



Annual Comprehensive

FINANCIAL REPORT

TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA

A COMPONENT UNIT OF THE STATE OF OKLAHOMA
FOR THE FISCAL YEAR ENDED JUNE 30, 2022



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

- **Collaborate:** We work cooperatively to empower each employee to achieve our vision and mission while embodying our core values.
- **Expertise:** We equip our staff, through training and development, to guide our members and employers through all aspects of pension participation.
- **Care:** We are open, responsive, and ethical as we engage with all our stakeholders.
- **Sustainable Funding:** We recognize the vital role a properly funded pension plan plays in the lives of our members and their families and the profound impact of paying benefits on Oklahoma's economy.
- **Reputation:** We take pride that TRS is known for the superior quality of its services, and we strive to continuously improve.



OKLAHOMA
Teachers' Retirement System

A component unit of the State of Oklahoma
Annual Comprehensive Financial Report
for the fiscal year ended June 30, 2022

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.



OKLAHOMA
Teachers' Retirement System



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)
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December 20, 2022

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 2022 Annual Comprehensive Financial Report (ACFR) of the Teachers' Retirement System of Oklahoma (the System) for the fiscal year beginning July 1, 2021 and ending June 30, 2022. 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 \$19.67 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 is "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 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

In recent years, TRS has developed updated processes and continues to improve upon technological advances, giving our members better access to their membership information while maintaining security. To better serve our membership, we are modernizing our pension administration system – a project anticipated to span the next three to five years – which includes updating security functions of our administration, employer, and member portals.

Organizational and Operational Strength

In conjunction with the modernization of our pension administration system, we are looking for ways to streamline our operations and increase efficiencies among staff. We are working diligently to create a flexible and enjoyable working environment for our staff – who administer the System with high efficiency – while maintaining a high level of customer service. In addition to employee retention, we are 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 rattled by unexpectedly high and persistent inflation that emerged during fiscal year 2022. One measure of inflation during the fiscal year is evidenced by the difference in nominal and real US GDP. While nominal GDP rose 9.55% for the fiscal year, real GDP rose only 1.80%. Annual CPI inflation at the end of the fiscal year was 9.1%. These inflation levels, not seen in over 40 years, caught central bankers off guard as they pursued aggressive interest rate hikes to combat the persistent high inflation. Higher interest rates caused steep drops in prices of financial assets.

Domestic equities fared poorly, and international equities fared even worse during this past fiscal year. The Russell 3000, a broad U.S. stock index, posted a return of -13.87%. The MSCI ACWI ex-U.S. IMI, a broad international benchmark of investable markets, returned -19.46%. Both the strong US dollar and the Russian invasion of Ukraine weighed heavily on international markets. Small capitalization stocks trailed both domestically and internationally, as investors sought to reduce portfolio risk.

By the end of the fiscal year, it became increasingly clear that inflation had become a major problem and that the Federal Reserve was well behind the curve. Fixed income markets experienced the worst returns in decades as the Federal Reserve raised the Fed Funds rate range multiple times during the fiscal year from 0 to 0.25% where it began the year to 1.5 to 1.75% where it ended the year with Fed officials signaling much higher rates to come. The Bloomberg Global Aggregate, a broad global bond index declined returning -15.2%. The Bloomberg U.S. Aggregate index, a broad index of U.S. government and private-issued bonds returned -10.3% in fiscal year 2022.

Commodity prices in aggregate remained elevated and volatile during the fiscal year as supply-chain concerns and disruptions linked to the war in Ukraine kept markets in turmoil. The Bloomberg Commodity index, a broad global commodity index, returned 23.6%. WTI, a measure of U.S. oil prices, ended the fiscal year at \$105.76 per barrel, up from \$73.47 per barrel the previous year. An additional factor contributing to commodity price volatility has been the zero-COVID policy economic shutdowns in China.

For fiscal year 2023, investors will be focusing domestically on whether the Federal Reserve can tame inflation without doing significant damage to the economy. Looking abroad, investors will be devoting attention to the war in Ukraine and the zero-COVID lockdowns in China. Positive resolutions to these problems would likely boost market returns while market returns would likely remain challenged should these problems persist or worsen.

Investments

For fiscal year 2022, the System experienced a -9.55% rate of return, outperforming the benchmark return of -12.03% and ended the year with a total fair value of \$19.69 billion. Relative to a peer group of U.S. Public Pension Plans with assets over \$1 billion, the Fund placed in the 66th percentile, trailing the performance of our less aggressively postured peer pension funds.

On June 30, 2022, the System's investment portfolio mix at fair value was 55.62% equities, 24.89% fixed income, 8.32% real estate, 8.8% private equity, 1.2% private debt, and 1.14% 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 proscribes that the System maintain a diversified portfolio and trust funds are diversified across an array of asset classes. The Board of Trustees has elected to allocate investments to domestic and international publicly traded equities, as well as publicly traded government, corporate and structured fixed income securities. In addition to publicly traded equity and fixed income investments, the Board has further diversified the portfolio to include private real estate, private equity and private credit. The Board retains professional investment management firms to achieve these diversified exposures.

Returns across publicly traded asset classes were negative while private asset classes, due in part to valuation lags, were positive. The System's domestic equity composite earned a return of -13.90%, slightly underperforming the benchmark return of -13.87%. International equities returned -21.24%, falling short of the benchmark due to an overweight to small-cap securities. Total fixed income earned a return of -13.29%, declining more than the benchmark due to an overweight to long duration US treasury bonds. Private capital, a mix of private equity and private debt, returned 24.67%. Private equity led the alternative asset classes returning 24.77%, while real estate and special opportunities returned 24.48% and 23.68% 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 2022 were \$366 million, which represents 7.3% of covered payroll. This compares to \$343 million for the fiscal year ending June 30, 2021. 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 2022 totaled \$967.4 million, compared to \$775.6 million for fiscal year 2021. Contributions from local school districts on regular employees and federally or privately funded positions increased by \$44.2 million as the state's dedicated revenue increased by \$147.6 million.

A properly funded pension plan continues to be the Board's most significant challenge. As of June 30, 2022, 73.5% of the System's actuarial liabilities were covered by the net position of the Plan. This is an increase from the 71.5% funded ratio reported for June 30, 2021. The increase in the funded ratio on the actuarial value of assets was primarily due to the level of expected contributions, the 7.5% return on the actuarial value of assets exceeding the assumed rate of 7.00%, and actual contributions higher than expected. Based upon the current statutory contribution schedule, the funding period is 14 years. This is a decrease to the funding period from 2021.

