreduced | Eligible for Reduced | Eligible for Unreduced | Eligible for Reduced |
| 50-54 | 15% | | | |
| 55 | 10% | 4% | | |
| 56 | 10% | 4% | | |
| 57 | 11% | 4% | | |
| 58 | 12% | 4% | | |
| 59 | 13% | 5% | | |
| 60 | 14% | 6% | 30/15%* | 5% |
| 61 | 20% | 13% | 30/15%* | 6% |
| 62 | 25% | | 30/15%* | 6% |
| 63 | 15% | | 30/15%* | 6% |
| 64 | 15% | | 30/15%* | 13% |
| 65 | 30% | | 30/15%* | |
| 66-69 | 25% | | 25% | |
| 70-74 | 50% | | 50% | |
| 75 | 100% | | 100% | |

*30% when first eligible to retire and 15% thereafter

Summary of Actuarial Assumptions and Methods (continued)

Schedule 2B

Percent of Elected Members Retiring Within Next Year

| Retirement Ages | Elected Prior to 11/1/2011 | | Elected on or After 11/1/2011 | |
|--------------------|----------------------------|-------------------------|-------------------------------|-------------------------|
| | Eligible for Unreduced | Eligible for Reduced | Eligible for Unreduced | Eligible for Reduced |
| 50-54 | 25% | | | |
| 55-59 | 20% | 7% | | |
| 60-61 | 20% | | | 10% |
| 62-66 | 20% | | 20% | |
| 67-74 | 35% | | 35% | |
| 75 | 100% | | 100% | |

Schedule 2C

Percent of Hazardous Duty Members Retiring Within Next Year

Hazardous Duty Members With Less Than 20 Years of Service

| Retirement Ages | Hired Prior To 11/1/2011 | Hired on or After 11/1/2011 |
|--------------------|-----------------------------|--------------------------------|
| 55 | 4% | |
| 56-59 | 5% | |
| 60 | 5% | 7% |
| 61 | 20% | 20% |
| 62 | 40% | 20% |
| 63 | 22% | 20% |
| 64 | 25% | 20% |
| 65 | 40% | 40% |
| 66 | 25% | 25% |
| 67 | 25% | 23% |
| 68 | 25% | 22% |
| 69 | 25% | 21% |
| 70 | 100% | 100% |

Summary of Actuarial Assumptions and Methods (continued)

Hazardous Duty Members With 20 or More Years of Service

| Service | Percent |
|----------------|----------------|
| 20 | 25% |
| 21 | 25% |
| 22 | 20% |
| 23 - 24 | 15% |
| 25 - 29 | 23% |
| 30 - 34 | 25% |
| 35 | 100% |

Collaborate for Success

Effective when working as a team with one purpose.

Search for opportunities to work collaboratively and efficiently as a team.

Value open and transparent communication.

Respect and value individual and cultural differences to create an environment of inclusiveness.

"The OPERS culture has shifted from being "non-existent" and not discussed, to the focus of our daily operations and interactions. Being a part of this initiative has been very rewarding as I have seen first-hand, a significant improvement in the agency dynamic between departments, staff, and leadership." -Justin

STATISTICAL

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The Statistical Section provides additional historical perspective, context, and detail to assist the reader in using the information in the financial statements, notes to financial statements and required supplementary information to understand and assess the economic condition of the Oklahoma Public Employees Retirement System (OPERS) on a combined basis, including both the Defined Benefit Pension Plan and the Health Insurance Subsidy Plan.

Financial trend information is intended to assist users in understanding and assessing the changes in the financial position over time. Schedules presenting financial trend information are *Schedule of Changes in Fiduciary Net Position, Schedule of Revenue by Source, Schedule of Expenses by Type, Schedule of Benefit Payments and Refunds by Type, and Funded Ratio Chart*.

Revenue capacity information is intended to assist users in understanding and assessing the factors affecting the ability of OPERS to generate own-source revenue, specifically investment income. The schedule presenting revenue capacity information is the *Rate of Return by Type of Investment*.

Operating information is intended to provide contextual information about the operations and resources of OPERS to assist readers in using financial statement information to understand and assess the economic condition. Schedules and charts presenting operating information are *Schedule of Retired Members by Type of Benefit, Schedule of Average Benefit Payments, Principal Participating Employer, Demographics Chart, Participating Employers, Member Statistics**, *Distribution of Retirees and Beneficiaries**, *Summary of Active Members**.

Schedules and information are derived from OPERS internal sources unless otherwise noted.

*Schedules and data are provided by actuarial consultant Cavanaugh McDonald, LLC.

