



Annual Comprehensive

FINANCIAL REPORT

TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA

A COMPONENT UNIT OF THE STATE OF OKLAHOMA
FOR THE FISCAL YEAR ENDED JUNE 30, 2021



OKLAHOMA
Teachers' Retirement System



OKLAHOMA

Teachers' Retirement System

Mission Statement

We collect, protect and grow assets to provide a secure retirement income for public education employees.

Vision

The vision of the Teachers' Retirement System of Oklahoma is to:

- Provide quality service to our members in an efficient, economical manner,
- Provide our members on-demand and accurate access to their personal financial information,
- Educate our members about their retirement benefits,
- Manage the assets of the plan competently and prudently while achieving long-term risk-adjusted net returns in excess of market benchmarks as identified in the Board's Investment Policy, as well as exceeding the actuarial assumed return, and
- Inform our members about the financial status of TRS so they will be confident in our ability to provide their benefits.

Core Values

We value the following in delivering our service:

Customer Service

Teamwork

Reputation

Adequate Funding

Competency

Ethical Behavior



OKLAHOMA
Teachers' Retirement System

A component unit of the State of Oklahoma
Annual Comprehensive Financial Report
for the fiscal year ended June 30, 2021

Prepared by TRS staff

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Introductory Section

MISSION

We collect, protect and grow assets to provide a secure retirement income for public education employees.





J. KEVIN STITT
GOVERNOR

SARAH GREEN
EXECUTIVE DIRECTOR

Teachers' Retirement System of Oklahoma

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Oklahoma City, OK 73152-3524

TRS Member Services: 877-738-6365 (toll-free)

or 405-521-2387 (OKC)

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December 13, 2021

The Board of Trustees
Teachers' Retirement System of Oklahoma
301 NW 63rd Street, Suite 500
Oklahoma City, OK 73116

Letter of Transmittal:

We are honored to present the 2021 Annual Comprehensive Financial Report (ACFR) of the Teachers' Retirement System of Oklahoma (the System) for the fiscal year beginning July 1, 2020 and ending June 30, 2021. The information included in this report not only defines our purpose, but also represents our commitment to protecting the financial future of our active and retired members. We accomplish this by monitoring and evaluating our daily operations as well as prudently managing the \$21.96 billion of net assets in the fund. The Teachers' Retirement System of Oklahoma is a component unit of the state of Oklahoma.

Profile of System

Established by legislation, the System began operations on July 1, 1943. The System provides retirement allowances and other benefits to public education employees in the common schools, career technology centers, colleges and universities, and other local and state educational agencies of the state of Oklahoma.

The mission of the System: "We collect, protect and grow assets to provide a secure retirement income for public education employees." The System also strives to provide outstanding customer service to all of our active and retired members. All services provided by the staff are performed to meet these objectives.

Major Initiatives

Communication

Our relationship with our members begins when they first enter the education profession and extends through their retirement. We are continually looking for avenues to serve as a resource and communicate the benefits of our System with our membership throughout their careers. We are also working to serve as an elite resource for all external stakeholders of our System.

Digital Transformation and Cybersecurity

With the ongoing Covid-19 pandemic, TRS has developed updated processes and continues to improve upon technological advances giving our members better access to their membership information while maintaining wellness. To better serve our membership, we are undertaking replacement of our pension administration system – a project anticipated to span the next three to five years. We are also hyper focused on the security of our membership data and funds.

Organizational Strength

With the pandemic came a change in how our business operated on a daily basis. In 2020 and early 2021, we lost several key employees to retirement and other factors. We are working diligently to create a flexible and enjoyable work environment for our staff – who administers the System with high efficiency – while maintaining a high level of customer service. In addition to employee retention, we are also focusing our efforts on succession planning and business continuity.

Management Responsibility

Management is responsible for maintaining a system of adequate internal accounting controls designed to provide reasonable assurance that the transactions are executed in accordance with management's general or specific authorization and are recorded as necessary to maintain accountability for assets and to permit preparation of financial statements in accordance with generally accepted accounting principles. This system includes written policies and procedures. Responsibility for the preparation, accuracy, completeness, and fairness of this presentation, including all disclosures, rests firmly with the System's management. To the best of our knowledge and belief, this financial report is complete and reliable in all material aspects.

The System maintains a comprehensive internal control framework designed to assure that assets are safeguarded from theft or misuse, transactions are completed accurately, and financial statements are fair and reliable. Internal control is designed to provide reasonable assurance, but not absolute assurance, that these objectives are met. The concept of reasonable assurance recognizes first that the cost of a control should not exceed the benefits likely to be derived, and second, the valuation of cost and benefits requires estimates and judgments by management. The System has its own internal audit program and uses a private firm retained by the Board of Trustees that answers directly to the Board. The firm not only analyzes financial issues and risk, but also provides advice on workflow and internal processes improvements.

The System operates according to an administrative budget approved annually by the Board. Although revenue is not appropriated from the state's General Revenue Fund, the budget is submitted to the Legislature as part of the Governor's recommended budget. The System operates under the same budgetary controls that apply to all state agencies.

The basic financial statements are prepared in accordance with generally accepted accounting principles as promulgated by the Governmental Accounting Standards Board. An independent auditing firm, Eide Bailly LLP, has audited the financial statements included in this report and its opinion letter is presented in the Financial Section of this ACFR. Readers are encouraged to review the Management's Discussion and Analysis (MD&A) in the Financial Section for an in-depth discussion of the financial statements and the cause and effect of market conditions, legislation and changes in operations affecting the System's financial results.

Economic Condition and Outlook

Global markets were buoyed by a wave of fiscal and monetary stimulus throughout fiscal year 2021. The U.S. unemployment rate dropped to 5.9% in June 2021 down from a high of 14.8% in April 2020 due to the easing of widespread lockdowns. U.S. GDP rose by 6.7% in the final quarter of fiscal year 2021 due to the re-opening of the overall economy and government stimulus efforts. Global supply chain weakness led to price increases and shortages of many goods, which raised inflation and the expectation of further price increases.

Domestic and international equity markets had historic returns during the last fiscal year. The Russell 3000, a broad U.S. stock index, returned 44.16%. The MSCI ACWI ex-U.S. IMI, a broad international benchmark of investable markets, returned 37.74%. Small capitalization stocks led the way both domestically and internationally, which was a tailwind for the Teachers' Retirement System of Oklahoma.

Fixed income returns were weaker. The Bloomberg Global Aggregate, a broad global bond index, returned just 2.63%. The Bloomberg U.S. Aggregate index, a broad index of U.S. government and private-issued bonds returned just 1.12% in fiscal year 2021. The market was pricing in future interest rate increases by the Federal Reserve and an expected decrease in the open market bond-buying programs. Inflation expectations also began to worry investors as the fiscal year ended.

Commodities rebounded strongly from the previous fiscal year. The Bloomberg Commodity index, a broad global commodity index, returned 45.61%. WTI, a measure of U.S. oil prices, ended the fiscal year at \$73.47 per barrel, up from \$39.67 per barrel the previous year. Commodity price increases were largely due to the expectation of future demand due to travel, new construction, and the re-opening of the economy. Supply chain weakness across the globe also contributed to low available supply of many commodities.

Looking ahead to fiscal year 2022, investors will be monitoring economic activity and medical breakthroughs to curtail the global COVID-19 pandemic. As global economies continue to re-open, central bank activity, inflation, consumer demand, and global supply chain developments will likely be determining factors for capital market returns.

Investments

For fiscal year 2021, the System earned a 32.95% rate of return, outperforming the benchmark return of 31.33%, and ended the year with a total market value of \$21,955,763,042. Relative to a peer group of U.S. Public Pension Plans with assets over \$1 billion, the Fund placed in the top 3rd percentile, representing a remarkable outperformance versus our peer funds.

On June 30, 2021, the System's investment portfolio mix at market value was 64.13% equities, 20.68% fixed income, 5.68% real estate, 8.86% private capital, and 0.64% cash. As fiduciaries for the retirement funds, the Board of Trustees is responsible for investment of the funds under the prudent investor standard. This standard allows the System to allocate trust funds across a diversified group of asset classes. The Board of Trustees has elected to limit investments to stocks and bonds, Treasury Bills and Notes, commercial paper, foreign currency exchange contracts, private debt and private equity, and bank deposits collateralized by U.S. Government securities.

Returns were positive across asset classes. The System's domestic equity composite returned 48.58%, outperforming the benchmark due to an overweight to small-cap securities. International equities returned 40.41%, outperforming the benchmark due to an overweight to small-cap and emerging market securities. Total fixed income returned 3.34%, outperforming the benchmark due to an overweight to U.S. investment grade and high yield credit. Private capital, a mix of private equity and private debt, returned 46.82%. Private equity led the alternative asset classes returning 52.06%, while real estate and special opportunities returned 1.17% and 21.36% respectively.

Please see the Investment Section of this report for more detailed information on the performance of the portfolio.

Revenue and Funding

The major sources of revenue for the System are investment income, member contributions, employer contributions and dedicated revenue from the state of Oklahoma.

Active member contributions for fiscal year 2021 were \$343 million, which represents 7.0% of covered payroll. This compares to \$340 million for the fiscal year ending June 30, 2020. Member contributions include direct payments by members for active service, to reestablish service credit, purchase Oklahoma service, out-of-state or military service, and payments required to qualify for the Education Employees Service Incentive Plan (EESIP).

Contributions from local employers, the state of Oklahoma, and federal sources for fiscal year 2021 totaled \$775.6 million, compared to \$817.6 million for fiscal year 2020. Contributions from local school districts on regular employees and federally or privately funded positions increased by \$6.0 million as the state's dedicated revenue decreased by \$53.7 million.

A properly funded pension plan continues to be the Board's most significant challenge. As of June 30, 2021, 71.5% of the System's actuarial liabilities were covered by the net position of the Plan. This is an increase from the 67.3% funded ratio reported for June 30, 2020. The primary cause of the increase was the impact of the asset gain due to the 11.4% return of the actuarial value of assets exceeding the assumed rate of return of 7.00%. Based upon the current statutory contribution schedule, the funding period is 9 years. This is a decrease to the funding period of 2020.

Expenses

The System's expenses are attributable to making retirement benefit payments including health insurance subsidies, death and survivor benefits, refunds of member contributions, and administrative expenses. During fiscal year 2021, the System paid \$88.6 million more in retirement, survivor, and insurance benefits than in the preceding year, and \$3.2 million less in refunds to active members who terminated accounts. The increase in retirement and insurance benefits is attributed to a net increase in the number of retired members and the average benefit payments. Administrative expenses increased \$205 thousand primarily due to an increase in payroll costs and depreciation expense.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Teachers' Retirement System of Oklahoma for its annual comprehensive financial report for the fiscal year ended June 30, 2020. This is the twenty-eighth consecutive year the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, the System must publish an easily readable and efficiently organized annual comprehensive financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. We believe that our current annual comprehensive financial report continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

In addition to the award for the ACFR, the System was awarded its sixth consecutive Certificate of Achievement for the Popular Annual Finances Report (PAFR). The purpose of this report is to be readily accessible and easily understandable to the public and other interested parties without a background in public finance.

Acknowledgements

This report reflects the combined efforts of the System's staff under the leadership of the Board of Trustees. It is intended to provide complete and reliable information as a basis for making management decisions, determining compliance with legal provisions, and as a means for determining responsible stewardship of the assets contributed by the members and their employers.

Notice is being mailed to the Governor, members of the Oklahoma Legislature, and the Oklahoma State Pension Commission that the ACFR is available on our website at www.Oklahoma.gov/TRS.

We would like to take this opportunity to express our gratitude to you, the staff, the advisors, and other people who have worked so diligently to assure the continued successful operation of the Teachers' Retirement System of Oklahoma.

Respectfully submitted,



Sarah Green, JD
Executive Director



Lisa Van Liew, CPA
Chief Financial Officer

TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA

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BOARD OF TRUSTEES

Chairman

Brandon Meyer, J.D.

Vice-Chairman

Stephen Streeter, RIA

Secretary

Michael Kellogg, M.Ed.

Members

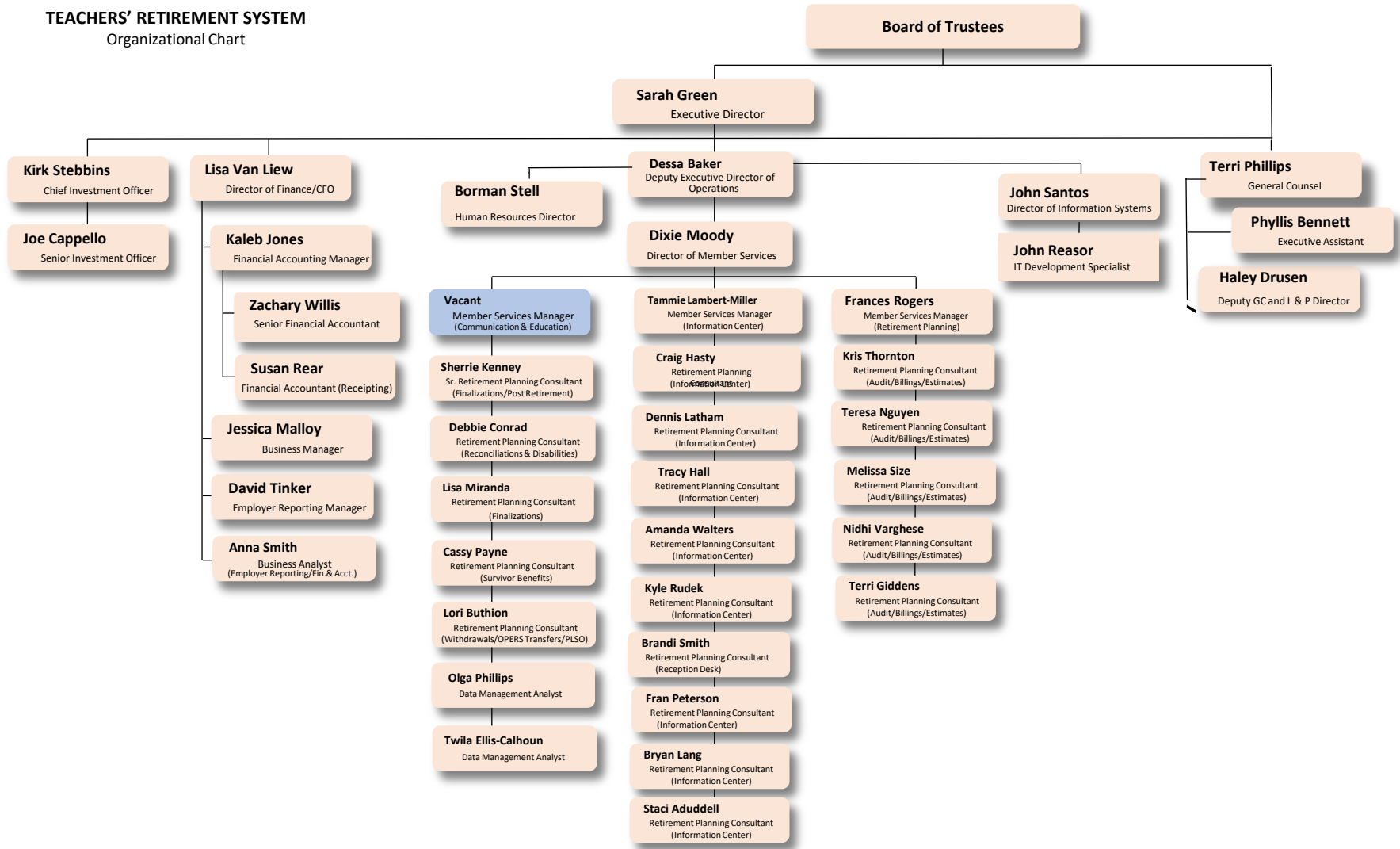
Kelsey Ardies
Rod Boles, M.Ed.
Vernon Florence
Steven Harpe
Lisa Henderson
Joy Hofmeister
Marcy Mack, Ed. D.
Randy McDaniel, CPTM
Christopher A. Rector
Marla Tharp
Drew Williamson, CFP/CPWA
Steve Massey, (nonvoting)

Designees

Tim Allen, for Treasurer McDaniel
Brandi Manek, for Director Harpe
Mathangi Shankar, CPA, for Superintendent
Hofmeister Greg Winters, Ph.D. for Director Mack

TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA

TEACHERS' RETIREMENT SYSTEM
Organizational Chart



**TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA
PROFESSIONAL CONSULTANTS**

OUTSIDE LEGAL COUNSEL

Ice Miller
1 American Sq. Ste. 2900
Indianapolis, IN 46282

Phillips Murrah
Corporate Tower, Thirteen Floor
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Oklahoma City, OK 73102

ACTUARY

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Irving, TX 75038-2631

EXTERNAL AUDITOR

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621 N. Robinson Avenue
Suite 200
Oklahoma City, OK 73102

INTERNAL AUDITORS

Stinnett & Associates
825 N. Broadway Avenue
Oklahoma City, OK 73102

INVESTMENT CUSTODIAN

Northern Trust Corporation
50 South La Salle Street
Chicago, IL 60603

INVESTMENT CONSULTANTS

AndCo Consulting *
531 West Morse Road
Suite 200
Winter Park, FL 32789

ALTERNATIVE INVESTMENT ADMINISTRATION

Meketa Investment Group
80 University Avenue
Westwood, MA 02090

The Schedule of Investment Expenses (page 60) and Schedule of Professional/Consultant Fees (page 62) in the Financial Section, and the Investment Expenses by Strategy (pages 72-73) and Schedule of Broker Commissions (pages 75-77) in the Investment Section contain additional information regarding professional advisors and consultants.

*Aon Consulting has replaced AndCo as of July 1, 2021 as the investment consultant for Teachers' Retirement System of Oklahoma.



Plan Summary 2020-2021

BEGINNINGS

The Teachers' Retirement System of Oklahoma (the System) was established July 1, 1943, to provide retirement allowances and other specified benefits for qualified employees of state-supported educational institutions.

ADMINISTRATION

A 15 member Board of Trustees oversees the administration of the System and acts as fiduciary for investing its funds.

CONTRIBUTIONS

Members of the System contribute 7% of their total compensation (salary and your fringe benefits).

Statutes also require employers to contribute a percentage of applicable employee earnings. The employer contribution rate for K-12 school districts, career-techs, and junior colleges is 9.5%. The employer contribution rate for comprehensive universities (University of Oklahoma and Oklahoma State University and their entities) and the state's four-year regional universities is 8.55%.

MEMBERSHIP

Oklahoma statutes require classified personnel to be members of the System. The definition of classified personnel in 70 O.S. § 17-101 includes teachers and other certified employees of common schools, faculty and administrators in public colleges and universities, and administrative personnel of state educational boards and agencies. Membership is optional for all other regular employees of public educational institutions who work at least 20 hours per week.

Employees of a charter school may join the System if the Teachers' Retirement System Board of Trustees approves the school's application for membership.

New employees at the University of Oklahoma, OU Health Sciences Center, and Oklahoma State University have the option to participate in an alternate retirement plan provided by the universities. Employees choosing the alternate retirement plan are not eligible to participate in the System as long as they remain employees of the universities.

SERVICE CREDIT

Service credit of up to 1 year is earned for every year of full-time employment. Fractional service is earned for periods of employment that are less than 8 months or for part-time employment. Members may purchase credit for out-of-state service, adjunct service, substitute teaching service, sabbatical leave, military service, service with certain Oklahoma governmental entities, incentive credit, and employment in Oklahoma schools before your date of membership.

Retiring members may count up to 120 days of unused accumulated sick leave toward an additional year of service credit. Unused sick leave of less than 120 days is granted a fractional year of service credit.

RETIREMENT ANNUITY

Members who joined the System prior to November 1, 2017 are fully vested after five years of contributory Oklahoma membership service. Those who join on or after November 1, 2017 are fully vested after seven years of contributory Oklahoma membership service and may choose to take an early, reduced retirement benefit, or stay to qualify for a regular, unreduced retirement

benefit. A vested member is eligible to receive a retirement benefit when one of the following requirements is met:

Age 62 or Combination 80. Those who joined the System prior to July 1, 1992 may retire with an unreduced benefit at age 62 or when the client's age and years of creditable service total 80 points. The highest three salaries are used in the calculation of the benefit. A reduced annuity is available at the minimum age of 55.

Age 62 or Combination 90. Those who joined the System after July 1, 1992 and before November 1, 2011 may retire with unreduced benefits at age 62 or when the client's age and years of creditable service total 90 points. Those who qualify under Combination 90 use the highest consecutive five contributory salaries to calculate their benefit in the retirement formula. A reduced annuity is available at the minimum age of 55.

Age 65 or Combination 90 at Age 60. Those who joined the System on or after November 1, 2011 may retire with an unreduced benefit at age 65 or when the client's age is at least 60 and years of creditable service total at least 90 points. Those who qualify under this rule use the highest consecutive five contributory salaries to calculate their benefit in the retirement formula. A reduced annuity is available at the minimum age of 60.

The Teachers' Retirement System of Oklahoma is a governmental defined benefit plan under Section 401(a) of the Internal Revenue Code. The retirement benefits paid to our members are not determined by the market value of their retirement account, but rather by a formula. The formula includes years of service and final average salary (FAS) multiplied by a 2% computation factor.

For members who joined prior to July 1, 1992, the FAS is calculated by averaging the member's highest three salaries earned during contributory employment. For members joining after July 1, 1992, the FAS is calculated by averaging the member's highest five consecutive salaries earned during contributory employment.

The Education Employees Service Incentive Plan (EESIP) provides the opportunity for capped years to be diminished by two years for every one year worked in common education or career technology district beyond the full retirement eligibility date. If salaries earned prior to July 1, 1995 are greater than \$40,000, there will be a cost to participate in EESIP. Members retiring from a four year university, college or other related entity are not eligible to participate in this plan.

If a member works for a comprehensive university (OU/OSU) or other associated entity, the retirement benefit calculation may involve a multi-step process. First, the capped average salary prior to July 1, 1995 is determined. Next the capped average salary between July 1, 1995 and June 30, 2007 is determined. Finally, years of service that did not meet the caps as well as service credit earned after July 1, 2007, will be incorporated into the retirement benefit formula using the highest average of actual total compensation, not to exceed the IRS compensation limits. There may be as few as one average salary or as many as four weighted averages to determine the final average salary used in the final benefit calculation.

Each of the Systems' five retirement options provides a lifetime benefit to the member. After the member's death, the designated beneficiary(ies) receive either a lump-sum payment or continued payments to one joint annuitant, depending upon the elected option's provisions.

DISABILITY BENEFITS

Members may qualify for disability retirement benefits if a medical condition keeps them from performing their regular job duties. A member may be considered for a disability retirement benefit if he or she is active and has at least 10 years of contributory service, a disability retirement application detailing the medical condition (which must have existed while employed by the public schools of Oklahoma) is received, and an application is approved by the System's Medical Review Board.

If a member is awarded Social Security Disability benefits, the member may receive disability benefits with the System if the disability is incurred while employed by the public schools and the System is provided with proof of the Social Security award.

HEALTH INSURANCE BENEFIT

If members have at least 10 years of creditable service and retire or terminate employment, they may elect to continue coverage in the insurance program the employer provides to active employees.

If members are not enrolled in the state plan, coverage is subject to the provisions of the plan in which they are enrolled.

Dependent and dental coverage is available if the member is enrolled in the State and Education Employees Group Health and Dental Insurance Plan.

Once a member begins receiving a monthly annuity, Teachers' Retirement System of Oklahoma will pay the first \$100 to \$105 of monthly premiums for the member but not for dependents. The amount paid by the System is determined by the member's total service and average salary at retirement.

If members have fewer than 10 years of employment, they have certain rights under federal law to continue health insurance coverage after employment ends. Specific information about continued coverage may be requested from the employer or the Employees Group Insurance Division of the Office of Management and Enterprise Services before termination.

SURVIVOR BENEFITS

Members' designated beneficiaries or estates are entitled to survivor benefits if the members are active in-service or retired at the time of their death.

If a member is an active in-service member at the time of death, the beneficiary(ies) will receive an \$18,000 death benefit, plus the contributions in the member's account and interest on those contributions. "Active in-service" is defined in the System's rules, but generally means a member currently employed by an Oklahoma public education institution. If a member dies, and the member is an active in-service member who qualified for service retirement and has one designated primary beneficiary, he or she may choose a monthly benefit instead of the lump-sum payment.

When an inactive member dies, the beneficiaries receive the amount of the contributions in the member's account, plus interest on those contributions, but will not qualify for the \$18,000 death benefit or the monthly retirement benefit payment payable to the surviving beneficiary of active in-service members.

If a retiree dies, the beneficiaries or estate will receive a \$5,000 death benefit, plus the survivor benefits provided by retiree's chosen retirement plan option. Certain plan options provide surviving joint annuitants with a continuing monthly retirement benefit.

WITHDRAWING CONTRIBUTIONS

If a member leaves a job that was qualified for membership, the member may request a refund of his or her contributions any time after the last day on that job. The member will be eligible to receive the refund four months after termination. The refund includes all member contributions, even if these contributions were made on the member's behalf by the employer, plus any applicable portion of interest earnings. When a member accepts a refund, all service credit is forfeited.

If a member returns to qualifying employment, the amount of the withdrawal may be redeposited after contributing to the System for 12 months. Redepositing withdrawn contributions reinstates the initial membership date. If withdrawn contributions are not redeposited, the official membership date will be the date the member rejoined the System.

If the member redeposits, the entire amount withdrawn must be repaid to the System. In addition, 10% simple interest must be redeposited on the withdrawn amount for each year the account was withdrawn. This amount may be paid in one lump sum or through installment payments for up to 60 months.

A member may also leave the contributions in his or her account. If a member is vested (have at least five or seven years of Oklahoma service), the account will continue earning interest until the member withdraws it or begins drawing a retirement benefit. If a member is not vested, the account will continue earning interest for five years, unless withdrawn before then.

THE 403(b) TAX SHELTERED ANNUITY PLAN

The 403(b) Plan was terminated effective January 29, 2021.

RIGHTS AND RESPONSIBILITIES

Teachers' Retirement System of Oklahoma publications provide answers to general questions. A member is responsible for resolving any questions about his or her retirement account. Members are entitled to counseling from the staff concerning any questions they have about their retirement account. The System will not be held accountable for information that is contrary to statutes or administrative rules, regardless of who provides that information.

For details of how statutes and administrative rules may affect a retirement account, contact

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 Oklahoma City, OK 73152-3524

Street Address
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 301 NW 63rd Street, Suite 500
 Oklahoma City, OK 73116-7921

Phone Numbers
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 (877) 738-6365 (Toll Free)

Website:
www.Oklahoma.gov/TRS

This Plan Summary provides general information summarizing the basic benefits available to members of the System. If conflict arises between information contained in this summary and state statutes or official Teachers' Retirement System of Oklahoma rules, the law and/or rule takes precedence.

Revised 11/29/2021



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Teachers' Retirement System of Oklahoma

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2020

Christopher P. Morrill

Executive Director/CEO



Financial Section

TRS manages a \$21.96 billion pension fund for Oklahoma's public education employees.



Independent Auditor's Report

To the Board of Trustees
Teachers' Retirement System of Oklahoma
Oklahoma City, Oklahoma

Report on the Financial Statements

We have audited the accompanying financial statements of the Teachers' Retirement System of Oklahoma (the System), a component unit of the state of Oklahoma, which comprise the statement of fiduciary net position as of June 30, 2021, and the related statement of changes in fiduciary net position, for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the statement of fiduciary net position of the Teachers' Retirement System of Oklahoma, as of June 30, 2021, and the respective changes in fiduciary net position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

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Emphasis of Matters

Alternative Investments

As discussed in Notes 2 and 3 to the financial statements, total system investments include investments valued at \$3,257,533,977 (13.8% of total assets), as of June 30, 2021, whose fair values have been estimated by management in the absence of readily determinable values. Management's estimates are based on information provided by the fund managers or the general partners. Our opinion is not modified with respect to this matter.

Adoption of New Accounting Standard

As described in Notes 2 and 11 to the financial statements, the System early adopted the provisions of GASB Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans, an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32*. As discussed in Notes 2 and 11 to the financial statements, the System has retroactively adjusted the financial statements to remove the System's defined contribution plan as a fiduciary activity. Our opinion is not modified with respect to this matter.

Report on Summarized Comparative Information

We have previously audited the System's June 30, 2020 financial statements, and we expressed an unmodified opinion on the statement of fiduciary net position and the statement of changes in fiduciary net position in our report dated October 16, 2020. Due to the implementation of GASB 97, certain amounts have been restated due to the retroactive application of the standard. See Notes 2 and 11 for further detail. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2020, is consistent, in all material respects, with the exception of the adoption of the new accounting standard identified in the preceding paragraph, with the audited financial statements from which it has been derived.

Other Matters

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 on pages 22 to 27 and 50 to 59 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 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 as a whole. 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 on pages 60 to 62 are the responsibility of management and were derived from and relate 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 supplemental information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The image shows a handwritten signature in black ink that reads "Eide Sully LLP". The signature is written in a cursive, flowing style.

Oklahoma City, Oklahoma
October 13, 2021

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2021 and 2020**

Management is pleased to present this discussion and analysis of the financial activities of the Teachers' Retirement System of Oklahoma ("TRS" or the "System") for the years ended June 30, 2021 and 2020. The System is responsible for administering retirement benefits for the following plans: an Internal Revenue Code (IRC) section 401(a) defined benefit plan (401(a) Plan), an IRC Section 401(h) medical supplement defined benefit plan, (OPEB Plan), (collectively "the Plans"). The 401(a) Plan is available for public education employees of the state of Oklahoma. The 401(h) Plan is available for all eligible members.

The System was established on July 1, 1943, for the purpose of providing these retirement benefits and other specific benefits for qualified persons employed by public educational institutions. The main purpose of the System is to provide a primary source of lifetime retirement benefits relative to years of service at the time of retirement. It is the objective of the System to provide these benefits in a prudent, responsible, and cost-effective manner. Plan net assets are used to pay current and future benefits to retired members.

This discussion and analysis is intended to serve as an introduction to the System's basic financial statements. TRS's basic financial statements are comprised of three components: 1) the *statement of fiduciary net position*, 2) the *statement of changes in fiduciary net position*, and 3) the *notes to the financial statements*. This report also contains *required supplementary information* and *other supplementary information* in addition to the basic financial statements themselves.

The *Statement of Fiduciary Net Position* presents information on all of the System's assets and liabilities, with the difference between these reported as *net position restricted for pensions and OPEB*. Over time, increases or decreases in plan net position may serve as a useful indicator of whether the financial position of the System is improving or deteriorating. Information relating to the System's ability to meet the cost of future benefit payments is not shown on the *statement of fiduciary net position* but is in both the *notes to the financial statements* and the *required supplementary information*.

The *Statement of Changes in Fiduciary Net Position* presents information showing how the System's net position changed during the most recent fiscal year. Changes in net position are recognized using the accrual basis of accounting, in which expenses are recorded when the liability is incurred and revenues are recorded in the accounting period in which they are earned and become measurable.

The *notes to the financial statements* are critical to the reader's understanding of the financial status of the System. These notes include a description of the System, details on the cash and investments of the System, as well as contribution and benefit information.

The *required supplementary information (RSI)* presents various required schedules for pensions and OPEB. *Other supplementary information* includes the Schedule of Administrative Expenses, the Schedule of Investment Expenses, and the Schedule of Professional/Consultants Fees. These schedules provide additional analysis of the information provided in the financial statements.

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2021 and 2020**

Condensed Financial Information

The following are condensed schedules of financial information about the Plans in the System for the years ended June 30, 2021, 2020 and 2019 and the results of the years then ended.

Fiduciary net position as of June 30:

| | OPEB Plan | 401(a) Plan | System Total | | | 2021 |
|--|----------------|-------------------|-------------------|-------------------|-------------------|----------|
| | | | 2021 | 2020 * | 2019 * | % Change |
| Assets | | | | | | |
| Cash | \$ - | \$ 25,803,234 | \$ 25,803,234 | \$ 26,064,064 | \$ 22,473,742 | -1.0% |
| Receivables | 3,560,620 | 207,931,211 | 211,491,831 | 247,307,733 | 309,141,320 | -14.5% |
| Long- and short-term investments, at fair value | 555,092,512 | 21,470,478,048 | 22,025,570,560 | 16,950,754,948 | 17,377,415,760 | 29.9% |
| Capital assets, net | 100,548 | 3,843,177 | 3,943,725 | 4,201,234 | 4,419,523 | -6.1% |
| Total investments and other assets | 558,753,680 | 21,708,055,670 | 22,266,809,350 | 17,228,327,979 | 17,713,450,345 | 29.3% |
| Securities lending institutional daily assets fund | 34,411,773 | 1,315,294,549 | 1,349,706,322 | 1,032,139,775 | 1,400,061,005 | 30.8% |
| Total assets | 593,165,453 | 23,023,350,219 | 23,616,515,672 | 18,260,467,754 | 19,113,511,350 | 29.3% |
| Liabilities | | | | | | |
| Investment settlements and other liabilities | 5,474,964 | 209,265,285 | 214,740,249 | 298,713,441 | 589,414,537 | -28.1% |
| Payable under securities lending agreement | 34,411,773 | 1,315,294,549 | 1,349,706,322 | 1,032,139,776 | 1,400,061,005 | 30.8% |
| Total liabilities | 39,886,737 | 1,524,559,834 | 1,564,446,571 | 1,330,853,217 | 1,989,475,542 | 17.6% |
| Net Position | | | | | | |
| Net position restricted for pensions and OPEB | \$ 553,278,716 | \$ 21,498,790,385 | \$ 22,052,069,101 | \$ 16,929,614,537 | \$ 17,124,035,808 | 30.3% |

*Restatements from previously presented amounts made due to the implementation of GASB Statement No. 97. See Notes 2 and 11 for further detail.

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2021 and 2020**

Changes in fiduciary net position for the year ended June 30:

| | OPEB Plan | 401(a) Plan | System Total | | | 2021 |
|--|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------|
| | | | 2021 | 2020 * | 2019 * | % Change |
| Additions: | | | | | | |
| Member contributions | \$ - | \$ 343,474,401 | \$ 343,474,401 | \$ 340,057,646 | \$ 325,766,148 | 1.0% |
| Employer contributions | 6,087,850 | 458,248,765 | 464,336,615 | 458,306,002 | 447,039,679 | 1.3% |
| Matching contributions | - | 34,371,572 | 34,371,572 | 28,745,259 | 27,969,601 | 19.6% |
| Dedicated tax revenue | - | 276,918,852 | 276,918,852 | 330,620,451 | 343,701,556 | -16.2% |
| Net investment income gain (loss) | 141,674,971 | 5,415,132,702 | 5,556,807,673 | 113,622,021 | 802,034,690 | 4790.6% |
| Security lending net income | 117,028 | 4,473,052 | 4,590,080 | 6,612,523 | 6,282,180 | -30.6% |
| Total additions | 147,879,849 | 6,532,619,344 | 6,680,499,193 | 1,277,963,902 | 1,952,793,854 | 422.7% |
| Deductions: | | | | | | |
| Benefit payments | 35,159,837 | 1,485,469,024 | 1,520,628,861 | 1,431,930,928 | 1,414,686,012 | 6.2% |
| Refund of member contributions and other payments | - | 31,939,815 | 31,939,815 | 35,183,705 | 38,002,018 | -9.2% |
| Administrative expenses | 29,789 | 5,446,164 | 5,475,953 | 5,270,540 | 5,198,970 | 3.9% |
| Total deductions | 35,189,626 | 1,522,855,003 | 1,558,044,629 | 1,472,385,173 | 1,457,887,000 | 5.8% |
| Net increase (decrease) in net position | 112,690,223 | 5,009,764,341 | 5,122,454,564 | (194,421,271) | 494,906,854 | -2734.7% |
| Net Position Restricted for Pensions and OPEB | | | | | | |
| Beginning of year | 440,588,493 | 16,489,026,044 | 16,929,614,537 | 17,124,035,808 | 16,629,128,954 | -1.1% |
| End of year | \$ 553,278,716 | \$ 21,498,790,385 | \$ 22,052,069,101 | \$ 16,929,614,537 | \$ 17,124,035,808 | 30.3% |

*Restatements from previously presented amounts made due to the implementation of GASB Statement No. 97. See Notes 2 and 11 for further detail.