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 2022, the System paid \$73.6 million more in retirement, survivor and insurance benefits than in the preceding year, and \$6.5 million more in refunds to active clients 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 \$362 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, 2021. This is the twenty-ninth 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 seventh 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, J.D.
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.

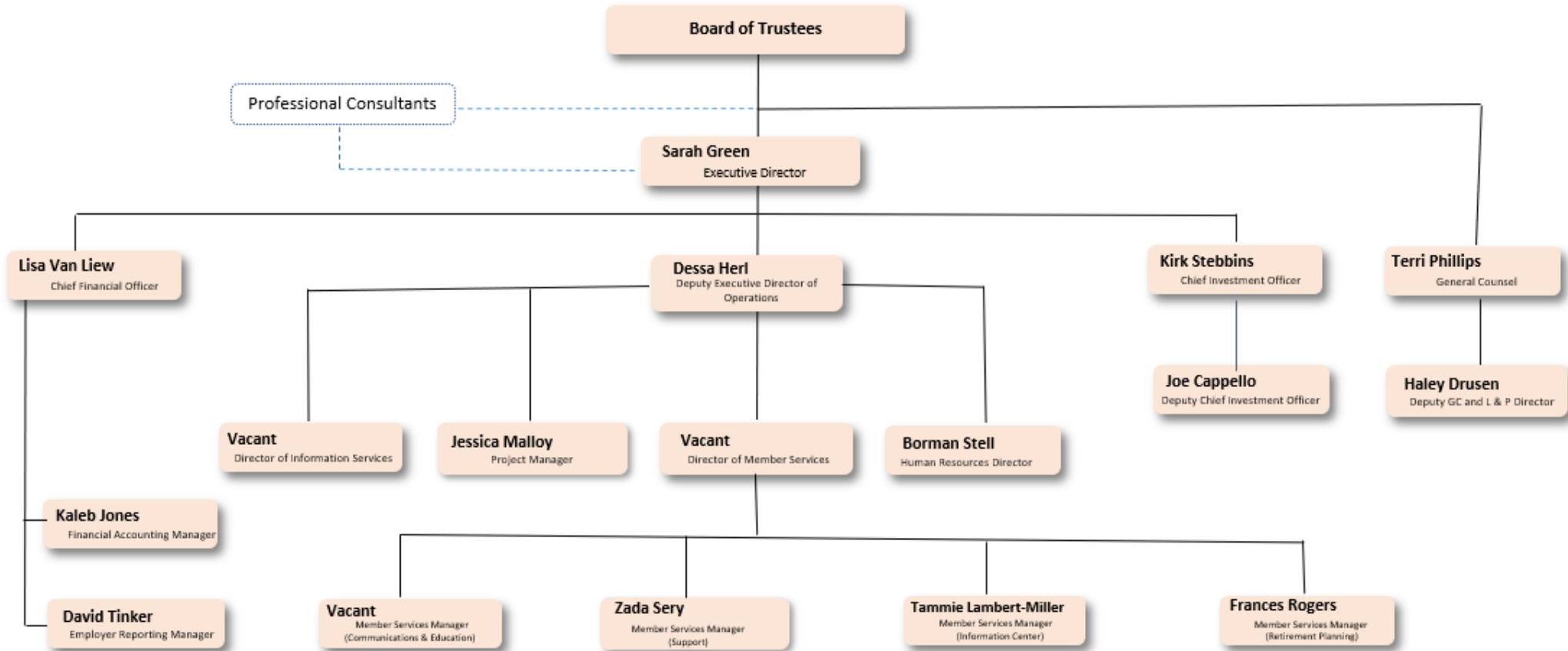
Members

Kelsey Ardies
Lee Denney, DVM
Vernon Florence
Steven Harpe
Lisa Henderson
Joy Hofmeister
Randy McDaniel, CPTM
Christopher A. Rector
Marla Tharp
Drew Williamson, CFP/CPWA
Bill Bentley, (nonvoting)

Designees

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

TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA
 Organizational Chart
 6/30/2022



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

OUTSIDE LEGAL COUNSEL

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Oklahoma City, OK 73102

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EXTERNAL AUDITOR

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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

Aon Investments USA, Inc.
200 E. Randolph Street
Suite 700
Chicago, IL 60601

ALTERNATIVE INVESTMENT ADMINISTRATION

Meketa Investment Group
80 University Avenue
Westwood, MA 02090

The Schedule of Investment Expenses (page 61) and Schedule of Professional/Consultant Fees (page 63) in the Financial Section, and the Investment Assets and Management Fees by Strategy (pages 81-82) and Schedule of Stock Brokerage Commissions (page 83) in the Investment Section contain additional information regarding professional advisors and consultants.



Plan Summary 2021-2022

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 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 full time equivalent 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 joined 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 member'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 member'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 member'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 (with 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

Teachers' Retirement System of Oklahoma

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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 11/22/2022



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Teachers' Retirement System of Oklahoma

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2021

Christopher P. Morrill

Executive Director/CEO



Financial Section

TRS manages a \$19.67 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 Audit of the Financial Statements

Opinion

We have audited the financial statements of the pension and medical supplement defined benefit plan (OPEB Plan) of the Teachers' Retirement System of Oklahoma (the System), a component unit of the state of Oklahoma, as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

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

Basis for Opinion

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

Emphasis of Matter

Alternative Investments

As discussed in Notes 2 and 3 to the financial statements, total system investments include investments valued at \$3,625,191,082 (16.7% of total assets), as of June 30, 2022, 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.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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.

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Auditor's Responsibilities for the Audit of the Financial Statements

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

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

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

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the required supplementary information, as referenced on the table of contents, to 60 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The other supplementary information, as referenced in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The 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 the auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Report on Summarized Comparative Information

We have previously audited the System's June 30, 2021 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 13, 2021. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2021, is consistent, in all material respects with the audited financial statements from which it has been derived.



Oklahoma City, Oklahoma
October 12, 2022

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2022 and 2021**

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, 2022 and 2021. 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) and 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, 2022 and 2021

Condensed Financial Information

The following are condensed schedules of financial information about the Plans in the System for the years ended June 30, 2022, 2021 and 2020 and the results of the years then ended.