Schedule of Changes in Fiduciary Net Position

| Year Ended June 30, | Additions | | | Deductions | | | Total Changes in Fiduciary Net Position |
|---------------------|----------------------|------------------------|--------------------------|------------------|-------------------------|---------------|---|
| | Member Contributions | Employer Contributions | Investment Income (Loss) | Benefit Payments | Administrative Expenses | Refunds | |
| 2022 | \$ 66,392,310 | \$ 299,743,221 | \$ (1,788,499,242) | \$ 692,813,323 | \$ 5,892,553 | \$ 11,905,764 | \$ (2,132,975,351) |
| 2021 | 66,204,166 | 293,018,730 | 2,764,349,697 | 679,280,964 | 5,474,638 | 10,732,584 | 2,428,084,407 |
| 2020 | 67,808,024 | 294,118,022 | 449,829,713 | 646,840,289 | 5,726,012 | 14,451,508 | 144,737,950 |
| 2019 | 66,566,433 | 282,473,659 | 568,130,487 | 639,964,683 | 5,754,961 | 15,369,288 | 251,029,310 |
| 2018 | 66,929,560 | 277,987,270 | 760,477,994 | 611,565,882 | 5,339,987 | 15,957,261 | 472,531,694 |
| 2017 | 70,276,234 | 288,338,941 | 1,049,614,508 | 592,961,277 | 5,397,137 | 15,950,303 | 793,920,966 |
| 2016 | 73,800,890 | 296,249,191 | 15,756,524 | 565,412,267 | 5,394,992 | 15,862,423 | (200,863,077) |
| 2015 | 73,145,380 | 292,184,940 | 264,289,114 | 542,488,709 | 5,182,848 | 15,610,803 | 66,337,074 |
| 2014 | 70,523,854 | 280,047,664 | 1,317,980,271 | 520,641,175 | 4,708,895 | 14,878,427 | 1,128,323,292 |
| 2013 | 68,200,616 | 269,994,831 | 804,177,712 | 502,636,899 | 4,612,783 | 14,645,400 | 620,478,077 |

Schedule of Revenue by Source

| Year Ended June 30, | Member Contributions | Employer Contributions | | Investment Income (Loss) | Total |
|------------------------|----------------------|------------------------|-----------------------------|--------------------------------|--------------------|
| | | Dollars | % of Annual Covered Payroll | | |
| 2022 | \$ 66,392,310 | \$ 299,743,221 | 19.63 % | \$ (1,788,499,242) | \$ (1,422,363,711) |
| 2021 | 66,204,166 | 293,018,730 | 18.82 | 2,764,349,697 | 3,123,572,593 |
| 2020 | 67,808,024 | 294,118,022 | 18.71 | 449,829,713 | 811,755,759 |
| 2019 | 66,566,433 | 282,473,659 | 17.83 | 568,130,487 | 912,118,242 |
| 2018 | 66,929,560 | 277,987,270 | 17.36 | 760,477,994 | 1,105,394,824 |
| 2017 | 70,276,234 | 288,338,941 | 17.08 | 1,049,614,508 | 1,408,229,683 |
| 2016 | 73,800,890 | 296,249,191 | 16.54 | 15,756,524 | 385,806,605 |
| 2015 | 73,145,380 | 292,184,940 | 16.15 | 264,289,114 | 629,619,434 |
| 2014 | 70,523,854 | 280,047,664 | 16.06 | 1,317,980,271 | 1,668,551,789 |
| 2013 | 68,200,616 | 269,994,831 | 15.93 | 804,177,712 | 1,142,373,159 |

Schedule of Expenses by Type

| Year Ended June 30, | Benefit Payments | Administrative Expenses | Withdrawals | Total |
|------------------------|------------------|-------------------------|---------------|----------------|
| 2022 | \$ 692,813,323 | \$ 5,892,553 | \$ 11,905,764 | \$ 710,611,640 |
| 2021 | 679,280,964 | 5,474,638 | 10,732,584 | 695,488,186 |
| 2020 | 646,840,289 | 5,726,012 | 14,451,508 | 667,017,809 |
| 2019 | 639,964,684 | 5,754,961 | 15,369,288 | 661,088,932 |
| 2018 | 611,565,882 | 5,339,987 | 15,957,261 | 632,863,130 |
| 2017 | 592,961,277 | 5,397,137 | 15,950,303 | 614,308,717 |
| 2016 | 565,412,267 | 5,394,992 | 15,862,423 | 586,669,682 |
| 2015 | 542,488,709 | 5,182,848 | 15,610,803 | 563,282,360 |
| 2014 | 520,641,175 | 4,708,895 | 14,878,427 | 540,228,497 |
| 2013 | 502,636,899 | 4,612,783 | 14,645,400 | 521,895,082 |