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2021 and 2020**

Financial Highlights and Analysis

The pension system's net position increased 30.4 percent and the OPEB net position increased 25.6 percent. The increase was due to a very strong global equity market. The domestic equity portfolio achieved a net return of 48.58 percent. The international equity portfolio earned a net return of 40.41 percent. The fixed income portfolio earned a relatively modest net return of 3.34 percent. The System's core and non-core real estate portfolios earned net returns of 2.00 percent and (0.19) percent respectively as real estate was particularly weak due to the global COVID-19 pandemic. The System's private capital portfolio, which includes private equity and private debt, earned a strong net return of 46.82 percent. In total, the System's portfolio earned a net return of 32.95 percent, outperforming the portfolio's policy benchmark return of 31.33 percent and the System's actuarial assumed return of 7 percent.

| | OPEB Plan | 401(a) Plan | System Totals | | |
|-------------------|----------------|-------------------|-------------------|-------------------|-------------------|
| | | | 2021 | 2020 | 2019 |
| Plan net position | \$ 553,278,716 | \$ 21,498,790,385 | \$ 22,052,069,101 | \$ 17,124,035,808 | \$ 16,929,614,537 |
| Yearly % change | 25.6% | 30.4% | 30.3% | -1.1% | 2.0% |

The total investment return for the one-, three-, five- and ten-year periods are above the 7.0 percent actuarial assumed rate of investment return due to the extraordinary returns in FY 2021.

| Total Returns Net of Fees | 1 Year | 3 Year | 5 Year | 10 Year |
|---------------------------|--------|--------|--------|---------|
| 2021 | 33.0% | 12.1% | 12.2% | 10.0% |
| 2020 | 0.8% | 5.2% | 5.4% | 9.0% |
| 2019 | 5.2% | 9.8% | 5.9% | 10.7% |

Benefit payments increased 6.2 percent in FY 2021 compared to FY 2020. The increase is a result of a 1.9 percent increase in the number of benefit recipients and a 4.6 percent increase in the average monthly benefit. Benefit payments to retired members in FY 2021 exceeded contributions from members and employers by \$433 million, or a ratio of 1.39 to 1. A ratio of more than one signifies that the System is receiving fewer contributions than it pays out in benefits. In a mature pension system like TRS a significant percentage of the benefits is paid out of investment earnings that are not reflected in this ratio. The table below reflects the ongoing employer and member contributions.

| | OPEB Plan | 401(a) Plan | System Totals | | |
|--|----------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | | | 2021 | 2020 | 2019 |
| Member contributions | \$ - | \$ 343,474,401 | \$ 343,474,401 | \$ 340,057,646 | \$ 325,766,148 |
| Employer contributions | 6,087,850 | 458,248,765 | 464,336,615 | 458,306,002 | 447,039,679 |
| State matching funds | - | 34,371,572 | 34,371,572 | 28,745,259 | 27,969,601 |
| Dedicated tax revenue | - | 276,918,852 | 276,918,852 | 330,620,451 | 343,701,556 |
| Total contributions | \$ 6,087,850 | \$ 1,113,013,590 | \$ 1,119,101,440 | \$ 1,157,729,358 | \$ 1,144,476,984 |
| Benefit payments | \$ 35,159,837 | \$ 1,485,469,024 | \$ 1,520,628,861 | \$ 1,431,930,928 | \$ 1,414,686,012 |
| Refund of contributions | - | 31,939,815 | 31,939,815 | 35,183,705 | 38,002,018 |
| Total payments | \$ 35,159,837 | \$ 1,517,408,839 | \$ 1,552,568,676 | \$ 1,467,114,633 | \$ 1,452,688,030 |
| Ratio of benefit payments to contributions | 5.78:1 | 1.36:1 | 1.39:1 | 1.28:1 | 1.28:1 |

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2021 and 2020**

Financial Highlights and Analysis (Continued)

The number of pension benefit recipients increased 1.9 percent in FY 2021 as compared to 1.5 percent in FY 2020 and 1.6 percent in FY 2019. There was a net increase of 1,238, 957, and 1,025 members that retired for FY 2021, FY 2020 and FY 2019, respectively. The number of OPEB benefit recipients increased 1.5 percent in FY 2021 as compared to 1.0 percent for FY 2020 and 1.1 percent for FY 2019. There was an increase of 867, 567 and 644 members that retired and opted to receive the OPEB benefit in FY 2021, FY 2020 and FY 2019, respectively.

| | OPEB Plan 2021 | 401(a) Plan 2021 | OPEB Plan 2020 | 401(a) Plan 2020 | OPEB Plan 2019 | 401(a) Plan 2019 |
|--------------------|----------------|------------------|----------------|------------------|----------------|------------------|
| Benefit recipients | 59,944 | 67,016 | 59,077 | 65,778 | 58,510 | 64,821 |
| Yearly % change | 1.5% | 1.9% | 1.0% | 1.5% | 1.1% | 1.6% |
| Net increase | 867 | 1,238 | 567 | 957 | 644 | 1,025 |

The following table reflects the average monthly benefit for service retirements. While the table above reflects an increase in the number of retirees in the past year of 1.9 percent, the table below reflects the average benefit per retiree has increased by 4.6 percent in FY 2021 as compared to 1.3 percent and 1.2 percent in FY 2020 and FY 2019 respectively. The increase in benefit recipients was 2.7 percent higher in FY 2021 as compared to 0.2 percent in FY 2020 and, 0.4 percent in FY 2019 than the increase in average benefit payment below.

| | 2021 | | 2020 | | 2019 | |
|-------------------------|------|-------|------|-------|------|-------|
| Average monthly benefit | \$ | 1,830 | \$ | 1,749 | \$ | 1,726 |
| Yearly % change | | 4.6% | | 1.3% | | 1.2% |

The following table shows the ratio of active members to retired members of the System is 1.34 to 1 in FY 2021, compared to 1.39 to 1 in FY 2020, and 1.39 to 1 in FY 2019. The ratio for FY 2021 decreased compared to FY 2020 due to retiring teachers exceeding new hires. Contributing members decreased by 1,526 in FY 2021; increased by 1,457 in FY 2020 and 1,480 in FY 2019, while benefit recipients increased by 1,238 in FY 2021; 957 in FY 2020 and 1,025 in FY 2019.

| | 401(a) Plan 2021 | 401(a) Plan 2020 | 401(a) Plan 2019 |
|----------------------------|------------------|------------------|------------------|
| Members contributing | 89,945 | 91,471 | 90,014 |
| Yearly % change | (-1.7)% | 1.6% | 1.7% |
| Benefit recipients | 67,016 | 65,778 | 64,821 |
| Yearly % change | 1.9% | 1.5% | 1.6% |
| Ratio contributing/retired | 1.34 | 1.39 | 1.39 |

In the table below the ratio of the 401(a) plan fiduciary net position to the total 401(a) plan liability increased by 17.3 percent in FY 2021 and decreased by 8.1 percent in FY 2020. The OPEB plan fiduciary net position to the total OPEB plan liability increased by 27.6 percent in FY 2020 and decreased by 12.8 percent in FY 2020. The funded ratios of the 401(a) plan and the OPEB plan are 80.8 percent and 129.9 percent respectively for FY 2021.

| | OPEB Plan 2021 | 401(a) Plan 2021 | OPEB Plan 2020 | 401(a) Plan 2020 | OPEB Plan 2019 | 401(a) Plan 2019 |
|--|----------------|-------------------|----------------|-------------------|----------------|-------------------|
| Total pension liability | \$ - | \$ 26,607,617,421 | \$ - | \$ 25,979,258,830 | \$ - | \$ 23,269,907,920 |
| Total OPEB liability | 425,907,944 | | 430,681,821 | - | 410,294,941 | - |
| Fiduciary net position -Pensions or similar | 553,278,716 | 21,498,790,385 | 440,588,493 | 16,489,026,044 | 472,127,498 | 16,651,908,344 |
| Employers' net pension liability | - | 5,108,827,036 | - | 9,490,232,786 | - | 6,617,999,576 |
| Employers' net OPEB asset | (127,370,772) | - | (9,906,672) | - | (61,832,557) | - |
| Ratio of Employers' fiduciary net position to applicable liabilities | 129.9% | 80.8% | 102.3% | 63.5% | 115.1% | 71.6% |

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2021 and 2020**

Financial Highlights and Analysis (Continued)

Under GASB Statement 67 the 401(a) plan ratio above represents the Total Pension Liability compared to the Plan's total net position at fair value. Prior to GASB Statement 67 this ratio was calculated using the actuarial value of the Plan's net position.

Under GASB Statement 74 the ratio above represents the Total OPEB Liability compared to the Plan's total net position at fair value.

Based on the actuarial value of assets or the market value of assets at the end of FY 2021, and the projected continuation of contribution rates and other revenue, and all assumptions hold constant, the Plan's actuary projected a "funding period" of 17 years.

In June of 2018 TRS purchased the Harvey Parkway building located on the northwest corner of NW 63rd and N. Harvey Place in Oklahoma City. The six-story office building was purchased as a real estate investment, and TRS relocated its headquarters to the new building in November 2020.

House Bill 3350 passed in the 2020 Legislative Session. This granted Cost of Living Adjustments (COLAs) for retirees who had been retired at least two (2) years as of July 1, 2020. Retirees who had been retired for at least two (2) years but under five (5) years, received 2% COLAs. Those who had been retired for at least five (5) years or more received 4% COLAs. The increased benefit began with the retirees' July 2020 benefit payment.

House Bill 2741 also passed in the 2020 session. This bill temporarily changed the rate of dedicated revenue from state sales and use tax, as well as personal and corporate income tax for FY 2021 through FY 2027. The rate was reduced to 3.50% for FY 2021 and 3.75% for FY 2022. The rate then increased to 5.50% for FY 2023 through FY 2027 before returning back to 5.00% beginning in FY 2028.

Effective August 2, 2018, the Oklahoma State Legislature amended Oklahoma Statutes Title 70, Section 17-102.3 to authorize TRS to terminate the TRS 403(b) Program. The Board of Trustees voted to terminate the TRS 403(b) Program effective January 29, 2021. All affected school districts were advised of the termination of the Program as well as each district's responsibilities with respect to the accounts currently held under the TRS 403(b) Program.

House Bill 2894 passed in the 2021 session. This bill eliminated the second year of the redirection of typical TRS apportionments provided in HB 2741 (2020) on income (individual and corporate), sales, and use taxes. Effective July 1, 2021, this bill restored apportionment fractions to TRS to the typical 5.00% for FY 2022, while providing an enhanced rate of 5.25% for FY 2023 - FY 2027 to make up for the reduced rate in FY 2021.

Requests for Information

This financial report is designed to provide a general overview of the System's finances for all those with an interest in the System. Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Executive Director of the Teachers' Retirement System of Oklahoma, P.O. Box 53524, Oklahoma City, Oklahoma 73152 or (405) 521-2387.

Teachers' Retirement System of Oklahoma

Statement of Fiduciary Net Position
June 30, 2021 (With Comparative Totals as of June 30, 2020)

| | OPEB Plan | 401(a) Plan | Totals June 30, | |
|---|-----------------------|--------------------------|--------------------------|--------------------------|
| | | | 2021 | 2020** |
| Assets | | | | |
| Cash | \$ - | \$ 25,803,234 | \$ 25,803,234 | \$ 26,064,064 |
| Short-term investments | 12,985,371 | 496,329,761 | 509,315,132 | 593,128,354 |
| Accrued interest and dividends receivable | 1,630,774 | 62,331,817 | 63,962,591 | 60,805,690 |
| Member contributions receivable | - | 25,456,192 | 25,456,192 | 26,608,835 |
| Employer contributions receivable | 1,078,315 | 41,215,582 | 42,293,897 | 43,075,787 |
| Receivable from the State of Oklahoma | - | 46,380,196 | 46,380,196 | 39,916,588 |
| Due from brokers for securities sold | 851,531 | 32,547,424 | 33,398,955 | 76,900,833 |
| Security lending institutional daily assets fund | 34,411,773 | 1,315,294,549 | 1,349,706,322 | 1,032,139,775 |
| Long-term investments: | | | | |
| U.S. government securities | 40,090,955 | 1,551,120,743 | 1,591,211,698 | 1,229,888,540 |
| U.S. corporate bonds | 55,910,910 | 2,163,195,495 | 2,219,106,405 | 1,951,919,295 |
| International corporate bonds and government securities | 13,584,741 | 525,594,190 | 539,178,931 | 426,132,914 |
| Equity securities | 350,446,197 | 13,558,778,220 | 13,909,224,417 | 9,972,348,003 |
| Private equity | 49,709,342 | 1,923,256,542 | 1,972,965,884 | 1,614,052,163 |
| Real estate | 32,364,996 | 1,252,203,097 | 1,284,568,093 | 1,163,285,679 |
| Total long-term investments | 542,107,141 | 20,974,148,287 | 21,516,255,428 | 16,357,626,594 |
| Capital assets, net | 100,548 | 3,843,177 | 3,943,725 | 4,201,234 |
| Total assets | \$ 593,165,453 | \$ 23,023,350,219 | \$ 23,616,515,672 | \$ 18,260,467,754 |
| Liabilities | | | | |
| Benefits in process of payment | \$ 2,664,263 | \$ 101,834,058 | \$ 104,498,321 | \$ 97,577,113 |
| Due to brokers for securities purchased | 2,549,521 | 97,448,349 | 99,997,870 | 192,802,210 |
| Payable under security lending agreement | 34,411,773 | 1,315,294,549 | 1,349,706,322 | 1,032,139,776 |
| Other liabilities | 261,180 | 9,982,878 | 10,244,058 | 8,334,118 |
| Total liabilities | \$ 39,886,737 | \$ 1,524,559,834 | \$ 1,564,446,571 | \$ 1,330,853,217 |
| Net Position | | | | |
| Net position restricted for pensions and OPEB | \$ 553,278,716 | \$ 21,498,790,385 | \$ 22,052,069,101 | \$ 16,929,614,537 |

** Restated. See Notes 2 and 11 for additional information.

See Notes to Financial Statements.

Teachers' Retirement System of Oklahoma

Statement of Changes in Fiduciary Net Position

For the year ended June 30, 2021 (With Comparative Totals for the Year Ended June 30, 2020)

| | OPEB Plan | 401(a) Plan | Totals | |
|--|--------------------|----------------------|----------------------|----------------------|
| | | | Year Ended June 30, | |
| | | | 2021 | 2020** |
| Additions: | | | | |
| Members | \$ - | \$ 343,474,401 | \$ 343,474,401 | \$ 340,057,646 |
| Employer statutory requirement from local school districts | 6,087,850 | 458,248,765 | 464,336,615 | 458,306,002 |
| Matching funds | - | 34,371,572 | 34,371,572 | 28,745,259 |
| Dedicated tax | - | 276,918,852 | 276,918,852 | 330,620,451 |
| Total contributions | 6,087,850 | 1,113,013,590 | 1,119,101,440 | 1,157,729,358 |
| Investment income: | | | | |
| Interest and dividends | 9,204,222 | 351,805,828 | 361,010,050 | 365,763,919 |
| Net appreciation (depreciation) in fair value of investments | 133,962,556 | 5,120,347,049 | 5,254,309,605 | (194,036,609) |
| Investment expenses | (1,491,807) | (57,020,175) | (58,511,982) | (58,105,289) |
| Gain from investing activities | 141,674,971 | 5,415,132,702 | 5,556,807,673 | 113,622,021 |
| Income from securities lending activities: | | | | |
| Securities lending income | 130,031 | 4,970,058 | 5,100,089 | 7,347,248 |
| Securities lending expenses: | | | | |
| Management fees | (13,003) | (497,006) | (510,009) | (734,725) |
| Net income from securities lending activities | 117,028 | 4,473,052 | 4,590,080 | 6,612,523 |
| Net investment gain | 141,791,999 | 5,419,605,754 | 5,561,397,753 | 120,234,544 |
| Total additions | 147,879,849 | 6,532,619,344 | 6,680,499,193 | 1,277,963,902 |
| Deductions: | | | | |
| Retirement, death, survivor and health benefits | 35,159,837 | 1,485,469,024 | 1,520,628,861 | 1,431,930,928 |
| Refund of member contributions and other payments | - | 31,939,815 | 31,939,815 | 35,183,705 |
| Administrative expenses | 29,789 | 5,446,164 | 5,475,953 | 5,270,540 |
| Total deductions | 35,189,626 | 1,522,855,003 | 1,558,044,629 | 1,472,385,173 |
| Net increase (decrease) in net position | 112,690,223 | 5,009,764,341 | 5,122,454,564 | (194,421,271) |
| Net position restricted for: | | | | |
| Beginning of year | 440,588,493 | 16,489,026,044 | 16,929,614,537 | 17,124,035,808 |
| End of year | \$ 553,278,716 | \$ 21,498,790,385 | \$ 22,052,069,101 | \$ 16,929,614,537 |

**Restated, see Notes 2 and 11 for additional information.

See Notes to Financial Statements.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 1. Description of the System

The following brief description of the Teachers' Retirement System of Oklahoma (the "System" or "TRS") is provided for general information purposes only. The plan's benefits are established and amended by State Statute and participants should refer to Title 70 of the Oklahoma Statutes, 1991, Sections 17-101 through 121, as amended.

The System was established as of July 1, 1943 for the purpose of providing retirement allowances and other specified benefits for qualified persons employed by state-supported educational institutions. The System is a part of the state of Oklahoma financial reporting entity, which is combined with other similar funds to comprise the fiduciary-pension trust funds of the state of Oklahoma (the "State"). The System administers a cost-sharing multiple-employer pension plan which is a defined benefit pension plan ("DB Plan"), and a cost-sharing multiple-employer benefit plan other than pensions ("OPEB Plan").

The supervisory authority for the management and operation of the System is a 15-member Board of Trustees, which acts as a fiduciary for investment of the funds and the application of plan interpretations. The Board of Trustees is comprised of six appointees by the Governor, two appointees by the Senate Pro Tempore, two appointees by the House Speaker, four Ex Officio positions, and one non-voting member representing Retired Professional Oklahoma Educators. Out of the six appointees by the Governor, one must be a Higher Education representative, one is a non-classified optional personnel, and the remaining four must work in the public or private funds management, banking, law or accounting field. Out of the two Senate Pro Tempore's as well as the House Speaker's appointees, one must be an active classroom teacher while the other be a retired member of Teachers' Retirement System of Oklahoma. The Ex Officio trustees are the State School Superintendent, the Office of Management and Enterprise Services Director, the Career-Tech Director or their designee, and the State Treasurer.

DB Plan: Oklahoma teachers and other certified employees of common schools, faculty and administrators in public colleges and universities, and administrative personnel of state educational boards and employees of agencies who are employed at least half-time must join the System's DB Plan. Membership is optional for all other regular employees of public educational institutions who work at least 20 hours per week. There are 599 contributing employers in the System. The DB Plan's membership consisted of the following as of June 30, 2021:

Pension

| | |
|---|---------|
| Inactive Plan Members or Beneficiaries Currently Receiving Benefits * | 67,016 |
| Inactive Plan Members Entitled to But Not Yet Receiving Benefits ** | 27,212 |
| Active Plan Members | 89,945 |
| | 184,173 |

* Service retirements, disability retirements, and beneficiaries.

** Includes 13,562 of nonvested terminated members entitled to a refund of their member contributions.

OPEB Plan: TRS will pay a monthly health insurance premium supplement for each retired member who is enrolled in the health insurance plan provided by the State and Education Employees Group Health and Dental Insurance plan or in an insurance program provided by a participating education employer who provides health insurance coverage to former employees, provided the retired member had at least ten (10) years of Oklahoma service prior to retirement. The supplement paid by TRS shall be the premium rate of the Medicare supplement charged to the retired employees not to exceed an amount between \$100 and \$105, depending on length of service and the final average salary of the retired member.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 1. Description of the System (Continued)

OPEB Plan: The OPEB Plan's membership consisted of the following as June 30, 2021:

| OPEB | |
|--|-----------------------|
| Inactive Plan Members or Beneficiaries Currently Eligible to Receive Benefits* | 59,944 |
| Inactive Plan Members Entitled to But Not Yet Receiving Benefits | 5,556 |
| Active Plan Members | <u>89,945</u> |
| Total Plan Members | <u><u>155,445</u></u> |

* Service retirements, disability retirements, and beneficiaries

Note 2. Summary of Significant Accounting Policies

Basis of accounting: The System has prepared its financial statements in accordance with accounting principles generally accepted in the United States of America and using the economic resources measurement focus. The financial statements are prepared using the accrual basis of accounting, under which expenses are recorded when the liability is incurred, revenues are recorded in the accounting period 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 Oklahoma Statutes 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 Oklahoma Statutes. Administrative expenses are funded through investment earnings.

Implementation of New Accounting Standard: As of July 1, 2019, the System implemented GASB Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans, an amendment of GASB Statements No. 14 and No. 84* (GASB 97). The System has applied the new accounting policy retroactively to remove the previously presented tax-deferred defined contribution plan ("DC Plan"). See Note 11.

Budgetary control: The System prepares and submits an annual budget of operating expenses on the cash basis for monitoring and reporting to the Office of Management and Enterprise Services. The System's budget process follows the budget cycle for State operations as outlined by the Office of Management and Enterprise Services.

The Executive Director may approve changes within the budget, but a change to the total budget must be handled according to the provision of Title 62 O.S. Sec. 41.12 of the Oklahoma Statutes.

Investments: The System is authorized to invest in eligible investments as approved by the Board of Trustees as set forth in the System's investment policy. The Board reviews and updates the plan investment policy at least annually, making changes as deemed necessary to achieve policy goals. An investment policy change can be made at any time during the year at the discretion of the Board.

System investments are reported at fair value within the hierarchy established by generally accepted accounting principles, most recently by Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application*. The short-term investment fund is comprised primarily of investments in a money market fund, which are reported at cost, which approximates fair value. Debt 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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 2. Summary of Significant Accounting Policies (Continued)

The System also invests as a limited partner in alternative investments. These investments employ specific strategies such as leveraged buyouts, venture capital, growth capital, distressed investments, and mezzanine capital. The strategies of all such funds are long term and illiquid in nature. As a result, investors are subject to redemption restrictions which generally limit distributions and restrict the ability of limited partners to exit a partnership investment prior to its dissolution. Alternative investment partnerships are valued using their respective net asset value (NAV) and are audited annually. The most significant input into the NAV of such an entity is the fair value of its investment holdings. These holdings are valued by the general partners on a quarterly or semi-annual basis, in conjunction with management and investment advisors and consultation with valuation specialists. The management assumptions are based upon the nature of the investment and the underlying business. The valuation techniques vary based upon investment type and involve a certain degree of expert judgment.

The System's real estate investments are primarily through limited partnerships. Properties owned by the partnership are subject to independent third-party appraisals performed every three years in accordance with the Uniform Standards of Professional Appraisal Practice. The System's real estate investments are long term and illiquid in nature. As a result, investors are subject to redemption restrictions which generally limit distributions and restrict the ability of limited partners to exit a partnership investment prior to its dissolution. Limited partner interests are valued by the System using the NAV of the partnership. The most significant input into the NAV of such an entity is the value of its investment holdings. These holdings are valued by the general partners on a continuous basis, audited annually, and may be periodically appraised by an independent third party. The valuation assumptions are based upon both market and property specific inputs which are not observable and involve a certain degree of expert judgment. The System evaluates investments in conjunction with their custodial bank and investment managers for impairment whenever events or changes in circumstances indicate that the carrying or fair value of the asset may not be recoverable. Should investments be deemed permanently impaired, the carrying or fair value is adjusted to the impaired value with an adjustment to investment income.

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

International investment managers use forward foreign exchange contracts to enhance returns or to control volatility. Currency risks arise due to foreign exchange rate fluctuations. Forward foreign exchange contracts are negotiated between two counter-parties. The System could incur a loss if its counter-parties failed to perform pursuant to the terms of their contractual obligations. The gains and losses on these contracts are included in the income in the period in which the exchange rates change. See Note 3 for additional information regarding investment derivatives as of June 30, 2021.

The System's investment policy provides for investment diversification of stocks, bonds, fixed income securities, real estate, alternative investments, and other investment securities along with investment in commingled or mutual funds. Investment securities and investment securities underlying commingled or mutual fund investments are exposed to various risks, such as interest rate, market, and credit risks.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 2. Summary of Significant Accounting Policies (Continued)

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.

| <u>Asset Class</u> | <u>Target Asset Allocation</u> |
|-----------------------|--------------------------------|
| Domestic Equity | 43.5% |
| International Equity | 19.0% |
| Domestic Fixed Income | 22.0% |
| Real Estate | 9.0% |
| Alternative Assets | 6.5% |
| Total | <u>100.0%</u> |

Capital assets: Capital assets are stated at cost when acquired, net of accumulated depreciation. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, which range from five to ten years.

Risks and uncertainties: Contributions to the System and the actuarial information included in Note 10 and the required supplementary information are reported based on certain assumptions pertaining to interest rates, inflation rates, 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.

Income taxes: The System is exempt from federal and state income taxes and has received a favorable determination from the Internal Revenue Service (the "IRS") under Internal Revenue Code (the "IRC") Section 401(a).

Compensated absences: It is the State's policy to permit employees to accumulate earned but unused vacation and sick leave. Employees earn annual vacation leave based upon their start date and years of service. All accrued vacation leave is payable upon termination, resignation, retirement, or death. Sick leave does not vest to the employee and therefore is not recorded as a liability. Amounts due to the employees for compensated absences were approximately \$261,000 at June 30, 2021.

Plan termination: In the event the System terminates, the board of trustees will distribute the net position of the System to provide the following benefits in the order indicated:

Accumulated contributions will be allocated to each respective member, former member, retired member, joint annuitant, or beneficiary then receiving payments.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 2. Summary of Significant Accounting Policies (Continued)

The balance of such assets, if any, will be allocated to each member then having an interest in the System based upon the excess of their retirement income under the System less the retirement income, which is equal to the actuarial equivalent of the amount allocated to them in accordance with the preceding paragraph in the following order:

- Those retired members, joint annuitants, or beneficiaries receiving payments
- Those members eligible to retire
- Those members eligible for early retirement
- Former members electing to receive a vested benefit
- All other members

Use of estimates: The preparation of the System's financial statements in conformity with accounting principles generally accepted in the United States of America requires the System's management to make significant estimates and assumptions. 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 disclosure and required supplementary information (RSI). Actual results could differ from these estimates.

Note 3. Cash and Investments

At June 30, 2021, the carrying amount of the System's bank deposits was approximately \$25,803,000. The bank balance of the System's bank deposits at June 30, 2021 was approximately \$21,703,000.

Custodial credit risk: Custodial credit risk is the risk that in the event of the failure of a counterparty, the System will not be able to recover the value of its bank deposits or investments. Bank deposits are exposed to custodial credit risk if they are uninsured and uncollateralized. In relation to its bank deposits, the System is not considered to be exposed to custodial credit risk. Although the System does not have a formal bank deposit policy for custodial credit risk, the State Treasurer holds all of the System's bank deposits. As required by Oklahoma Statutes, all bank deposits held by the State Treasurer are insured by Federal Deposit Insurance Corporation, collateralized by securities held by the cognizant Federal Reserve Bank, or invested in U.S. government obligations.

Fair Value Measurements – The System categorizes fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements) as follows:

- Level 1 Unadjusted quoted prices for identical instruments in active markets.
- Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
- Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured using the net asset value per share (NAV) (or its equivalent) as a practical expedient are not classified in the fair value hierarchy. In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The following table shows the fair value levels of the investments for the System as of June 30, 2021:

| Investments by fair value level | 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 | |
| Fixed Income securities | | | | |
| Asset Backed Securities | \$ 309,944,032 | \$ - | \$ 305,369,081 | \$ 4,574,951 |
| Bank Loans | 13,746,614 | - | 13,706,739 | 39,875 |
| Commercial Mortgage-Backed | 145,767,534 | - | 141,530,295 | 4,237,239 |
| Corporate Bonds | 2,084,195,535 | - | 2,081,357,438 | 2,838,097 |
| Corporate Convertible Bonds | 64,068,212 | - | 64,068,212 | - |
| Government Agencies | 35,607,887 | - | 34,013,791 | 1,594,096 |
| Government Bonds | 1,491,351,859 | 394,336,385 | 1,097,015,474 | - |
| Government Mortgage Backed Securities | 102,402,601 | - | 99,664,207 | 2,738,394 |
| Gov't-issued Commercial Mortgage-Backed | 130,132 | - | 130,132 | - |
| Index Linked Government Bonds | 24,122,737 | - | 24,122,737 | - |
| Municipal/Provincial Bonds | 9,531,048 | - | 9,531,048 | - |
| Non-Government Backed C.M.O.s | 68,628,843 | - | 68,628,843 | - |
| Total fixed income securities | 4,349,497,034 | 394,336,385 | 3,939,137,997 | 16,022,652 |
| Equity securities | | | | |
| Common Stock | 13,399,050,557 | 13,384,676,939 | 11,682,997 | 2,690,621 |
| Convertible Equity | 22,754,265 | 22,754,265 | - | - |
| Funds - Equities ETF | 64,077,279 | 64,077,279 | - | - |
| Preferred Stock | 37,239,412 | 22,800,102 | 12,361,385 | 2,077,925 |
| Rights/Warrants | 103,394 | 103,352 | - | 42 |
| Other Securities | 293,966 | - | - | 293,966 |
| Total equity securities | 13,523,518,873 | 13,494,411,937 | 24,044,382 | 5,062,554 |
| Total investments by fair value level | \$ 17,873,015,907 | \$ 13,888,748,322 | \$ 3,963,182,379 | \$ 21,085,206 |
| Investments measured at the net asset value (NAV) | | | | |
| Alternative investments | | | | |
| Private Equity Investments | 1,972,965,884 | | | |
| Real Estate Investments | 1,284,568,093 | | | |
| Total alternative investments | 3,257,533,977 | | | |
| Comingled Mutual Funds | 385,705,544 | | | |
| Total Investments measured at the NAV | 3,643,239,521 | | | |
| Total Investments measured at fair value and NAV | \$ 21,516,255,428 | | | |

Equity, derivative securities, and governmental debt securities classified in Level 1 are valued using prices quoted in active markets for those securities. Debt and debt derivative securities classified in Level 2 and Level 3 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Index linked debt securities are valued by multiplying the external market price feed by the applicable day's Index Ratio.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

Level 2 debt securities have non-proprietary information that was readily available to market participants, from multiple independent sources, which are known to be actively involved in the market. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities.

Level 3 debt securities use proprietary information or single source pricing. Equity securities classified in Level 3 are valued with last trade data having limited trading volume.

Investments in Entities that Calculate Net Asset Value per Share

The System holds shares or interests in investment companies at where the fair value of the investments are measured on a recurring basis using net asset value per share (or its equivalent) of the investment companies as a practical expedient.

The System's policy is to obtain an external appraisal a minimum of every year for properties or portfolios over which the System has some degree of control or discretion. In practice, some investments are appraised annually. Appraisals are performed by an independent appraiser with preference for Member Appraisal Institute (MAI) designated appraisers. The appraisals are performed using generally accepted valuation approaches applicable to the property type.

At year end, the NAV value, unfunded commitments, and redemption rules of those investments is as follows:

| | Net Asset Value | Unfunded Commitments | Redemption Frequency | Redemption Notice Period |
|--|-------------------------|-------------------------|-------------------------|--------------------------------|
| Private Equity Investments | \$ 1,972,965,884 | \$ 766,738,865 | N/A | N/A |
| Real Estate Investments | 1,284,568,093 | 489,219,316 | N/A | N/A |
| Other Mutual Funds | 385,705,544 | | Daily | 1 Day |
| Total investments measured at the NAV | <u>\$ 3,643,239,521</u> | | | |

Real Estate Investments: This type includes 20 real estate funds that invest primarily in commercial real estate. The values of the investments in this type have been determined using the NAV per share (or its equivalent) of the portfolio's ownership interest in partners' capital. These investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 20 years. Because it is not probable that any individual investment will be sold, the value of each individual investment has been determined using the NAV per share (or its equivalent) of the portfolio's ownership interest in partners' capital.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

Private Equity Funds: This type includes 7 private equity funds that invest primarily in leveraged buyouts. The values of the investments in this type have been determined using the NAV per share (or its equivalent) of the portfolio's ownership interest in partners' capital. These investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 20 years. Because it is not probable that any individual investment will be sold, the value of each individual investment has been determined using the NAV per share (or its equivalent) of the portfolio's ownership interest in partners' capital.

Commingled Mutual Funds: This type includes investment(s) in an open-end mutual fund that emphasizes broad diversification and consistent exposure to emerging market small company stocks. The value of the investment in this type has been determined using the NAV per share of the investment.

The System does not anticipate restrictions, other than those outlined in the table, on the ability to sell individual investments at the measurement date. Additionally, the System does not anticipate that NAV-driven investments will become redeemable at valuations materially different from the corresponding NAV listed on previous page. The System has no prescribed time frame to liquidate the investments.

Custodial Credit Risk of Investments: Investment securities are exposed to custodial credit risk if they are uninsured, are not registered in the name of the System, and are held by a counterparty or the counterparty's trust department but not in the name of the System. While the System's investment policy does not specifically address custodial credit risk, it does limit the amount of cash equivalents and short-term investments to no more than 5 percent of each manager's portfolio. At June 30, 2021, the System had uninsured and uncollateralized deposits translated to approximately \$7,069,000 with its custodial agent.