Fiduciary net position as of June 30:

	OPEB Plan	401(a) Plan	System Total			2022	2021
			2022	2021	2020	% Change	% Change
Assets							
Cash	\$ -	\$ 33,320,929	\$ 33,320,929	\$ 25,803,234	\$ 26,064,064	29.1%	-1.0%
Receivables	9,877,972	534,912,639	544,790,611	211,491,831	247,307,733	157.6%	-14.5%
Long- and short-term investments, at fair value	472,560,276	19,213,914,701	19,686,474,977	22,025,570,560	16,950,754,948	-10.6%	29.9%
Securities lending institutional daily assets fund	34,801,488	1,387,095,247	1,421,896,735	1,349,706,322	1,032,139,775	5.4%	30.8%
Total investments and other assets	517,239,736	21,169,243,516	21,686,483,252	23,612,571,947	18,256,266,520	-8.2%	29.3%
Capital assets, net	86,289	3,439,247	3,525,536	3,943,725	4,201,234	-10.6%	-6.1%
Total assets	517,326,025	21,172,682,763	21,690,008,788	23,616,515,672	18,260,467,754	-8.2%	29.3%
Liabilities							
Investment settlements and other liabilities	14,653,522	584,050,629	598,704,151	214,740,249	298,713,441	178.8%	-28.1%
Payable under securities lending agreement	34,801,488	1,387,095,247	1,421,896,735	1,349,706,322	1,032,139,776	5.4%	30.8%
Total liabilities	49,455,010	1,971,145,876	2,020,600,886	1,564,446,571	1,330,853,217	29.2%	17.6%
Net Position							
Net position restricted for pensions and OPEB	\$ 467,871,015	\$ 19,201,536,887	\$ 19,669,407,902	\$ 22,052,069,101	\$ 16,929,614,537	-10.8%	30.3%

Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2022 and 2021

Condensed Financial Information (Continued)

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

	OPEB Plan	401(a) Plan	System Total		2020	2022	2021
			2022	2021		% Change	% Change
Additions:							
Member contributions	\$ -	\$ 366,066,840	\$ 366,066,840	\$ 343,474,401	\$ 340,057,646	6.6%	1.0%
Employer contributions	-	495,861,085	495,861,085	464,336,615	458,306,002	6.8%	1.3%
Matching contributions	-	47,040,754	47,040,754	34,371,572	28,745,259	36.9%	19.6%
Dedicated tax revenue	-	424,507,378	424,507,378	276,918,852	330,620,451	53.3%	-16.2%
Net investment income gain (loss)	(50,960,484)	(2,031,150,129)	(2,082,110,613)	5,556,807,673	113,622,021	-137.5%	4790.6%
Security lending net income	108,877	4,339,568	4,448,445	4,590,080	6,612,523	-3.1%	-30.6%
Total additions (loss)	(50,851,607)	(693,334,504)	(744,186,111)	6,680,499,193	1,277,963,902	-111.1%	422.7%
Deductions:							
Benefit payments	34,556,094	1,559,682,030	1,594,238,124	1,520,628,861	1,431,930,928	4.8%	6.2%
Refund of member contributions and other payments	-	38,398,988	38,398,988	31,939,815	35,183,705	20.2%	-9.2%
Administrative expenses	-	5,837,976	5,837,976	5,475,953	5,270,540	6.6%	3.9%
Total deductions	34,556,094	1,603,918,994	1,638,475,088	1,558,044,629	1,472,385,173	5.2%	5.8%
Net increase (decrease) in net position	(85,407,701)	(2,297,253,498)	(2,382,661,199)	5,122,454,564	(194,421,271)	-146.5%	-2734.7%
Net Position Restricted for Pensions and OPEB							
Beginning of year	553,278,716	21,498,790,385	22,052,069,101	16,929,614,537	17,124,035,808	30.3%	-1.1%
End of year	\$ 467,871,015	\$ 19,201,536,887	\$ 19,669,407,902	\$ 22,052,069,101	\$ 16,929,614,537	-10.8%	30.3%

Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2022 and 2021

Financial Highlights and Analysis

The pension system's net position decreased 10.7 percent and the OPEB net position decreased 15.4 percent. The decrease was due to a very weak global equity market, rising inflation, supply chain disruptions, and rising interest rates by the Federal Reserve. The domestic equity portfolio achieved a net return of -13.9%. The international equity portfolio earned a net return of -21.2%. The fixed income portfolio earned a net return of -13.3%. The System's core and non-core real estate portfolios earned net returns of 28.6% and 19.2% respectively as real estate was particularly strong due to rising rental growth and a general lack of supply. The System's private capital portfolio, which includes private equity and private debt, earned a strong net return of 24.7%. In total, the System's portfolio earned a net return of -9.6%, outperforming the portfolio's policy benchmark return of -12.0%. The System's actuarial assumed return is 7.0%.

	OPEB Plan	401(a) Plan	System Totals		
			2022	2021	2020
Plan net position	\$ 467,871,015	\$ 19,201,536,887	\$ 19,669,407,902	\$ 22,052,069,101	\$ 16,929,614,537
Yearly % change	-15.4%	-10.7%	-10.8%	30.3%	-4.4%

The total investment return for longer periods of time continues to be near the actuarial assumed rate of return. The 10-year rate of return remains strong at 8.7%.

Total Returns Net of Fees	Total Returns			
	1 Year	3 Year	5 Year	10 Year
2022	-9.6%	6.6%	6.9%	8.7%
2021	33.0%	12.1%	12.2%	10.0%
2020	0.8%	5.2%	5.4%	9.1%

Benefit payments increased 4.8 percent in FY 2022 compared to FY 2021. The increase is a result of a 2.0 percent increase in the number of benefit recipients and a 2.1 percent increase in the average monthly benefit. Benefit payments to retired members in FY 2022 exceeded contributions from members and employers by \$299 million, or a ratio of 1.22 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		
			2022	2021	2020
Member contributions	\$ -	\$ 366,066,840	\$ 366,066,840	\$ 343,474,401	\$ 340,057,646
Employer contributions	-	495,861,085	495,861,085	464,336,615	458,306,002
State matching funds	-	47,040,754	47,040,754	34,371,572	28,745,259
Dedicated tax revenue	-	424,507,378	424,507,378	276,918,852	330,620,451
Total contributions	\$ -	\$ 1,333,476,057	\$ 1,333,476,057	\$ 1,119,101,440	\$ 1,157,729,358
Benefit payments	\$ 34,556,094	\$ 1,559,682,030	\$ 1,594,238,124	\$ 1,520,628,861	\$ 1,431,930,928
Refund of contributions	-	38,398,988	38,398,988	31,939,815	35,183,705
Total payments	\$ 34,556,094	\$ 1,598,081,018	\$ 1,632,637,112	\$ 1,552,568,676	\$ 1,467,114,633
Ratio of benefit payments to contributions		1.20:1	1.22:1	1.39:1	1.28:1

Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2022 and 2021

Financial Highlights and Analysis (Continued)

The number of pension benefit recipients increased 2.0 percent in FY 2022 as compared to 1.9 percent in FY 2021 and 1.5 percent in FY 2020. There was a net increase of 1,314; 1,238 and 957 members that retired for FY 2022, FY 2021 and FY 2020, respectively. The number of OPEB benefit recipients increased 1.4 percent in FY 2022 as compared to 1.5 percent for FY 2021 and 1.0 percent for FY 2020. There was an increase of 849; 867 and 567 members that retired and opted to receive the OPEB benefit in FY 2022, FY 2021 and FY 2020, respectively.

	OPEB Plan 2022	401(a) Plan 2022	OPEB Plan 2021	401(a) Plan 2021	OPEB Plan 2020	401(a) Plan 2020
Benefit recipients	60,793	68,330	59,944	67,016	59,077	65,778
Yearly % change	1.4%	2.0%	1.5%	1.9%	1.0%	1.5%
Net increase	849	1,314	867	1,238	567	957

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 2.0 percent, the table below reflects the average benefit per retiree has increased by 2.1 percent in FY 2022 as compared to 4.6 percent and 1.3 percent in FY 2021 and FY 2020 respectively. The increase in benefit recipients was 0.1 percent lower in FY 2022 as compared to 2.7 percent lower in FY 2021 and, 0.2 percent higher in FY 2020 than the increase in average benefit payment below.

	2022	2021	2020
Average monthly benefit	\$ 1,869	\$ 1,830	\$ 1,749
Yearly % change	2.1%	4.6%	1.3%

The following table shows the ratio of active members to retired members of the System is 1.46 to 1 in FY 2022, compared to 1.34 to 1 in FY 2021, and 1.39 to 1 in FY 2020. The ratio for FY 2022 increased compared to FY 2021 due to new hires exceeding retiring teachers. Contributing members increased by 9,899 in FY 2022, decreased by 1,526 in FY 2021 and increased by 1,457 in FY 2020, while benefit recipients increased by 1,314 in FY 2022, 1,238 in FY 2021 and 957 in FY 2020.

	401(a) Plan 2022	401(a) Plan 2021	401(a) Plan 2020
Members contributing	99,844	89,945	91,471
Yearly % change	11.0%	(-1.7)%	1.6%
Benefit recipients	68,330	67,016	65,778
Yearly % change	2.0%	1.9%	1.5%
Ratio contributing/retired	1.46	1.34	1.39

In the table below the ratio of the 401(a) plan fiduciary net position to the total 401(a) plan liability decreased by 10.8 percent in FY 2022 and increased by 17.3 percent in FY 2021. The OPEB plan fiduciary net position to the total OPEB plan liability decreased by 19.6 percent in FY 2020 and increased by 27.6 percent in FY 2021. The funded ratios of the 401(a) plan and the OPEB plan are 70.1 percent and 110.3 percent respectively for FY 2022.

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2022 and 2021**

Financial Highlights and Analysis (Continued)

	OPEB Plan 2022	401(a) Plan 2022	OPEB Plan 2021	401(a) Plan 2021	OPEB Plan 2020	401(a) Plan 2020
Total pension liability	\$ -	\$ 27,410,915,544	\$ -	\$ 26,607,617,421	\$ -	\$ 25,979,258,830
Total OPEB liability	424,129,431		425,907,944		430,681,821	-
Fiduciary net position -Pensions or similar	467,871,015	19,201,536,887	553,278,716	21,498,790,385	440,588,493	16,489,026,044
Employers' net pension liability	-	8,209,378,657	-	5,108,827,036	-	9,490,232,786
Employers' net OPEB asset	(43,741,584)	-	(127,370,772)	-	(9,906,672)	-
Ratio of Employers' fiduciary net position to applicable liabilities	110.31%	70.05%	129.91%	80.80%	102.30%	63.47%

Under GASB Statement 67, *Financial Reporting for Pension Plans*, 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, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, 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 fair value of assets at the end of FY 2022, and the projected continuation of contribution rates and other revenue, and all assumptions hold constant, the Plan's actuary projected a "funding period" of 14 years.

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 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.

House Bill 2293 passed in the 2022 session. This bill creates two separate rates for TRS's matching contribution: one for summer programs, and one for any other employment. While both rates will be actuarially determined, the summer school rate will be limited to one half of the regular matching rate. This bill would have the effect of reducing revenue to TRS for the specified summer programs. However, after conferring with the System's actuary, the reduced rate will cover the increased cost to the System for this summer work, as most members do not gain any additional service credit while working in these programs. Therefore, TRS does not expect this legislative change to have an actuarial impact on the System.

Senate Bill 683 passed in the 2022 session. This bill removes the requirement that nonclassified optional personnel be regularly employed for more than one year to participate in TRS. Instead, these employees, working 20 or more hours per week, may join the System upon hiring. It also establishes an election system in which optional employees must make a one-time, irrevocable election to opt-in or -out of the plan upon their initial eligibility to the plan.

**Management's Discussion and Analysis
Teachers' Retirement System of Oklahoma
June 30, 2022 and 2021**

Financial Highlights and Analysis (Continued)

Senate Bill 267 passed in the 2022 session. This bill opens a three-year window to allow certain retirees to return to employment as an active classroom teacher without salary limitations while receiving retirement benefits. This bill encourages qualified retired educators to return to the classroom. As post-retirement contributions will be owed on all salary paid to these retirees, TRS does not anticipate that this bill will negatively affect the System.