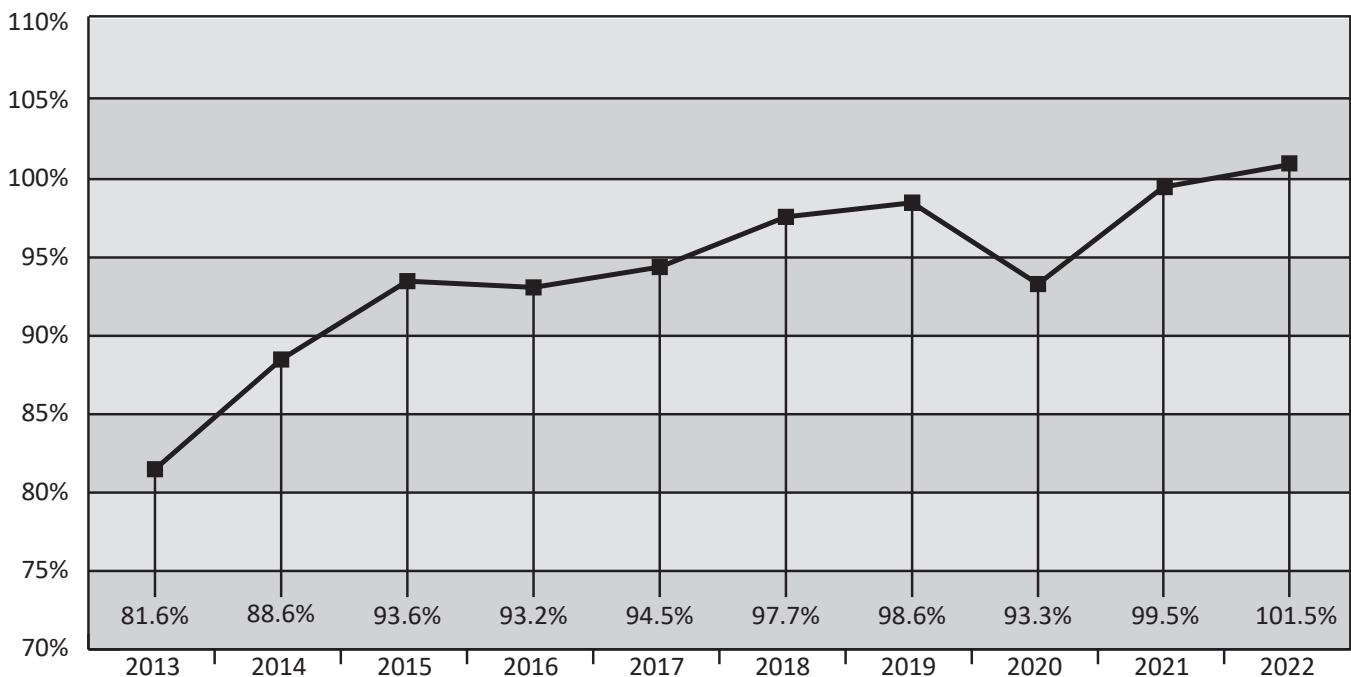
Schedule of Benefit Payments and Refunds by Type

The following schedule provides information as to the type of benefit expenses incurred by the Plan as reflected in the “Benefit Payment” and “Refunds” columns of the **Schedule of Expenses by Type** included elsewhere in this Statistical Section.

| Year Ended June 30, | Benefits | | | | Refunds | | | Total Benefit Payments and Refunds |
|---------------------|-----------------|---------------|-------------------|--------------|----------------------|--------------|------------|------------------------------------|
| | Age and Service | Disability | Beneficiary Death | Withdrawals | Transfers to Systems | Member Death | Other | |
| 2022 | \$ 670,557,157 | \$ 15,968,220 | \$ 6,287,946 | \$ 8,599,383 | \$ 2,325,154 | \$ 853,773 | \$ 127,454 | \$704,719,087 |
| 2021 | 656,256,513 | 16,578,207 | 6,446,243 | 7,293,815 | 2,150,564 | 1,215,103 | 73,103 | 690,013,548 |
| 2020 | 624,283,035 | 16,704,506 | 5,852,750 | 8,297,248 | 4,930,490 | 789,120 | 434,650 | 661,291,798 |
| 2019 | 616,796,975 | 17,598,163 | 5,569,545 | 10,664,312 | 3,522,635 | 881,612 | 300,729 | 655,333,972 |
| 2018 | 588,815,903 | 17,173,572 | 5,576,407 | 10,704,430 | 4,128,787 | 916,168 | 207,876 | 627,523,143 |
| 2017 | 569,870,507 | 17,597,316 | 5,493,454 | 11,827,836 | 3,219,022 | 746,849 | 156,596 | 608,911,580 |
| 2016 | 542,788,467 | 17,433,604 | 5,190,196 | 9,866,169 | 5,069,244 | 798,666 | 128,344 | 581,274,690 |
| 2015 | 522,513,529 | 14,775,998 | 5,199,181 | 10,562,956 | 3,988,925 | 897,939 | 160,984 | 558,099,512 |
| 2014 | 498,432,095 | 17,292,985 | 4,916,095 | 10,276,798 | 3,881,544 | 682,179 | 37,906 | 535,519,602 |
| 2013 | 480,885,816 | 17,325,263 | 4,425,820 | 10,423,136 | 3,191,104 | 897,727 | 133,433 | 517,282,299 |

Funded Ratio Chart

As of July 1



Rate of Return by Type of Investment

| Year Ended June 30, | Fixed Income | U.S. Equity | International Equity | Total |
|------------------------------------|-------------------------|------------------------|---------------------------------|--------------|
| 2022 | (11.0) % | (13.1) % | (20.8) % | (14.5) % |
| 2021 | 0.1 | 46.0 | 36.9 | 28.0 |
| 2020 | 11.7 | 3.8 | (3.2) | 4.5 |
| 2019 | 8.4 | 7.1 | 2.0 | 6.1 |
| 2018 | 0.3 | 15.5 | 7.3 | 8.4 |
| 2017 | (0.6) | 19.6 | 19.2 | 12.8 |
| 2016 | 7.1 | (0.2) | (7.7) | 0.3 |
| 2015 | 2.5 | 7.9 | (4.4) | 3.2 |
| 2014 | 5.1 | 25.6 | 21.9 | 18.0 |
| 2013 | (1.0) | 22.7 | 13.9 | 12.0 |