Credit risk: Fixed-income securities are subject to credit risk. Credit quality rating is one method of assessing the ability of the issuer to meet its obligation. The System's investment policy places limits on the amount of the fixed income portfolio that may be invested in bonds rated Ba1 or lower by Moody's or BB+ or lower by Standard & Poor's. Short-term investments include United States Treasury bills that mature in less than 90 days.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

The following table presents the System's fixed income securities subject to credit risk (amounts in thousands):

| Investment Type | AAA | AA | A | BBB | BB | B |
|---|------------|-----------|------------|------------|------------|------------|
| Asset backed securities | \$ 79,460 | \$ 22,742 | \$ 25,787 | \$ 29,129 | \$ 16,054 | \$ 1,349 |
| Bank loans | - | - | - | - | 5,052 | 6,002 |
| Commercial mortgage-backed | 15,133 | 14,641 | 9,686 | 3,079 | 4,311 | 3,660 |
| Corporate bonds | 525 | 7,508 | 142,964 | 840,707 | 618,469 | 305,980 |
| Corporate convertible bonds | - | - | - | 4,056 | 6,092 | 2,341 |
| Government agencies | 7,380 | 1,895 | - | 13,196 | 3,211 | 5,192 |
| Government bonds | - | 8,622 | - | 9,929 | 13,590 | 4,792 |
| Government mortgage-backed securities | - | - | - | 866 | - | - |
| Gov't-issued commercial mortgage-backed | - | - | - | - | - | - |
| Index linked government bonds | - | - | - | - | - | - |
| Municipal/Provincial bonds | - | 4,626 | 1,825 | 2,622 | - | - |
| Non-government backed C.M.O.s | 8,147 | 3,039 | - | - | - | - |
| Sukuk | - | - | - | - | - | - |
| Total fixed income | 110,645 | 63,073 | 180,262 | 903,584 | 666,779 | 329,316 |
| Short-term investments | - | - | - | - | - | - |
| | \$ 110,645 | \$ 63,073 | \$ 180,262 | \$ 903,584 | \$ 666,779 | \$ 329,316 |

| Investment Type | US Government Securities | | | | | Total |
|---|--------------------------|--------|----------|------------|--------------|--------------|
| | CCC | CC | D | Not Rated | | |
| Asset backed securities | \$ 2,290 | \$ - | \$ - | \$ 129,484 | \$ 3,650 | \$ 309,945 |
| Bank loans | - | - | - | 2,693 | - | 13,747 |
| Commercial mortgage-backed | 3,122 | - | - | 92,135 | - | 145,767 |
| Corporate bonds | 75,335 | - | 4,299 | 86,090 | - | 2,081,877 |
| Corporate convertible bonds | 14,924 | - | - | 36,656 | - | 64,069 |
| Government agencies | 1,688 | - | - | 2,369 | 676 | 35,607 |
| Government bonds | 1,596 | - | - | 12,516 | 1,440,306 | 1,491,351 |
| Government mortgage-backed securities | - | - | - | - | 101,537 | 102,403 |
| Gov't-issued commercial mortgage-backed | - | - | - | - | 130 | 130 |
| Index linked government bonds | - | - | - | - | 24,123 | 24,123 |
| Municipal/Provincial bonds | - | 459 | - | - | - | 9,532 |
| Non-government backed C.M.O.s | 152 | - | - | 57,291 | - | 68,629 |
| Sukuk | - | - | - | 2,317 | - | 2,317 |
| Total fixed income | 99,107 | 459 | 4,299 | 421,551 | 1,570,422 | 4,349,497 |
| Short-term investments | - | - | - | - | 59,484 | 59,484 |
| | \$ 99,107 | \$ 459 | \$ 4,299 | \$ 421,551 | \$ 1,629,906 | \$ 4,408,981 |

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

Interest rate risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. 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. While all investments are subject to market changes, securities invested in index funds are more sensitive to market risk. Although the System's investment policy does not specifically address the duration of fixed-income securities, the System's management does monitor interest rate risk by monitoring the performance of each investment manager. As of June 30, 2021, the System had the following investments with maturities (dollars in thousands):

| Investment Type | Fair Value | Effective Duration in Years |
|--|---------------------|-----------------------------|
| Asset-backed securities | \$ 283,844 | 2.8 |
| Bank loans | 13,300 | 1.1 |
| Commercial mortgage-backed | 145,681 | 3.0 |
| Corporate bonds | 2,079,480 | 5.7 |
| Corporate convertible bonds | 64,069 | 5.8 |
| Government agencies | 34,014 | 6.0 |
| Government bonds | 1,491,351 | 15.7 |
| Government mortgage-backed securities | 102,403 | 3.6 |
| Government issued commercial mortgage-backed | 130 | 6.9 |
| Index linked government bonds | 24,123 | 5.5 |
| Municipal/Provincial bonds | 9,532 | 12.1 |
| Non-government backed CMOs | 68,629 | 4.8 |
| Sukuk | 2,316 | 8.4 |
| Other fixed income securities | 30,625 | 11.8 |
| Total fixed income and portfolio duration | <u>\$ 4,349,497</u> | <u>8.9</u> |

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 places limits on the amount that may be invested in securities of any single issuer. As of June 30, 2021, the System did not hold 5% or more of its total investments in any one issuer.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

Foreign currency risk: Foreign currency risk is the potential risk for loss due to changes in exchange rates. The System's investment policy provides that international investment managers invest no more than 30 percent of their portfolio's total assets in one or more issuers in a single country, provided that in the U.K. or Japan such limit shall be 35 percent. Investment in cash and cash equivalents, foreign equities, and fixed-income securities as of June 30, 2021 is shown in the following table by monetary unit to indicate possible foreign currency risk (dollars in thousands):

| Currency | Equities | Corporate Bonds | Government Bonds | Foreign Exchange Contracts | Cash and Cash Equivalents | Other Investments | Grand Total |
|-----------------------------------|---------------------|-----------------|------------------|----------------------------|---------------------------|-------------------|---------------------|
| Argentine Peso | \$ - | \$ - | \$ 459 | \$ - | \$ 131 | \$ - | \$ 590 |
| Australian Dollar | 90,668 | - | - | - | - | - | 90,668 |
| Brazilian Real | 22,842 | - | 5,770 | (2,759) | 10 | - | 25,863 |
| British Pound Sterling | 414,291 | - | - | (973) | 973 | - | 414,291 |
| Canadian Dollar | 152,902 | - | - | - | 15 | - | 152,917 |
| Czech Koruna | 321 | - | - | - | - | - | 321 |
| Danish Krone | 51,081 | - | - | - | - | - | 51,081 |
| Euro | 834,132 | 245 | 819 | 100 | 79 | 26,997 | 862,372 |
| HK offshore Chinese Yuan Renminbi | 37,730 | - | - | - | 3 | - | 37,733 |
| Hong Kong Dollar | 241,725 | - | - | (636) | 751 | - | 241,840 |
| Hungarian Forint | 4,095 | - | - | - | - | - | 4,095 |
| Indonesian Rupiah | 4,561 | - | - | - | - | - | 4,561 |
| India Rupee | - | - | 2,369 | - | - | - | 2,369 |
| Japanese Yen | 521,592 | - | - | (775) | 775 | - | 521,592 |
| Malaysian Ringgit | 7,416 | - | - | - | 5 | - | 7,421 |
| Mexican Peso | 18,528 | - | 5,200 | - | - | - | 23,728 |
| New Israeli Shekel | 7,392 | - | - | - | - | - | 7,392 |
| New Taiwan Dollar | 203,811 | - | - | - | 2,452 | - | 206,263 |
| New Zealand Dollar | 3,421 | - | - | - | - | - | 3,421 |
| Norwegian Krone | 13,943 | - | - | - | 332 | - | 14,275 |
| Phillipine Peso | 359 | - | - | - | - | - | 359 |
| Polish Zloty | 3,897 | - | - | - | - | - | 3,897 |
| Singapore Dollar | 12,560 | - | - | - | - | - | 12,560 |
| South African Rand | 21,657 | - | - | - | - | - | 21,657 |
| South Korean Won | 136,481 | - | - | - | - | - | 136,481 |
| Swedish Krona | 83,081 | - | - | - | 47 | - | 83,128 |
| Swiss Franc | 229,976 | - | - | (1,250) | 1,554 | - | 230,280 |
| Thai Baht | 22,026 | - | - | - | - | - | 22,026 |
| Turkish Lira | 10,676 | - | - | - | - | - | 10,676 |
| Total | \$ 3,151,164 | \$ 245 | \$ 14,617 | \$ (6,293) | \$ 7,127 | \$ 26,997 | \$ 3,193,857 |

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

Derivative instruments: The System's investment derivatives include forward currency and futures contracts. These investments are not speculative in nature and do not increase investment risk beyond allowable limits specified in the System's investment policy. A futures contract is a contract to buy or sell units of an index or financial instrument at a specified future date at a price agreed upon when the contract is originated. The System purchases and sells futures contracts as a means of adjusting the TRS portfolio mix at a lower transaction cost than the transactions, which would otherwise occur in the underlying portfolios. During fiscal year ended June 30, 2021, S&P 500 futures and U.S. Treasury note futures were utilized. Upon entering into such a contract, the System pledges cash or U.S. government securities to the broker equal to the minimum initial margin requirement of the futures exchange. Additionally, TRS receives or pays a daily variation margin, which is an amount of cash equal to the daily fluctuation in value of the contract. The change in fair value of the futures contracts is presented in the statement of changes in fiduciary net position as "Net change in fair value of investments." The net change in fair value from futures contracts for fiscal year ended June 30, 2021 was (\$373,318). At June 30, 2021, the foreign currency futures contracts outstanding were as follows:

| Description | Expiration Date | Open Position | Number of Contracts | Notional Contract Size | Fair Value | Notional Value |
|--------------------|-----------------|---------------|---------------------|----------------------------|-----------------------|-----------------------|
| U.S. Treasury note | September 2021 | Long | 1 | 10-year U.S. Treasury note | \$ 26,897,500 | \$ 26,866,458 |
| U.S. Treasury note | September 2021 | Long | 2 | 5-year U.S. Treasury note | 68,503,477 | 68,725,591 |
| U.S. Treasury bond | September 2021 | Long | 2 | U.S. Treasury bond | 71,679,750 | 69,157,583 |
| Russell 2000 | September 2021 | Long | 1 | N/A | 115,390 | 116,040 |
| S&P 500 Index | September 2021 | Long | 3 | N/A | 39,455,120 | 38,906,783 |
| Russell Mid Cap | September 2021 | Long | 3 | N/A | 14,538,960 | 14,744,328 |
| U.S. Treasury bond | September 2021 | Long | 3 | U.S. Treasury bond | 98,379,000 | 96,122,715 |
| U.S. Treasury note | September 2021 | Long | 2 | 2-year U.S. Treasury note | 176,917,211 | 177,173,207 |
| U.S. Treasury note | September 2021 | Short | 1 | 10-year U.S. Treasury note | (44,785,000) | (44,647,688) |
| U.S. Treasury bond | September 2021 | Short | 1 | U.S. Treasury bond | (43,354,688) | (41,758,028) |
| U.S. Treasury note | September 2021 | Short | 3 | U.S. Treasury note | (234,494,578) | (231,181,531) |
| | | | | | <u>\$ 173,852,141</u> | <u>\$ 174,225,459</u> |

A foreign currency forward contract is an agreement that obligates the parties to exchange given quantities of currencies at a pre-specified exchange rate on a certain future date. The fair values of the forward contracts are estimated based on the present value of their estimated future cash flows.

The foreign currency forward contracts subject the System to foreign currency risk because the investments are denominated in international currencies. The risks are described in the foreign currency risk schedule where the fair value of the foreign currency contracts in U.S. dollars is presented. The System enters into foreign exchange forward contracts for TRS to manage foreign currency exposure, as permitted by portfolio policies. The fair values of the contracts are presented in the Statement of Fiduciary Net Position as Investments, at fair value – Equities. The change in fair value of the forward contracts is presented in the statement of changes in fiduciary net position as "Net change in fair value of investments." The net change in fair value from foreign currency forward contracts for fiscal year ended June 30, 2021 was (\$157,639). At June 30, 2021, the foreign currency forward contracts outstanding were as follows:

| Description | Fair Value (U.S. Dollars) | Currency | Value Date | Notional Value |
|------------------|------------------------------|----------|---------------|----------------|
| Forward sale | \$ (2,759,351) | BRL | 9/2/2021 | \$ (2,601,712) |
| Forward sale | (921,186) | USD | 7/1/2021 | (921,186) |
| Forward sale | (404,489) | USD | 7/2/2021 | (404,489) |
| Forward sale | (219,687) | USD | 7/6/2021 | (219,687) |
| Forward purchase | 204,245 | USD | 7/1/2021 | 204,245 |

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

Rate of return - Pension: For the year ended June 30, 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 33.27 percent. The money-weighted rate of return expresses investment performance, net of investment expense, as adjusted for the changing amounts actually invested.

Rate of return - OPEB: For the year ended June 30, 2021, the annual money-weighted rate of return on OPEB plan investments, net of OPEB plan investment expense, was 33.04 percent. The money-weighted rate of return expresses investment performance, net of investment expense, as adjusted for the changing amounts actually invested.

Note 4. Commitments

At June 30, 2021, the System has total capital commitments related to alternative and real estate investments of \$3,950,400,000. Of this amount, approximately \$1,255,958,000 remained unfunded.

Note 5. Securities Lending Activity

The System's investment policy and State statutes provide 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. 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 agreement, collateralization of the fair value of the loaned securities must be provided in the amount of 102 percent when the security to be loaned and the collateral are in the same currency and 105 percent when the loan and collateral currencies are dissimilar. The securities on loan as of June 30, 2021 collateralized by cash were approximately \$1,312,247,000 and the cash collateral received for those securities on loan was approximately \$1,349,706,000. Securities on loan as of June 30, 2021 consisted of equity loans, corporate fixed income and US government and agencies securities collateralized by cash and non-cash securities. Because the System cannot pledge or sell collateral securities and letters of credit received unless the borrower defaults, the collateral and related liability are not presented in the accompanying statements of fiduciary net position.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 5. Securities Lending Activity (Continued)

The following table describes the types of securities lent and collateral as of June 30, 2021 (dollars in thousands):

| | Fair Value of Securities on Loan | Cash Collateral Value | Collateral Percentage |
|---|--|-----------------------------|--------------------------|
| Governmental loans compared to collateral | \$ 124,648 | \$ 127,810 | 103% |
| Equity loans compared to collateral | 884,545 | 910,407 | 103% |
| Corporate loans compared to collateral | 303,054 | 311,489 | 103% |
| | <u>\$ 1,312,247</u> | <u>\$ 1,349,706</u> | |

At June 30, 2021, the System had no credit risk exposure since the amounts the System owed to borrowers exceeded the amounts borrowers owed the System. The contract with the System's lending agent requires it to indemnify the System if the borrowers fail to return the lent securities. In the event of a collateral shortfall due to a loss in value of investments made with cash collateral, such loss would be the responsibility of the System.

All securities loans can be terminated on demand by either the System or the borrower. Cash collateral is invested in a separate account for the System in accordance with investment guidelines approved by the System. At June 30, 2021, the weighted average maturity of the cash collateral investments was 22 days. The dollar-weighted average maturity of cash collateral investments shall not exceed ninety days. For purposes of this restriction, the average maturity of variable rate instruments will be calculated to the next interest reset date. The Cash Collateral Account's minimum overnight liquidity level shall not be less than twenty percent. The cash collateral investments are structured and maintained by the lending agent's investment desk utilizing an asset and liability methodology designed to manage to an appropriate extent any mismatch between the investment maturities and the System's loans.

Note 6. Capital Assets

Capital assets consist of the following at June 30, 2021:

| | Balance June 30, 2020 | Additions | Deletions | Balance June 30, 2021 |
|-----------------------------------|--------------------------|------------|-------------|--------------------------|
| Furniture, fixtures and equipment | \$ 5,609,644 | \$ 369,690 | \$ (76,393) | \$ 5,902,941 |
| Accumulated depreciation | (1,408,410) | (625,028) | 74,222 | (1,959,216) |
| Capital assets, net | <u>\$ 4,201,234</u> | | | <u>\$ 3,943,725</u> |

The System has commitments to lease building space as well as leases on certain equipment. The future minimum commitment for operating leases as of June 30, 2021 was approximately \$243,000. The System's leases are one-year renewable contracts. Rental expense for all operating leases amounted to approximately \$220,000 for the year ended June 30, 2021.

Note 7. Member and Employer Contributions

All contribution rates are defined or amended by the Oklahoma Legislature. All active members contribute to the System; however, the employer may elect to pay all or part of the contribution for its employees. There are special provisions for members of higher education who joined the System before July 1, 1995. The annual employer contributions reported for the year ended June 30, 2021 were \$464,336,615. Employers satisfied 100 percent of their contribution requirements for 2021.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 7. Member and Employer Contributions (Continued)

All members must contribute 7.0 percent of regular annual compensation, not to exceed the member's maximum compensation level, which for the year ended June 30, 2021 was the full amount of regular annual compensation.

The employers are required to contribute a fixed percentage of annual compensation on behalf of active members. The employer contribution rate was 9.5 percent beginning on January 1, 2011 for all remitting entities other than comprehensive and four year regional universities. The employer contribution rate was 8.55 percent starting on January 1, 2011 for comprehensive and four year universities. The rates for fiscal year 2021 are applied on the full amount of the member's regular annual compensation up to certain limits prescribed by the IRC.

Note 8. Benefits

The System provides defined retirement benefits based on members' final compensation, age, and term of service. In addition, the retirement program provides for benefits upon disability and to survivors upon the death of eligible members. Title 70 O. S. Sec. 17-105 defines all retirement benefits. The authority to establish and amend benefit provisions rests with the State Legislature.

Benefit provisions include:

- Members who join TRS after July 1, 1991 become fully vested in retirement benefits earned to date after five years of credited service. Members who join TRS on or after November 1, 2017 become fully vested after seven years of credited service. Any member who has attained age fifty-five (55) or who has completed thirty (30) years of creditable service, or for any person who initially became a member prior to July 1, 1992, whose age and number of years of creditable service total eighty (80) may be retired upon proper application for retirement on forms established by the System and executing a retirement contract. Any person who became a member after June 30, 1992, but prior to November 1, 2011, whose age and number of years of creditable service total ninety (90) may be retired upon proper application for retirement and executing a retirement contract. Any person who becomes a member on or after November 1, 2011, who attains the age of sixty-five (65) years or who reaches a normal retirement date having attained a minimum age of sixty (60) years may be retired upon proper application for retirement and executing a retirement contract.
- Final compensation for members who joined the System prior to July 1, 1992 is defined as the average salary for the three highest years of compensation. Final compensation for members joining the System after June 30, 1992 is defined as the average of the highest five consecutive years of annual compensation in which contributions have been made. The final average compensation is limited for service credit accumulated prior to July 1, 1995 to \$40,000 or \$25,000, depending on the member's election. Monthly benefits are 1/12 of this amount. Service credits accumulated after June 30, 1995 are calculated based on each member's final average compensation, except for certain employees of the two comprehensive universities. Upon the death of a member who has not yet retired, the designated beneficiary shall receive the member's total contributions plus 100 percent of interest earned through the end of the fiscal year, with interest rates varying based on time of service. A surviving spouse of a qualified member may elect to receive, in lieu of the aforementioned benefits, the retirement benefit the member was entitled to at the time of death as provided under the Joint Survivor Benefit Option.

Upon the death of a retired member, the System will pay \$5,000 to the designated beneficiary, in addition to the benefits provided for the retirement option selected by the member.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 8. Benefits (Continued)

- A member is eligible for disability benefits after ten years of credited Oklahoma service. The disability benefit is equal to 2 percent of final average compensation for the applicable years of credited service.
- Upon separation from the System, members' contributions are refundable with interest based on certain restrictions provided in the plan, or by the IRC.

Supplemental Health Insurance Program (OPEB Plan)

The System makes payments to certain retiree health insurance providers that are subsidies to help pay for certain supplemental health benefits that are available to eligible retired members who elect such coverage. The subsidy payments are made to the Employees Group Insurance Division (EGID) of the Office of Management and Enterprise Services (OMES) for retirees who opt to continue their employer-provided insurance and are also made to employers who provide health insurance options through other insurers as long as the plans provide health insurance options to both the employers' active and retired employees.

All retirees are eligible except for special retirees (as defined) and spouses and beneficiaries as long as they have at least 10 years of service. Retirees who elect such coverage receive the smaller of (i) a Medicare supplement benefit, if eligible, or (ii) an amount between \$100 and \$105 per month, depending on service and final average compensation. Payments are made on their behalf monthly (i) to EGID as described above, if the member continues health coverage under that Plan, or (ii) to the member's former employer, if the member retains health coverage under a plan maintained by the former employer as described above. The amounts paid to EGID or local employers were approximately \$35,160,000 in 2021 and are included in retirement and other benefits expense.

Employer and employee contributions are made based upon the TRS Plan provisions contained in Title 70 of the Oklahoma Statutes, as amended. However the statutes do not specify or identify any particular contribution source to pay the health insurance subsidy. The cost of the subsidy averages 0.12% of normal cost, as determined by an actuarial valuation.

Each employer in the OPEB Plan discloses the employer's own apportioned elements of the OPEB plan.

Assumptions: For OPEB, the actuarial valuation date was performed as of June 30, 2021. The measurement date was June 30, 2021. The benefits are only available to those retirees that participate and have at least 10 years of service credit at retirement.

Note 9. Dedicated Tax

The plan receives funds provided by the State of Oklahoma, a non-employer contributing entity, through 5.0 percent of the State's sales, use, and corporate and individual income taxes collected as dedicated tax. The System receives 1.0 percent of the cigarette taxes collected by the State and receives 5.0 percent of net lottery proceeds collected by the State. The System received approximately \$276,919,000 from the State in 2021. Amounts due from the State were approximately \$46,380,000 at June 30, 2021.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 10. DB Plans (Pension and OPEB Actuarial Information)

The components of the net pension liability of the employers at June 30, 2021 were as follows:

| | |
|----------------------------------|-------------------------|
| Total pension liability | \$ 26,607,617,421 |
| Plan fiduciary net position | (21,498,790,385) |
| Employers' net pension liability | <u>\$ 5,108,827,036</u> |

Plan fiduciary net position as a percentage of the total pension liability 80.80%

The components of the net OPEB asset at June 30, 2021 were as follows:

| | |
|-----------------------------|-------------------------|
| Total OPEB liability | \$ 425,907,944 |
| Plan fiduciary net position | (553,278,716) |
| Employers' net OPEB asset | <u>\$ (127,370,772)</u> |

Plan fiduciary net position as a percentage of the total OPEB asset 129.91%

The total pension and OPEB liability and total pension and OPEB asset as of June 30, 2021, were determined based on actuarial valuations prepared as of June 30, 2021 using the following actuarial assumptions:

- Actuarial Cost Method—Entry Age Normal
- Inflation—2.25 percent
- Future Ad Hoc Cost-of-living Increases—None
- Salary Increases—Composed of 2.25 percent wage inflation, plus 0.75% productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service
- Investment Rate of Return—7.00 percent
- Retirement Age— Experience-based table of rates based on age, service, and gender. Adopted by the Board in July 2020 in conjunction with the five year experience study for the period ending June 30, 2019
- Mortality Rates after Retirement— Males: 2020 GRS Southwest Region Teacher Mortality Table. Generational mortality improvements in accordance with the Ultimate MP scales are projected for the year 2020. Females: 2020 GRS Southwest Region Teacher Mortality Table. Generational mortality improvements in accordance with the Ultimate MP scales are projected from the year 2020.
- Mortality Rates for Active Members— Pub-2010 Teachers Active Employee Mortality table. Generational mortality improvements in accordance with the Ultimate MP scales are projected from the year 2010.

Measurement of the net pension liability: The net pension liability is measured as the total pension liability, less the amount of the plan's fiduciary net position. In actuarial terms, this is analogous to the accrued liability as measured using the individual entry age normal actuarial cost method less the fair value of assets (not the smoothed actuarial value of assets seen in actuarial valuations based on the Board's adopted assumptions and methods).

For the valuation period ending June 30, 2021, a single discount rate of 7.00% was used to measure the total pension liability. Based on the stated assumptions and the projection of cash flows, the pension plan's fiduciary net position and future contributions were projected to be available to finance all projected future benefit payments of current plan members.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 10. DB Plans (Pension and OPEB Actuarial Information) (Continued)

Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The projection of cash flows used to determine this single discount rate assumed that plan member and employer contributions will be made at the current statutory levels and remain a level percentage of payroll. The projection of cash flows also assumed that the State's contribution plus the matching contributions will remain a constant percent of projected member payroll based on the past five years of actual contributions.

The long-term expected rate of return on pension plan investments was determined using a building block method 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 target asset allocation and best estimates of arithmetic expected real rates of return for each major asset class as of June 30, 2021 are summarized in the following table:

| Asset Class | Target Asset Allocation | Long-Term Expected Real Rate of Return |
|-----------------------|----------------------------|--|
| Domestic Equity | 43.5% | 4.3% |
| International Equity | 19.0% | 5.2% |
| Domestic Fixed Income | 22.0% | 0.4% |
| Real Estate | 9.0% | 4.3% |
| Alternative Assets | 6.5% | 6.5% |
| Total | 100.0% | |

** The Real Estate total expected return is a combination of US Direct Real Estate (unleveraged) and US Value added Real Estate (unleveraged).

Sensitivity of the net pension liability and net OPEB asset to the single discount rate assumptions: The following table provides the sensitivity of the net pension liability and net OPEB asset to changes in the discount rate as of June 30, 2021. In particular, the table presents the plan's net pension liability and net OPEB asset, if they were calculated using a single discount rate that is one-percentage-point lower or one-percentage-point higher than the single discount rate:

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 10. DB Plans (Pension and OPEB Actuarial Information) (Continued)

| | 1% Decrease (6.00%) | Current Discount Rate (7.00%) | 1% Increase (8.00%) |
|-----------------------|-------------------------|-------------------------------------|-------------------------|
| Net pension liability | <u>\$ 8,350,461,571</u> | <u>\$ 5,108,827,036</u> | <u>\$ 2,425,193,952</u> |
| | 1% Decrease (6.00%) | Current Discount Rate (7.00%) | 1% Increase (8.00%) |
| Net OPEB asset | <u>\$ (81,829,188)</u> | <u>\$ (127,370,772)</u> | <u>\$ (165,959,855)</u> |

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

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 11. Restatement Resulting from Adoption of GASB 97

As disclosed in Note 2, the System has adopted the provisions of GASB 97 as of July 1, 2019. As a part of the adoption, changes were made to the previous presentation of the financial statements to remove the tax-deferred defined contribution plan.

The following financial statement line items as of and for the year ended June 30, 2020, were restated as a result of the adoption:

| | As Previously Reported | Adoption of GASB 97 | As Restated |
|--|---------------------------|-------------------------|--------------------------|
| <u>Statement of Fiduciary Net Position</u> | | | |
| Long-term investments: | | | |
| Mutual funds | \$ 153,884,145 | \$ (153,884,145) | \$ - |
| Total long-term investments | <u>\$ 16,511,510,739</u> | <u>\$ (153,884,145)</u> | <u>\$ 16,357,626,594</u> |
| Total assets | <u>\$ 18,414,351,899</u> | <u>\$ (153,884,145)</u> | <u>\$ 18,260,467,754</u> |
| Net position restricted for pensions and OPEB | <u>\$ 17,083,498,682</u> | <u>\$ (153,884,145)</u> | <u>\$ 16,929,614,537</u> |
| <u>Statement of Change in Fiduciary Net Position</u> | | | |
| Additions: | | | |
| Contributions to 403(b) plan | \$ 2,349,639 | \$ (2,349,639) | \$ - |
| Total contributions | <u>1,160,078,997</u> | <u>(2,349,639)</u> | <u>\$ 1,157,729,358</u> |
| Investment income: | | | |
| Interest and dividends | \$ 372,394,913 | \$ (6,630,994) | \$ 365,763,919 |
| Net appreciation (depreciation) in fair value of investments | (192,528,161) | (1,508,448) | (194,036,609) |
| Gain from investing activities | <u>121,761,463</u> | <u>(8,139,442)</u> | <u>113,622,021</u> |
| Net investment gain | <u>128,373,986</u> | <u>(8,139,442)</u> | <u>120,234,544</u> |
| Total additions | <u>1,288,452,983</u> | <u>(10,489,081)</u> | <u>1,277,963,902</u> |
| Deductions: | | | |
| Refund of member contributions and other payments | \$ 51,683,402 | \$ (16,499,697) | \$ 35,183,705 |
| Total deductions | <u>1,488,884,870</u> | <u>(16,499,697)</u> | <u>1,472,385,173</u> |
| Net increase (decrease) in net position | <u>(200,431,887)</u> | <u>6,010,616</u> | <u>(194,421,271)</u> |
| Net position restricted for: | | | |
| Beginning of year | <u>\$ 17,283,930,569</u> | <u>\$ (159,894,761)</u> | <u>\$ 17,124,035,808</u> |
| End of year | <u>\$ 17,083,498,682</u> | <u>\$ (153,884,145)</u> | <u>\$ 16,929,614,537</u> |

Teachers' Retirement System of Oklahoma

Required Supplementary Information

Schedule of Changes in Employers' Net Pension Liability (Unaudited)
Fiscal Year Ended June 30,

| | Year Ended June 30 | | | | | | | |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
| Total pension liability: | | | | | | | | |
| Service cost | \$ 516,376,790 | \$ 482,233,224 | \$ 444,005,366 | \$ 432,592,587 | \$ 446,728,754 | \$ 428,904,761 | \$ 415,702,261 | \$ 409,199,801 |
| Interest | 1,783,511,996 | 1,709,647,749 | 1,628,247,388 | 1,586,869,029 | 1,599,025,933 | 1,609,511,334 | 1,538,893,982 | 1,491,722,137 |
| Benefit changes | - | 425,115,415 | | 18,410,937 | - | - | - | - |
| Difference between actual and expected return | (154,121,356) | 247,417,000 | 418,186,187 | (99,947,351) | (373,928,623) | (36,212,168) | (159,980,414) | (105,344,633) |
| Assumption changes | - | 1,276,379,957 | - | - | (482,042,966) | 933,294,515 | 346,488,630 | - |
| Benefit payments | (1,485,469,024) | (1,396,258,730) | (1,378,984,998) | (1,323,912,271) | (1,281,816,606) | (1,257,276,705) | (1,201,350,907) | (1,153,051,607) |
| Refunds | (31,939,815) | (35,183,705) | (38,002,018) | (42,940,983) | (40,944,298) | (36,109,832) | (35,240,176) | (28,718,256) |
| Net change in total pension liability | 628,358,591 | 2,709,350,910 | 1,073,451,925 | 571,071,948 | (132,977,806) | 1,642,111,905 | 904,513,376 | 613,807,442 |
| Total pension liability: | | | | | | | | |
| Beginning | <u>25,979,258,830</u> | <u>23,269,907,920</u> | <u>22,196,455,995</u> | <u>21,625,384,047</u> | <u>21,758,361,853</u> | <u>20,551,132,567</u> | <u>19,646,619,191</u> | <u>19,032,811,749</u> |
| Ending (a) | <u>26,607,617,421</u> | <u>25,979,258,830</u> | <u>23,269,907,920</u> | <u>22,196,455,995</u> | <u>21,625,384,047</u> | <u>22,193,244,472</u> | <u>20,551,132,567</u> | <u>19,646,619,191</u> |
| Plan fiduciary net position: | | | | | | | | |
| Contributions-Employer/State | 769,539,189 | 816,756,915 | 817,833,074 | 757,678,568 | 698,695,713 | 725,425,216 | 728,442,070 | 707,052,675 |
| Contributions-Members | 343,474,401 | 340,057,646 | 325,766,148 | 312,866,576 | 292,949,337 | 294,459,090 | 303,677,304 | 301,300,811 |
| Net investment income | 5,419,605,754 | 117,011,982 | 785,418,295 | 1,455,605,848 | 1,945,898,975 | (357,443,247) | 428,855,747 | 2,571,707,952 |
| Benefit payments | (1,485,469,024) | (1,396,258,730) | (1,378,984,998) | (1,323,912,271) | (1,281,816,606) | (1,257,276,705) | (1,201,350,906) | (1,153,051,607) |
| Refunds | (31,939,815) | (35,183,705) | (38,002,018) | (42,940,983) | (40,944,298) | (36,109,832) | (35,240,176) | (28,718,256) |
| Administrative expense | (5,446,164) | (5,266,375) | (5,194,983) | (4,200,021) | (4,028,080) | (4,458,336) | (4,358,938) | (4,282,605) |
| Net change in plan fiduciary net position | 5,009,764,341 | (162,882,267) | 506,835,518 | 1,155,133,717 | 1,610,755,041 | (635,403,814) | 220,025,101 | 2,394,008,970 |
| Plan fiduciary net position: | | | | | | | | |
| Beginning | <u>16,489,026,044</u> | <u>16,651,944,311</u> | <u>16,145,108,793</u> | <u>14,989,975,076</u> | <u>13,379,220,035</u> | <u>14,449,506,469</u> | <u>14,229,481,368</u> | <u>11,835,472,398</u> |
| Ending (b) | <u>21,498,790,385</u> | <u>16,489,026,044</u> | <u>16,651,944,311</u> | <u>16,145,108,793</u> | <u>14,989,975,076</u> | <u>13,814,102,655</u> | <u>14,449,506,469</u> | <u>14,229,481,368</u> |
| Plan's net pension liability (a)-(b) | \$ 5,108,827,036 | \$ 9,490,232,786 | \$ 6,617,963,609 | \$ 6,051,347,202 | \$ 6,635,408,971 | \$ 8,379,141,817 | \$ 6,101,626,098 | \$ 5,417,137,823 |

See notes to required supplementary information

Information to present a 10 year schedule is not currently available.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

Schedule of Employers' Net Pension Liability (Unaudited)

Fiscal Years Ended June 30,

| | Year Ended June 30 | | | | | | | |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
| Total pension liability | \$ 26,607,617,421 | \$ 25,979,258,830 | \$ 23,269,907,920 | \$ 22,196,455,995 | \$ 21,625,384,047 | \$ 22,193,244,472 | \$ 20,551,132,567 | \$ 19,646,619,191 |
| Plan fiduciary net position | 21,498,790,385 | 16,489,026,044 | 16,651,908,311 | 16,145,072,793 | 14,989,675,076 | 13,814,102,655 | 14,449,506,469 | 14,229,481,368 |
| Employers' net Pension liability | \$ 5,108,827,036 | \$ 9,490,232,786 | \$ 6,617,999,609 | \$ 6,051,383,202 | \$ 6,635,708,971 | \$ 8,379,141,817 | \$ 6,101,626,098 | \$ 5,417,137,823 |
| Employers' fiduciary net position as a percentage of the total pension liability | 80.80% | 63.47% | 71.56% | 72.74% | 69.32% | 62.24% | 70.31% | 72.43% |
| Covered payroll | \$ 4,822,734,551 | \$ 4,739,701,022 | \$ 4,473,511,671 | \$ 4,149,557,077 | \$ 4,070,723,673 | \$ 4,206,558,429 | \$ 4,338,247,200 | \$ 4,304,297,300 |
| Employers' net pension liability as a percentage of covered payroll | 105.93% | 200.23% | 147.94% | 145.83% | 163.00% | 199.19% | 140.65% | 125.85% |

See notes to required supplementary information

Information to present a 10 year schedule is not currently available.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

Schedule of Contributions From Employers
and Other Contributing Entities (Unaudited)

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Actuarially determined contributions | \$ 829,510,343 | \$ 810,488,875 | \$ 760,496,984 | \$ 705,424,703 | \$ 689,580,590 |
| Contributions in relation to the actuarially determined contribution: | | | | | |
| Employers (Schools) | 458,248,765 | 457,391,205 | 446,161,917 | 413,068,467 | 396,743,812 |
| State of Oklahoma, a non-employer contributing entity | 311,290,424 | 359,365,710 | 371,671,157 | 344,610,101 | 301,951,901 |
| Contribution deficiency (excess) | \$ 59,971,154 | \$ (6,268,040) | \$ (57,336,090) | \$ (52,253,865) | \$ (9,115,123) |
| Covered payroll | <u>\$ 4,822,734,551</u> | <u>\$ 4,739,701,022</u> | <u>\$ 4,473,511,671</u> | <u>\$ 4,149,557,077</u> | <u>\$ 4,070,723,673</u> |
| Contributions as a percentage of covered payroll | <u>15.96%</u> | <u>17.23%</u> | <u>18.28%</u> | <u>18.26%</u> | <u>17.16%</u> |
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Actuarially determined contributions | \$ 723,528,050 | \$ 550,652,420 | \$ 602,936,966 | \$ 619,805,640 | \$ 588,287,377 |
| Contributions in relation to the actuarially determined contribution: | | | | | |
| Employers (Schools) | 409,753,221 | 392,051,458 | 386,895,127 | 373,789,020 | 376,635,234 |
| State of Oklahoma, a non-employer contributing entity | 315,671,995 | 336,390,612 | 320,157,548 | 327,505,309 | 304,995,663 |
| Contribution deficiency (excess) | \$ (1,897,166) | \$ (177,789,650) | \$ (104,115,709) | \$ (81,488,689) | \$ (93,343,520) |
| Covered payroll | <u>\$ 4,206,558,429</u> | <u>\$ 4,338,247,200</u> | <u>\$ 4,304,297,300</u> | <u>\$ 3,933,100,000</u> | <u>\$ 3,924,800,000</u> |
| Contributions as a percentage of covered payroll | <u>17.25%</u> | <u>16.79%</u> | <u>16.43%</u> | <u>17.83%</u> | <u>17.37%</u> |

See notes to required supplementary information

Notes to Schedule:

The covered payroll is an estimate of the actual payroll, imputed from individual member contributions.