Requests for Information

This financial report is designed to provide a general overview of the System's finances for all those with an interest 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, 2022 (With Comparative Totals as of June 30, 2021)

	OPEB Plan	401(a) Plan	Totals June 30,	
			2022	2021
Assets				
Cash	\$ -	\$ 33,320,929	\$ 33,320,929	\$ 25,803,234
Short-term investments	12,439,446	495,803,420	508,242,866	509,315,132
Accrued interest and dividends receivable	1,947,025	77,603,282	79,550,307	63,962,591
Member contributions receivable	-	30,649,775	30,649,775	25,456,192
Employer contributions receivable	-	51,493,866	51,493,866	42,293,897
Receivable from the State of Oklahoma	-	59,059,138	59,059,138	46,380,196
Due from brokers for securities sold	7,930,947	316,106,578	324,037,525	33,398,955
Security lending institutional daily assets fund	34,801,488	1,387,095,247	1,421,896,735	1,349,706,322
Long-term investments:				
U.S. government securities	42,481,825	1,728,197,187	1,770,679,012	1,591,211,698
U.S. corporate bonds	56,906,265	2,314,995,841	2,371,902,106	2,219,106,405
International corporate bonds and government securities	14,917,883	606,872,302	621,790,185	539,178,931
Equity securities	258,839,899	10,529,829,827	10,788,669,726	13,909,224,417
Private equity	47,928,533	1,949,773,964	1,997,702,497	1,972,965,884
Real estate	39,046,425	1,588,442,160	1,627,488,585	1,284,568,093
Total long-term investments	460,120,830	18,718,111,281	19,178,232,111	21,516,255,428
Capital assets, net	86,289	3,439,247	3,525,536	3,943,725
Total assets	\$ 517,326,025	\$ 21,172,682,763	\$ 21,690,008,788	\$ 23,616,515,672
Liabilities				
Benefits in process of payment	\$ 2,667,506	\$ 106,319,734	\$ 108,987,240	\$ 104,498,321
Due to brokers for securities purchased	11,765,407	468,937,986	480,703,393	99,997,870
Payable under security lending agreement	34,801,488	1,387,095,247	1,421,896,735	1,349,706,322
Other liabilities	220,609	8,792,909	9,013,518	10,244,058
Total liabilities	\$ 49,455,010	\$ 1,971,145,876	\$ 2,020,600,886	\$ 1,564,446,571
Net Position				
Net position restricted for pensions and OPEB	\$ 467,871,015	\$ 19,201,536,887	\$ 19,669,407,902	\$ 22,052,069,101

See Notes to Financial Statements.

Teachers' Retirement System of Oklahoma

Statement of Changes in Fiduciary Net Position

For the year ended June 30, 2022 (With Comparative Totals for the Year Ended June 30, 2021)

	OPEB Plan	401(a) Plan	Totals	
			Year Ended June 30,	
			2022	2021
Additions:				
Members	\$ -	\$ 366,066,840	\$ 366,066,840	\$ 343,474,401
Employer statutory requirement from local school districts	-	495,861,085	495,861,085	464,336,615
Matching funds	-	47,040,754	47,040,754	34,371,572
Dedicated tax	-	424,507,378	424,507,378	276,918,852
Total contributions	-	1,333,476,057	1,333,476,057	1,119,101,440
Investment income:				
Interest and dividends	10,744,480	428,246,551	438,991,031	361,010,050
Net appreciation (depreciation) in fair value of investments	(60,182,639)	(2,398,720,821)	(2,458,903,460)	5,254,309,605
Investment expenses	(1,522,325)	(60,675,859)	(62,198,184)	(58,511,982)
(Loss) Gain from investing activities	(50,960,484)	(2,031,150,129)	(2,082,110,613)	5,556,807,673
Income from securities lending activities:				
Securities lending income	120,975	4,821,742	4,942,717	5,100,089
Securities lending expenses:				
Management fees	(12,098)	(482,174)	(494,272)	(510,009)
Net income from securities lending activities	108,877	4,339,568	4,448,445	4,590,080
Net investment (loss) gain	(50,851,607)	(2,026,810,561)	(2,077,662,168)	5,561,397,753
Total additions	(50,851,607)	(693,334,504)	(744,186,111)	6,680,499,193
Deductions:				
Retirement, death, survivor and health benefits	34,556,094	1,559,682,030	1,594,238,124	1,520,628,861
Refund of member contributions and other payments	-	38,398,988	38,398,988	31,939,815
Administrative expenses	-	5,837,976	5,837,976	5,475,953
Total deductions	34,556,094	1,603,918,994	1,638,475,088	1,558,044,629
Net increase (decrease) in net position	(85,407,701)	(2,297,253,498)	(2,382,661,199)	5,122,454,564
Net position restricted for pension and OPEB:				
Beginning of year	553,278,716	21,498,790,385	22,052,069,101	16,929,614,537
End of year	\$ 467,871,015	\$ 19,201,536,887	\$ 19,669,407,902	\$ 22,052,069,101

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, 2022:

Pension

Inactive Plan Members or Beneficiaries Currently Receiving Benefits*	68,330
Inactive Plan Members Entitled to But Not Yet Receiving Benefits**	26,992
Active Plan Members	99,844
	<u>195,166</u>

* Service retirements, disability retirements, and beneficiaries.

* Does not include 12,896 of non-vested terminated members entitled to a refund of their member contributions.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 1. Description of the System (Continued)

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.

OPEB Plan: The OPEB Plan's membership consisted of the following as June 30, 2022:

OPEB

Inactive Plan Members or Beneficiaries Currently Eligible to Receive Benefits *	60,793
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	5,685
Active Plan Members	99,844
Total Plan Members	<u><u>166,322</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.

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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 2. Summary of Significant Accounting Policies (Continued)

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.

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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 2. Summary of Significant Accounting Policies (Continued)

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, 2022.

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.

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.

At June 30, 2022, the asset allocation guidelines established by the Board's investment policy were:

<u>Asset Class</u>	<u>Target Asset Allocation</u>
Domestic Equity	38.3%
International Equity	16.7%
Domestic Fixed Income	22.0%
Real Estate	10.0%
Private Equity	8.0%
Private Debt	5.0%
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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 2. Summary of Significant Accounting Policies (Continued)

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 \$238,000 at June 30, 2022.

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.

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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments

At June 30, 2022, the carrying amount of the System's bank deposits was approximately \$33,321,000. The bank balance of the System's bank deposits at June 30, 2022 was approximately \$31,013,000.