Schedule of Retired Members by Type of Benefit

June 30, 2022

| Amount of Monthly Benefit | Number of Retirees | Type of Retirement | | | | | Option Selected | | | |
|------------------------------|-----------------------|--------------------|--------------|--------------|--------------|------------|-----------------|--------------|--------------|------------|
| | | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 |
| \$1 – 1,000 | 14,847 | 8,319 | 2,962 | 2,423 | 810 | 333 | 8,224 | 2,914 | 3,472 | 237 |
| 1,001 – 2,000 | 12,018 | 9,834 | 580 | 1,207 | 389 | 8 | 6,658 | 2,061 | 3,141 | 158 |
| 2,001 – 3,000 | 6,099 | 5,649 | 55 | 370 | 25 | - | 3,180 | 1,098 | 1,715 | 106 |
| 3,001 – 4,000 | 2,186 | 2,026 | 6 | 151 | 3 | - | 1,054 | 369 | 732 | 31 |
| 4,001 – 5,000 | 860 | 819 | 5 | 36 | - | - | 420 | 153 | 275 | 12 |
| Over 5,000 | 639 | 621 | 4 | 14 | - | - | 318 | 103 | 211 | 7 |
| Totals | 36,649 | 27,268 | 3,612 | 4,201 | 1,227 | 341 | 19,854 | 6,698 | 9,546 | 551 |

Type of Retirement

- Type 1 – *Normal retirement for age and service:* Eligible at (1) age 62 or (2) when the sum of the member's age plus years of service equals 80 points for those who became members before July 1, 1992 and 90 points for those becoming members after that date. Members joining OPERS after November 1, 2011 are eligible at (1) age 65 or (2) when reaching 90 points and at least age 60.
- Type 2 – *Early retirement:* Eligible beginning at age 55 with ten (10) years of participating service. Members joining OPERS after November 1, 2011 are eligible for early retirement beginning at age 60.
- Type 3 – *Survivor payment:* Normal or early retirement.
- Type 4 – *Disability:* Eligible if member is qualified for payment of disability benefits as certified by the Social Security Administration, has eight (8) years of credited service, and has terminated employment.
- Type 5 – *Survivor payment:* Disability retirement.

Option Selected

- Option 1 – *Single-life annuity:* The maximum benefit is paid for the member's lifetime.
- Option 2 – *Option A – ½ Joint and Survivor Annuity:* The member will receive a reduced retirement benefit for life and ½ of the reduced retirement benefit will be paid to the surviving joint annuitant for their lifetime.
- Option 3 – *Option B – 100% Joint and Survivor Annuity:* A reduced benefit is paid to the member for life and the same benefit is paid to a surviving joint annuitant for their lifetime.
- Option 4 – *Option C – Single-life Annuity with a 10-Year Certain Period:* The member will receive a reduced benefit for their lifetime. If the member dies within ten years of when the benefit payments began, the monthly payment will be made to the beneficiary for the balance of the 10-year period.

Deferred Members

At June 30, 2022, there are 6,454 former members with deferred future benefits.