The assumption change in fiscal year 2015 is attributable to the new assumptions adopted by the Board in May 2015.

The assumption change in fiscal year 2016 is attributable to the new economic assumptions adopted by the Board in September 2016.

The beginning balances for the total pension liability and the plan fiduciary net position were both restated as of June 30, 2016 to remove \$434,882,619 which will be reported as an OPEB going forward.

The assumption change in fiscal year 2017 is attributable to the change in assumed election rate for the Supplemental Medical Insurance benefit adopted by the Board in August 2017.

The assumption change in fiscal year 2020 is attributable to the new assumptions adopted by the Board in July 2020.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

**Schedule of Investment Returns (Unaudited)
Fiscal Year Ended June 30,**

| | Year Ended June 30 | | | | | | | |
|--|--------------------|-------|-------|-------|--------|--------|-------|--------|
| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
| Annual money-weighted rate of return, net of investment expenses | 33.27% | 0.71% | 4.95% | 9.87% | 14.72% | -2.50% | 3.04% | 21.95% |

See notes to required supplementary information

Information to present a 10 year schedule is not currently available.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION:

Actuarially determined contribution rates are calculated as of June 30.

Members and employers contribute based on statutorily fixed rates. The State of Oklahoma contributes 5.0% of revenues from sales taxes, use taxes, corporate and individual income taxes and lottery proceeds. An additional contribution is made for members whose salary is paid from federal funds or certain grant money.

Beginning with fiscal year ending June 30, 2016, the Actuarially Determined Employer Contribution (ADEC) is determined as the employer contribution amount necessary to discharge the Unfunded Actuarial Accrued Liability over a period equal to the funding period for the current actuarial valuation for plan funding purposes (i.e., 17 years as of June 30, 2017). However, in no event shall the amortization period be in excess of a fixed period of twenty (20) years. ADEC rates are calculated as of June 30.

Beginning with the fiscal year ending June 30, 2017, an actuarially determined portion of the employers' contributions (0.07% of pay for FY2018) is allocated to the OPEB Plan and reported under GASB 74. As a result, these contributions are not included in either the actual or actuarially determined contributions above.

The ADEC was previously determined as the total employer contribution necessary to fund the normal cost and to amortize the UAAL as a level percentage of payroll over 30 years.

Methods and assumptions used to determine contribution rates:

| | |
|-------------------------------|---|
| Actuarial cost method | Entry age normal |
| Amortization method | Level percentage of payroll |
| Remaining Amortization period | 20 years |
| Asset valuation method | 5-year smooth market |
| Inflation | 2.25% |
| Salary increase | Composed of 2.25% inflation, plus 0.75% productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service. |
| Investment rate of return | 7.00% |
| Retirement age | Experience-based table of rates based on age, service and gender. Adopted by the Board in July 2020 in conjunction with the five year experience study for the period ending June 30, 2019. |
| Mortality | 2020 GRS Southwest Region Teacher Mortality Table for males and females. Generational mortality improvements in accordance with the Ultimate MP scales are projected from the year 2020. |
| Notes | New assumptions were adopted in July 2020 and were effective as of June 30, 2020. |

Teachers' Retirement System of Oklahoma

Required Supplementary Information

Schedule of Changes in Employers' Net OPEB (Asset)/Liability (Unaudited) Fiscal Years Ended June 30,

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|--|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| Total OPEB liability: | | | | | |
| Service cost | \$ 6,485,892 | \$ 6,219,278 | \$ 6,160,629 | \$ 6,431,010 | \$ 6,647,749 |
| Interest on the total OPEB liability | 29,144,139 | 29,667,636 | 30,349,537 | 31,012,327 | 31,728,895 |
| Benefit changes | | | | - | - |
| Difference between actual and expected return | (5,244,071) | (5,384,475) | (9,944,903) | (9,813,028) | (14,186,133) |
| Assumption changes | - | 25,556,639 | | | - |
| Benefit payments | (35,159,837) | (35,672,198) | (35,701,014) | (36,963,620) | (30,309,127) |
| Net change in total OPEB liability | <u>(4,773,877)</u> | <u>20,386,880</u> | <u>(9,135,751)</u> | <u>(9,333,311)</u> | <u>(6,118,616)</u> |
| Total OPEB liability: | | | | | |
| Beginning | <u>430,681,821</u> | <u>410,294,941</u> | <u>419,430,692</u> | <u>428,764,003</u> | <u>434,882,619</u> |
| Ending (a) | <u>425,907,944</u> | <u>430,681,821</u> | <u>410,294,941</u> | <u>419,430,692</u> | <u>428,764,003</u> |
| Plan fiduciary net position: | | | | | |
| Employer contributions | 6,087,850 | 914,797 | 877,762 | 2,912,563 | 6,513,158 |
| Employee contributions | - | - | - | - | - |
| OPEB net investment income | 141,791,999 | 3,222,561 | 22,898,575 | 44,760,425 | 62,298,027 |
| Benefit payments | (35,159,837) | (35,672,198) | (35,701,014) | (36,963,620) | (30,309,127) |
| Administrative expense | (29,789) | (4,165) | (3,987) | (11,427) | (26,457) |
| Net change in plan fiduciary net position | <u>112,690,223</u> | <u>(31,539,005)</u> | <u>(11,928,664)</u> | <u>10,697,941</u> | <u>38,475,601</u> |
| Plan fiduciary net position: | | | | | |
| Beginning | <u>440,588,493</u> | <u>472,127,498</u> | <u>484,056,162</u> | <u>473,358,220</u> | <u>434,882,619</u> |
| Ending (b) | <u>553,278,716</u> | <u>440,588,493</u> | <u>472,127,498</u> | <u>484,056,161</u> | <u>473,358,220</u> |
| Employers' Net OPEB liability (asset) (a)-(b) | <u>\$ (127,370,772)</u> | <u>\$ (9,906,672)</u> | <u>\$ (61,832,557)</u> | <u>\$ (64,625,469)</u> | <u>\$ (44,594,217)</u> |

Information to present a 10 year schedule is not currently available.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

**Schedule of Employers' Net OPEB Liability (asset) (Unaudited)
Fiscal Years Ended June 30,**

| | <u>2021</u> | <u>2020</u> | <u>2019</u> | <u>2018</u> | <u>2017</u> |
|---|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| Total OPEB liability | \$ 425,907,944 | \$ 430,681,821 | \$ 410,294,941 | \$ 419,430,692 | \$ 428,764,003 |
| OPEB fiduciary net position | 553,278,716 | 440,588,493 | 472,127,498 | 484,056,162 | 473,358,220 |
| Employers' net OPEB liability (asset) | <u>\$ (127,370,772)</u> | <u>\$ (9,906,672)</u> | <u>\$ (61,832,557)</u> | <u>\$ (64,625,470)</u> | <u>\$ (44,594,217)</u> |
| Employers' fiduciary net position as a percentage of the total OPEB liability | 129.91% | 102.30% | 115.07% | 115.41% | 110.40% |
| Covered payroll | \$4,822,734,551 | \$4,739,701,022 | \$4,473,511,671 | \$4,149,557,077 | \$4,070,723,673 |
| Employers' net OPEB liability (asset) as a percentage of covered OPEB payroll | (2.64)% | (0.21)% | (1.38)% | (1.56)% | (1.10)% |

See notes to required supplementary information

Information to present a 10 year schedule is not currently available.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

Schedule of OPEB Contributions From Employers

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Actuarially determined contributions | \$ 6,087,850 | \$ 914,797 | \$ 877,762 | \$ 2,912,563 | \$ 6,513,158 |
| Contributions in relation to the actuarially determined contribution: | | | | | |
| Employers | 6,087,850 | 914,797 | 877,762 | 2,912,563 | 6,513,158 |
| Contribution deficiency (excess) | \$ - | \$ - | \$ - | \$ - | \$ - |
| Covered payroll | <u>\$ 4,822,734,551</u> | <u>\$ 4,739,701,022</u> | <u>\$ 4,473,511,671</u> | <u>\$ 4,149,557,077</u> | <u>\$ 4,070,723,673</u> |
| Contributions as a percentage of covered payroll | <u>0.13%</u> | <u>0.02%</u> | <u>0.02%</u> | <u>0.07%</u> | <u>0.16%</u> |

Information to present a 10 year schedule is not currently available.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

**Schedule of OPEB Investment Returns (Unaudited)
Fiscal Year Ended June 30,**

| OPEB Plan | Year Ended June 30 | | | | |
|--|--------------------|-------|-------|-------|--------|
| | 2021 | 2020 | 2019 | 2018 | 2017 |
| Annual money-weighted rate of return, net of investment expenses | 33.04% | 0.70% | 4.91% | 9.71% | 14.72% |

See notes to required supplementary information

Information to present a 10 year schedule is not currently available.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

NOTES TO SCHEDULE OF CONTRIBUTIONS

The ADEC is the amount needed to fund the normal cost, the anticipated administrative expenses, and a payment towards eliminating the Unfunded Actuarial Accrued Liability (UAAL). The payment towards eliminating the UAAL is based on an closed period of twenty (20) years calculated as a level percentage of future payroll with the initial period beginning on July 1, 2016.

Methods and Assumptions Used to Determine Contribution Rates:

| | |
|-------------------------------|---|
| Actuarial cost method | Entry age normal |
| Amortization method | Level percentage of payroll |
| Remaining Amortization period | 20 years beginning on July 1, 2016 |
| Asset valuation method | Market |
| Inflation | 2.25% |
| Salary increase | Composed of 2.25% inflation, plus 0.75% productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service. |
| Investment rate of return | 7.00% |
| Retirement age | Experience-based table of rates based on age, service and gender. Adopted by the Board in July 2020 in conjunction with the five year experience study for the period ending June 30, 2019. |
| Mortality | 2020 GRS Southwest Region Teacher Mortality Table for males and females. Generational mortality improvements in accordance with the Ultimate MP scales are projected from the year 2020. |
| Health Care Trend Rates | Due to the nature of the benefit, health care trend rates are not applicable to the calculation of contribution rates. |
| Expenses | Administrative expenses are explicitly included in the ADEC. Investment expenses are paid through investment returns. |

Teachers' Retirement System of Oklahoma

Supplementary Information

**Schedule of Investment Expenses
For the Year Ended June 30, 2021**

| | |
|----------------------------------|-----------------------------|
| Investment managers | \$ 56,977,004 |
| Investment consultants | 1,192,389 |
| Investment personnel | 342,589 |
| Total investment expenses | <u>\$ 58,511,982</u> |

Teachers' Retirement System of Oklahoma

Supplementary Information

**Schedule of Administrative Expenses
For the Year Ended June 30, 2021**

| | | |
|--------------------------------------|-----------|-------------------------|
| Salaries and benefits | \$ | 3,475,805 |
| General and miscellaneous | | 674,424 |
| Professional/consultant fees | | 698,223 |
| Travel and related expenses | | 2,473 |
| Depreciation expense | | 625,028 |
| Total administrative expenses | \$ | <u>5,475,953</u> |

Teachers' Retirement System of Oklahoma

Supplementary Information

**Schedule of Professional/Consultant Fees
For the Year Ended June 30, 2021**

| | | |
|---|-----------|----------------|
| Actuarial | \$ | 86,918 |
| Medical | | 10,700 |
| Legal | | 48,860 |
| Audit | | 224,286 |
| Data processing | | 249,536 |
| Miscellaneous | | 77,923 |
| Total professional/consultant fees | \$ | 698,223 |





Investment Section

The TRS investment portfolio generated a 32.95% net return on its investments placing it in the top 3rd percentile of peer funds for the fiscal year ended June 30, 2021.



**TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA
PROFESSIONAL CONSULTANTS AND ADVISORS**

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Geneva Capital Management Ltd.
Milwaukee, Wisconsin
Hotchkis & Wiley Investment,
Los Angeles, California
Neumeier Poma Investment Counsel, LLC
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New York City, New York
FCP Realty Advisor
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GreenOak
New York City, New York
Harbert Real Estate
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Heitman Real Estate
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Dallas, Texas
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Oklahoma City, Oklahoma

Statement of Investment Policies

The policies and procedures of the Teachers' Retirement System of Oklahoma provide for a prudent and systematic investment process on behalf of its members, allowing for reasonable expenses of administration of the Fund, and providing for an orderly means whereby employees may be retired from active service with all pension benefits allowed by Oklahoma statutes. The Board of Trustees must follow the "prudent investor standard." In making investments, the Board must exercise the judgment, care, skill, prudence, and diligence under the circumstances that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character.

The Board diversifies investments to minimize risk. The investment objectives of the Board, as fiduciaries, are long-term rather than short-term. The investment portfolio is constructed to provide liquidity for present benefits and to provide investment returns adequate to meet the needs for all future benefit payments. Board policy takes into consideration actuarial assumptions of the retirement program and any unfunded liabilities.

Basis of Presentation

Investment values and return metrics for the Teachers' Retirement System's portfolio are presented using common investment industry best practices. All information is reported on a time-weighted and net-of-fee basis. It is important to note that these investment values and return metrics may differ from the Financial and Actuarial sections of this report. Both methodologies are relevant and accurate but serve different functions. The most important distinction is the difference in timing between the reported values and return metrics. Investment reporting requires timely information that can be reported in our news releases, Board reports, public statements, and that can be benchmarked against our peer funds. Private market investments are typically reported on a quarter-lagged basis. The Financial and Actuarial statements make adjustments to the previous quarter's value to make those results current, whereas the Investment section does not. The values in the Investment section are consistent with the reporting standards of other pension plans and institutional investors.

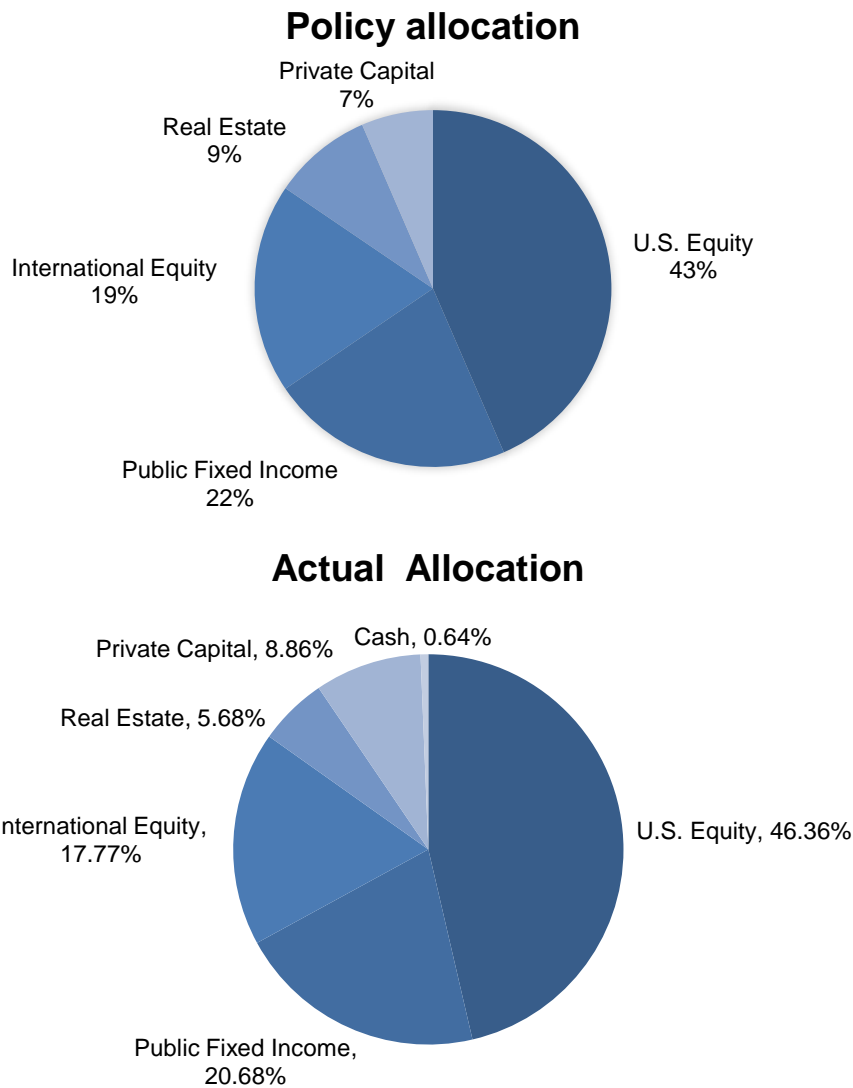
This report was prepared by,

A handwritten signature in black ink, appearing to read "Joseph Cappello". The signature is fluid and cursive, with a large initial "J" and "C".

Joseph Cappello, CFA
Senior Investment Officer

Investment Allocation Policy

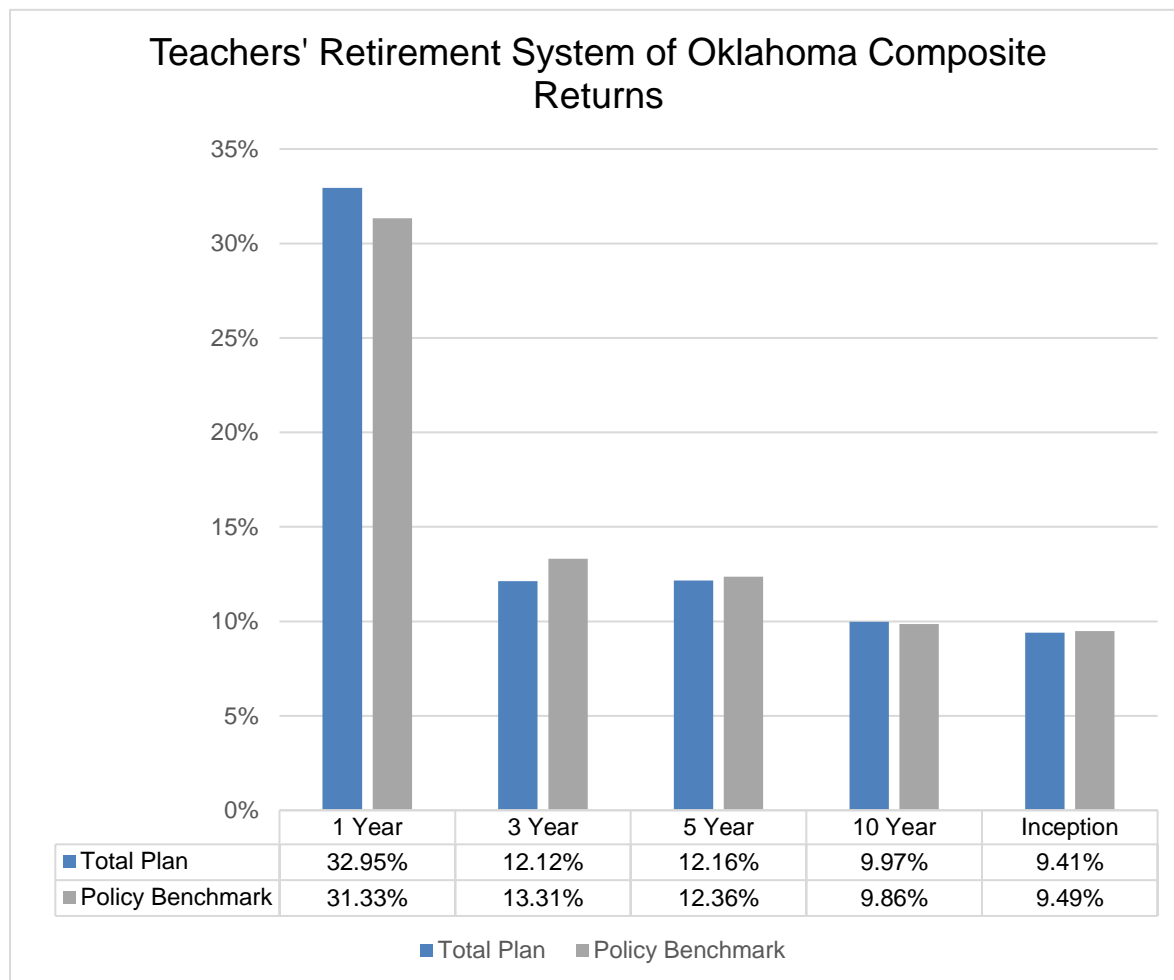
In the pursuit of long-term returns to meet or exceed our 7 percent actuarial assumption, while maintaining the goal of capital preservation, the System has adopted a policy of diversified asset allocation. The resulting diversified portfolio is designed to enhance long-term returns while mitigating short-term volatility. The System has a policy allocation of 43.5 percent to domestic equities, 19 percent to international equities and a 22 percent allocation to fixed income. In addition, the System’s alternative market investments include a 6.5 percent allocation to private capital, and a 9 percent allocation to real estate. The private capital allocation represents both private equity and special opportunities. All investments are managed by external investment management firms with the exception of an office building expected to house the System. The office building has a market value of \$10,080,000 and it is managed by the Teachers’ Retirement System. Our policy allocation versus our actual allocation as of June 30th, 2021 fiscal year end is shown below.



Investment Performance

For fiscal year 2021, the Fund realized a time weighted net-of-fee 32.95 percent return based upon the market value of assets and accruals, compared to the Fund’s policy benchmark return of 31.33 percent. Relative to a peer group of U.S. Public Pension Plans with assets over \$1 billion, the Fund placed in the top 3rd percentile, representing a remarkable outperformance versus our peer funds for fiscal year 2021. The Fund’s ten-year performance versus our peer funds placed in the top 5th percentile. This outperformance is primarily attributable to an overweight of the U.S. equity asset class relative to our peer funds.

Since inception, December 1, 1991, the Teachers’ Retirement System composite has a time-weighted 9.41 percent rate of return, net of fees, while the policy benchmark has returned 9.49 percent. Both return percentages are calculated using the time-weighted rate of return.



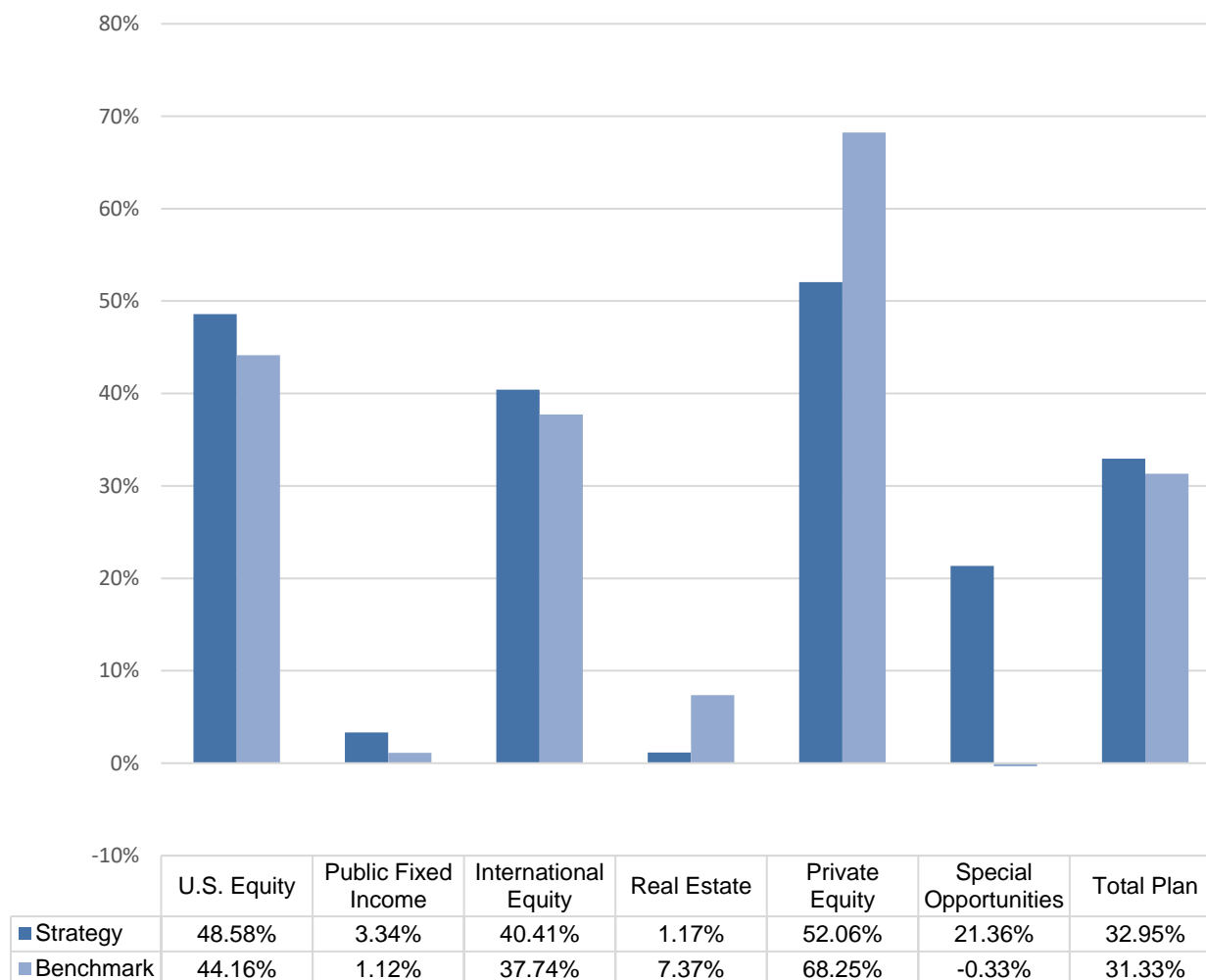
Strategy Performance

To achieve the investment goals set forth by the Oklahoma Teacher's Retirement System Investment Policy Statement, the Board of Trustees employ a strategy of active management. During fiscal year 2021, the Private Capital strategy was the best returning strategy with an annual time-weighted rate of return of 46.82 percent.

The Fund's U.S. and International Equity portfolios have a greater weighting to smaller companies with value characteristics than the overall strategy benchmark. This small cap bias enhanced the portfolio's returns during fiscal year 2021. The Fund's Real Estate portfolio is relatively young, and the underperformance can be primarily attributed to the recent investments that have not yet been fully developed or realized. The Fund employs both active and passive management throughout the portfolio. The active management of the portfolio contributed positively to the Fund's returns during fiscal year 2021.

The net-of-fee time-weighted rates of return for fiscal year 2021 for each strategy is shown below.

Fiscal Year '21 Strategy Performance



Benchmark Returns

The policy benchmark consists of 43.5% Russell 3000, 19.0% MSCI All Country World Index Ex-USA IMI, 22.0% Barclays U.S. Universal, 9.0% NCREIF Property Index, 6.5% Russell 2000 + 400bp. Below you can see the full list of the System's benchmark time-weighted returns.

| Domestic Equity | One Year | Three Year | Five Year |
|--|---------------|---------------|---------------|
| Oklahoma Teachers' Total Domestic Equity | 48.58% | 14.83% | 16.25% |
| <i>Russell 3000</i> | 44.16% | 18.73% | 17.89% |
| <i>Russell 1000</i> | 13.07% | 19.16% | 17.99% |
| <i>Russell Midcap</i> | 49.80% | 16.45% | 15.62% |
| <i>Russell Midcap Growth</i> | 43.77% | 22.39% | 20.52% |
| <i>Russell Mid Cap Value</i> | 53.06% | 11.89% | 11.79% |
| <i>Russell 2000</i> | 62.03% | 13.52% | 16.47% |
| <i>Russell 2000 Value</i> | 73.28% | 10.27% | 13.62% |
| <i>Russell 2000 Growth</i> | 51.36% | 15.94% | 18.76% |
| International Equity | One Year | Three Year | Five Year |
| Oklahoma Teachers' Total International Equity | 40.41% | 8.90% | 11.40% |
| <i>MSCI ACWI ex USA IMI</i> | 37.74% | 9.91% | 11.69% |
| <i>MSCI ACWI ex USA Value</i> | 38.32% | 5.83% | 9.17% |
| <i>MSCI ACWI ex USA Growth</i> | 34.06% | 13.60% | 13.75% |
| <i>MSCI ACWI ex USA Small Cap</i> | 47.58% | 10.20% | 12.39% |
| <i>MSCI EAFE Small Cap</i> | 41.49% | 8.80% | 12.44% |
| <i>MSCI EM Small Cap</i> | 64.38% | 12.74% | ** |
| Fixed Income | One Year | Three Year | Five Year |
| Oklahoma Teachers' Total Fixed Income | 3.34% | 7.42% | 5.31% |
| <i>BB Barclays US Universal</i> | 1.12% | 5.64% | 3.48% |
| <i>70% BB Barclays US Aggregate/ 30% ML High Yield</i> | 4.24% | 5.99% | 3.56% |
| Real Estate | One Year | Three Year | Five Year |
| Oklahoma Teachers' Real Estate | 1.17% | 2.94% | 4.52 |
| <i>NCREIF ODCE Price Index</i> | -1.44% | 0.81% | 1.95% |
| <i>NCREIF Property</i> | 7.37% | 5.50% | 6.13% |
| Private Equity* | One Year | Three Year | Five Year |
| Oklahoma Teachers' Private Equity | 52.06% | 26.38% | 23.05% |
| <i>Russell 2000 + 4%</i> | 68.25% | 21.30% | 21.12% |
| Special Opportunities* | One Year | Three Year | Five Year |
| Oklahoma Teachers' Special Opportunities | 21.36% | 5.48% | 8.13% |
| <i>BB Barclays US Universal</i> | 1.12% | 5.64% | 3.48% |
| Oklahoma Teachers' Total Fund | 32.95% | 12.12% | 12.16% |

*Private Equity and Special Opportunities rolls up into Private Capital for asset allocation purposes

**Oklahoma TRS does not have long-term data for this benchmark

Top Holdings

The System's ten largest stock and fixed income holdings by fair value as of June 30, 2021 are listed below.

| Security | Ticker | Market Value | Shares |
|--------------------------|--------|----------------|-----------|
| Apple Inc. | AAPL | \$ 131,254,931 | 958,345 |
| Microsoft Corp. | MSFT | \$ 122,942,276 | 453,829 |
| Amazon | AMZN | \$ 119,297,868 | 34,678 |
| Lions Gate Entertainment | LGFA | \$ 71,956,021 | 3,932,023 |
| Pfizer Inc. | PFE | \$ 65,901,385 | 1,682,875 |
| Fedex Corp | FDX | \$ 63,869,768 | 214,091 |
| FireEye | FEYE | \$ 59,698,640 | 2,952,455 |
| AT&T | T | \$ 58,270,175 | 2,024,676 |
| Alphabet Class A | GOOGL | \$ 57,899,724 | 23,712 |
| Axalta Coating Systems | AXTA | \$ 56,799,455 | 1,862,888 |

| Security | Par Value | Market Value |
|--|----------------|----------------|
| U.S. Treasury Bond 2.5% Due 05-15-2046 | \$ 305,193,171 | \$ 281,710,000 |
| U.S. Treasury Bond 2.25% Due 08-15-2046 | \$ 292,762,337 | \$ 283,140,000 |
| U.S. Treasury Strip Due 11-15-2045 | \$ 104,438,609 | \$ 175,000,000 |
| U.S. Treasury Bond 2.5% Due 02-15-2046 | \$ 89,143,214 | \$ 82,290,000 |
| U.S. Treasury Strip Due 02-15-2046 | \$ 82,620,061 | \$ 139,700,000 |
| U.S. Treasury Note 0.75% Due 03-31-2026 | \$ 80,094,576 | \$ 80,456,000 |
| U.S. Treasury Note 0.125% Due 01-31-2023 | \$ 60,520,840 | \$ 60,580,000 |
| U.S. Treasury Strip Due 08-15-2045 | \$ 57,930,259 | \$ 96,750,000 |
| U.S. Treasury Note 0.125% Due 03-31-2023 | \$ 57,022,996 | \$ 57,110,000 |
| U.S. Treasury Bill Due 07-29-2021 | \$ 49,885,147 | \$ 49,887,000 |

A comprehensive list of the Fund's investments as of June 30, 2021 may be obtained by contacting the Investment Department.