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, 2022:

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	\$ 275,980,257	\$ -	\$ 181,296,853	\$ 94,683,404
Bank Loans	14,057,706	-	14,057,706	-
Commercial Mortgage-Backed	218,403,106	-	173,716,230	44,686,876
Corporate Bonds	2,241,834,223	-	2,237,417,335	4,416,888
Corporate Convertible Bonds	92,147,363	-	92,147,363	-
Government Agencies	71,296,320	-	70,364,320	932,000
Government Bonds	1,442,117,535	-	1,442,117,535	-
Government Mortgage Backed Securities	339,744,269	-	328,033,107	11,711,162
Gov't-issued Commercial Mortgage-Backed	1,434,727	-	1,434,727	-
Index Linked Government Bonds	6,098,829	-	6,098,829	-
Municipal/Provincial Bonds	13,742,593	-	13,742,593	-
Non-Government Backed C.M.O.s	47,514,375	-	43,280,035	4,234,340
Total fixed income securities	4,764,371,303	-	4,603,706,633	160,664,670
Equity securities				
Common Stock	10,366,903,150	10,360,997,150	1,450,042	4,455,958
Convertible Equity	11,137,484	11,137,484	-	-
Funds - Equities ETF	40,772,817	40,772,817	-	-
Preferred Stock	43,001,906	20,691,077	20,232,904	2,077,925
Other Securities	2,769,635	-	-	2,769,635
Total equity securities	10,464,584,992	10,433,598,528	21,682,946	9,303,518
Total investments by fair value level	\$ 15,228,956,295	\$ 10,433,598,528	\$ 4,625,389,579	\$ 169,968,188
Investments measured at the net asset value (NAV)				
Alternative investments				
Private Equity Investments	\$ 1,997,702,497			
Real Estate Investments	1,627,488,585			
Total alternative investments	3,625,191,082			
Comingled Mutual Funds	324,084,734			
Total Investments measured at the NAV	3,949,275,816			
Total Investments measured at fair value and NAV	\$ 19,178,232,111			

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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

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.

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	\$ 1,997,702,497	\$ 1,087,200,134	N/A	N/A
Real Estate Investments	1,627,488,585	258,408,716	N/A	N/A
Comingled Mutual Funds	324,084,734	-	Daily	1 Day
Total investments measured at the NAV	<u>\$ 3,949,275,816</u>			

Real Estate Investments: This type includes 22 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 6 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.

Comingled Mutual Funds: This type includes investments 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 on the 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, 2022, the System had uninsured and uncollateralized deposits translated to approximately \$3,427,000 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	\$ 62,301	\$ 17,771	\$ 31,317	\$ 35,637	\$ 10,565	\$ 1,259
Bank loans	-	-	-	572	8,680	3,235
Commercial mortgage-backed	10,541	11,406	5,077	3,188	2,530	3,915
Corporate bonds	-	4,352	195,641	837,955	688,313	375,815
Corporate convertible bonds	-	-	-	11,782	7,911	7,475
Government agencies	26,460	11,833	3,399	12,269	10,577	-
Government bonds	-	-	3,886	8,727	11,585	2,306
Government mortgage-backed securities	-	-	713	12,535	13,402	8,972
Gov't-issued commercial mortgage-backed	-	-	-	1,039	-	-
Index linked government bonds	-	-	-	-	-	-
Municipal/Provincial bonds	6,770	2,633	1,725	2,244	-	-
Non-government backed C.M.O.s	9,169	3,464	-	-	-	-
Total fixed income	115,241	51,459	241,758	925,948	753,563	402,977
Short-term bills and notes	-	-	-	-	-	-
	\$ 115,241	\$ 51,459	\$ 241,758	\$ 925,948	\$ 753,563	\$ 402,977

Investment Type	CCC	CC	C	D	US Government		Total
					Not Rated	Securities	
Asset backed securities	\$ 1,432	\$ -	\$ -	\$ -	\$ 112,211	\$ 3,487	\$ 275,980
Bank loans	-	-	-	-	1,571	-	14,058
Commercial mortgage-backed	2,149	-	-	-	179,596	-	218,402
Corporate bonds	41,016	1,350	-	2,228	95,164	-	2,241,834
Corporate convertible bonds	22,052	-	-	-	42,928	-	92,148
Government agencies	-	-	-	-	-	6,759	71,297
Government bonds	-	383	-	-	3,573	1,411,657	1,442,117
Government mortgage-backed securities	-	-	-	-	-	304,122	339,744
Gov't-issued commercial mortgage-backed	-	-	-	-	-	395	1,434
Index linked government bonds	-	-	-	-	-	6,099	6,099
Municipal/Provincial bonds	371	-	-	-	-	-	13,743
Non-government backed C.M.O.s	119	-	-	-	34,763	-	47,515
Total fixed income	67,139	1,733	-	2,228	469,806	1,732,519	4,764,371
Short-term bills and notes	-	-	-	-	-	93,922	93,922
	\$ 67,139	\$ 1,733	\$ -	\$ 2,228	\$ 469,806	\$ 1,826,441	\$ 4,858,293

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, 2022, the System had the following investments with maturities (dollars in thousands):

Investment Type	Fair Value	Effective Duration in Years
Asset-backed securities	\$ 274,767	2.2
Bank Loans	14,058	0.3
Commercial mortgage-backed	218,301	2.1
Corporate bonds	2,227,743	5.4
Corporate convertible bonds	92,147	3.9
Government agencies	71,296	2.9
Government bonds	1,442,117	12.7
Government mortgage- backed securities	329,513	6.5
Government issued commercial mortgage-backed	1,435	2.6
Index linked government bonds	6,099	17.2
Municipal/Provincial bonds	13,743	6.8
Non-government backed CMOs	47,514	4.3
Other fixed income securities	25,638	5.2
Total fixed income and portfolio duration	<u>\$ 4,764,371</u>	<u>7.3</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, 2022, 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, 2022 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	\$ -	\$ -	\$ 371	\$ -	\$ 245	\$ -	\$ 616
Australian Dollar	71,425	-	-	-	-	-	71,425
Brazilian Real	32,659	-	7,872	-	91	-	40,622
British Pound Sterling	433,118	-	-	(638)	641	-	433,121
Canadian Dollar	179,990	-	-	(39)	59	-	180,010
Colombian Peso	817	-	-	-	-	-	817
Danish Krone	19,111	-	-	-	116	-	19,227
Euro	657,118	1,619	-	(1,460)	104	36,922	694,303
HK offshore Chinese Yuan Renminbi	46,897	-	-	-	76	-	46,973
Hong Kong Dollar	192,873	-	-	(316)	556	-	193,113
Hungarian Forint	917	-	-	-	-	-	917
Indonesian Rupiah	26,276	-	-	-	405	-	26,681
Japanese Yen	367,931	-	-	(617)	617	-	367,931
Malaysian Ringgit	7,416	-	-	-	5	-	7,421
Mexican Peso	15,577	-	10,871	-	-	-	26,448
New Israeli Shekel	11,409	-	-	-	-	-	11,409
New Taiwan Dollar	110,989	-	-	-	213	-	111,202
New Zealand Dollar	471	-	-	-	-	-	471
Norwegian Krone	14,679	-	-	-	50	-	14,729
Phillipine Peso	874	-	-	-	1	-	875
Polish Zloty	2,515	-	-	-	-	-	2,515
Qatari Rial	1,588	-	-	281	-	-	1,869
Singapore Dollar	22,327	-	-	-	4	-	22,331
South African Rand	12,309	-	-	-	-	-	12,309
South Korean Won	65,195	-	-	-	-	-	65,195
Swedish Krona	29,799	-	-	-	-	-	29,799
Swiss Franc	149,628	-	-	-	231	-	149,859
Thai Baht	12,775	-	-	-	-	-	12,775
Turkish Lira	7,181	-	-	(12)	12	-	7,181
UAE Dirham	2,891	-	-	-	-	-	2,891
Total	\$ 2,496,755	\$ 1,619	\$ 19,114	\$ (2,801)	\$ 3,426	\$ 36,922	\$ 2,555,035