Schedule of Average Benefit Payments

| Retirement Effective Dates | Years of Credited Service | | | | | | |
|--------------------------------------|---------------------------|----------|----------|----------|----------|----------|----------|
| | 0 to 5 | 6 to 10 | 11 to 15 | 16 to 20 | 21 to 25 | 26 to 30 | 31+ |
| July 1, 2012 to June 30, 2022 | | | | | | | |
| Period 7/1/12 to 6/30/13 | | | | | | | |
| Average Monthly Benefit | \$ 193 | \$ 462 | \$ 745 | \$ 1,172 | \$ 1,663 | \$ 2,204 | \$ 3,031 |
| Average Final Average Salary | \$ 1,928 | \$ 2,859 | \$ 3,068 | \$ 3,644 | \$ 3,664 | \$ 3,838 | \$ 4,214 |
| Number of Active Retirees | 1 | 259 | 343 | 261 | 324 | 294 | 272 |
| Period 7/1/13 to 6/30/14 | | | | | | | |
| Average Monthly Benefit | \$ - | \$ 476 | \$ 741 | \$ 1,107 | \$ 1,620 | \$ 2,382 | \$ 2,790 |
| Average Final Average Salary | \$ - | \$ 3,060 | \$ 3,069 | \$ 3,325 | \$ 3,579 | \$ 4,176 | \$ 4,202 |
| Number of Active Retirees | - | 292 | 331 | 243 | 295 | 245 | 256 |
| Period 7/1/14 to 6/30/15 | | | | | | | |
| Average Monthly Benefit | \$ 623 | \$ 487 | \$ 771 | \$ 1,216 | \$ 1,728 | \$ 2,360 | \$ 3,003 |
| Average Final Average Salary | \$ 2,387 | \$ 2,924 | \$ 3,146 | \$ 3,484 | \$ 3,687 | \$ 4,252 | \$ 4,303 |
| Number of Active Retirees | 2 | 292 | 323 | 311 | 331 | 321 | 310 |
| Period 7/1/15 to 6/30/16 | | | | | | | |
| Average Monthly Benefit | \$ 159 | \$ 491 | \$ 772 | \$ 1,163 | \$ 1,586 | \$ 2,196 | \$ 3,100 |
| Average Final Average Salary | \$ 1,900 | \$ 3,121 | \$ 3,253 | \$ 3,410 | \$ 3,506 | \$ 3,949 | \$ 4,505 |
| Number of Active Retirees | 5 | 300 | 342 | 308 | 301 | 358 | 370 |
| Period 7/1/16 to 6/30/17 | | | | | | | |
| Average Monthly Benefit | \$ 362 | \$ 546 | \$ 813 | \$ 1,230 | \$ 1,714 | \$ 2,393 | \$ 3,324 |
| Average Final Average Salary | \$ 4,716 | \$ 3,241 | \$ 3,265 | \$ 3,626 | \$ 3,789 | \$ 4,256 | \$ 4,716 |
| Number of Active Retirees | 4 | 293 | 377 | 295 | 257 | 292 | 326 |
| Period 7/1/17 to 6/30/18 | | | | | | | |
| Average Monthly Benefit | \$ - | \$ 552 | \$ 787 | \$ 1,202 | \$ 1,622 | \$ 2,448 | \$ 3,310 |
| Average Final Average Salary | \$ - | \$ 3,225 | \$ 3,328 | \$ 3,493 | \$ 3,657 | \$ 4,406 | \$ 4,787 |
| Number of Active Retirees | - | 260 | 335 | 324 | 237 | 256 | 281 |
| Period 7/1/18 to 6/30/19 | | | | | | | |
| Average Monthly Benefit | \$ 702 | \$ 578 | \$ 834 | \$ 1,343 | \$ 1,845 | \$ 2,521 | \$ 3,412 |
| Average Final Average Salary | \$ 7,635 | \$ 3,346 | \$ 3,451 | \$ 3,824 | \$ 4,038 | \$ 4,427 | \$ 4,854 |
| Number of Active Retirees | 3 | 290 | 379 | 277 | 230 | 225 | 284 |
| Period 7/1/19 to 6/30/20 | | | | | | | |
| Average Monthly Benefit | \$ 111 | \$ 574 | \$ 853 | \$ 1,261 | \$ 1,731 | \$ 2,640 | \$ 3,425 |
| Average Final Average Salary | \$ 2,281 | \$ 3,477 | \$ 3,498 | \$ 3,872 | \$ 3,980 | \$ 4,786 | \$ 4,977 |
| Number of Active Retirees | 1 | 255 | 303 | 265 | 200 | 178 | 274 |
| Period 7/1/20 to 6/30/21 | | | | | | | |
| Average Monthly Benefit | \$ 170 | \$ 553 | \$ 928 | \$ 1,324 | \$ 1,866 | \$ 2,580 | \$ 3,512 |
| Average Final Average Salary | \$ 2,592 | \$ 3,388 | \$ 3,668 | \$ 3,785 | \$ 4,161 | \$ 4,586 | \$ 5,042 |
| Number of Active Retirees | 4 | 239 | 330 | 251 | 238 | 172 | 297 |
| Period 7/1/21 to 6/30/22 | | | | | | | |
| Average Monthly Benefit | \$ - | \$ 580 | \$ 878 | \$ 1,374 | \$ 1,850 | \$ 2,546 | \$ 3,589 |
| Average Final Average Salary | \$ - | \$ 3,509 | \$ 3,617 | \$ 3,941 | \$ 4,213 | \$ 4,666 | \$ 5,213 |
| Number of Active Retirees | - | 244 | 281 | 289 | 239 | 148 | 336 |

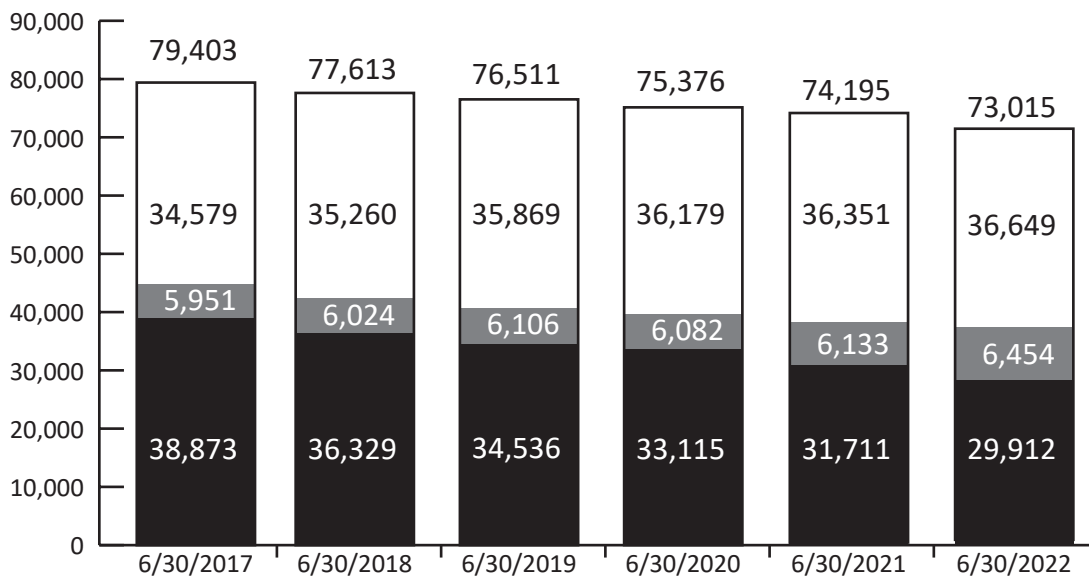
Principal Participating Employer

The Oklahoma Public Employees Retirement System is a multiple-employer cost-sharing public employee retirement plan. The Plan covers all state employees that are not covered by six other plans and employees of participating county and local agencies in the State. The State of Oklahoma is the principal participating employer. A list of participating state, county and local agencies is included elsewhere in this Statistical Section.