Investment Expenses by Strategy

Investment fees paid to investment management firms employed by TRS were as follows:

| Domestic Equity | | | |
|------------------------|---------------------------|-----------------|------------------------|
| Account Manager | Strategy | AUM (\$) | Total Fees (\$) |
| Hotchkis & Wiley | Domestic Mid Cap | 518,739,120 | 673,588 |
| Wellington | Domestic Mid Cap | 596,316,809 | 1,709,035 |
| Frontier | Domestic Small Cap | 295,313,470 | 1,519,397 |
| Geneva Capital | Domestic Small Cap | 323,030,451 | 1,763,728 |
| Neumeier Poma | Domestic Small Cap | 338,486,623 | 1,600,440 |
| Shapiro Cap | Domestic Small Cap | 1,048,814,286 | 4,133,270 |
| Wasatch Adv | Domestic Small Cap | 374,706,864 | 2,164,841 |
| Northern Trust | Russell 1000 Index | 2,200,646,588 | 172,885 |
| Northern Trust | Russell Mid Cap Index | 1,347,262,389 | 99,649 |
| Northern Trust | SciBeta US 6 Factor Index | 3,135,815,541 | 1,909,449 |

| International Equity | | | |
|-----------------------------|-------------------------|-----------------|------------------------|
| Account Manager | Strategy | AUM (\$) | Total Fees (\$) |
| Allianz | International Large Cap | 1,326,236,260 | 3,113,296 |
| Causeway Capital | International Large Cap | 642,089,634 | 1,811,761 |
| Wellington | International Large Cap | 755,025,773 | 3,744,981 |
| Wasatch | International Small Cap | 449,551,411 | 2,784,203 |
| Wellington | International Small Cap | 342,388,464 | 1,242,752 |
| SSGA | Emerging Mkts Small Cap | 385,705,543 | 2,157,438 |

| Fixed Income | | | |
|---------------------------|------------------------|-----------------|------------------------|
| Account Manager | Strategy | AUM (\$) | Total Fees (\$) |
| Hoisington Investment Co. | Active Duration | 975,118,670 | 724,416 |
| Loomis Sayles | Core Plus Fixed Income | 1,227,557,701 | 2,470,838 |
| Lord Abbett | Core Plus Fixed Income | 1,154,465,556 | 1,715,221 |
| Mackay Shields | Core Plus Fixed Income | 1,183,786,882 | 2,076,492 |

Real Estate

| Account Manager | Strategy | AUM (\$) | Management Fees (\$) |
|--------------------------------|----------------------|-------------|----------------------|
| AEW | Core Real Estate | 340,174,677 | 2,558,091 |
| Heitman America Real Estate | Core Real Estate | 329,203,875 | 2,347,819 |
| L&B Core Income Partners | Core Real Estate | 69,321,554 | 363,976 |
| American Strategic Value | Non-Core Real Estate | 78,381,809 | 837,424 |
| Angelo Gordon X | Non-Core Real Estate | 29,511,356 | 889,609 |
| Artemis Real Estate III | Non-Core Real Estate | 19,042,483 | 748,968 |
| Dune Real Estate III | Non-Core Real Estate | 40,265,526 | 282,371 |
| Dune Real Estate IV | Non-Core Real Estate | 13,411,947 | 824,603 |
| FCP Realty Fund IV, L.P. | Non-Core Real Estate | 27,097,958 | 520,374 |
| GreenOak US II | Non-Core Real Estate | 22,649,659 | 348,796 |
| GreenOak US III | Non-Core Real Estate | 24,874,132 | 641,850 |
| Harbert European Real Estate V | Non-Core Real Estate | 26,997,224 | € 656,257 |
| Invesco Strategic Realty | Non-Core Real Estate | 14,335,489 | 343,460 |
| L&B Golden Driller | Non-Core Real Estate | 74,080,904 | 299,875 |
| Landmark Real Estate VII | Non-Core Real Estate | 9,680,448 | 113,384 |
| Lyrical-OTRS Realty Partner IV | Non-Core Real Estate | 62,706,673 | 595,512 |
| Teachers' Retirement System | Non-Core Real Estate | 10,080,000 | - |
| Starwood Opportunity X | Non-Core Real Estate | 15,110,037 | 591,653 |
| Starwood Opportunity XI | Non-Core Real Estate | 40,489,952 | 781,378 |

Private Capital

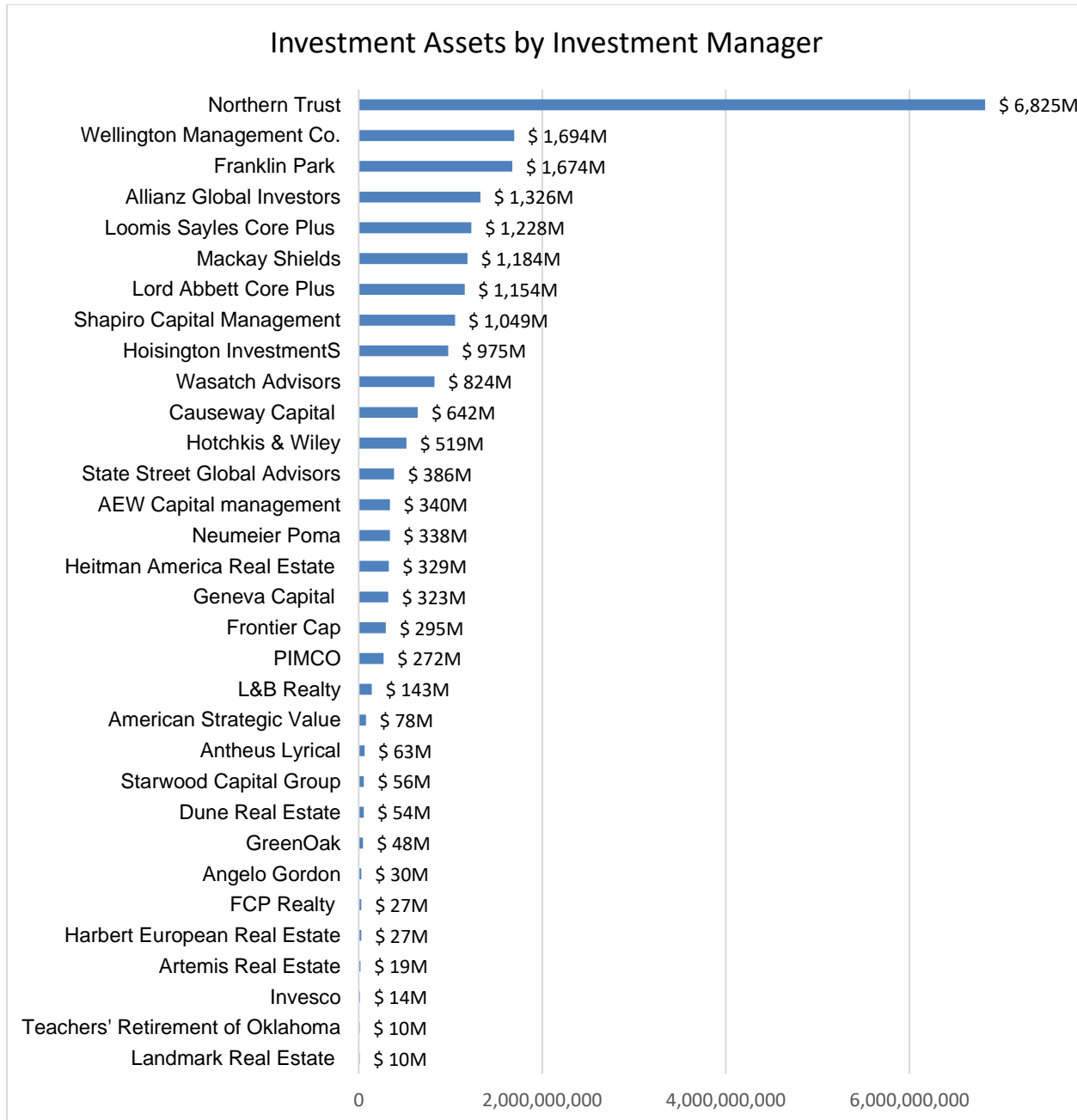
| Account Manager | Strategy | AUM (\$) | Management Fees (\$) |
|-----------------|-------------------------|---------------|----------------------|
| Franklin Park | Private Equity | 1,661,764,317 | 2,476,770 |
| Franklin Park | Private Equity - Legacy | 12,432,643 | 23,230 |
| PIMCO Bravo | Special Opportunities | 82,887 | - |
| PIMCO Bravo II | Special Opportunities | 45,732,765 | 909,927 |
| PIMCO Bravo III | Special Opportunities | 184,295,432 | 2,215,978 |
| PIMCO COF II | Special Opportunities | 41,437,463 | 1,179,787 |

Cash & Other Investment Expenses

| Account Manager | Strategy | AUM (\$) | Total Fees (\$) |
|-------------------------|---------------------------|-------------|-----------------|
| Northern Trust | STIF Account | 140,254,749 | - |
| Northern Trust | Tax Reclaims / Transition | 1,289,046 | - |
| Northern Trust | Custody | | 25,000 |
| AndCo Consulting | Investment Consulting | | 1,195,290 |
| Meketa Investment Group | Private Market Admin | | 325,000 |
| Investment Staff | | | 244,078 |

Investment Assets by Investment Manager

The Board of Trustees has hired the following investment management firms to manage the assets of the System. The investment managers have full discretion in the management of assets in their portfolios, subject to individual investment styles and the overall guidelines of the System's Investment Policy Statement. Some investment management firms manage multiple accounts for Teachers' Retirement System. The investment assets under management, when rolled up by manager, can be seen below. Northern Trust manages several index funds, which represents a large portion of the Fund's U.S. equity exposure.



Schedule of Brokerage Commissions

| Broker | Commission | Shares | Commission per Share |
|----------------------------------|------------|------------|----------------------|
| Abel Noser | 337,956 | 11,331,868 | \$ 0.030 |
| Abn Amro Clearing Bank N.V. | 2,163 | 48,339 | \$ 0.045 |
| Altacorp Capital Inc. | 4,080 | 247,343 | \$ 0.016 |
| B.Riley & Co. Llc | 1,417 | 48,900 | \$ 0.029 |
| Banco Santander S.A. | 5,964 | 620,979 | \$ 0.010 |
| Bank Of America Corporation | 133,106 | 6,328,534 | \$ 0.021 |
| Banque Paribas | 2,278 | 209,886 | \$ 0.011 |
| Barclays Bank Plc | 38,637 | 2,451,514 | \$ 0.016 |
| Berenberg Capital Markets Llc | 50 | 2,476 | \$ 0.020 |
| BMO Capital Markets Corp | 9,746 | 538,229 | \$ 0.018 |
| BNP Paribas Securities Ltd. | 22,520 | 2,015,638 | \$ 0.011 |
| BNY Convergenx | 2,768 | 510,142 | \$ 0.005 |
| Bradesco S.A. Ctvm | 259 | 205,300 | \$ 0.001 |
| Brasil Plural | 2,674 | 957,492 | \$ 0.003 |
| BTIG Llc | 6,707 | 287,460 | \$ 0.023 |
| Cantor Fitzgerald | 1,393 | 110,606 | \$ 0.013 |
| Carnegie Investment Bank | 4,051 | 94,244 | \$ 0.043 |
| Charles Schwab And Co., Inc. | 119 | 245,535 | \$ 0.000 |
| China Intl Capital Corp | 1,305 | 247,000 | \$ 0.005 |
| China Renaissance Securities | 155 | 7,761 | \$ 0.020 |
| Citigroup Global Markets | 48,664 | 4,149,474 | \$ 0.012 |
| CJS Securities Inc | 294 | 7,350 | \$ 0.040 |
| CL King | 2,359 | 58,975 | \$ 0.040 |
| CLSA Securities Ltd | 161 | 35,865 | \$ 0.004 |
| Collins Stewart | 807 | 38,486 | \$ 0.021 |
| Cornerstone Macro Llc | 4,042 | 202,080 | \$ 0.020 |
| Cowen And Company Llc | 6,311 | 157,765 | \$ 0.040 |
| Craig-Hallum | 1,560 | 39,000 | \$ 0.040 |
| Credit Agricole Securities | 4,284 | 520,772 | \$ 0.008 |
| Credit Lyonnais Securities | 2,223 | 155,000 | \$ 0.014 |
| Credit Suisse Limited | 3,042 | 821,092 | \$ 0.004 |
| Cuttone & Co. Inc. | 150 | 15,010 | \$ 0.010 |
| D. Carnegie Ab | 12,487 | 204,246 | \$ 0.061 |
| D.A. Davidson And Co | 4,465 | 114,578 | \$ 0.039 |
| Daiwa Capital Markets | 30,872 | 1,170,907 | \$ 0.026 |
| Danske Bank | 492 | 18,725 | \$ 0.026 |
| Davy Stockbrokers | 507 | 40,095 | \$ 0.013 |
| Decker And Company | 145 | 625,525 | \$ 0.000 |
| Deutsche Bank Securities Inc. | 184 | 9,184 | \$ 0.020 |
| Direct Trading Institutional Inc | 8,632 | 497,637 | \$ 0.017 |

| Broker | Commission | Shares | Commission per Share |
|-----------------------------------|-------------------|---------------|---------------------------------|
| Dnb Markets | 2,359 | 198,635 | \$ 0.012 |
| Electronic Brokerage Systems | 64 | 6,365 | \$ 0.010 |
| Evercore Group Llc | 1,208 | 30,200 | \$ 0.040 |
| Exane Inc. | 3,526 | 122,749 | \$ 0.029 |
| Fidelity Securities | 144 | 9,105 | \$ 0.016 |
| Fleet Securities | 70 | 3,501 | \$ 0.020 |
| Goldman Sachs Llc | 304 | 92,000 | \$ 0.003 |
| Goodbody Stockbrokers | 401 | 421,107 | \$ 0.001 |
| Guggenheim Capital, Llc | 2,063 | 164,776 | \$ 0.013 |
| Haitong International Securities | 4,360 | 74,200 | \$ 0.059 |
| HSBC Bank Plc | 13,366 | 921,671 | \$ 0.015 |
| Instinet Securities | 39,271 | 4,546,571 | \$ 0.009 |
| Investec Bank Plc | 1,005 | 592,500 | \$ 0.002 |
| Investment Technology Group | 4,683 | 461,098 | \$ 0.010 |
| ISI Group Inc. | 37,857 | 1,532,239 | \$ 0.025 |
| ITG Securities | 595 | 81,415 | \$ 0.007 |
| Jane Street Execution Services | 446 | 22,290 | \$ 0.020 |
| Jefferies Securities Limited | 62 | 71,684 | \$ 0.001 |
| Joh. Berenberg, Gossler Co. | 15,503 | 903,700 | \$ 0.017 |
| Johnson Rice & Company Llc | 8,739 | 291,300 | \$ 0.030 |
| Jones Trading Institutional rvice | 43,540 | 1,616,766 | \$ 0.027 |
| KCG Americas Llc | 4,059 | 232,051 | \$ 0.017 |
| Keefe Bruyette | 1,704 | 42,600 | \$ 0.040 |
| Kepler Capital Markets | 4,412 | 610,077 | \$ 0.007 |
| Kim Eng Securities Ltd | 369 | 528,280 | \$ 0.001 |
| Korea Investments & Secs | 2,399 | 11,192 | \$ 0.214 |
| Leerink Swan & Company | 33 | 828 | \$ 0.040 |
| Liberum Capital Inc | 108 | 39,580 | \$ 0.003 |
| Liquidnet Asia Limited | 2,522 | 596,500 | \$ 0.004 |
| Loop Capital Markets Llc | 320 | 8,000 | \$ 0.040 |
| Luminex Trading | 669 | 133,890 | \$ 0.005 |
| Merrill Lynch Equities | 1,088 | 223,055 | \$ 0.005 |
| Mirae Asset Daewoo Co., Ltd. | 3,502 | 126,941 | \$ 0.028 |
| Mitsubishi Ufj Securities, Inc | 2,743 | 199,000 | \$ 0.014 |
| Mizuho Securities Inc | 9,557 | 219,739 | \$ 0.043 |
| MKM Partners | 9,387 | 220,007 | \$ 0.043 |
| Morgan Stanley And Co. | 422 | 7,529 | \$ 0.056 |
| MUFG Securities Americas Inc. | 4,999 | 100,367 | \$ 0.050 |
| National Financial Services Llc | 214 | 9,533 | \$ 0.022 |
| Northern Trust Company | 21,712 | 775,010 | \$ 0.028 |
| Northland Securities | 1,030 | 31,025 | \$ 0.033 |
| Numis Securities Limited | 100 | 29,249 | \$ 0.003 |

| Broker | Commission | Shares | Commission per Share |
|--------------------------------|-------------------|-------------------|---------------------------------|
| Oddo Bhf | 240 | 6,414 | \$ 0.037 |
| Okasan International Limited | 150 | 7,250 | \$ 0.021 |
| Oppenheimer And Co, Inc. | 2,761 | 90,073 | \$ 0.031 |
| Parel | 214 | 2,425 | \$ 0.088 |
| Paris Agency | 1,199 | 34,758 | \$ 0.035 |
| Peel Hunt Llp | 2,927 | 497,045 | \$ 0.006 |
| Penserra Securities | 12,918 | 430,607 | \$ 0.030 |
| Pershing Securities Limited | 104,856 | 24,887,435 | \$ 0.004 |
| Piper Jaffray & Co. | 13,998 | 431,152 | \$ 0.032 |
| Raymond James | 12,355 | 361,391 | \$ 0.034 |
| RBC Capital Markets, Llc | 10,391 | 1,090,017 | \$ 0.010 |
| Redburn | 12,440 | 2,045,002 | \$ 0.006 |
| Robert W. Baird Co. | 10,270 | 279,625 | \$ 0.037 |
| Roth Capital Partners | 4,421 | 130,282 | \$ 0.034 |
| Samsung Securities Co | 4,372 | 67,523 | \$ 0.065 |
| Sanford C. Bernstein And Co. | 45,792 | 5,356,612 | \$ 0.009 |
| Scotia Mcleod Inc. | 182 | 24,454 | \$ 0.007 |
| SG Americas Securities Llc | 1,148 | 28,700 | \$ 0.040 |
| Shinhan Investment Corp. | 923 | 9,250 | \$ 0.100 |
| Sidoti & Company Llc | 3,691 | 124,366 | \$ 0.030 |
| Skandinaviska Enskilda | 187 | 8,978 | \$ 0.021 |
| Smbc Nikko Securities, Inc | 5,189 | 382,556 | \$ 0.014 |
| Stephens Inc | 8,831 | 268,250 | \$ 0.033 |
| Stifel Nicolaus & Co, Inc | 67,881 | 2,274,039 | \$ 0.030 |
| Suntrust Robinson Humphrey | 65,463 | 2,141,993 | \$ 0.031 |
| Toronto Dominion Securities | 1,991 | 99,496 | \$ 0.020 |
| UBS AG | 48 | 4,371 | \$ 0.011 |
| Wall Street Access | 21 | 2,819 | \$ 0.007 |
| Wedbush Morgan Securities | 94 | 2,346 | \$ 0.040 |
| Wells Fargo Bank, N.A. | 100,217 | 3,098,246 | \$ 0.032 |
| William Blair And Company | 6,378 | 242,746 | \$ 0.026 |
| Winterflood Securities Limited | 2,658 | 951,558 | \$ 0.003 |
| Wolfe Research Securities | 104 | 2,593 | \$ 0.040 |
| Grand Total | 1,464,245 | 97,083,709 | \$ 0.015 |

Summary of Investments
June 30, 2021

| <u>Type of Investment</u> | <u>Fair Value</u> | <u>Percentage of Total Fair Value</u> |
|---------------------------------------|--------------------------------|---|
| Fixed Income: | | |
| U S Government Securities | \$ 1,591,211,698 | 7.22% |
| Corporate Bonds | 2,219,106,405 | 10.08% |
| International Bonds | 539,178,931 | 2.45% |
| Total Fixed Income | <u>4,349,497,034</u> | <u>19.75%</u> |
| Equities: | | |
| Domestic | 10,394,338,825 | 47.19% |
| International | 3,514,885,592 | 15.96% |
| Total Equities | <u>13,909,224,417</u> | <u>63.15%</u> |
| Other Investments | | |
| Private Equity | 1,972,965,884 | 8.96% |
| Real Estate | 1,284,568,093 | 5.83% |
| Total Other Investments | <u>3,257,533,977</u> | <u>14.79%</u> |
| Short-Term Investments: | | |
| Short-term Investments Northern Trust | 441,581,548 | 2.00% |
| Money Markets | 67,733,584 | 0.31% |
| Total Short-Term Investments | <u>509,315,132</u> | <u>2.31%</u> |
| Total Investments | <u><u>\$22,025,570,560</u></u> | <u><u>100.0%</u></u> |





Actuarial Section

For fiscal year ended June 30, 2021, TRS' funded status reached 71.5% on an actuarial basis.





October 7, 2021

Board of Trustees
Teachers' Retirement System of Oklahoma
Harvey Parkway Building
301 NW 63rd Street, Suite 500
Oklahoma City, OK 73116-7921

Re: ACTUARIAL VALUATION AS OF JUNE 30, 2021

Dear Members of the Board:

At the request of the Teachers' Retirement System of Oklahoma (the System), Gabriel Roeder Smith & Company (GRS) has performed the actuarial valuation of the System. The information in the Actuarial Section is based on our annual actuarial valuation report, with the most recent valuation conducted as of June 30, 2021, and is intended to be used in conjunction with the full report.

This letter and the schedules listed below represent GRS' certification of the funded status as required for the financial report for the fiscal year ended June 30, 2021 for the System. In accordance with GASB Statement No. 67, GRS prepared the Sensitivity of the Net Pension Liability, the Schedule of Changes in the Employers' Net Pension Liability, the Schedule of Contributions from Employers, and the Notes to Schedule of Contributions presented in the Financial Section of this report. In accordance with GASB Statement No. 74, GRS prepared the Sensitivity of the Net OPEB Liability, the Schedule of Changes in the Employers' Net OPEB Liability, the Schedule of OPEB Contributions from Employers, and the Notes to the Schedule of Contributions presented in the Financial Section of this report. Additionally, GRS prepared the Executive Summary, the Schedule of Increases and Decreases of Benefit Recipients, the Total Experience Gain or Loss, the Solvency Test, and the Schedule of Funding Progress presented in the Actuarial Section of this report. Full actuarial valuation reports have also been provided to the System.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the results presented also comply with the requirements of the Oklahoma statutes and, where applicable, the Internal Revenue Code. The undersigned are independent actuaries. They are Enrolled Actuaries and Members of the American Academy of Actuaries, and they are experienced in performing valuations for large public retirement systems. They meet all of the Qualification Standards of the American Academy of Actuaries.

ACTUARIAL VALUATION

The primary purposes of the actuarial valuation are to determine the adequacy of the current employer contribution rates and the level of dedicated State revenue, to describe the current financial condition of the System, and to analyze changes in the System's condition. In addition, the actuarial valuation produces various summaries of the data.

FINANCING OBJECTIVES

The member, employer, and "grant matching" contribution rates, as well as the dedicated State revenue, are established by law. Members contribute 7.00% of covered compensation.

The contribution rate for employers covered by the Education Employees Service Incentive Plan (EESIP) is 9.50%. For employers not covered by the EESIP—the comprehensive and regional four-year universities—the contribution rate is 8.55%. This employer payroll contribution is projected to average about 9.3% of payroll.

The State of Oklahoma contributes a percentage of its revenues from sales taxes, use taxes, corporate income taxes, individual income taxes, and lottery proceeds to the System. This percentage has been 5.00% since FY 2008. HB 2741 passed during the 2020 legislative session which temporarily reduced the rate to 3.50% for FY 2021. HB 2894 passed during the 2021 legislative session which restored the rate to 5.00% for FY 2022 and then changed the rate to 5.25% for FY 2023 through FY 2027. The rate is scheduled to return back to 5.00% beginning in FY 2028. Since these contribution sources are unrelated to the covered payroll of the System, our outlook for the future contribution level from these sources incorporates five years of actual contributions to develop a five-year average of 7.4%.

Finally, the System receives "grant matching" contributions from employers for positions whose funding comes from federal sources or certain grants. The matching contribution rate for FY 2022 is 7.9% of applicable payroll. These "grant matching" contributions are equivalent to a contribution rate of approximately 0.6% of covered payroll.

The Initial Funding Surcharge, which was an additional contribution made by the comprehensive universities for those employees who elect to join the Alternate Retirement Plan in lieu of joining the System, ended with FY 2019 when the unfunded actuarial accrued liability of the participating institutions was reduced to zero.

On a combined basis, we expect that the contributing entities will contribute 17.3% of covered payroll (9.3% + 7.4% + 0.6% = 17.3%) in FY 2022 increasing to 17.7% for FY 2023 through FY 2027 before returning to 17.3% for all years after.

The dedicated State revenue along with the local and matching contributions, when combined with the contributions made by members, are intended to pay for the normal cost and to amortize the unfunded actuarial accrued liability of the System.



DEFERRED ASSET LOSSES/GAINS

The actuarial value of assets is based upon the market value, but asset gains and losses – earnings greater or less than the assumed annual investment return – are recognized at a rate of 20% per year for five years.

The market value of assets returned 33.3% for the fiscal year ending June 30, 2021. The actuarial value of assets returned 11.4% due to the asset smoothing method which exceeded the assumed rate of 7.00% for FY 2021. This excess return on the actuarial value of assets resulted in an asset gain of over \$771 million and an increase in the System's funded ratio of about 2.8%. It should be noted that results based on the actuarial value, as well as the market value, provide important information about the financial health of the System.

The current actuarial value of assets of \$19.330 billion is \$2.722 billion lower than the market value of assets of \$22.052 billion, and the actuarial value of assets is approximately 87.7% of the market value.

PROGRESS TOWARD ELIMINATING UAAL

The unfunded actuarial accrued liability (UAAL) as of June 30, 2020 was \$8.641 billion based on the actuarial value of assets and it decreased to \$7.703 billion this year. As a result, the System's funded ratio—actuarial value of assets divided by the actuarial accrued liability—increased from 67.3% to 71.5% as of June 30, 2021. If measured on the market value of assets, the funded ratio would increase to 81.6%. The primary cause of the increase was the strong investment returns for the year.

The System is expected to eliminate the current UAAL in 17 years based upon the current contribution and benefit provisions, assuming no actuarial gains or losses in the future, and assuming the actuarial value of assets returns 7.00% (9 years assuming the market value of assets returns 7.00%).

BENEFIT PROVISIONS

Our actuarial valuation as of June 30, 2021 reflects the benefit and contribution provisions set forth in current statutes. There were no bills enacted during the 2021 State of Oklahoma legislative session impacting the benefits paid by the System that had an actuarial impact upon the System.

A summary of all major plan provisions contained within this valuation is included in the section titled "Summary of Plan Provisions".

ASSUMPTIONS AND METHODS

Assumptions are set by the Board of Trustees, taking into account the recommendations of the System's actuary. The System has an experience investigation study performed every fifth year. The actuarial assumptions used in this valuation are based upon the 2020 Experience Investigation Study Report, dated July 15, 2020, measuring the experience investigation period FY2015 – FY2019. The current actuarial assumptions were adopted by the Board in July 2020 and first utilized in the June 30, 2020 actuarial valuation report, and there have been no changes since the last valuation.



Board of Trustees
October 7, 2021
Page 4

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods.

We believe the assumptions are internally consistent and are reasonable, based on the actual experience of the System. A summary of the actuarial methods and assumptions incorporated into this valuation is included in the section titled "Summary of Actuarial Assumptions and Methods".

DATA

Member data for retired, active, and inactive participants was supplied as of June 30, 2021 by the System's staff. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information as of June 30, 2021 was supplied by the auditors and by the System's staff. GRS is not responsible for the accuracy or completeness of the information provided to us.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



R. Ryan Falls, FSA, EA, MAAA
Senior Consultant



Bill Detweiler, ASA, EA, FCA, MAAA
Consultant



Brad Stewart, ASA, EA, MAAA
Consultant



Executive Summary

| Item | 2021 | 2020 |
|---|--|---|
| Membership <ul style="list-style-type: none"> • Number of <ul style="list-style-type: none"> - Active members - Retirees and beneficiaries - Inactive, vested - Inactive, nonvested - Total • Payroll | 89,945 67,016 13,650 13,562 184,173 \$ 4,793 million | 91,471 65,778 13,091 13,686 184,026 \$ 4,801 million |
| Statutory contribution rates <ul style="list-style-type: none"> • Employers in EESIP • Regional universities • Federal/grant salaries • Members • State (% of tax revenues) | FY 2022 9.50% 8.55% 7.90% 7.00% 5.00% | FY 2021 9.50% 8.55% 7.70% 7.00% 3.50% |
| Assets <ul style="list-style-type: none"> • Market value • Actuarial value • Return on market value • Return on actuarial value • State/local/federal contributions • External cash flow % • Ratio of actuarial to market value | \$ 22,052 million \$ 19,330 million 33.3% 11.4% \$ 776 million -2.0% 87.7% | \$ 16,930 million \$ 17,769 million 0.7% 5.5% \$ 818 million -1.9% 105.0% |
| Actuarial Information on Actuarial Value <ul style="list-style-type: none"> • Normal cost % • Unfunded actuarial accrued liability (UAAL) • Funded ratio • Funding period (years) | 10.54% \$ 7,703 million 71.5% 17 | 10.57% \$ 8,641 million 67.3% 21 |
| Actuarial Information on Market Value <ul style="list-style-type: none"> • Unfunded actuarial accrued liability (UAAL) • Funded ratio • Funding period (years) | \$ 4,981 million 81.6% 9 | \$ 9,480 million 64.1% 24 |
| Gains/(losses) <ul style="list-style-type: none"> • Asset experience • Liability experience • Legislative Changes • Assumption Changes • Total | \$ 771 million 158 million 0 million 0 million \$ 929 million | (\$341) million (243) million (425) million (1,302) million (\$2,311) million |

Schedule of Active Member Valuation Data Periods Ended June 30

| Valuation <u>Valuation Date</u> | <u>Number</u> | <u>Annual Payroll</u> | Annual <u>Average Pay</u> | % Increase in <u>Average Pay</u> |
|------------------------------------|---------------|-----------------------|------------------------------|-------------------------------------|
| 2011 | 88,085 | \$3,773,283,867 | 42,837 | -0.10% |
| 2012 | 87,778 | 3,924,843,696 | 44,713 | 4.38% |
| 2013 | 89,333 | 3,933,056,084 | 44,027 | -1.53% |
| 2014 | 89,570 | 4,002,883,716 | 44,690 | 1.51% |
| 2015 | 90,388 | 4,231,846,057 | 46,819 | 4.76% |
| 2016 | 90,167 | 4,254,783,265 | 47,188 | 0.79% |
| 2017 | 87,795 | 4,115,686,767 | 46,878 | -0.66% |
| 2018 | 88,534 | 4,223,226,379 | 47,702 | 1.76% |
| 2019 | 90,014 | 4,591,955,376 | 51,014 | 6.94% |
| 2020 | 91,471 | 4,801,299,110 | 52,490 | 2.89% |
| 2021 | 89,945 | 4,793,220,825 | 53,291 | 1.53% |

Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

The following table provides the sensitivity of the net pension liability to changes in the discount rate as of June 30, 2021. In particular, the table presents the plan's net pension liability, if it were calculated using a single discount rate that is one-percentage-point lower or one-percentage-point higher than the single discount rate:

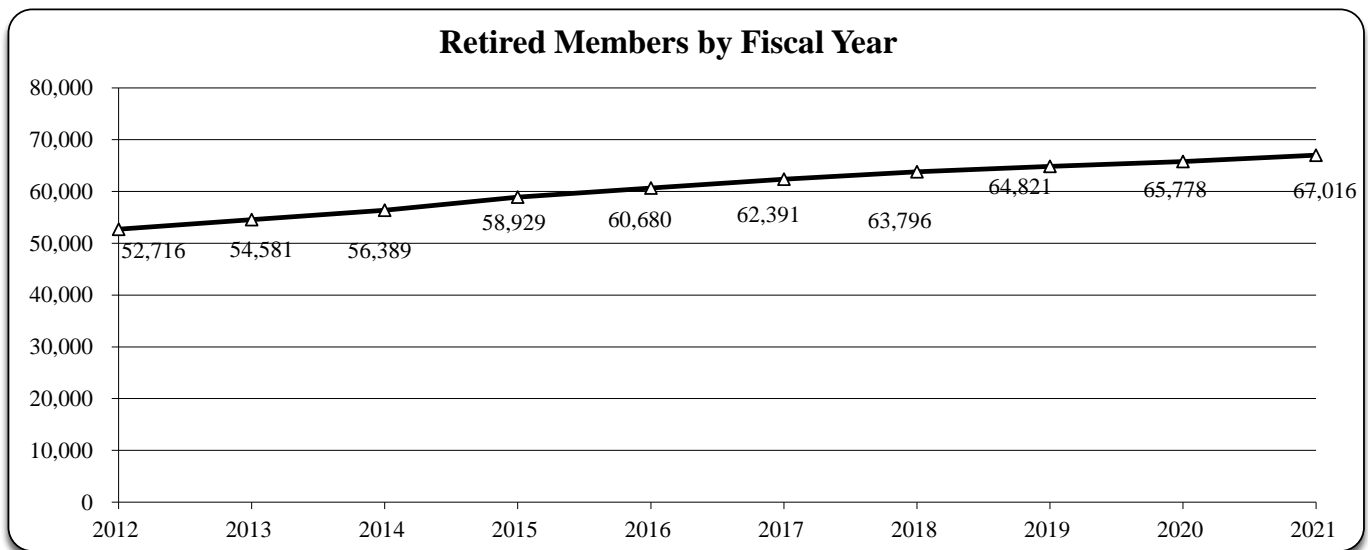
| 1% Decrease 6.00% | Current Single Rate Assumption 7.00% | 1% Increase 8.00% |
|-----------------------------|---|-----------------------------|
| \$8,350,461,571 | \$5,108,827,036 | \$2,425,193,952 |

Schedule of Increases and Decreases of Benefit Recipients Periods Ended June 30

| Year Ended | <u>Added to Rolls</u> | | <u>Removed from Rolls</u> | | <u>Rolls-End of Year</u> | | % Increase in Annual Allowances | Average Annual Allowances |
|---------------|-----------------------|--------------------------|---------------------------|----------------------|--------------------------|------------------------|---------------------------------------|---------------------------------|
| | No. | Annual Allowances* ** | No. | Annual Allowances | No. | Annual Allowances** | | |
| 2012 | 3,003 | \$59,122,021 | 1,189 | \$10,098,394 | 52,716 | \$988,658,890 | 5.2% | \$18,754 |
| 2013 | 3,305 | 76,049,460 | 1,440 | 22,392,434 | 54,581 | 1,042,315,916 | 5.4% | 19,097 |
| 2014 | 3,208 | 74,367,565 | 1,400 | 22,188,183 | 56,389 | 1,094,495,298 | 5.0% | 19,410 |
| 2015 | 4,053 | 96,652,350 | 1,513 | 24,486,087 | 58,929 | 1,166,661,561 | 6.6% | 19,798 |
| 2016 | 3,420 | 83,343,346 | 1,669 | 27,476,789 | 60,680 | 1,222,528,118 | 4.8% | 20,147 |
| 2017 | 3,323 | 79,639,291 | 1,612 | 26,725,994 | 62,391 | 1,275,441,415 | 4.3% | 20,443 |
| 2018 | 3,155 | 74,318,025 | 1,750 | 29,816,313 | 63,796 | 1,319,943,127 | 3.5% | 20,690 |
| 2019 | 2,816 | 66,700,469 | 1,791 | 30,295,490 | 64,821 | 1,356,348,106 | 2.8% | 20,925 |
| 2020 | 2,877 | 115,139,960 | 1,920 | 31,861,412 | 65,778 | 1,439,626,654 | 6.1% | 21,886 |
| 2021 | 3,606 | 96,892,428 | 2,368 | 39,297,593 | 67,016 | 1,497,221,489 | 4.0% | 22,341 |

* Includes post-retirement increases for members who retired in previous years and changes occurring due to plan options which offer a continuing monthly benefit payment to beneficiaries.

** Includes the impact of HB3350 which granted a cost of living adjustment for certain retirees.



Investment Experience Gain or Loss

| Item (1) | Year Ending June 30, 2021 (2) | Year Ending June 30, 2020 (3) |
|---|-------------------------------------|-------------------------------------|
| 1. Actuarial assets, beginning of year | \$ 17,769,313,155 | \$ 17,150,348,067 |
| 2. Contributions during year | \$ 1,119,101,440 | \$ 1,157,729,358 |
| 3. Benefits and refunds paid | \$ (1,552,568,676) | \$ (1,467,114,633) |
| 4. Administrative expenses | \$ (5,475,953) | \$ (5,270,540) |
| 5. Assumed net investment income at 7.0%: | | |
| a. Beginning of year assets | \$ 1,243,851,921 | \$ 1,286,276,105 |
| b. Contributions | 39,168,550 | 43,414,851 |
| c. Benefits and refunds paid | (54,339,904) | (55,016,799) |
| d. Administrative expenses | (191,658) | (197,645) |
| e. Total | \$ 1,228,488,909 | \$ 1,274,476,512 |
| 6. Expected actuarial assets, end of year (Sum of Items 1 through 5) | \$ 18,558,858,875 | \$ 18,110,168,764 |
| 7. Actual actuarial assets, end of year | \$ 19,330,293,468 | \$ 17,769,313,155 |
| 8. Asset gain (loss) for year (Item 7 - Item 6) | \$ 771,434,593 | \$ (340,855,609) |

Solvency Test

The System's funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due – the ultimate test of financial soundness.