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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

During fiscal year ended June 30, 2022, 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, 2022 was (\$3,364,299). At June 30, 2022, 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 2022	Long	1	10-year U.S. Treasury note	\$ 71,474,344	\$ 71,316,835
U.S. Treasury note	September 2022	Long	1	5-year U.S. Treasury note	58,706,750	59,275,905
U.S. Treasury bond	September 2022	Long	3	U.S. Treasury bond	72,695,906	73,896,812
U.S. Treasury note	September 2022	Long	2	U.S. Treasury note	41,014,750	39,919,136
S&P 500 Index	September 2022	Long	1	N/A	14,968,525	15,324,644
Russell Mid Cap	September 2022	Long	1	N/A	3,628,800	3,804,540
U.S. Treasury bond	September 2022	Long	3	U.S. Treasury bond	83,036,375	84,467,446
U.S. Treasury note	September 2022	Long	2	2-year U.S. Treasury note	179,563,359	180,428,290
U.S. Treasury note	September 2022	Short	1	5-year U.S. Treasury note	(7,184,000)	(7,164,500)
					<u>\$ 517,904,808</u>	<u>\$ 521,269,108</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, 2022 was \$3,451. At June 30, 2022, the foreign currency forward contracts outstanding were as follows:

Description	Fair Value (U.S. Dollars)	Currency	Value Date	Notional Value
Forward sale	\$ (394,447)	USD	7/1/2021	\$ (394,447)
Forward sale	(4,148,141)	TWD	7/1/2021	(4,150,765)
Forward purchase	214,439	JPY	7/1/2022	213,612
Forward purchase	288,109	USD	7/5/2022	288,109
Forward purchase	988,999	USD	9/21/2022	988,999

Rate of return - Pension: For the year ended June 30, 2022, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was -9.02 percent. The money-weighted rate of return expresses investment performance, net of investment expense, as adjusted for the changing amounts actually invested.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 3. Cash and Investments (Continued)

Rate of return - OPEB: For the year ended June 30, 2022, the annual money-weighted rate of return on OPEB plan investments, net of OPEB plan investment expense, was -10.23 percent. The money-weighted rate of return expresses investment performance, net of investment expense, as adjusted for the changing amounts actually invested.

Note 4. 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, 2022 collateralized by cash were approximately \$1,374,030,000 and the cash collateral received for those securities on loan was approximately \$1,421,896,000. Securities on loan as of June 30, 2022 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.

The following table describes the types of securities lent and collateral as of June 30, 2022 (dollars in thousands):

	Fair Value of Securities on Loan	Cash Collateral Value	Collateral Percentage
Governmental loans compared to collateral	\$ 192,335	\$ 196,387	102%
Equity loans compared to collateral	712,175	741,714	104%
Corporate loans compared to collateral	469,520	483,795	103%
	<u>\$ 1,374,030</u>	<u>\$ 1,421,896</u>	

At June 30, 2022, 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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 4. Securities Lending Activities (Continued)

At June 30, 2022, the weighted average maturity of the cash collateral investments was 13 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 5. Capital Assets

Capital assets consist of the following at June 30, 2022:

	Balance June 30, 2021	Additions	Deletions	Balance June 30, 2022
Furniture, fixtures and equipment	\$ 5,902,941	\$ 256,829	\$ (20,292)	\$ 6,139,478
Accumulated depreciation	(1,959,216)	(672,592)	17,866	(2,613,942)
Capital assets, net	<u>\$ 3,943,725</u>			<u>\$ 3,525,536</u>

Note 6. 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, 2022 were \$495,861,085. Employers satisfied 100 percent of their contribution requirements for 2022.

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, 2022 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 2022 are applied on the full amount of the member's regular annual compensation up to certain limits prescribed by the IRC.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 7. 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.
- 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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 7. Benefits (Continued)

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 \$34,556,000 in 2022 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, 2022. The measurement date was June 30, 2022. The benefits are only available to those retirees that participate and have at least 10 years of service credit at retirement.

Note 8. 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 percent of net lottery proceeds collected by the State. The System received approximately \$424,507,000 from the State in 2022. Amounts due from the State were approximately \$59,059,000 at June 30, 2022.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 9. DB Plans (Pension and OPEB Actuarial Information)

The components of the net pension liability of the employers at June 30, 2022, were as follows:

Total pension liability	\$ 27,410,915,544
Plan fiduciary net position	(19,201,536,887)
Employers' net pension liability	<u>\$ 8,209,378,657</u>

Plan fiduciary net position as a percentage of the total pension liability	70.05%
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The components of the net OPEB asset at June 30, 2022 were as follows:

Total OPEB liability	\$ 424,129,431
Plan fiduciary net position	(467,871,015)
Employers' net OPEB asset	<u>\$ (43,741,584)</u>

Plan fiduciary net position as a percentage of the total OPEB asset	110.31%
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The total pension and OPEB liability and total pension and OPEB asset as of June 30, 2022, were determined based on actuarial valuations prepared as of June 30, 2022 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 percent productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service
- Investment Rate of Return, net of investment expenses —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.

Teachers' Retirement System of Oklahoma

Notes to Financial Statements

Note 9. DB Plans (Pension and OPEB Actuarial Information) (Continued)

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, 2022, 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.