| Year Ended June 30, | Covered Employees of the State | Percent of Total System |
|----------------------------|---------------------------------------|--------------------------------|
| 2022 | 18,673 | 62.4 % |
| 2021 | 20,471 | 64.6 |
| 2020 | 22,467 | 67.8 |
| 2019 | 23,610 | 68.4 |
| 2018 | 25,594 | 70.5 |
| 2017 | 27,850 | 71.6 |
| 2016 | 30,776 | 73.6 |
| 2015 | 33,002 | 75.3 |
| 2014 | 33,242 | 75.6 |
| 2013 | 32,671 | 75.5 |

Demographics Chart

Active
 Vested
 Retirees



Participating Employers

State Agencies

ABLE Commission
 Abstractors, Board of
 Accountancy, Board of Public
 Aeronautics Commission
 Agriculture, Department of
 Architects, Board of Governors
 Arts Council, State
 Attorney General's Office
 Auditor and Inspector
 Banking Department
 Behavioral Health Licensure, Board of
 Boll Weevil Eradication Organization
 Bond Advisor, Office of the State
 Cardinal Point Public Trust
 Children and Youth, Commission on
 Chiropractic Examiners, Board of
 Commerce, Department of
 Conservation Commission
 Construction Industries Board
 Consumer Credit, Department of
 Commission for Education Quality &
 Accountability
 Corporation Commission
 Corrections, Department of
 Cosmetology, Board of
 Council on Judicial Complaints
 Court of Criminal Appeals
 Davis Gun Museum
 Dentistry, Board of
 Disability Concerns, Office of
 District Attorneys' Council
 District Courts
 Educational Television Authority
 Election Board, State
 Emergency Management
 Employment Security Commission
 Engineers and Surveyors, Board of
 Environmental Quality, Department of
 Ethics Commission
 Finance, State Office of
 Fire Marshall Commission, State
 Firefighters Pension and Retirement
 Board
 Funeral Board
 Garfield County Criminal Justice Trust
 Authority
 Governor's Office
 Grand River Dam Authority
 Grady County Fairgrounds Trust
 Health, Department of
 Health Care Authority
 Historical Society
 Horse Racing Commission

House of Representatives
 Housing Finance Agency
 Human Services, Department of
 Indigent Defense System
 Industrial Finance Authority
 Insurance Department, State
 Interstate Oil Compact Commission
 Investigation, State Bureau of
 Juvenile Affairs, Office of
 Labor, Department of
 Land Office, Commissioners of the
 Law Enforcement Education and
 Training, Council on
 Law Enforcement Retirement System
 Legislative Service Bureau
 Libraries, Department of
 Licensed Alcohol and Drug Counselors,
 Board of
 Licensed Social Workers, Registration
 Board of
 Lieutenant Governor, Office of
 Liquefied Petroleum Gas Administration
 Lottery Commission
 J.D. McCarty Center
 Medical Licensure Board
 Medicolegal Investigations, Board of
 Mental Health & Substance Abuse,
 Department of
 Merit Protection Commission
 Military Department
 Mines, Department of
 Motor Vehicle Commission
 Multiple Injury Trust Fund
 Municipal Power Authority
 Narcotics and Dangerous Drugs Control,
 Bureau of
 Native American Cultural and Education,
 Authority of Oklahoma
 Nursing, Board of
 Nursing Home Administrators, Board of
 Examiners for
 Optometry Board
 Ordinance Works Authority
 Osteopathic Examiners, State Board of
 Pardon and Parole Board
 Pharmacy, Board of
 Physicians Manpower Training
 Commission
 Police Pension and Retirement
 Psychologists Examiners, Board of
 Public Employees Retirement System
 Public Safety, Department of
 Quartz Mountain Arts and Conference
 Center Nature Park
 Real Estate Commission

Rehabilitation, Department of
 Science and Technology, Center for
 Advancement of
 Secretary of State, Office of the
 Securities Commission
 Senate, State
 Space Industry Development Authority
 Speech Pathology and Audiology Board
 Supreme Court
 Tax Commission
 Test for Alcohol and Drug Influence
 Board
 Tobacco Settlement Trusts
 Tourism and Recreation Department
 Transportation, Department of
 Treasurer's Office, State
 Turnpike Authority
 Uniform Building Code Commission
 University Health Sciences Center
 University Hospitals Trust
 Used Motor Vehicles and Parts
 Commission
 Veterans Affairs, Department of
 Veterinary Medical Examiners,
 State Board of
 Waters Resources Board
 Wheat Commission
 Workers' Compensation Court
 Workers' Compensation Commission

Counties and County Governmental Units

Adair County
 Alfalfa County
 Alfalfa County Rural Water District
 Atoka County
 Atoka County Rural Water District #2
 Atoka County Rural Water District #4
 Beaver County
 Beaver County Memorial Hospital
 Beckham County
 Blaine County
 Bryan County
 Caddo County
 Canadian County
 Carter County
 Cherokee County
 Choctaw County
 Choctaw County Ambulance
 Cimarron County
 Cleveland County
 Coal County
 Comanche County
 Comanche County Facilities Authority

Participating Employers (continued)