A short-term solvency test is one way of evaluating a system's progress under its funding program. In a short-term solvency test, the plan's present assets are compared with:

1. Active member contributions on deposit;
2. The liabilities for future benefits to present retirees;
3. The liabilities for terminated employees with vested benefits; and
4. The liabilities for service already rendered by active members.

In a system that has been following the level contribution rate of payroll financing principle, the liabilities for active member contributions on deposit (liability 1), the liabilities for future benefits to present retirees (liability 2), and the liabilities for terminated employees with vested benefits (liability 3) will be fully covered by present assets except in rare circumstances. In addition, the liabilities for service already rendered by active members (liability 4) 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 4 will increase over time. Following is a summary of the solvency test:

Solvency Test

Actuarial Accrued Liability and Percent of Active Member Payroll for:

| June 30, | Accumulated Member Contributions Including Interest | | Retirees and Beneficiaries Currently Receiving Benefits | | Terminated Employees Not Yet Receiving Benefits | | Employer Financed Portion of Vested and Nonvested Benefits | | Actuarial Value of Assets | Portion of Accrued Liabilities Covered by Assets | | | |
|----------|---|--------------|---|--------------|---|--------------|--|--------------|---------------------------|--|-----|-----|-----|
| | (1) | % of Payroll | (2) | % of Payroll | (3) | % of Payroll | (4) | % of Payroll | | (1) | (2) | (3) | (4) |
| 2012 | \$ 5,087.4 | 130% | \$ 9,814.2 | 250% | \$ 443.8 | 11% | \$ 3,242.6 | 83% | \$ 10,190.5 | 100% | 52% | 0% | 0% |
| 2013 | 5,252.6 | 134% | 10,315.6 | 262% | 469.3 | 12% | 2,935.7 | 75% | 10,861.1 | 100% | 54% | 0% | 0% |
| 2014 | 5,221.1 | 130% | 10,780.2 | 269% | 726.8 | 18% | 2,847.5 | 71% | 12,369.0 | 100% | 66% | 0% | 0% |
| 2015 | 5,377.9 | 127% | 11,499.9 | 272% | 534.3 | 13% | 3,280.5 | 78% | 13,771.9 | 100% | 73% | 0% | 0% |
| 2016 | 5,494.8 | 129% | 12,466.8 | 293% | 610.9 | 14% | 3,620.7 | 85% | 14,577.9 | 100% | 73% | 0% | 0% |
| 2017 | 5,572.8 | 135% | 12,602.9 | 306% | 651.1 | 16% | 3,227.3 | 78% | 15,516.3 | 100% | 79% | 0% | 0% |
| 2018 | 5,736.4 | 136% | 12,973.2 | 307% | 696.5 | 16% | 3,209.8 | 76% | 16,486.9 | 100% | 83% | 0% | 0% |
| 2019 | 6,011.2 | 131% | 13,205.7 | 288% | 750.2 | 16% | 3,713.1 | 81% | 17,150.3 | 100% | 84% | 0% | 0% |
| 2020 | 6,315.8 | 132% | 14,409.8 | 300% | 858.9 | 18% | 4,825.4 | 101% | 17,769.3 | 100% | 79% | 0% | 0% |
| 2021 | 6,340.3 | 132% | 14,941.6 | 312% | 920.1 | 19% | 4,831.5 | 101% | 19,330.3 | 100% | 87% | 0% | 0% |

Note: Dollar amounts in millions

Schedule of Funding Progress
(As required by GASB #25)

| Valuation Date | Actuarial Value of Assets (AVA) | Actuarial Accrued Liability (AAL) | Unfunded Actuarial | | Annual Covered Payroll | UAAL as % of Payroll (4)/(6) |
|----------------|---------------------------------|-----------------------------------|------------------------------------|----------------------|------------------------|------------------------------|
| | | | Accrued Liability (UAAL) (3) - (2) | Funded Ratio (2)/(3) | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| June 30, 2012 | \$10,190.5 | \$18,588.0 | \$8,397.6 | 54.8% | \$3,924.8 | 214.0% |
| June 30, 2013 | \$10,861.1 | \$18,973.2 | \$8,112.1 | 57.2% | \$3,933.1 | 206.3% |
| June 30, 2014 | \$12,369.0 | \$19,575.6 | \$7,206.6 | 63.2% | \$4,002.9 | 180.0% |
| June 30, 2015 | \$13,771.9 | \$20,692.6 | \$6,920.7 | 66.6% | \$4,231.8 | 163.5% |
| June 30, 2016 | \$14,577.9 | \$22,193.4 | \$7,615.6 | 65.7% | \$4,254.8 | 179.0% |
| June 30, 2017 | \$15,516.3 | \$22,054.1 | \$6,537.8 | 70.4% | \$4,115.7 | 158.9% |
| June 30, 2018 | \$16,486.9 | \$22,615.9 | \$6,129.0 | 72.9% | \$4,223.2 | 145.1% |
| June 30, 2019 | \$17,150.3 | \$23,680.2 | \$6,529.9 | 72.4% | \$4,591.9 | 142.2% |
| June 30, 2020 | \$17,769.3 | \$26,409.9 | \$8,640.6 | 67.3% | \$4,801.3 | 180.0% |
| June 30, 2021 | \$19,330.3 | \$27,033.5 | \$7,703.2 | 71.5% | \$4,793.2 | 160.7% |

Note: Dollar amounts in millions

Summary of Plan Provisions

1. Effective Date: July 1, 1943.
2. Plan Year: Twelve-month period ending June 30th.
3. Administration: The Teachers' Retirement System of Oklahoma is administered by a Board of Trustees, which is responsible for administration of the System and investment of System assets. Four members serve ex officio, while a total of ten others are appointed by the Governor (six), the President of the Senate (two), and the Speaker of the House (two), according to various guidelines. Additionally, a statewide organization representing retired educators shall appoint a member to the Board who shall be a nonvoting member.
4. Type of Plan: The System is a qualified governmental defined benefit retirement plan. For GASB purposes, it is a cost-sharing multiple-employer plan.
5. Eligibility: Employees of any public school in Oklahoma, including public colleges and universities, are eligible to participate in the System. Classified personnel (teachers, supervisors, principals, registered school nurses, administrators, etc.) are required to participate, beginning at their date of employment. Non-classified employees (all other employees, such as drivers, secretaries, janitors, cooks, etc.) working 20 hours or more per week may, but are not required to, participate. Certain other State employees, such as employees of the System itself, participate in the System. Beginning July 1, 2004, new employees hired by the comprehensive universities (Oklahoma University, the Health Sciences Center, and Oklahoma State University) may elect to join an alternate plan provided by the universities in lieu of joining TRS. The election to join the alternate plan is irrevocable.
6. Maximum Pay: Prior to July 1, 1995, contributions under this System were based on pay up to a maximum dollar amount. Members could choose between a \$40,000 maximum and a \$25,000 maximum. The member's Final Average Compensation was limited by this same maximum, so the member's election affected both benefits and contributions.

The maximum was removed for most members effective July 1, 1995. It no longer applies in determining the required member and employer contributions. It does still have an impact, however. As noted below, benefits based on service earned before July 1, 1995 are limited by the \$40,000 or \$25,000 maximum, whichever was elected. This cap may be modified for members in the Education Employees Service Incentive Plan (EESIP). See Item 22 below discussing the EESIP provisions.

In addition, the cap on salary continued to apply after June 30, 1995 to members employed by one of the comprehensive universities who entered the System before July 1, 1995. The cap on salary for contribution purposes is shown in the schedule below. All caps were removed effective July 1, 2007.

| | <u>Elected</u> <u>\$40,000 Maximum</u> | <u>Elected</u> <u>\$25,000 Maximum</u> |
|------------|---|---|
| 1995/1996 | \$44,000 | \$27,500 |
| 1996/1997 | 49,000 | 32,500 |
| 1997/1998 | 54,000 | 37,500 |
| 1998/1999 | 59,000 | 42,500 |
| 1999/2000 | 59,000 | 42,500 |
| 2000/2001 | 64,000 | 47,500 |
| 2001/2002 | 69,000 | 52,500 |
| 2002/2003 | 74,000 | 57,500 |
| 2003/2004 | 79,000 | 62,500 |
| 2004/2005 | 84,000 | 67,500 |
| 2005/2006 | 89,000 | 72,500 |
| 2006/2007 | 94,000 | 77,500 |
| Thereafter | No limit | No limit |

Benefits for the members employed by the comprehensive universities, except for those hired on or after July 1, 1995, are limited by the pay caps for the period before July 1, 2007.

7. Member Contributions: Generally, active members contribute 7.00% of all compensation to the System. A school district may pay all or part of the contribution for its employees.
8. Employer Contributions: Employers are required to contribute a fixed percentage of pay on behalf of active members. The employer contribution rate is now applied to all pay, although historically the rate was not applied to pay above the cap on salary.

The employer contribution rate for years from July 1, 2002 through December 31, 2006 was 7.05% of covered salary. Effective January 1, 2007, the employer contribution rate paid by all employers covered by the EESIP increased to 7.60%. This rate then increased to 7.85% effective July 1, 2007, 8.35% effective January 1, 2008, 8.50% effective July 1, 2008, 9.00% effective January 1, 2009, and 9.50% effective January 1, 2010. For employers not covered by the EESIP—the comprehensive and regional four-year universities—the rate increased to 7.55% effective January 1, 2008, 8.05% effective January 1, 2009, and 8.55% effective January 1, 2010.

In addition, the State of Oklahoma contributes 5.00% percent of revenues from sales taxes, use taxes, corporate income taxes and individual income taxes. The 5.00% rate became effective on July 1, 2007. The rates are shown in the following schedule on the next page.

| Fiscal Year | State Contribution Percentage |
|-------------|----------------------------------|
| FY 2003 | 3.54% |
| FY 2004 | 3.54% |
| FY 2005 | 3.75% |
| FY 2006 | 4.00% |
| FY 2007 | 4.50% |
| FY 2008 | 5.00% |
| Thereafter | 5.00%* |

Beginning in FY 2006, the State also contributes 5.00% of lottery proceeds.

* HB 2741 passed during the 2020 legislative session which temporarily changed the rate to 3.50% for FY 2021, 3.75% for FY 2022, and 5.50% for FY 2023 through FY 2027. HB 2894 passed during the 2021 legislative session which restored the rate to 5.00% for FY 2022 and modified the rate to 5.25% for FY 2023 through FY 2027. The rate is scheduled to return back to 5.00% beginning in FY 2028. The lottery proceeds contributed to the System were not impacted by this legislation.

If a member's salary is paid from federal funds or certain grant money, an additional contribution (the grant matching contribution) is required. The matching contribution rate is set by the Board of Trustees annually and is expressed as a percentage of federal/grant salaries.

| Fiscal Year | Federal/Grant Contribution Percentage |
|-----------------|--|
| FY 2003 | 5.00% |
| FY 2004 to 2005 | 4.50% |
| FY 2006 | 5.00% |
| FY 2007 to 2008 | 7.00% |
| FY 2009 to 2010 | 7.50% |
| FY 2011 | 6.50% |
| FY 2012 | 7.00% |
| FY 2013 | 8.00% |
| FY 2014 to 2016 | 8.25% |
| FY 2017 | 7.70% |
| FY 2018 | 7.80% |
| FY 2019 to 2021 | 7.70% |
| FY 2022 | 7.90% |

Beginning August 25, 2021, the matching contribution rate for summer programs will be limited to one half of the regular matching rate.

9. Service: Employees receive credit for a year of service if they are contributing members for at least six months within one school year. For service performed on or after July 1, 2013, fractional service will be awarded for less than full-time employment performed during the contract year. Fractional service credit will be added together and the resulting sum will be included in the retirement formula calculations. For service performed on or after July 1, 2016 service credit awarded for all members will be the result of the days the employee worked during the employment year divided by the days the full-time equivalent for that position would be required to work during the entire employment year.

Credit may also be granted for service prior to the System's effective date, and non-classified employees can purchase credit for their prior service once they have joined the System. Credit is also available for some out-of-state and military service under certain circumstances.

Finally, members receive a year of service credit if they have accumulated 120 days of unused sick leave at termination. As of August 1, 2012, if a member has less than 120 days of unused sick leave at termination, additional service credit for sick leave days shall be equal to the number of unused sick leave days divided by 120 days.

10. Final Average Compensation (FAC): The average of the member's compensation for the three or five years on which the highest contributions are paid. For persons becoming members before July 1, 1992, the averaging period is three years. For other members, the averaging period is five years. For service prior to July 1, 1995, the FAC is limited to \$40,000 or \$25,000, depending on the member's election and participation in the EESIP as discussed in Item 6 above and in Item 22.

11. Normal Retirement

- a. Eligibility: A member is eligible to retire and receive a Normal Retirement benefit if (i) the member is at least age 62 and has credit for five or more years of service, or (ii) the sum of the member's age and service is at least 80 (Rule of 80). For members joining after June 30, 1992, a "Rule of 90" is used instead of the "Rule of 80". Members joining after October 31, 2011 are eligible if (i) the member is at least age 65 and has credit for five or more years of service, or (ii) the member is at least age 60 and meets the "Rule of 90". Members joining after October 31, 2017 must have credit for seven or more years of service.
- b. Monthly Benefit: 2% of FAC (limited to \$40,000 or \$25,000, as appropriate) times years of service prior to July 1, 1995, plus 2% of FAC (unlimited) times years of service after June 30, 1995. Special provisions apply to members covered by the EESIP (see Item 22 below). Other special provisions apply to higher education members for service during the period July 1, 1995 through June 30, 2007 if their pay in any year in this period exceeded the applicable maximum. Monthly benefits are equal to one-twelfth of the calculated amount.
- c. Payment Form: Benefits are paid as a monthly life annuity, with a guarantee that if the payments made do not exceed the member's accumulated contributions, determined as of the date of retirement, the balance will be paid in a lump-sum to the member's beneficiary. This payment form is referred to as the "Maximum Option" since it initially provides the largest annuity. Optional forms of payment are available; see below.

12. Early Retirement

- a. Eligibility: A member is eligible to retire early if the member is at least age 55 and has credit for five or more years of service, or at any age after 30 years of service. For members joining after October 31, 2011, a member is eligible to retire early if the member is at least age 60 and has credit for five or more years of service. Members joining after October 31, 2017 must have credit for seven or more years of service.

- b. Monthly Benefit: The Normal Retirement benefit (based on current years of service) multiplied by the applicable early retirement factor below.
- c. Early Retirement Factor:

| Retirement Age | Actuarial Equivalent Factors for Members Joining before November 1, 2011* | Statutory Factors for Members Joining after October 31, 2011 |
|-------------------|--|--|
| 65 or later | 1.000000 | 1.00 |
| 64 | 1.000000 | 0.93 |
| 63 | 1.000000 | 0.86 |
| 62 | 1.000000 | 0.80 |
| 61 | 0.913529 | 0.73 |
| 60 | 0.835549 | 0.65 |
| 59 | 0.765083 | N/A |
| 58 | 0.701285 | N/A |
| 57 | 0.643419 | N/A |
| 56 | 0.590845 | N/A |
| 55 | 0.543003 | N/A |
| 54 | 0.499406 | N/A |
| 53 | 0.459624 | N/A |
| 52 | 0.423278 | N/A |
| 51 | 0.390033 | N/A |
| 50 | 0.359593 | N/A |

* Reduction factors will change as the System's definition of Actuarial Equivalence changes. Factors stated here were communicated to the System in 2018.

- d. Payment Form: Same as for Normal Retirement above.

13. Disability Retirement

- a. Eligibility: A member is eligible provided (i) he/she has credit for at least 10 years of service and (ii) the disability is either approved by the Medical Board appointed by the Board of Trustees, or the member is determined to be eligible for disability benefits pursuant to the Social Security System.
- b. Monthly Benefit: Same as for Normal Retirement above (based on current service).

- c. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits are reduced or cease entirely upon recovery or reemployment prior to age 60. Disability benefits are payable as a monthly life annuity, with a guarantee that if the payments made do not exceed the sum of the member's accumulated contributions as of the date of retirement, the balance will be paid in a lump-sum to the member's beneficiary. A married, disabled member may elect a reduced benefit under the Joint & 100% Survivor option (with pop up) form of payments (Option 2 described in Item 17 below).

14. Vested Termination Benefit

- a. Eligibility: A member with at least 5 years of service who does not withdraw his/her contributions from the fund is eligible for a vested termination benefit. Members joining after October 31, 2017 must have credit for seven or more years of service.
- b. Monthly Benefit: Same as for Normal Retirement above (based on current service). If benefits commence prior to age 62 (age 65 for members joining after October 31, 2011), they may be reduced for Early Retirement above.
- c. Payment Form: Same as for Normal Retirement above.

15. Withdrawal (Refund) Benefit

- a. Eligibility: All members leaving covered employment with less than 5 years of service (7 years for members joining after October 31, 2017) for a reason other than the member's death. Optionally, members eligible for other benefits may withdraw their contributions in lieu of the regular benefits due.
- b. Benefit: The member who withdraws receives a lump-sum payment of his/her employee contributions, plus a portion of the interest credited by the System on these contributions. Interest is credited at an annual rate of 8%. The portion of the interest paid on termination depends on the member's years of service as follows:

| Years of Service | Percent of Interest Refunded |
|---------------------|------------------------------------|
| 0-15 | 50% |
| 16-21 | 60% |
| 22-25 | 75% |
| 26 or more | 90% |

16. Death in Service

- a. Eligibility: Death must have occurred while an active member.

- b. Benefit: Upon the death of an active member, a refund of the member's contributions and 100% of the interest credited is paid. In addition, a lump sum of \$18,000 will be paid. If the member is eligible for retirement (early or normal) at the time of death, and the member is married, the spouse may elect to receive a monthly life annuity equal to the retirement benefit for which the member was eligible, reduced as though the member had elected to receive benefits under Option 2 (see below). This annuity is paid in lieu of both (i) the \$18,000 lump-sum death benefit and (ii) the refund of contributions.

The spouse of an EESIP eligible member can elect to receive the enhanced benefit described under Item 22 below.

17. Optional Forms of Payment: In addition to the "Maximum Option" described under Normal Retirement, above, there are optional forms of payment available on an actuarially equivalent basis, as follows:

- a. Option 1 - A modified cash refund annuity payable for life with a guaranteed refund of the member's contributions and interest, less the total of the "annuity" payments paid. (The "annuity" payment is the portion of the monthly benefit provided by the member's own account balance.)
- b. Option 2 - A joint life annuity payable while both the member and the joint annuitant are alive; and if the member dies before the joint annuitant, continuing without change to the joint annuitant; or if the joint annuitant dies before the member, "popping-up" to the original life annuity amount and continuing for the life of the member.
- c. Option 3 - A joint life annuity payable while both the member and the joint annuitant are alive; and if the member dies before the joint annuitant, continuing at 50% of this amount for the joint annuitant's lifetime; or if the joint annuitant dies before the member, "popping-up" to the original life annuity amount and continuing for the life of the member.
- d. Option 4 - A life annuity with a guarantee that if the member dies before 120 payments (10 years) have been made; the payments will be continued to the member's beneficiary for the balance of the ten-year period.
- e. PLSO Option - A partial lump-sum option (PLSO) is allowed for those members with at least 30 years of service upon retirement. The amount of the PLSO is equal to 12, 24, or 36 times the member's monthly retirement benefit, determined before applying any reduction for the PLSO or any other optional form of payment. A member who elects to receive a PLSO will have his/her monthly retirement benefit reduced on an actuarial basis to compensate for the fact that a PLSO is provided. A member who elects a PLSO may elect any of the other optional forms of payment as well, taking a further reduction in the annuity amount.

Actuarial equivalence is based on tables adopted by the Board of Trustees.

18. Special Retirees: This was a group of retirees who had been granted a special \$150 per month benefit although they did not fulfill the requirements for service retirement. There are currently no Special Retirees receiving benefits.
19. Supplemental Medical Insurance
- a. Eligibility: All retired members (including service retirees and disabled retirees but excluding the special retirees and spouses or beneficiaries) who have at least 10 years of service credit are eligible for a supplemental medical insurance payment.
 - b. Monthly Benefit: Eligible members receive the smaller of (i) a Medicare supplement benefit, if eligible, or (ii) an amount between \$100 and \$105 per month, depending on service and Final Average Compensation.
 - c. Payment Form: Benefits are payable as a life annuity on behalf of the retired member to (i) the Oklahoma Employees' Group Insurance Plan, if the member has health coverage under this Plan, or (ii) to the member's former employer, if the member retains health coverage under a plan maintained by the former employer.
20. Post-retirement Death Benefit
- a. Eligibility: All retired members (including service retirees and disabled retirees but excluding the special retirees and spouses or beneficiaries) are eligible for a post-retirement death benefit.
 - b. Benefit: A lump-sum payment of \$5,000.
21. Cost-of-living Increase: From time to time, the System has been amended to grant certain post-retirement benefit increases. However, the System has no automatic cost-of-living increase features.
22. EESIP: The Education Employees Service Incentive Plan (EESIP) was created in 2006. Active members are eligible for the EESIP if they have service prior to July 1, 1995, are active on or after July 1, 2006, and are not employed by one of the comprehensive or regional four-year universities.

The EESIP allows for two years of service prior to July 1, 1995 to be computed at an enhanced or eliminated cap for each year that the employee has worked beyond Normal Retirement Age at the time of retirement.

For each “uncapped” year, the \$40,000 cap applicable to service before July 1, 1995 is increased to \$60,000 for retirements in FY 2007, to \$80,000 for retirements in FY 2008, and the cap is removed beginning July 1, 2008. The employee that elects the enhanced benefit must pay the accumulations, at 10% interest, of contributions that would have been required but for the cap then in place. Payment is required only for years FY 1988 through FY 1995 even if more than 8 years of service prior to July 1, 1995 are being “uncapped.” Payment is required only for those years of service that are computed at an elevated or eliminated cap.

Contributions are required at the following rates for salary in excess of the \$25,000 or \$40,000 cap earned in years FY 1998 through FY 1995:

| <u>Fiscal Year</u> | <u>Contribution Percentage</u> |
|--------------------|--------------------------------|
| FY 1995 | 8.00% |
| FY 1994 | 9.00% |
| FY 1993 | 11.00% |
| FY 1992 | 11.00% |
| FY 1991 | 11.00% |
| FY 1990 | 10.50% |
| FY 1989 | 10.00% |
| FY 1988 | 10.00% |

For those members electing the enhanced benefit, the payment required is 50% of the accumulated balance in FY 2007, 75% of the accumulated balance in FY 2008 and 100% of the accumulated balance on or after FY 2009.

Summary of Actuarial Assumptions and Methods

The actuarial assumptions and methods used in this valuation are based upon the 2020 Experience Investigation Study Report, dated July 15, 2020, measuring the experience investigation period FY2015 – FY2019. The current actuarial assumptions were adopted by the Board in July 2020 and first utilized in the June 30, 2020 actuarial valuation report and correspond with the recommendations of the actuary.

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

Because the employer contribution rate is set by statute, the actuarial valuation is used to determine the number of years required to amortize the Unfunded Actuarial Accrued Liability (UAAL), or the funding period.

The Individual Entry Age Normal actuarial cost method assigns the plan's total unfunded liabilities (the actuarial present value of future benefits less the actuarial value of assets) to various periods. The unfunded actuarial accrued liability is assigned to years prior to the valuation, and the normal cost is assigned to the year following the valuation. The remaining costs are the normal costs that will be recognized in future years. The resulting actuarially determined contribution requirement is intended to pay for the normal cost and to amortize the unfunded actuarial accrued liability of the System.

The normal cost contribution rate is determined using the Individual Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member. The employer normal cost rate is equal to (i) the normal cost rate, plus (ii) the expected administrative expenses, minus (iii) the member contribution rate.

The actuarial accrued liability is the difference between the total present value of future benefits and the actuarial present value of future normal costs. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of assets.

The funding period is calculated as the number of years required to fully amortize the UAAL, assuming that: (a) future market earnings, net of investment-related expenses, will equal 7.00% per year, (b) there will be no liability gains/losses or changes in assumptions, (c) the number of active members will remain unchanged after 80% of the "pending termination group" is assumed to terminate during the year after the valuation date, (d) the other active members who leave employment will be replaced by new entrants each year, and (e) employer contributions and dedicated State revenue will remain the same percentage of payroll as projected for the current fiscal year.

The Entry Age actuarial cost method is an “immediate gain” method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

III. Actuarial Value of Assets

The actuarial value of assets is equal to the market value, adjusted for a five-year phase in of actual investment return in excess of expected investment return. The actual return is calculated net of investment-related expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year’s market value of assets, adjusted for contributions, administrative expenses, benefits paid, and refunds.

Prior to the June 30, 2015, the actual and expected returns on plan assets were also determined net of administrative expenses.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.00% per year, net of investment-related expenses (composed of an assumed 2.25% inflation rate and a 4.75% real rate of return)
2. Administrative expenses: 0.10% of valuation payroll per year
3. Salary increase rate: Inflation rate of 2.25% plus productivity increase rate of 0.75% plus step-rate/promotional as shown

| <u>Years of Service</u> | <u>Service-Related Component</u> | <u>Total Salary Increase Rate</u> |
|-------------------------|----------------------------------|-----------------------------------|
| (1) | (2) | (3) |
| 0 | 8.00% | 11.00% |
| 1-2 | 1.50% | 4.50% |
| 3-4 | 1.25% | 4.25% |
| 5-11 | 1.00% | 4.00% |
| 12-17 | 0.75% | 3.75% |
| 18-21 | 0.50% | 3.50% |
| 22-24 | 0.25% | 3.25% |
| 25 or more | 0.00% | 3.00% |

4. New entrant salary growth: 3.00% per year
5. Future ad hoc cost-of-living increases: None.

B. Demographic Assumptions

1. Mortality rates - after retirement or termination.

- a. Healthy males – 2020 GRS Southwest Region Teacher Mortality Table. Generational mortality improvements in accordance with the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables projected from the year 2020.
- b. Healthy females – 2020 GRS Southwest Region Teacher Mortality Table. Generational mortality improvements in accordance with the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables projected from the year 2020.

Sample healthy retiree mortality rates, including associated annuity value and life expectancy results:

| Sample Attained Ages in 2019 | Present Value of \$1 Monthly for Life * | | Future Life Expectancy (years) * | | Mortality Rates * | |
|---------------------------------|--|---------|-------------------------------------|---------|-------------------|----------|
| | Males | Females | Males | Females | Males | Females |
| 40 | 165.9 | 168.3 | 46.0 | 49.2 | 0.000621 | 0.000391 |
| 45 | 161.5 | 164.8 | 40.7 | 43.9 | 0.000962 | 0.000650 |
| 50 | 155.6 | 160.0 | 35.5 | 38.7 | 0.001668 | 0.001091 |
| 55 | 148.0 | 153.7 | 30.5 | 33.5 | 0.003116 | 0.001859 |
| 60 | 138.3 | 145.3 | 25.6 | 28.5 | 0.004695 | 0.002693 |
| 65 | 125.9 | 134.2 | 20.9 | 23.6 | 0.008034 | 0.004773 |
| 70 | 110.9 | 120.2 | 16.5 | 18.9 | 0.014492 | 0.009055 |
| 75 | 93.9 | 103.7 | 12.6 | 14.6 | 0.026143 | 0.017173 |
| 80 | 75.5 | 85.0 | 9.1 | 10.7 | 0.047160 | 0.032577 |
| 85 | 57.1 | 65.5 | 6.3 | 7.5 | 0.085072 | 0.061795 |

- c. Disabled males – 2020 GRS Southwest Region Teacher Mortality Table, set forward three years with minimum rates at all ages of 4.0%. Generational mortality improvements in accordance with the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables projected from the year 2020.
 - d. Disabled females – 2020 GRS Southwest Region Teacher Mortality Table, set forward three years with minimum rates at all ages of 2.5%. Generational mortality improvements in accordance with the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables projected from the year 2020.
2. Mortality rates for active members – Pub-2010 Teachers Active Employee Mortality table. Generational mortality improvements in accordance with the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables projected from the year 2010.

3. Disability Incidence –As shown below for selected ages (rates are only applied to eligible members, which are members with at least 10 years of service)

| Age | Occurrence of Disability per 100 Members | |
|-----|--|---------|
| | Males | Females |
| 25 | 0.020 | 0.018 |
| 30 | 0.020 | 0.018 |
| 35 | 0.028 | 0.036 |
| 40 | 0.053 | 0.090 |
| 45 | 0.081 | 0.144 |
| 50 | 0.243 | 0.216 |
| 55 | 0.365 | 0.333 |
| 60 | 0.142 | 0.234 |
| 65 | 0.000 | 0.000 |

4. Retirement rates - Separate male and female rates, based on age, developed from the 2020 Experience Study. Sample rates are shown below:

| Age | Expected Retirements per 100 Lives | | | |
|-------------|------------------------------------|---------|--------------------|---------|
| | Unreduced Retirement | | Reduced Retirement | |
| | Males | Females | Males | Females |
| Under 50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50-54 | 12.0 | 12.0 | 0.0 | 0.0 |
| 55 | 12.0 | 12.0 | 1.0 | 1.3 |
| 56 | 12.0 | 14.0 | 1.0 | 1.5 |
| 57 | 12.0 | 14.0 | 1.3 | 1.5 |
| 58 | 12.0 | 14.0 | 1.5 | 1.8 |
| 59 | 12.0 | 14.0 | 1.8 | 2.5 |
| 60 | 12.0 | 16.0 | 2.0 | 4.5 |
| 61 | 16.0 | 20.0 | 2.8 | 5.0 |
| 62 | 25.0 | 25.0 | 3.5 | 10.0 |
| 63 | 18.0 | 20.0 | 10.0 | 7.5 |
| 64 | 18.0 | 20.0 | 7.5 | 7.5 |
| 65-74 | 25.0 | 30.0 | | |
| 75 and over | 100.0 | 100.0 | | |

The retirement assumption was further modified for members hired after June 30, 1992. The probability of retirement upon first eligibility for Rule of 90 reflects the accumulated probability of retirement between Rule of 80 and Rule of 90, as applicable.

5. Termination Rates – Rates based on the member’s service, developed from the 2020 Experience Study, and separate rates are used in the development of the present value of benefits (PVB) and the normal cost (NC) calculation. Rates reflect terminations for causes other than death, disability or retirement. Sample rates are shown below:

| Credited Service (Years) | Expected Terminations Per 100 Lives | | | |
|--------------------------|-------------------------------------|---------|---|---------|
| | Short-Term Expectation (PVFB) | | Long Term Expectation (NC, New Entrant) | |
| | Males | Females | Males | Females |
| 0 | 11.00 | 12.00 | 35.00 | 35.00 |
| 1 | 10.50 | 11.50 | 16.00 | 16.00 |
| 2 | 10.00 | 11.00 | 14.00 | 14.00 |
| 3 | 8.00 | 8.50 | 12.00 | 12.00 |
| 4 | 7.50 | 8.00 | 10.00 | 10.00 |
| 5 | 7.00 | 7.50 | 9.00 | 9.00 |
| 6 | 6.00 | 7.00 | 8.00 | 8.00 |
| 7 | 5.50 | 6.00 | 7.50 | 7.50 |
| 8 | 5.00 | 5.50 | 7.00 | 7.00 |
| 9 | 4.75 | 5.00 | 6.50 | 6.50 |
| 10 | 4.50 | 4.75 | 6.00 | 6.00 |
| 11 | 4.00 | 4.50 | 5.50 | 5.50 |
| 12 | 3.75 | 4.00 | 5.00 | 5.00 |
| 13 | 3.50 | 3.75 | 4.50 | 4.50 |
| 14 | 3.25 | 3.50 | 4.00 | 4.00 |
| 15 | 3.25 | 3.25 | 3.75 | 3.75 |
| 16 | 3.25 | 3.00 | 3.50 | 3.50 |
| 17 | 3.25 | 3.00 | 3.50 | 3.50 |
| 18 | 2.50 | 2.75 | 3.00 | 3.00 |
| 19 | 2.50 | 2.50 | 3.00 | 3.00 |
| 20 | 2.50 | 2.25 | 2.50 | 2.50 |
| 21 | 2.50 | 2.00 | 2.50 | 2.50 |
| 22 | 2.00 | 2.00 | 2.50 | 2.50 |
| 23 | 2.00 | 2.00 | 2.50 | 2.50 |
| 24 | 2.00 | 2.00 | 1.50 | 1.50 |
| 25 or more | 2.00 | 2.00 | 1.50 | 1.50 |

“Pending termination group” is defined as members reported as active in the current census data where the date of last contribution is before April of a valuation year. For short term expectations (and PVFB development), this group is assumed to have an 80% termination rate applied in the year after the valuation date.

C. Other Assumptions

1. Percent married: 80% of employees are assumed to be married.
2. Age difference: Males are assumed to be three years older than females.
3. Percent electing annuity on death (when eligible): All of the spouses of married participants who die after becoming eligible for a retirement benefit are assumed to elect an annuity, in lieu of the \$18,000 lump sum and refund.
4. Election of deferred termination benefit: vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
5. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at age 62 (age 65 if hired on or after November 1, 2011).
6. Supplemental medical insurance: 50% of eligible members who are active or due a deferred vested benefit are assumed to elect the insurance benefit. For annuitants who began receiving a benefit in the year preceding the valuation date, 50% of those not already receiving the benefit are assumed to elect it. The liability for all other annuitants is based on the actual benefit being paid as shown in the data.
7. Members who retire with at least 24 years of credited service are assumed to have 120 days of unused sick leave for which they will receive one year of service credit. This assumption only applies to reduced and unreduced retirement.
8. No assumption was made that current active members employed by the comprehensive universities will elect to transfer out of TRS.
9. Reemployment, purchase of service, transfers: No recognition is made of (i) future member reimbursements upon reemployment, (ii) future purchase of additional service, or (iii) special transfer provisions.
10. For EESIP eligible employees, if the refund amount to be paid exceeds the actuarial present value of the additional benefit, then we assume the member does not elect the enhanced benefit.
11. Decrement timing: Decrements of all types are assumed to occur mid-year.

V. Valuation Data

Participant data was supplied on an electronic file for (i) active members, (ii) inactive vested members who are entitled to a future deferred benefit, (iii) inactive nonvested members who are entitled to a refund of their employee contributions, and in some cases a portion of the accumulated interest, and (iv) members and beneficiaries receiving benefits.

The data for active and inactive, non-retired members included date of birth, date of hire, gender, years of service, salary, employee contributions and accumulated interest on employee contributions. The data also included a code to indicate whether the employee had elected to make contributions on salary above \$25,000, and a code indicating the type of employer (comprehensive university, other college or university, or other employer). For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Individual member contributions for the 12 months prior to the valuation date were used to determine the actual salary for plan members in the prior plan year. The valuation assumptions for salary increases were used to determine the projected salary for the current plan year. Additionally, contributing members were assumed to accrue one additional year of service between the end of the prior employment year and the valuation date.

Additional assumptions were made to correct for missing or inconsistent data. These had no material impact on the results presented.

Some inactive, nonvested employees who are entitled to a refund are not included in the data, but a liability for their refund is included instead in the Suspense Fund, which is included in the liability.

VI. Actuarial Model

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.



Statistical Section

For fiscal year ending
June 30, 2021, TRS
retirees earned an annual
retirement benefit of
\$22,851.00.



Statistical Section Summary

The Statistical Section presents several schedules that provide financial trends analysis of the Teachers' Retirement System of Oklahoma's overall financial health and additional analytical information on membership data and retirement benefits.