Cotton County
 Craig County
 Creek County
 Creek County Rural Water District #3
 Creek County Rural Water District #5
 Custer County
 Delaware County
 Delaware County E-911 Trust Authority
 Delaware County Solid Waste Trust Authority
 Dewey County
 Ellis County
 Garfield County
 Garfield County Fairgrounds Trust Auth.
 Garvin County
 Grady County
 Grady County Criminal Justice Authority
 Grady County EMS
 Grant County
 Greer County
 Greer County Special Ambulance Service
 Harmon County
 Harper County
 Haskell County
 Hughes County
 Jackson County
 Jefferson County
 Johnston County
 Johnston County Rural Water District
 Kay County
 Kay County Justice Facilities Authority
 Kingfisher County
 Kiowa County
 Latimer County
 LeFlore County
 LeFlore County EMS
 LeFlore County Rural Water and Sewer
 LeFlore County Rural Water District #3
 Lincoln County
 Lincoln County E-911 Trust Authority
 Logan County
 Love County
 Major County
 Major County EMS
 Marshall County
 Mayes County
 Mayes County Rural Water District #3
 Mayes Emergency Services Trust Authority
 McClain County
 McClain-911 Trust Authority
 McClain-Grady County EMS
 McCurtain County
 McCurtain County EMS
 McIntosh County
 Murray County
 Muskogee County
 Muskogee County EMS

Noble County
 Nowata County
 Nowata Consolidated Rural Water District #1
 Okfuskee County
 Okmulgee County
 Okmulgee County Criminal Justice Authority
 Osage County
 Ottawa County
 Ottawa County E-911 Authority
 Pawnee County
 Payne County
 Pittsburg County
 Pittsburg County Rural Water District #7
 Pontotoc County
 Pottawatomie County
 Pottawatomie County Public Safety Center
 Pushmataha County
 Roger Mills County
 Rogers County
 Seminole County
 Sequoyah County
 Sequoyah County 911 Trust Authority
 Sequoyah County Rural Water District #7
 Stephens County
 Texas County
 Tillman County
 Tillman County EMS
 Tillman County Rural Water District
 Wagoner County
 Washington County
 Washita County
 Woods County
 Woodward County

Towns, Cities and Municipal Governmental Units

Anadarko Housing Authority
 Arnett, Town of
 Beaver, City of
 Bixby, City of
 Bixby Public Works
 Cheyenne, City of
 Commerce, City of
 Cyril, Town of
 Fairfax, Town of
 Fort Supply, Town of
 Grandfield, City of
 Grove, City of
 Grove Municipal Airport Managing Authority
 Heavener, City of
 Heavener Utility Authority

Hinton, Town of
 Holdenville, City of
 Holdenville Housing Authority
 Hugo, City of
 Idabel Housing Authority
 Indianola Rural Water District #18
 Ketchum, City of
 Ketchum Public Works
 Kingfisher, City of
 Mangum, City of
 Mountain View, City of
 Muskogee City-County 911 Trust Authority
 Okarche, City of
 Poteau Valley Improvement Authority
 Rush Springs, Town of
 Ryan, City of
 Sentinel, Town of
 Shattuck, City of
 Sportsmen Acres, Town of
 Stigler, City of
 Tahlequah, City of
 Vici, Town of
 Watonga Housing Authority
 Watts Public Works Authority
 Wewoka, City of
 Wilson, City of

Other Governmental Units

Association of South Central Oklahoma Government
 Circuit Engineering District #4
 Circuit Engineering District #6
 Eastern Oklahoma Circuit Engineering District #2
 Eastern Oklahoma District Library
 Grand Gateway Economic Development Association
 Kiamichi Economical Development District of Oklahoma
 Midwestern Oklahoma Development Authority
 Northeast Oklahoma Enhanced 911 Trust Authority
 Northern Oklahoma Development Authority
 Northwestern Oklahoma Solid Waste Disposal Authority
 Oklahoma Environmental Management Authority
 Southeast Circuit Engineering District #3
 Southwestern Oklahoma Ambulance Authority
 Southwestern Oklahoma Developmental Authority
 Tri-County Rural Water District

Member Statistics

| Inactive members as of July 1, 2022 | Number | Amount of Annual Benefit |
|--|---------------|-----------------------------|
| Members receiving benefits | | |
| Retired | 30,879 | \$ 605,496,907 |
| Surviving spouses | 4,543 | 57,195,979 |
| Disabled | 1,227 | 13,202,719 |
| Total | 36,649 | \$ 675,895,605 |
| Members with deferred benefits | | |
| Vested terminated | 2,614 | \$ 29,793,344 |
| Assumed deferred vested members (estimated benefits) | 3,840 | 36,365,241 |
| Total | 6,454 | \$ 66,158,585 |

| Statistics for | Average | | | |
|--|---------------|-------------|-------------|------------------|
| | Number | Age | Service | Earnings |
| Active members as of July 1, 2021 | | | | |
| Continuing | 28,839 | 48.9 | 13.0 | \$ 49,007 |
| New | 2,872 | 37.9 | 2.0 | 27,034 |
| Total | 31,711 | 47.9 | 12.0 | \$ 47,017 |
| Active members as of July 1, 2022 | | | | |
| Continuing | 26,793 | 49.2 | 13.4 | \$ 51,173 |
| New | 3,119 | 38.7 | 2.0 | 29,757 |
| Total | 29,912 | 48.1 | 12.2 | \$ 48,940 |

Distribution of Retirees and Beneficiaries

| Age | Number | | | Annual Benefits | | |
|--------------|---------------|---------------|---------------|-----------------------|-----------------------|-----------------------|
| | Male | Female | Total | Male | Female | Total |
| Under 50 | 102 | 93 | 195 | \$ 1,788,949 | \$ 1,159,175 | \$ 2,948,124 |
| 50-55 | 203 | 139 | 342 | 5,147,904 | 2,893,480 | 8,041,384 |
| 55-60 | 668 | 763 | 1,431 | 16,987,134 | 17,400,084 | 34,387,218 |
| 60-65 | 1,671 | 2,472 | 4,143 | 39,832,610 | 51,482,270 | 91,314,880 |
| 65-70 | 3,089 | 4,810 | 7,899 | 63,300,641 | 89,652,097 | 152,952,738 |
| 70-75 | 3,428 | 4,931 | 8,359 | 67,720,530 | 86,712,807 | 154,433,337 |
| 75-80 | 2,769 | 3,874 | 6,643 | 53,033,742 | 62,550,733 | 115,584,475 |
| 80-85 | 1,629 | 2,514 | 4,143 | 30,003,632 | 36,863,926 | 66,867,558 |
| 85-90 | 807 | 1,526 | 2,333 | 13,397,251 | 20,052,140 | 33,449,391 |
| 90-95 | 285 | 654 | 939 | 4,648,661 | 8,508,093 | 13,156,754 |
| 95-100 | 46 | 155 | 201 | 790,544 | 1,753,495 | 2,544,039 |
| Over 100 | 3 | 18 | 21 | 66,133 | 149,574 | 215,707 |
| Total | 14,700 | 21,949 | 36,649 | \$ 296,717,731 | \$ 379,177,874 | \$ 675,895,605 |

Summary of Active Members

Age and years of credited service

Earnings tabulated are average rates of pay as of July 1, 2022

| Age | Years of Service | | | | | | | | | Total | |
|--------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|-----------------|
| | 0 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 & Up | | |
| Under 25 | 919 | 18 | | | | | | | | | 937 |
| Average Pay | \$29,003 | \$37,395 | | | | | | | | | \$29,164 |
| 25 to 29 | 1,064 | 362 | 7 | | | | | | | | 1,433 |
| Average Pay | \$33,844 | \$41,099 | \$45,279 | | | | | | | | \$35,732 |
| 30 to 34 | 944 | 1,206 | 303 | 7 | | | | | | | 2,460 |
| Average Pay | \$33,408 | \$46,867 | \$50,189 | \$42,587 | | | | | | | \$42,099 |
| 35 to 39 | 827 | 1,167 | 899 | 250 | 2 | | | | | | 3,145 |
| Average Pay | \$34,391 | \$48,712 | \$55,712 | \$56,093 | \$60,920 | | | | | | \$47,542 |
| 40 to 44 | 661 | 1,118 | 954 | 763 | 189 | 2 | | | | | 3,687 |
| Average Pay | \$35,424 | \$48,161 | \$55,683 | \$59,667 | \$59,811 | \$52,573 | | | | | \$50,804 |
| 45 to 49 | 591 | 866 | 795 | 717 | 587 | 135 | 3 | | | | 3,694 |
| Average Pay | \$35,414 | \$47,970 | \$54,289 | \$57,235 | \$61,502 | \$62,673 | \$50,867 | | | | \$51,810 |
| 50 to 54 | 550 | 860 | 793 | 713 | 632 | 461 | 134 | 3 | | | 4,146 |
| Average Pay | \$36,539 | \$46,605 | \$52,847 | \$55,285 | \$57,928 | \$61,900 | \$63,655 | \$84,679 | | | \$51,961 |
| 55 to 59 | 458 | 816 | 710 | 671 | 548 | 460 | 376 | 106 | 15 | | 4,160 |
| Average Pay | \$35,433 | \$45,289 | \$49,484 | \$54,052 | \$55,664 | \$57,884 | \$63,617 | \$65,781 | \$64,000 | | \$51,339 |
| 60 to 64 | 382 | 668 | 686 | 629 | 493 | 369 | 304 | 222 | 142 | | 3,895 |
| Average Pay | \$35,831 | \$46,034 | \$51,219 | \$51,608 | \$53,805 | \$55,894 | \$65,425 | \$65,066 | \$61,234 | | \$51,917 |
| 65 to 69 | 142 | 299 | 316 | 266 | 204 | 149 | 112 | 84 | 71 | | 1,643 |
| Average Pay | \$34,276 | \$48,282 | \$48,440 | \$57,637 | \$54,380 | \$56,187 | \$63,081 | \$66,587 | \$64,680 | | \$52,744 |
| 70 & up | 95 | 137 | 131 | 115 | 80 | 54 | 34 | 24 | 42 | | 712 |
| Average Pay | \$27,807 | \$45,100 | \$53,737 | \$51,566 | \$55,425 | \$59,702 | \$64,841 | \$57,523 | \$63,249 | | \$50,126 |
| Total | 6,633 | 7,517 | 5,594 | 4,131 | 2,735 | 1,630 | 963 | 439 | 270 | | 29,912 |
| Average Pay | \$33,847 | \$46,921 | \$52,988 | \$55,748 | \$57,293 | \$58,864 | \$64,134 | \$65,251 | \$62,607 | | \$48,940 |



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