The schedules presented are for the combined Plans unless noted as an individual Plan. The schedules beginning on page 110 through page 119 provide data depicting active membership, level of monthly benefits, years of service, and retirement options.

The schedules on page 120 through page 126 provide financial data showing revenues, expenses and changes in net position.

On page 127 through page 131, the schedules report the financial impact of retirees in the state of Oklahoma and the participating employers.

The source of the information in these schedules is derived from internal information unless otherwise noted.

Retired Members by Type of Benefit

Fiscal Year Ended June 30, 2021

| Amount of Monthly Benefit | Number of Retired Members | Type of Retirement * | | | | | Option Selected # | | | | |
|---------------------------------|---------------------------------|----------------------|--------------|--------------|------------|--------------|-------------------|---------------|---------------|--------------|--------------|
| | | 1 | 2 | 3 | 4 | 5 | A | B | C | D | E |
| Under \$500 | 7,365 | 4,248 | 2,381 | 358 | 111 | 267 | 3,600 | 1,364 | 1,788 | 338 | 275 |
| \$501-\$1,000 | 10,452 | 6,927 | 2,004 | 760 | 91 | 670 | 4,766 | 1,870 | 2,698 | 825 | 293 |
| \$1,001-\$1,500 | 8,845 | 6,948 | 606 | 764 | 17 | 510 | 3,442 | 1,481 | 2,753 | 975 | 194 |
| \$1,501-\$2,000 | 12,918 | 11,756 | 169 | 707 | 5 | 281 | 4,376 | 2,750 | 4,253 | 1,261 | 278 |
| \$2,001-\$2,500 | 13,260 | 12,510 | 56 | 619 | 2 | 73 | 4,132 | 2,703 | 4,642 | 1,441 | 342 |
| \$2,501-\$3,000 | 6,479 | 6,157 | 22 | 282 | 1 | 17 | 2,210 | 1,116 | 2,293 | 745 | 115 |
| \$3,001-\$3,500 | 3,249 | 3,117 | 7 | 116 | 1 | 8 | 1,147 | 472 | 1,205 | 356 | 69 |
| \$3,501-\$4,000 | 1,712 | 1,657 | 5 | 48 | 0 | 2 | 615 | 205 | 695 | 171 | 26 |
| Over \$4,000 | 2,736 | 2,643 | 4 | 86 | 0 | 3 | 935 | 247 | 1,151 | 349 | 54 |
| Totals | | 55,963 | 5,254 | 3,740 | 228 | 1,831 | 25,223 | 12,208 | 21,478 | 6,461 | 1,646 |

* Type of Retirement

Type 1 - Normal retirement for age and service

Type 2 - Early retirement

Type 3 - Beneficiary payment (Normal retirement)

Type 4 - Beneficiary payment (Early retirement)

Type 5 - Disability retirement

Option Selected

Option A – The Maximum Retirement Plan – provides the greatest monthly lifetime benefit.

Option B – Retirement Option 1 – provides for a decreased rate of reduction of a member's account balance.

Option C – Retirement Option 2 – known as the 100% joint survivor annuity – provides for a reduced monthly benefit to the member for life. Upon the death of the

Option D – Retirement Option 3 – known as the 50% joint survivor annuity – provides a similar benefit as Option 2; however, upon the death of the member, the

Option E – Retirement Option 4 – provides a reduced monthly benefit payable to the member for life. In the event of the member's death within 120 months from the

Average Benefit Payments

Fiscal Years Ended June 30

| Retirement Effective Date | Years of Credited Service | | | | | | | |
|------------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|
| | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30-35 | 35-40 | 40+ |
| Period 7/1/2011 to 6/30/2012 | | | | | | | | |
| Average monthly benefit | \$420 | \$706 | \$1,137 | \$1,610 | \$2,092 | \$2,613 | \$3,226 | \$4,044 |
| Average final average salary | \$37,155 | \$37,678 | \$41,880 | \$44,307 | \$46,476 | \$52,852 | \$57,217 | \$64,388 |
| Number of retired members | 228 | 383 | 350 | 570 | 553 | 585 | 326 | 188 |
| Period 7/1/2012 to 6/30/2013 | | | | | | | | |
| Average monthly benefit | \$408 | \$755 | \$1,179 | \$1,633 | \$2,156 | \$2,673 | \$3,394 | \$4,163 |
| Average final average salary | \$36,670 | \$39,047 | \$43,676 | \$44,651 | \$47,860 | \$53,717 | \$58,966 | \$64,801 |
| Number of retired members | 203 | 320 | 342 | 519 | 577 | 537 | 350 | 166 |
| Period 7/1/2013 to 6/30/2014 | | | | | | | | |
| Average monthly benefit | \$407 | \$798 | \$1,179 | \$1,704 | \$2,195 | \$2,793 | \$3,525 | \$4,441 |
| Average final average salary | \$35,420 | \$40,470 | \$43,464 | \$46,152 | \$48,554 | \$55,667 | \$60,991 | \$69,444 |
| Number of retired members | 235 | 337 | 335 | 498 | 557 | 482 | 335 | 167 |
| Period 7/1/2014 to 6/30/2015 | | | | | | | | |
| Average monthly benefit | \$417 | \$747 | \$1,218 | \$1,671 | \$2,258 | \$2,756 | \$3,564 | \$4,127 |
| Average final average salary | \$35,345 | \$38,407 | \$44,188 | \$45,736 | \$50,004 | \$55,057 | \$61,810 | \$63,623 |
| Number of retired members | 240 | 419 | 403 | 468 | 644 | 504 | 352 | 170 |
| Period 7/1/2015 to 6/30/2016 | | | | | | | | |
| Average monthly benefit | \$448 | \$754 | \$1,263 | \$1,772 | \$2,320 | \$2,784 | \$3,649 | \$4,371 |
| Average final average salary | \$37,695 | \$38,868 | \$46,885 | \$49,917 | \$52,157 | \$56,599 | \$64,207 | \$68,359 |
| Number of retired members | 243 | 407 | 413 | 389 | 606 | 433 | 323 | 176 |
| Period 7/1/2016 to 6/30/2017 | | | | | | | | |
| Average monthly benefit | \$470 | \$744 | \$1,269 | \$1,845 | \$2,358 | \$2,974 | \$3,929 | \$4,531 |
| Average final average salary | \$39,571 | \$38,864 | \$46,334 | \$53,037 | \$53,235 | \$59,824 | \$68,654 | \$69,286 |
| Number of retired members | 293 | 410 | 392 | 471 | 624 | 465 | 290 | 175 |
| Period 7/1/2017 to 6/30/2018 | | | | | | | | |
| Average monthly benefit | \$438 | \$764 | \$1,281 | \$1,778 | \$2,393 | \$2,967 | \$3,742 | \$4,381 |
| Average final average salary | \$37,791 | \$39,234 | \$46,783 | \$50,356 | \$53,883 | \$60,355 | \$65,413 | \$68,236 |
| Number of retired members | 279 | 449 | 394 | 379 | 521 | 409 | 256 | 165 |
| Period 7/1/2018 to 6/30/2019 | | | | | | | | |
| Average monthly benefit | \$436 | \$791 | \$1,295 | \$1,808 | \$2,448 | \$2,978 | \$3,985 | \$4,607 |
| Average final average salary | \$38,603 | \$41,519 | \$47,917 | \$52,538 | \$56,261 | \$61,581 | \$69,781 | \$71,046 |
| Number of retired members | 229 | 388 | 340 | 389 | 431 | 373 | 174 | 139 |
| Period 7/1/2019 to 6/30/2020 | | | | | | | | |
| Average monthly benefit | \$461 | \$814 | \$1,233 | \$1,791 | \$2,485 | \$3,091 | \$4,036 | \$4,786 |
| Average final average salary | \$41,334 | \$42,885 | \$46,416 | \$52,145 | \$56,989 | \$63,197 | \$71,547 | \$74,590 |
| Number of retired members | 268 | 404 | 372 | 395 | 450 | 396 | 182 | 126 |
| Period 7/1/2020 to 6/30/2021 | | | | | | | | |
| Average monthly benefit | \$428 | \$831 | \$1,229 | \$1,874 | \$2,512 | \$3,187 | \$3,879 | \$4,753 |
| Average final average salary | \$37,739 | \$44,020 | \$46,748 | \$53,422 | \$58,072 | \$64,758 | \$68,034 | \$74,239 |
| Number of retired members | 281 | 360 | 346 | 441 | 444 | 551 | 284 | 214 |

Principal Participating Employers

Current Year (2021) and Nine Years Ago (2012)

| Participating Employer | Fiscal Year 2021 | | | Fiscal Year 2012 | | |
|------------------------------|------------------|------|----------------------------|------------------|------|----------------------------|
| | Covered Members | Rank | Percentage of Total System | Covered Members | Rank | Percentage of Total System |
| OKLAHOMA CITY PUBLIC SCHOOLS | 4,699 | 1 | 4.98% | 5,076 | 1 | 5.46% |
| TULSA PUBLIC SCHOOLS | 3,582 | 2 | 3.80% | 3,852 | 3 | 4.15% |
| OKLAHOMA STATE UNIVERSITY | 3,083 | 3 | 3.27% | 4,034 | 2 | 4.34% |
| EDMOND PUBLIC SCHOOLS | 2,751 | 4 | 2.92% | 2,468 | 6 | 2.66% |
| MOORE PUBLIC SCHOOLS | 2,486 | 5 | 2.64% | 2,520 | 5 | 2.71% |
| UNIVERSITY OF OKLAHOMA | 2,289 | 6 | 2.43% | 2,661 | 4 | 2.86% |
| EPIC ONE ON ONE CHARTER | 2,236 | 7 | 2.37% | 81 | 214 | 0.09% |
| PUTNAM CITY PUBLIC SCHOOLS | 1,962 | 8 | 2.08% | 1,725 | 8 | 1.86% |
| OU HEALTH SCIENCES CENTER | 1,911 | 9 | 2.03% | 1,973 | 7 | 2.12% |
| NORMAN PUBLIC SCHOOLS | 1,839 | 10 | 1.95% | 1,534 | 12 | 1.65% |
| * All Other | 67,479 | | 71.54% | 66,959 | | 72.09% |
| Total (599 Employers) | 94,317 | | 100.00% | 92,883 | | 100.00% |

*In Fiscal Year 2021, "all other" consisted of:

| Type | Employers | Members |
|-------------------|------------|---------------|
| School Districts | 504 | 52,668 |
| Higher Education | 24 | 8,698 |
| Career Technology | 28 | 4,306 |
| State Agencies | 21 | 1,359 |
| Other | 12 | 448 |
| Total | 589 | 67,479 |

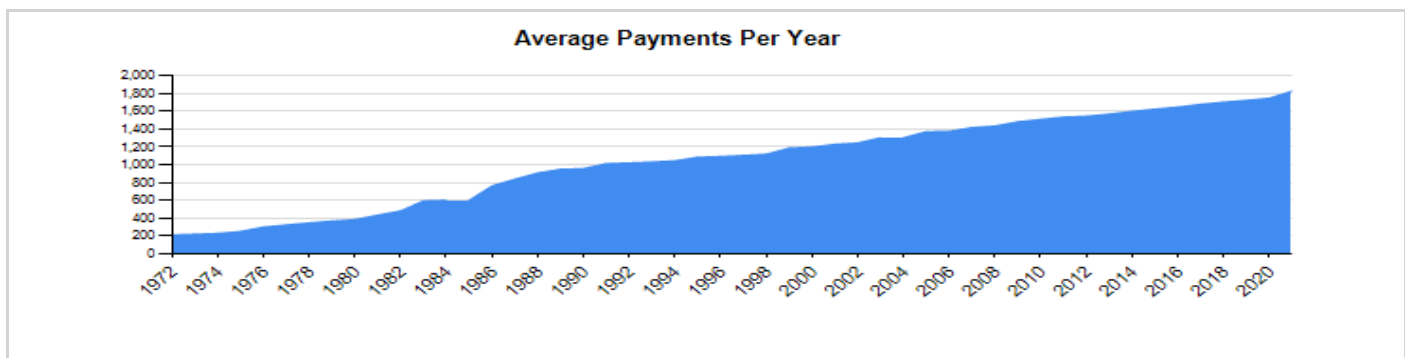
Schedule of Average Payment Amounts

Fiscal Year Ended June 30, 2021

| Date | Regular Annuitants |
|---------------|--------------------|
| June 30, 1948 | \$33 |
| June 30, 1954 | \$75 |
| June 30, 1960 | \$83 |
| June 30, 1970 | \$179 |
| June 30, 1972 | \$209 |
| June 30, 1973 | \$217 |
| June 30, 1974 | \$226 |
| June 30, 1975 | \$248 |
| June 30, 1976 | \$297 |
| June 30, 1977 | \$321 |
| June 30, 1978 | \$345 |
| June 30, 1979 | \$365 |
| June 30, 1980 | \$382 |
| June 30, 1981 | \$432 |
| June 30, 1982 | \$480 |
| June 30, 1983 | \$592 |
| June 30, 1984 | \$600 |
| June 30, 1985 | \$600 |
| June 30, 1986 | \$761 |
| June 30, 1987 | \$837 |
| June 30, 1988 | \$907 |
| June 30, 1989 | \$949 |

| Date | Regular Annuitants | Special Annuitants |
|---------------|--------------------|--------------------|
| June 30, 1990 | \$956 | \$159 |
| June 30, 1991 | \$1,013 | \$159 |
| June 30, 1992 | \$1,021 | \$159 |
| June 30, 1993 | \$1,030 | \$159 |
| June 30, 1994 | \$1,044 | \$159 |
| June 30, 1995 | \$1,084 | \$163 |
| June 30, 1996 | \$1,093 | \$163 |
| June 30, 1997 | \$1,105 | \$163 |
| June 30, 1998 | \$1,119 | \$163 |
| June 30, 1999 | \$1,187 | \$172 |
| June 30, 2000 | \$1,199 | \$172 |
| June 30, 2001 | \$1,231 | \$175 |
| June 30, 2002 | \$1,246 | \$175 |
| June 30, 2003 | \$1,304 | \$175 |
| June 30, 2004 | \$1,304 | \$180 |
| June 30, 2005 | \$1,373 | \$187 |
| June 30, 2006 | \$1,376 | \$191 |
| June 30, 2007 | \$1,419 | \$191 |
| June 30, 2008 | \$1,437 | \$191 |
| June 30, 2009 | \$1,483 | \$194 |
| June 30, 2010 | \$1,511 | \$195 |
| June 30, 2011 | \$1,537 | \$195 |
| June 30, 2012 | \$1,547 | \$195 |
| June 30, 2013 | \$1,571 | \$195 |
| June 30, 2014 | \$1,601 | \$195 |
| June 30, 2015 | \$1,627 | \$195 |
| June 30, 2016 | \$1,650 | \$195 |
| June 30, 2017 | \$1,681 | \$195 |
| June 30, 2018 | \$1,705 | \$195 |
| June 30, 2019 | \$1,726 | \$195 |
| June 30, 2020 | \$1,749 | \$195 |
| June 30, 2021 | \$1,830 | \$0 |

Note that figures after June 30, 1989, do not include monthly medical premiums.



Active Personnel

Fiscal Year Ended June 30, 2021

| Years of Service | All Active Personnel |
|------------------|----------------------|
| Under 5 years | 33,190 |
| 5-9 | 18,462 |
| 10-14 | 12,684 |
| 15-19 | 9,809 |
| 20-24 | 8,191 |
| 25-29 | 4,613 |
| 30-34 | 1,963 |
| 35-39 | 762 |
| 40-44 | 219 |
| 45-49 | 41 |
| 50-54 | 7 |
| 55-59 | 3 |
| 60-64 | 1 |
| Totals | 89,945 |

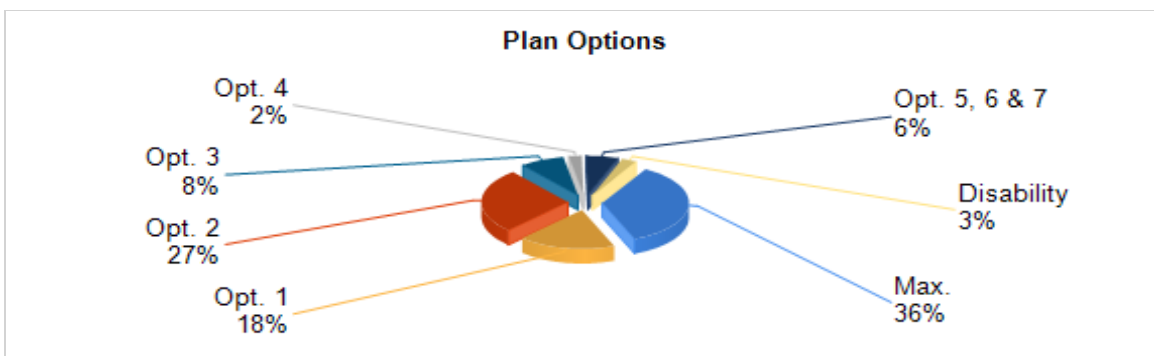
| Salary Range | All Active Personnel |
|--------------------|----------------------|
| Under \$5,000 | 1,256 |
| \$5,001-\$10,000 | 1,348 |
| \$10,001-\$15,000 | 4,172 |
| \$15,001-\$20,000 | 5,199 |
| \$20,001-\$25,000 | 3,808 |
| \$25,001-\$30,000 | 2,997 |
| \$30,001-\$35,000 | 6,570 |
| \$35,001-\$40,000 | 10,770 |
| \$40,001-\$45,000 | 12,068 |
| \$45,001-\$50,000 | 10,704 |
| \$50,001-\$55,000 | 7,882 |
| \$55,001-\$60,000 | 5,498 |
| \$60,001-\$65,000 | 3,755 |
| \$65,001-\$70,000 | 2,751 |
| \$70,001-\$75,000 | 2,135 |
| \$75,001 and Above | 9,032 |
| Totals | 89,945 |

| | |
|-------------------------|-------------|
| Average Age (years) | 46.0 |
| Average Salary | \$46,904.87 |
| Average Service (years) | 10.2 |

Schedule of Retired Members by Type of Benefits

Selected Plan Options
Fiscal Year Ended June 30, 2021

| Option | Retired Members | | | Average Monthly Payment | % of Total |
|------------------|-----------------|---------------|---------------|-------------------------|-------------|
| | Male | Female | Total | | |
| Maximum | 4,264 | 19,576 | 23,840 | \$1,730 | 36% |
| Option 1 | 2,512 | 9,697 | 12,209 | \$1,731 | 18% |
| Option 2 | 8,730 | 9,301 | 18,031 | \$2,056 | 27% |
| Option 3 | 1,937 | 3,602 | 5,539 | \$2,194 | 8% |
| Option 4 | 432 | 1,167 | 1,599 | \$1,654 | 2% |
| Options 5, 6 & 7 | 1,188 | 2,780 | 3,968 | \$1,544 | 6% |
| Disability | 465 | 1,365 | 1,830 | \$1,070 | 3% |
| Totals | 19,528 | 47,488 | 67,016 | \$1,826 | 100% |



Maximum – provides for the greatest possible benefit.

Option 1 – provides for a decreased rate of reduction of member’s account balance.

Option 2 – provides for a reduced monthly benefit to the member for life. Upon death of the member, the designated beneficiary will continue to receive the same monthly benefit for life.

Option 3 – provides a similar benefit as Option 2; however, upon death of the member, the monthly benefit to the designated beneficiary is one-half of the benefit of the member.

Option 4 – provides a reduced monthly benefit. In the event of the member’s death within 120 months from the date of retirement, the balance of the payments are continued to the beneficiary designated at the time of retirement.

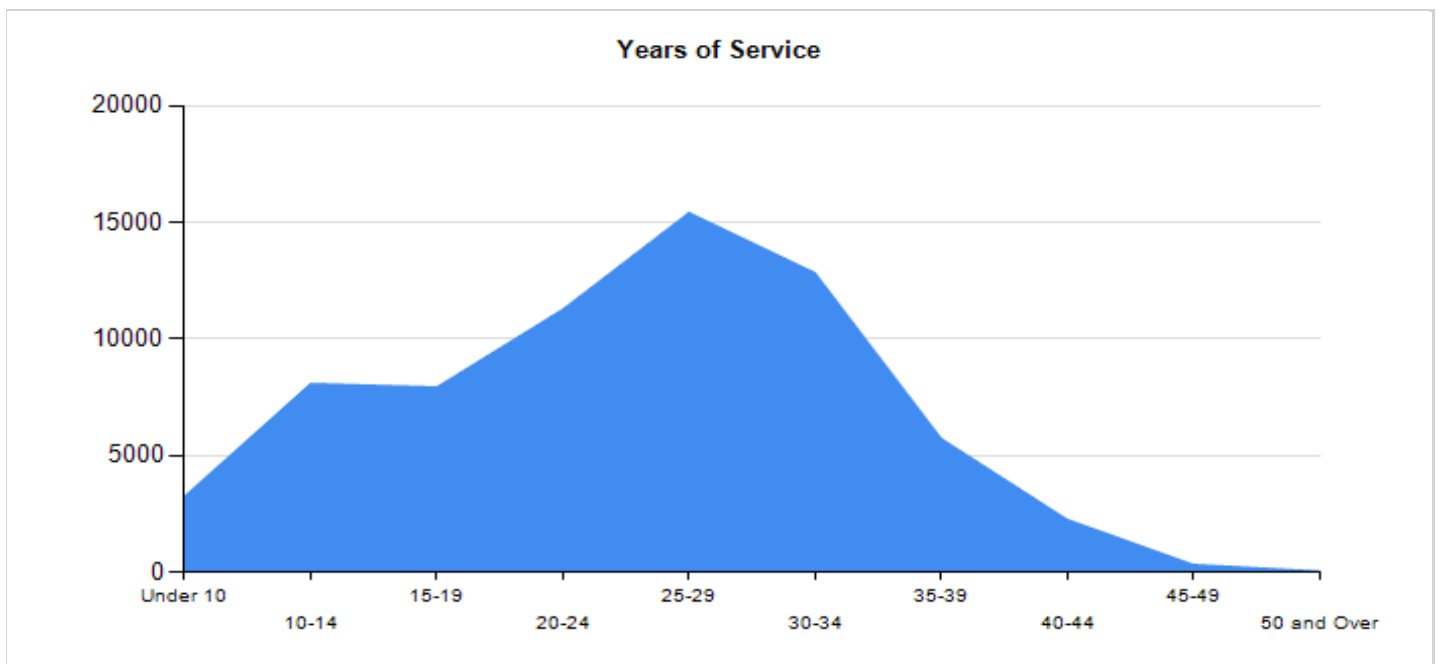
Options 5, 6 & 7 – represents beneficiaries of options 2, 3 & 4.

Disability – upon meeting requirements, a vested member may receive a monthly benefit.

Distribution by Years of Service

Fiscal Year Ended June 30, 2021

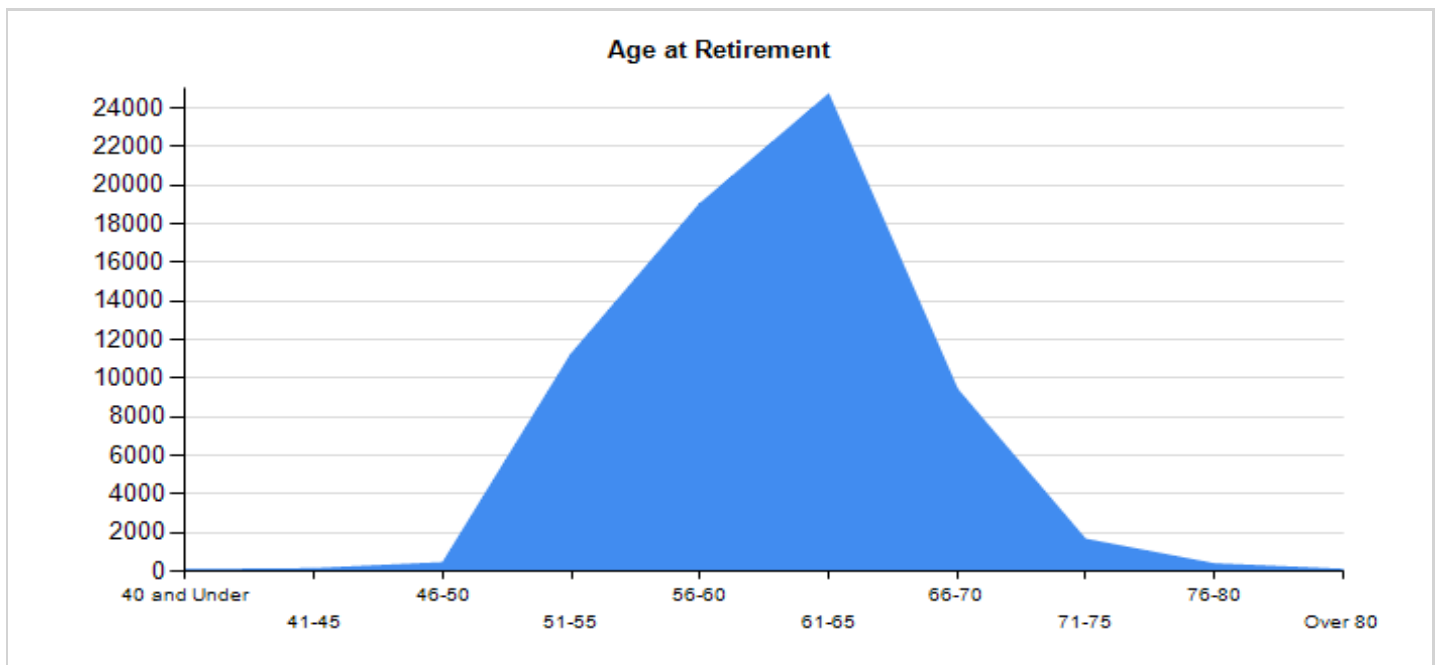
| Years of Creditable Service | Retired Members | | | Average Monthly Payment |
|-----------------------------|-----------------|---------------|---------------|-------------------------|
| | Male | Female | Total | |
| | Under 10 | 1,156 | 2,261 | |
| 10-14 | 2,269 | 6,169 | 8,438 | \$640 |
| 15-19 | 2,139 | 3,017 | 5,156 | \$1,018 |
| 20-24 | 2,634 | 9,136 | 11,770 | \$1,500 |
| 25-29 | 4,405 | 11,685 | 16,090 | \$2,008 |
| 30-34 | 4,489 | 8,903 | 13,392 | \$2,454 |
| 35-39 | 2,220 | 3,767 | 5,987 | \$3,172 |
| 40-44 | 952 | 1,414 | 2,366 | \$3,862 |
| 45-49 | 148 | 201 | 349 | \$4,515 |
| 50 and Over | 30 | 21 | 51 | \$5,094 |
| Totals | 20,442 | 46,574 | 67,016 | \$1,826 |



Distribution by Age at Retirement

Fiscal Year Ended June 30, 2021

| Age at Retirement | Retired Members | | | Average Monthly Payment | Average Length of Service (Years) |
|-------------------|-----------------|---------------|---------------|-------------------------|-----------------------------------|
| | Male | Female | Total | | |
| 40 and Under | 20 | 63 | 83 | \$759 | 13.0 |
| 41-45 | 32 | 103 | 135 | \$1,042 | 15.9 |
| 46-50 | 121 | 323 | 444 | \$1,301 | 20.2 |
| 51-55 | 4,002 | 7,220 | 11,222 | \$2,091 | 28.6 |
| 56-60 | 5,067 | 13,898 | 18,965 | \$1,815 | 25.6 |
| 61-65 | 6,570 | 18,041 | 24,611 | \$1,710 | 23.0 |
| 66-70 | 2,910 | 6,507 | 9,417 | \$1,873 | 22.8 |
| 71-75 | 601 | 1,050 | 1,651 | \$1,896 | 23.3 |
| 76-80 | 165 | 219 | 384 | \$1,757 | 23.3 |
| Over 80 | 41 | 63 | 104 | \$1,550 | 23.5 |
| Totals | 19,529 | 47,487 | 67,016 | \$1,826 | 24.6 |

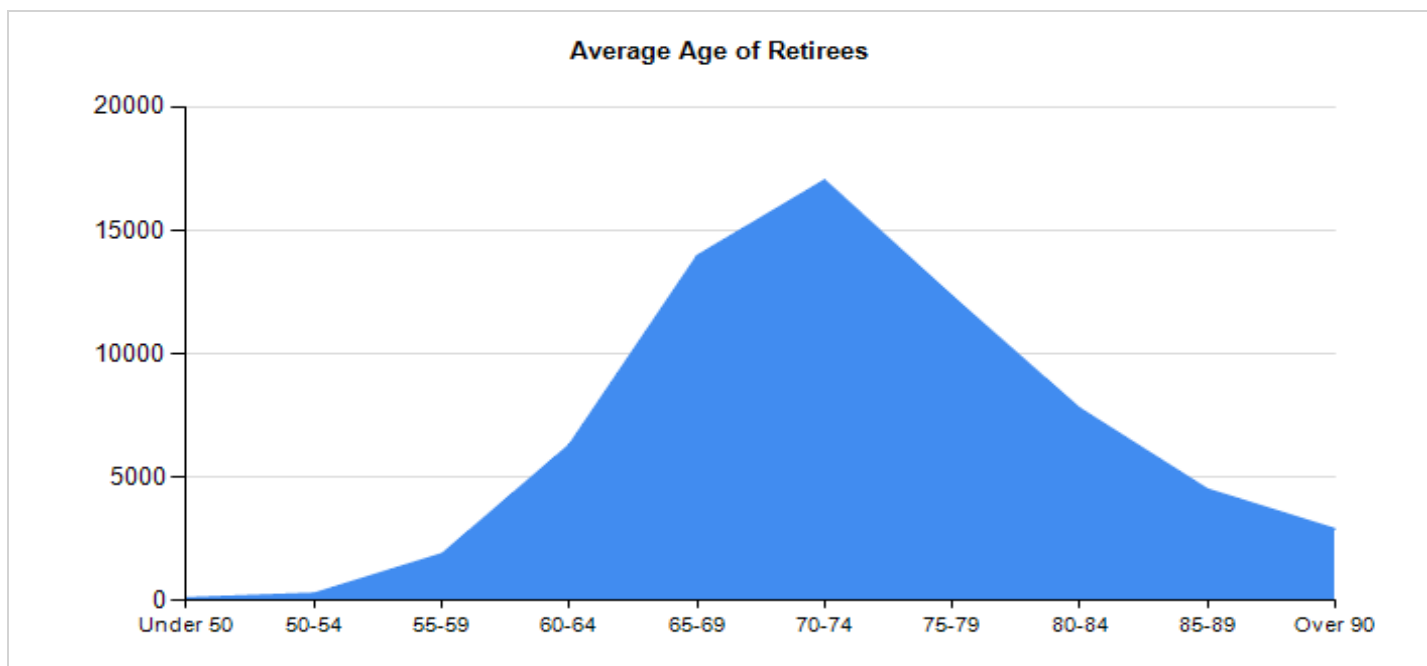


Distribution by Retiree Age

Fiscal Year Ended June 30, 2021

| Age | Total Retired Members | Average Length of Service | Average Monthly Payment |
|---------------|-----------------------|---------------------------|-------------------------|
| Under 50 | 118 | 19.5 | \$1,211 |
| 50-54 | 300 | 24.3 | \$2,092 |
| 55-59 | 1,903 | 26.9 | \$2,319 |
| 60-64 | 6,312 | 25.6 | \$2,142 |
| 65-69 | 13,932 | 24.4 | \$1,983 |
| 70-74 | 16,985 | 24.7 | \$1,905 |
| 75-79 | 12,294 | 24.5 | \$1,736 |
| 80-84 | 7,768 | 24.2 | \$1,568 |
| 85-89 | 4,507 | 23.9 | \$1,400 |
| Over 90 | 2,897 | 24.9 | \$1,318 |
| Totals | 67,016 | 24.6 | \$1,826 |

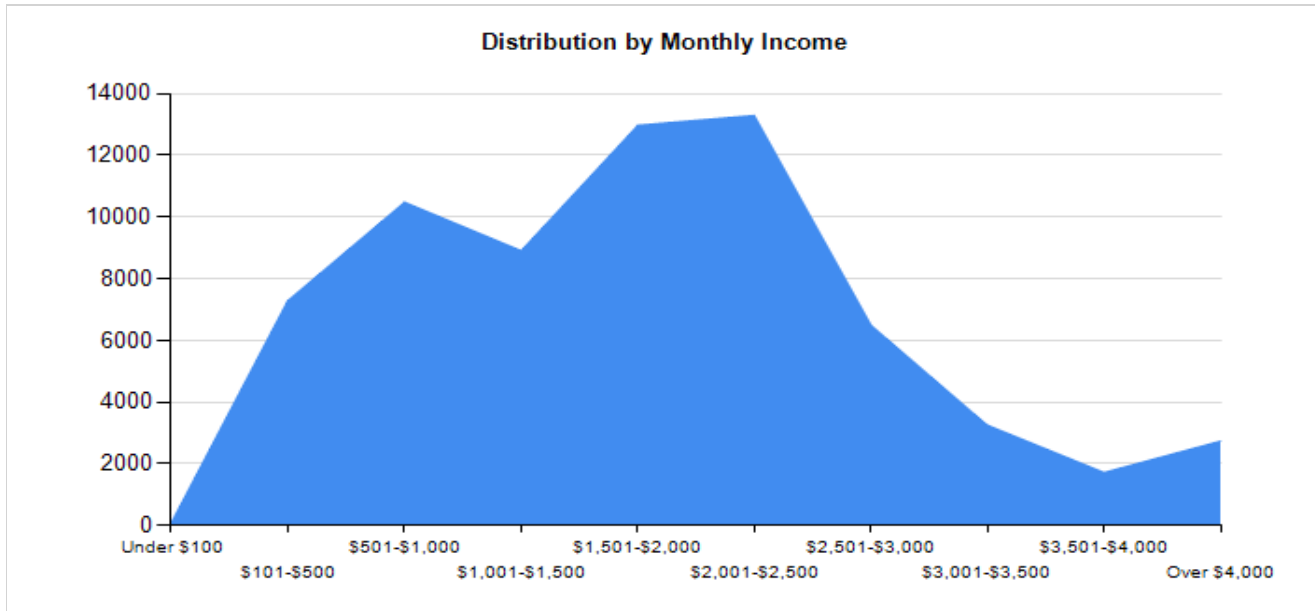
Average age of retired members is 73.1 years.



Distribution by Monthly Income

Fiscal Year Ended June 30, 2021

| Monthly Income | Retired Members | Total | Average Payment |
|-----------------|-----------------|----------------------|-----------------|
| Under \$100 | 91 | \$7,541 | \$83 |
| \$101-\$500 | 7,270 | \$2,406,067 | \$330 |
| \$501-\$1,000 | 10,446 | \$7,741,231 | \$738 |
| \$1,001-\$1,500 | 8,879 | \$11,189,947 | \$1,256 |
| \$1,501-\$2,000 | 12,931 | \$22,885,659 | \$1,764 |
| \$2,001-\$2,500 | 13,249 | \$29,629,855 | \$2,229 |
| \$2,501-\$3,000 | 6,476 | \$17,660,356 | \$2,717 |
| \$3,001-\$3,500 | 3,240 | \$10,492,306 | \$3,227 |
| \$3,501-\$4,000 | 1,708 | \$6,385,978 | \$3,726 |
| Over \$4,000 | 2,726 | \$14,333,047 | \$5,239 |
| Totals | 67,016 | \$122,731,988 | \$1,825 |



**Schedule of Changes in Net Position 401(a) Plan
For Periods Ended June 30**

| Year | Additions | | | | Deductions | | | Total Changes in Net Position |
|--------|----------------|----------------|-------------------------------|--------------------------|---------------------|---------------------------------|----------------------------|-------------------------------------|
| | Contributions | | State and Federal Matching | Net Investment Income | Benefit Payments | Refunds and Annuity Payments | Administrative Expenses | |
| | Member | Employer | | | | | | |
| 2012 * | \$ 291,385,506 | \$ 376,635,234 | \$ 304,995,663 | \$ 137,844,165 | \$ 1,036,132,586 | \$ 32,076,398 | \$ 4,273,189 | \$ 38,378,395 |
| 2013 * | 290,044,395 | 373,789,020 | 327,505,309 | 1,777,593,224 | 1,095,144,055 | 28,894,193 | 4,156,867 | 1,640,736,833 |
| 2014 * | 301,300,811 | 386,895,127 | 320,157,548 | 2,571,707,952 | 1,153,051,607 | 28,718,256 | 4,282,605 | 2,394,008,970 |
| 2015 * | 303,677,304 | 392,051,458 | 336,390,612 | 428,855,747 | 1,201,350,906 | 35,240,176 | 4,358,938 | 220,025,101 |
| 2016 * | 294,459,091 | 409,753,221 | 315,671,996 | (357,443,248) | 1,257,276,705 | 36,109,832 | 4,458,338 | (635,403,815) |
| 2017 * | 292,949,337 | 396,743,812 | 301,951,901 | 1,945,898,975 | 1,281,816,606 | 40,944,298 | 4,028,080 | 1,610,755,041 |
| 2018 * | 312,866,576 | 413,068,467 | 344,610,101 | 1,455,605,848 | 1,323,912,271 | 42,940,983 | 4,200,021 | 1,155,097,717 |
| 2019 * | 325,766,148 | 446,161,917 | 371,671,157 | 785,418,294 | 1,378,984,998 | 38,002,018 | 5,194,983 | 506,835,517 |
| 2020 * | 340,057,646 | 457,391,205 | 359,365,710 | 117,011,983 | 1,396,258,730 | 35,183,705 | 5,266,375 | (162,882,266) |
| 2021 * | 343,474,401 | 458,248,765 | 311,290,424 | 5,419,605,754 | 1,485,469,024 | 31,939,815 | 5,446,164 | 5,009,764,341 |

* - Net investment income includes both securities lending income and realized and unrealized gains and losses on investments.

**Schedule of Changes in Net Position Other Postemployment Benefit Plan
For Period Ended June 30**

| <u>Year</u> | <u>Additions</u> | | <u>Deductions</u> | | <u>Total Changes in Net Position</u> |
|-------------|-----------------------------------|----------------------------------|-----------------------------|------------------------------------|--|
| | <u>Contributions Employer</u> | <u>Net Investment Income</u> | <u>Benefit Payments</u> | <u>Administrative Expenses</u> | |
| 2017 * | \$ 6,513,158 | \$ 62,298,027 | \$ 30,309,127 | \$ 26,457 | \$ 38,475,601 |
| 2018 * | 2,912,563 | 44,760,425 | 36,963,620 | 11,427 | 10,697,941 |
| 2019 * | 877,761 | 22,898,576 | 35,701,014 | 3,987 | (11,928,664) |
| 2020 * | 914,797 | 3,222,561 | 35,672,198 | 4,165 | (31,539,005) |
| 2021 * | 6,087,850 | 141,791,999 | 35,159,837 | 29,789 | 112,690,223 |

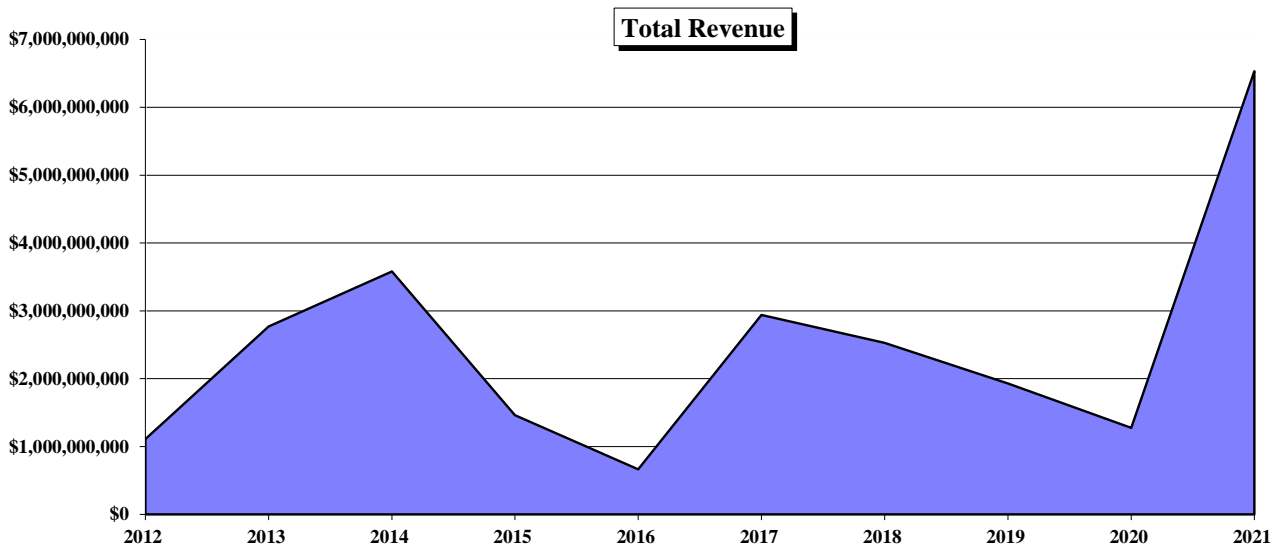
* - Net investment income includes both securities lending income and realized and unrealized gains and losses on investments.

Information to present a 10-year history is not readily available

**Schedule of Revenue by Source 401(a) Plan
For Periods Ended June 30**

| <u>Year</u> | <u>Member Contributions</u> | <u>Employer Contributions</u> | <u>State of Oklahoma and Various Grant Sources</u> | <u>Net Investment Income</u> | <u>Other Revenue</u> | <u>Total</u> |
|-------------|-----------------------------|-------------------------------|--|------------------------------|----------------------|------------------|
| 2012 * | \$ 291,385,506 | \$ 376,635,234 | \$ 304,995,663 | \$ 128,564,937 | \$ 9,279,228 | \$ 1,110,860,568 |
| 2013 * | 290,044,395 | 373,789,020 | 327,505,309 | 1,768,061,837 | 9,531,387 | 2,768,931,948 |
| 2014 * | 301,300,811 | 386,895,127 | 320,157,548 | 2,563,117,816 | 8,590,136 | 3,580,061,438 |
| 2015 * | 303,677,304 | 392,051,458 | 336,390,612 | 417,023,224 | 11,832,523 | 1,460,975,121 |
| 2016 * | 294,459,091 | 409,753,221 | 315,671,996 | (365,314,005) | 7,870,757 | 662,441,060 |
| 2017 * | 292,949,337 | 396,743,812 | 301,951,901 | 1,937,463,392 | 8,435,583 | 2,937,544,025 |
| 2018 * | 312,866,576 | 413,068,467 | 344,610,101 | 1,448,090,255 | 7,515,593 | 2,526,150,992 |
| 2019 * | 325,766,148 | 446,161,917 | 371,671,157 | 779,314,080 | 6,104,214 | 1,929,017,516 |
| 2020 * | 340,057,646 | 457,391,205 | 359,365,710 | 110,576,703 | 6,435,280 | 1,273,826,544 |
| 2021 * | 343,474,401 | 458,248,765 | 311,290,424 | 5,415,132,702 | 4,473,052 | 6,532,619,344 |

* - Investment income includes both realized and unrealized gains and losses on investments.



**Schedule of Revenue by Source Other Postemployment Benefit Plan
For Period Ended June 30**

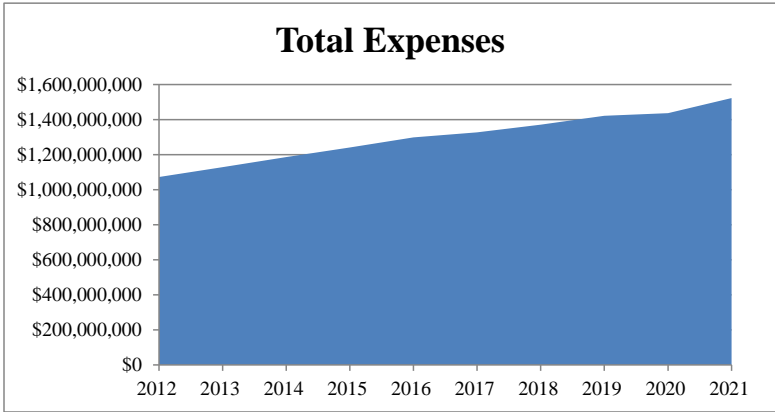
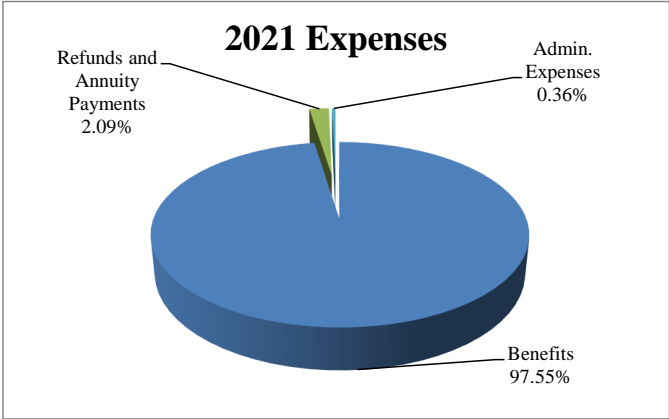
| <u>Year</u> | <u>Employer Contributions</u> | <u>Net Investment Income</u> | <u>Total</u> |
|-------------|-----------------------------------|--------------------------------------|---------------|
| 2017 * | \$ 6,513,158 | \$ 62,298,027 | \$ 68,811,185 |
| 2018 * | 2,912,563 | 44,760,425 | 47,672,988 |
| 2019 * | 877,761 | 22,898,576 | 23,776,337 |
| 2020 * | 914,797 | 3,222,561 | 4,137,358 |
| 2021 * | 6,087,850 | 141,791,999 | 147,879,849 |

* - Investment income includes both realized and unrealized gains and losses on investments.

Information to present a 10-year history is not readily available.

**Schedule of Expenses by Type 401(a) Plan
For Periods Ended June 30**

| <u>Year</u> | <u>Benefits</u> | <u>Refunds and Annuity Payments</u> | <u>Administrative Expenses</u> | <u>Total</u> |
|-------------|------------------|-------------------------------------|--------------------------------|-----------------|
| 2012 | \$ 1,036,132,586 | \$ 32,076,398 | \$ 4,273,189 | \$1,072,482,173 |
| 2013 | 1,095,144,055 | 28,894,193 | 4,156,867 | 1,128,195,115 |
| 2014 | 1,153,051,607 | 28,718,256 | 4,282,605 | 1,186,052,468 |
| 2015 | 1,201,350,907 | 35,240,176 | 4,358,938 | 1,240,950,021 |
| 2016 | 1,257,276,705 | 36,109,832 | 4,458,338 | 1,297,844,875 |
| 2017 | 1,281,816,606 | 40,944,298 | 4,028,080 | 1,326,788,984 |
| 2018 | 1,323,912,271 | 42,940,983 | 4,200,021 | 1,371,053,275 |
| 2019 | 1,378,984,998 | 38,002,018 | 5,194,983 | 1,422,181,999 |
| 2020 | 1,396,258,730 | 35,183,705 | 5,266,375 | 1,436,708,810 |
| 2021 | 1,485,469,024 | 31,939,815 | 5,446,164 | 1,522,855,003 |



**Schedule of Expenses by Type Other Postemployment Benefit Plan
For Period Ended June 30**

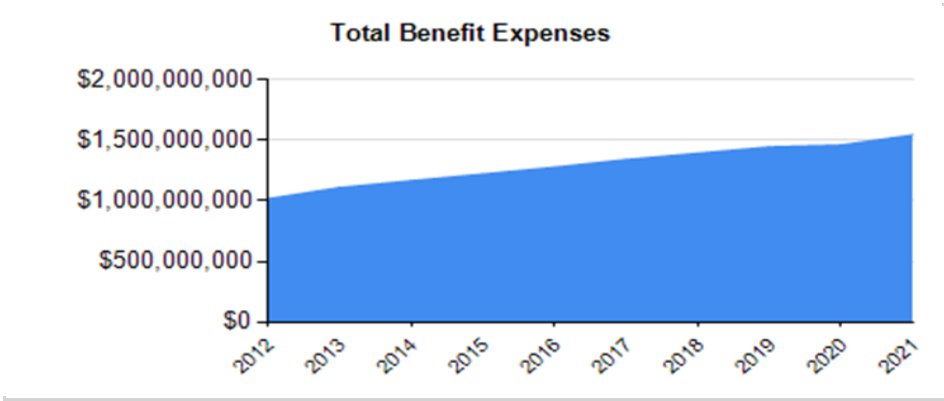
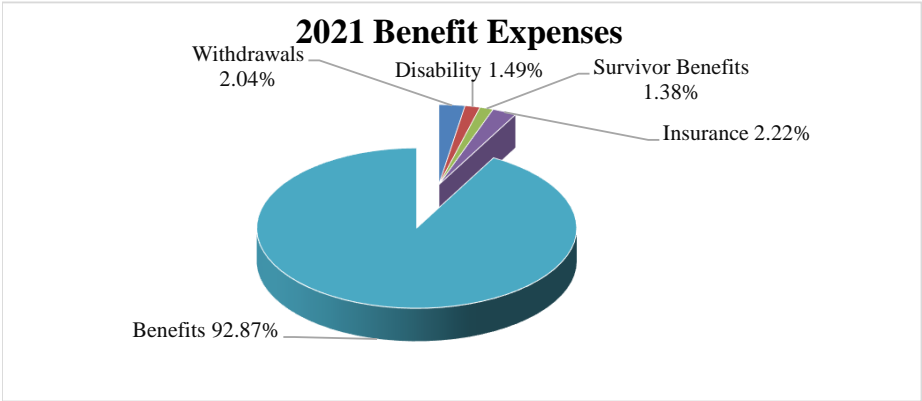
| <u>Year</u> | <u>Benefits</u> | Administrative <u>Expenses</u> | <u>Total</u> |
|-------------|-----------------|-----------------------------------|---------------|
| 2017 | \$ 30,309,127 | \$ 26,457 | \$ 30,335,584 |
| 2018 | 36,963,620 | 11,427 | 36,975,047 |
| 2019 | 35,701,014 | 3,987 | 35,705,001 |
| 2020 | 35,672,198 | 4,165 | 35,676,363 |
| 2021 | 35,159,837 | 29,789 | 35,189,626 |

Information to present a 10-year history is not readily available.

Schedule of Benefit Expenses by Type

For Periods Ended June 30

| Year | Age And Service Benefits | Disability Benefits | Insurance Payments | Survivor Benefits | Withdrawal of Accounts | Total |
|------|--------------------------|---------------------|--------------------|-------------------|------------------------|-----------------|
| 2012 | \$923,869,182 | \$18,055,036 | \$29,607,919 | \$12,339,834 | \$32,076,398 | \$1,015,948,369 |
| 2013 | \$1,016,274,986 | \$18,713,611 | \$31,809,399 | \$17,393,994 | \$32,295,274 | \$1,116,487,264 |
| 2014 | \$1,088,077,119 | \$19,310,123 | \$30,135,639 | \$15,527,726 | \$28,718,256 | \$1,181,768,863 |
| 2015 | \$1,136,433,283 | \$20,093,601 | \$30,362,551 | \$14,461,472 | \$35,240,176 | \$1,236,591,083 |
| 2016 | \$1,189,645,360 | \$20,731,886 | \$30,522,251 | \$16,377,208 | \$36,109,832 | \$1,293,386,537 |
| 2017 | \$1,242,088,802 | \$21,238,923 | \$30,309,127 | \$18,488,881 | \$40,944,298 | \$1,353,070,031 |
| 2018 | \$1,281,644,941 | \$21,617,912 | \$36,963,620 | \$20,649,418 | \$42,940,983 | \$1,403,816,874 |
| 2019 | \$1,336,969,540 | \$22,194,722 | \$35,701,014 | \$19,820,736 | \$38,002,018 | \$1,452,688,030 |
| 2020 | \$1,352,066,625 | \$22,023,290 | \$35,672,198 | \$22,168,815 | \$35,183,705 | \$1,467,114,633 |
| 2021 | \$1,433,355,299 | \$22,953,408 | \$34,321,929 | \$21,320,403 | \$31,459,308 | \$1,543,410,347 |



Retirees in the State of Oklahoma by County

Of the 66,601 pensioners and beneficiaries in the Teachers' Retirement System of Oklahoma, 88% or 58,881 remain state of Oklahoma residents. As such, benefit payments of approximately \$1,312,892,056.26 this year alone went into the State's communities and businesses. Since money changes hands several times, the System's payments have a dramatic effect on the State's economy.

| County | Recipients | Annual Payment |
|------------|------------|-----------------|
| Alfalfa | 111 | \$2,366,639.49 |
| Beaver | 93 | \$1,979,657.78 |
| Canadian | 1,843 | \$40,537,200.39 |
| Cherokee | 1,096 | \$24,264,633.40 |
| Craig | 224 | \$4,321,545.69 |
| Custer | 632 | \$14,443,139.51 |
| Grant | 86 | \$1,926,694.09 |
| Harmon | 71 | \$1,364,173.16 |
| Jefferson | 86 | \$1,949,987.78 |
| Kay | 674 | \$13,891,317.15 |
| Love | 106 | \$1,978,826.32 |
| Marshall | 304 | \$6,629,680.65 |
| Noble | 191 | \$3,990,862.48 |
| Okfuskee | 205 | \$4,219,421.11 |
| Pawnee | 235 | \$4,898,454.02 |
| Pittsburg | 713 | \$15,028,490.18 |
| Sequoyah | 713 | \$15,156,817.83 |
| Texas | 225 | \$4,797,916.47 |
| Woodward | 261 | \$5,702,761.75 |
| Adair | 415 | \$9,051,150.57 |
| Atoka | 243 | \$5,015,778.69 |
| Carter | 747 | \$14,968,477.18 |
| Choctaw | 251 | \$5,446,190.16 |
| Cotton | 106 | \$2,234,961.31 |
| Creek | 893 | \$18,277,253.87 |
| Grady | 751 | \$16,527,566.21 |
| Greer | 105 | \$2,303,423.21 |
| Johnston | 264 | \$5,556,956.23 |
| Kingfisher | 269 | \$6,076,750.39 |
| Logan | 554 | \$10,850,747.91 |
| Major | 159 | \$3,472,905.80 |
| Muskogee | 1,329 | \$29,209,449.28 |
| Nowata | 113 | \$2,157,967.14 |
| Payne | 2,371 | \$58,559,310.74 |
| Pontotoc | 905 | \$20,245,641.56 |
| Seminole | 411 | \$8,757,454.83 |
| Stephens | 685 | \$14,858,550.48 |
| Tillman | 138 | \$3,076,132.61 |
| Woods | 235 | \$5,134,333.17 |

| County | Recipients | Annual Payment |
|--------------|---------------|---------------------------|
| Beckham | 333 | \$7,590,951.82 |
| Blaine | 195 | \$4,257,006.25 |
| Bryan | 891 | \$20,071,607.31 |
| Caddo | 617 | \$13,033,949.24 |
| Delaware | 515 | \$11,358,048.51 |
| Dewey | 145 | \$2,905,415.22 |
| Ellis | 61 | \$1,259,717.97 |
| Garfield | 842 | \$19,609,591.22 |
| Garvin | 439 | \$9,377,417.48 |
| Kiowa | 198 | \$4,294,917.80 |
| Latimer | 225 | \$4,829,185.66 |
| Lefore | 806 | \$17,500,961.85 |
| Lincoln | 514 | \$10,127,534.20 |
| Oklahoma | 10,949 | \$248,431,696.32 |
| Okmulgee | 765 | \$15,975,482.27 |
| Osage | 215 | \$4,240,136.45 |
| Ottawa | 683 | \$13,189,064.22 |
| Tulsa | 8,306 | \$193,098,540.00 |
| Wagoner | 489 | \$10,735,567.39 |
| Washington | 661 | \$12,721,636.99 |
| Washita | 213 | \$4,662,882.36 |
| Cimarron | 48 | \$814,838.67 |
| Cleveland | 4,060 | \$97,645,158.63 |
| Coal | 95 | \$2,026,816.24 |
| Comanche | 1,758 | \$38,696,948.94 |
| Harper | 84 | \$1,766,936.13 |
| Haskell | 254 | \$5,325,493.00 |
| Hughes | 204 | \$4,445,794.11 |
| Jackson | 424 | \$10,402,078.34 |
| Mayes | 662 | \$14,835,544.70 |
| Mcclain | 764 | \$16,355,766.07 |
| Mccurtain | 634 | \$12,935,070.57 |
| Mcintosh | 444 | \$9,435,105.68 |
| Murray | 221 | \$4,882,428.83 |
| Pottawatomie | 989 | \$22,578,999.38 |
| Pushmataha | 199 | \$4,245,370.90 |
| Roger Mills | 81 | \$1,811,612.89 |
| Rogers | 1,085 | \$24,187,562.06 |
| Total | 58,881 | \$1,312,892,056.26 |

2021 Participating Employers

Public School Districts

| | | | |
|----------------|----------------------|---------------------|-------------------|
| ACHILLE | BOKOSHE | CHOCTAW/NICOMA PARK | DURANT |
| ADA | BOONE-APACHE | CHOUTEAU-MAZIE | EAGLETOWN |
| ADAIR | BOSWELL | CIMARRON | EARLSBORO |
| AFTON | BOWLEGS | CLAREMORE | EDMOND |
| AGRA | BOWRING | CLAYTON | EL RENO |
| ALBION | BRAGGS | CLEORA | ELGIN |
| ALEX | BRAY-DOYLE | CLEVELAND | ELK CITY |
| ALINE CLEO | BRIDGE CREEK | CLINTON | ELMORE CITY |
| ALLEN | BRIGGS | COALGATE | EMPIRE |
| ALLEN-BOWDEN | BRISTOW | COLBERT | ENID |
| ALTUS | BROKEN ARROW | COLCORD | ERICK |
| ALVA | BROKEN BOW | COLEMAN | EUFULA |
| AMBER-POCASSET | BRUSHY | COLLINSVILLE | FAIRLAND |
| ANADARKO | BUFFALO | COMANCHE | FAIRVIEW |
| ANDERSON | BUFFALO VALLEY | COMMERCE | FANSHAWE |
| ANTLERS | BURLINGTON | COPAN | FARGO |
| ARAPAHO-BUTLER | BURNS FLAT-DILL CITY | CORDELL | FELT |
| ARDMORE | BUTNER | COTTONWOOD | FLETCHER |
| ARKOMA | BYNG | COVINGTON-DOUG | FLOWER MOUND |
| ARNETT | CACHE | COWETA | FOREST GROVE |
| ASHER | CADDO | COYLE | FORGAN |
| ATOKA | CALERA | CRESCENT | FORT COBB-BROXTON |
| AVANT | CALUMET | CROOKED OAK | FORT GIBSON |
| BALKO | CALVIN | CROWDER | FORT SUPPLY |
| BANNER | CAMERON | CRUTCHO | FORT TOWSON |
| BARNSDALL | CANADIAN | CUSHING | FOX |
| BARTLESVILLE | CANEY | CYRIL | FOYIL |
| BATTIEST | CANEY VALLEY | DAHLONEGAH | FREDERICK |
| BEARDEN | CANTON | DALE | FREEDOM |
| BEAVER | CANUTE | DARLINGTON | FRIEND |
| BEGGS | CARNEGIE | DAVENPORT | FRINK-CHAMBERS |
| BELFONTE | CARNEY | DAVIDSON | FRONTIER |
| BENNINGTON | CASHION | DAVIS | GANS |
| BERRYHILL | CATOOSA | DEER CREEK | GARBER |
| BETHANY | CAVE SPRINGS | DEER CREEK-LAMONT | GEARY |
| BETHEL | CEMENT | DENISON | GERONIMO |
| BIG PASTURE | CENTRAL | DEPEW | GLENCOE |
| BILLINGS | CENTRAL HIGH | DEWAR | GLENPOOL |
| BINGER-ONEY | CHANDLER | DEWEY | GLOVER |
| BISHOP | CHATTANOOGA | DIBBLE | GOODWELL |
| BIXBY | CHECOTAH | DICKSON | GORE |
| BLACKWELL | CHELSEA | DOVER | GRACEMONT |
| BLAIR | CHEROKEE | DRUMMOND | GRAHAM-DUSTIN |
| BLANCHARD | CHEYENNE | DRUMRIGHT | GRAND VIEW |
| BLUEJACKET | CHICKASHA | DUKE | GRANDFIELD |
| BOISE CITY | CHISHOLM | DUNCAN | GRANDVIEW |

2021 Participating Employers

Public School Districts (continued)

| | | | |
|---------------|-------------------|----------------------|-----------------------|
| GRANITE | KELLYVILLE | MARYETTA | OAKDALE |
| GREASY | KENWOOD | MASON | OAKS MISSION |
| GREENVILLE | KEOTA | MAUD | OILTON |
| GROVE | KETCHUM | MAYSVILLE | OKARCHE |
| GROVE | KEYES | MCALESTER | OKAY |
| GUTHRIE | KEYS | MCCORD | OKEENE |
| GUYMON | KEYSTONE | MCCURTAIN | OKEMAH |
| GYPSY | KIEFER | MCCLOUD | OKLAHOMA CITY |
| HAILEYVILLE | KILDARE | MEDFORD | OKLAHOMA UNION |
| HAMMON | KINGFISHER | MEEKER | OKMULGEE |
| HANNA | KINGSTON | MERRITT | OKTAHA |
| HARDESTY | KINTA | MIAMI | OLIVE |
| HARMONY | KIOWA | MID-DEL | OLUSTEE-ELDORADO |
| HARRAH | KONAWA | MIDDLEBERG | OOLOGAH TALALA |
| HARTSHORNE | KREBS | MIDWAY | OPTIMA |
| HASKELL | KREMLIN-HILLSDALE | MILBURN | OSAGE |
| HAWORTH | LANE | MILL CREEK | OSAGE HILLS |
| HAYWOOD | LATTA | MILLWOOD | OWASSO |
| HEALDTON | LAVERNE | MINCO | PADEN |
| HEAVENER | LAWTON | MOFFETT | PANAMA |
| HENNESSEY | LEACH | MONROE | PANOLA |
| HENRYETTA | LEEDEY | MOORE | PAOLI |
| HILLDALE | LEFLORE | MOORELAND | PAULS VALLEY |
| HINTON | LEXINGTON | MORRIS | PAWHUSKA |
| HOBART | LIBERTY | MORRISON | PAWNEE |
| HODGEN | LIBERTY | MOSELEY | PEAVINE |
| HOLDENVILLE | LINDSAY | MOSS | PECKHAM |
| HOLLIS | LITTLE AXE | MOUNDS | PEGGS |
| HOLLY CREEK | LOCUST GROVE | MOUNTAIN VIEW-GOTEBO | PERKINS TRYON |
| HOMINY | LOMEGA | MOYERS | PERRY |
| HOOKER | LONE GROVE | MULDROW | PIEDMONT |
| HOWE | LONE STAR | MULHALL-ORLANDO | PIONEER |
| HUGO | LONE WOLF | MUSKOGEE | PIONEER-PLEASANT VALE |
| HULBERT | LOOKEBA-SICKLES | MUSTANG | PITTSBURG |
| HYDRO-EAKLY | LOWREY | NASHOBA | PLAINVIEW |
| IDABEL | LUKFATA | NAVAJO | PLEASANT GROVE |
| INDIAHOMA | LUTHER | NEW LIMA | POCOLA |
| INDIANOLA | MACOMB | NEWCASTLE | PONCA CITY |
| INOLA | MADILL | NEWKIRK | POND CREEK - HUNTER |
| JAY | MANGUM | NINNEKAH | PORTER CONSOLIDATED |
| JENKS | MANNFORD | NOBLE | PORUM |
| JENNINGS | MANNSVILLE | NORMAN | POTEAU |
| JONES | MAPLE | NORTH ROCK CREEK IND | PRAGUE |
| JUSTICE | MARBLE CITY | NORWOOD | PRESTON |
| JUSTUS-TIAWAH | MARIETTA | NOWATA | PRETTY WATER |
| KANSAS | MARLOW | OAK GROVE | PRUE |

2021 Participating Employers

Public School Districts (continued)

| | | | |
|----------------|-------------------|------------------------|-----------------|
| PRYOR | SHATTUCK | THACKERVILLE | WATTS |
| PURCELL | SHAWNEE | THE ACADEMY OF | WAUKOMIS |
| PUTNAM CITY | SHIDLER | THOMAS-FAY-CUSTER | WAURIKA |
| QUAPAW | SILO | TIMBERLAKE INDEPENDENT | WAYNE |
| QUINTON | SKIATOOK | TIPTON | WAYNOKA |
| RATTAN | SMITHVILLE | TISHOMINGO | WEATHERFORD |
| RAVIA | SNYDER | TONKAWA | WEBBERS FALLS |
| RED OAK | SOPER | TULSA | WELCH |
| REYDON | SOUTH COFFEYVILLE | TUPELO | WELEETKA |
| RINGLING | SOUTH ROCK CREEK | TURKEY FORD | WELLSTON |
| RINGWOOD | SPERRY | TURNER | WESTERN HEIGHTS |
| RIPLEY | SPIRO | TURPIN | WESTVILLE |
| RIVERSIDE | SPRINGER | TUSHKA | WETUMKA |
| ROBIN HILL | STERLING | TUSKAHOMA | WEWOKA |
| ROCK CREEK | STIDHAM | TUTTLE | WHITE OAK |
| ROCKY MOUNTAIN | STIGLER | TWIN HILLS | WHITE ROCK |
| ROFF | STILLWATER | TYRONE | WHITEBEAD |
| ROLAND | STILWELL | UNION | WHITEFIELD |
| RUSH SPRINGS | STONEWALL | UNION CITY | WHITESBORO |
| RYAL | STRAIGHT | VALLIANT | WICKLIFFE |
| RYAN | STRATFORD | VANOSS | WILBURTON |
| SALINA | STRINGTOWN | VARNUM | WILSON |
| SALLISAW | STROTHER | VELMA ALMA | WILSON |
| SAND SPRINGS | STROUD | VERDEN | WISTER |
| SAPULPA | STUART | VERDIGRIS | WOODALL |
| SASAKWA | SULPHUR | VIAN | WOODLAND |
| SAVANNA | SWEETWATER | VICI | WOODWARD |
| SAYRE | TAHLEQUAH | VINITA | WRIGHT CITY |
| SCHULTER | TALIHINA | WAGONER | WYANDOTTE |
| SEILING | TALOGA | WAINWRIGHT | WYNNEWOOD |
| SEMINOLE | TANNEHILL | WALTERS | WYNONA |
| SENTINEL | TECUMSEH | WANETTE | YALE |
| SEQUOYAH | TEMPLE | WAPANUCKA | YARBROUGH |
| SHADY GROVE | TENKILLER | WARNER | YUKON |
| SHADY POINT | TERRAL | WASHINGTON | ZANEIS |
| SHARON MUTUAL | TEXHOMA | WATONGA | ZION |

Career and Technology Centers

| | | | |
|---------------------|----------------|--------------|-------------------|
| AUTRY | GORDON COOPER | METRO TECH | RED RIVER SCHOOL |
| CADDO-KIOWA | GREAT PLAINS | MID-AMERICA | SOUTHERN OKLAHOMA |
| CANADIAN VALLEY | GREEN COUNTRY | MOORE-NORMAN | SOUTHWEST |
| CENTRAL OKLAHOMA | HIGH PLAINS | NORTHEAST | TRI COUNTY |
| CHISHOLM TRAIL | INDIAN CAPITOL | NORTHWEST | TULSA |
| EASTERN OKLAHOMA CO | KIAMICHI | PIONEER | WES WATKINS |
| FRANCIS TUTTLE | MERIDIAN | PONTOTOC | WESTERN |

2021 Participating Employers

Colleges and Universities

| | | | |
|----------------------------|------------------------|------------------------|---------------------------|
| CAMERON UNIV | N OKLA COLLEGE | OU HEALTH SCIENCES | TULSA COMMUNITY COLLEGE |
| CARL ALBERT STATE COLLEGE | NE OKLA A&M COLLEGE | REDLANDS COMM. COLLEGE | UNIV CENTER AT PONCA CITY |
| CONNORS STATE COLLEGE | NE STATE UNIV | ROGERS STATE UNIV | UNIV OF CENTRAL OKLA |
| EAST CENTRAL STATE | NW OKLA STATE UNIV | ROSE STATE COLLEGE | UNIV OF OKLA |
| EASTERN OKLA STATE COLLEGE | OKC COMMUNITY COLLEGE | SE OKLA STATE UNIV | UNIV OF SCIENCES & ARTS |
| LANGSTON UNIV | OKLA PANHANDLE ST UNIV | SEMINOLE STATE COLLEGE | W OKLA STATE COLLEGE |
| MURRAY STATE COLLEGE | OKLA STATE UNIV | SW OKLA STATE UNIV | |

Other Entities

| | | | |
|--------------------------------|--------------------------------|--|--|
| BOARD OF PRIVATE VOC SCHOOLS | EPIC CHARTER | OFFICE OF EDUCATIONAL QUALITY AND ACCOUNTABILITY | STATEWIDE VIRTUAL CHARTER SCHOOL BOARD |
| BOARD OF REGENTS FOR HIGHER ED | FIVE STAR INTERLOCAL | OKLA SCHOOL OF SCIENCE & MATH | STREET SCHOOL |
| CAREER TECH | HARDING CHARTR PREP | OKLA STUDENT LOAN AUTH | TEACHERS RETIREMENT SYSTEM |
| CARLTON LANDING ACADEMY | HARDING FINE ARTS CENTER | OKLAHOMA YOUTH ACADEMY CHARTER SCHOOL | TRI-COUNTY INTERLOCAL CO-OP |
| CHOCTAW NATION INTERLOCAL COOP | INDEPENDENCE CHRTR MIDL SCHOOL | OMES | TULSA SCHOOL OF ARTS & SCIENCES |
| DEBORAH BROWN | JOHN REX CHARTER ELEM SCHOOL | OSAGE COUNTY INTERLOCAL COOP | UNIVERSITY CENTER OF SOUTHERN OKLA |
| DEPT OF CORRECTIONS | KIPP OKC COLLEGE PREP | QUARTZ MOUNTAIN | WESTERN GATEWAY |
| DEPT OF EDUCATION | KIPP TULSA COLLEGE PREP | REGIONAL UNIVERSITY SYSTEM OF OKLA | WESTERN VILLAGE CHARTER SCHOOL |
| DEPT OF REHAB SERVICE | LE MONDE INTERNATIONAL | SOVEREIGN COMMUNITY SCHOOL | |