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, 2022, are summarized in the following table:

Asset Class	Target Asset Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	38.3%	4.9%
International Equity	16.7%	5.5%
Domestic Fixed Income	22.0%	1.3%
Real Estate	10.0%	3.5%
Private Equity	8.0%	7.6%
Private Debt	5.0%	4.6%
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).

Teachers' Retirement System of Oklahoma

Notes to Financial Statements**Note 9. DB Plans (Pension and OPEB Actuarial Information) (Continued)**

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, 2022. 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:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net pension liability	<u>\$ 11,558,854,353</u>	<u>\$ 8,209,378,657</u>	<u>\$ 5,455,716,502</u>
	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net OPEB asset	<u>\$ 1,822,426</u>	<u>\$ (43,741,584)</u>	<u>\$ (82,324,426)</u>

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

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								
	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability:									
Service cost	\$ 513,417,762	\$ 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	1,824,570,006	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	63,391,373	(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	(1,559,682,030)	(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	(38,398,988)	(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	803,298,123	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	26,607,617,421	25,979,258,830	23,269,907,920	22,196,455,995	21,625,384,047	21,758,361,853	20,551,132,567	19,646,619,191	19,032,811,749
Ending (a)	27,410,915,544	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:									
Contributions-Employer/State	967,409,217	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	366,066,840	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	(2,026,810,561)	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	(1,559,682,030)	(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	(38,398,988)	(31,939,815)	(35,183,705)	(38,002,018)	(42,904,983)	(40,944,298)	(36,109,832)	(35,240,176)	(28,718,256)
Administrative expense	(5,837,976)	(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	(2,297,253,498)	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	21,498,790,385	16,489,026,044	16,651,944,311	16,145,108,793	14,989,975,076	13,379,220,035	14,449,506,469	14,229,481,368	11,835,472,398
Ending (b)	19,201,536,887	21,498,790,385	16,489,062,044	16,651,944,311	16,145,108,793	14,989,975,076	13,814,102,655	14,449,506,469	14,229,481,368
Plan's net pension liability (a)-(b)	\$ 8,209,378,657	\$ 5,108,827,036	\$ 9,490,196,786	\$ 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								
	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability	\$ 27,410,915,544	\$ 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	19,201,536,887	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	\$ 8,209,378,657	\$ 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	70.05%	80.80%	63.47%	71.56%	72.74%	69.32%	62.24%	70.31%	72.43%
Covered payroll	\$ 5,015,138,698	\$ 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	163.69%	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)

	2022	2021	2020	2019	2018
Actuarially determined contributions	\$ 867,618,995	\$ 829,510,343	\$ 810,488,875	\$ 760,496,984	\$ 705,424,703
Contributions in relation to the actuarially determined contribution:					
Employers (Schools)	495,861,085	458,248,765	457,391,205	446,161,917	413,068,467
State of Oklahoma, a non-employer contributing entity	471,548,132	311,290,424	359,365,710	371,671,157	344,610,101
Contribution deficiency (excess)	<u>\$ (99,790,222)</u>	<u>\$ 59,971,154</u>	<u>\$ (6,268,040)</u>	<u>\$ (57,336,090)</u>	<u>\$ (52,253,865)</u>
Covered payroll	<u>\$ 5,015,138,698</u>	<u>\$ 4,822,734,551</u>	<u>\$ 4,739,701,022</u>	<u>\$ 4,473,511,671</u>	<u>\$ 4,149,557,077</u>
Contributions as a percentage of covered payroll	<u>19.29%</u>	<u>15.96%</u>	<u>17.23%</u>	<u>18.28%</u>	<u>18.26%</u>
	2017	2016	2015	2014	2013
Actuarially determined contributions	\$ 689,580,590	\$ 723,528,050	\$ 550,652,420	\$ 602,936,966	\$ 619,805,640
Contributions in relation to the actuarially determined contribution:					
Employers (Schools)	396,743,812	409,753,221	392,051,458	386,895,127	373,789,020
State of Oklahoma, a non-employer contributing entity	301,951,901	315,671,995	336,390,612	320,157,548	327,505,309
Contribution deficiency (excess)	<u>\$ (9,115,123)</u>	<u>\$ (1,897,166)</u>	<u>\$ (177,789,650)</u>	<u>\$ (104,115,709)</u>	<u>\$ (81,488,689)</u>
Covered payroll	<u>\$ 4,070,723,673</u>	<u>\$ 4,206,558,429</u>	<u>\$ 4,338,247,200</u>	<u>\$ 4,304,297,300</u>	<u>\$ 3,924,800,000</u>
Contributions as a percentage of covered payroll	<u>17.16%</u>	<u>17.25%</u>	<u>16.79%</u>	<u>16.43%</u>	<u>17.87%</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									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	
Annual money-weighted rate of return, net of investment expenses	-9.02%	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 a portion 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 finance the normal cost and anticipated administrative expenses as well as 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., 21 years as of June 30, 2020). 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 (0.12% of pay for FY2021) 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 smoothed fair
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, net of investment expenses	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.

Teachers' Retirement System of Oklahoma

Required Supplementary Information

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

	2022	2021	2020	2019	2018	2017
Total OPEB liability:						
Service cost	\$ 5,975,764	\$ 6,485,892	\$ 6,219,278	\$ 6,160,629	\$ 6,431,010	\$ 6,647,749
Interest on the total OPEB liability	28,813,245	29,144,139	29,667,636	30,349,537	31,012,327	31,728,895
Benefit changes					-	-
Difference between actual and expected return	(2,011,428)	(5,244,071)	(5,384,475)	(9,944,903)	(9,813,028)	(14,186,133)
Assumption changes	-	-	25,556,639	-	-	-
Benefit payments	(34,556,094)	(35,159,837)	(35,672,198)	(35,701,014)	(36,963,620)	(30,309,127)
Net change in total OPEB liability	(1,778,513)	(4,773,877)	20,386,880	(9,135,751)	(9,333,311)	(6,118,616)
Total OPEB liability:						
Beginning	425,907,944	430,681,821	410,294,941	419,430,692	428,764,003	434,882,619
Ending (a)	424,129,431	425,907,944	430,681,821	410,294,941	419,430,692	428,764,003
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	(50,851,607)	141,791,999	3,222,561	22,898,575	44,760,425	62,298,027
Benefit payments	(34,556,094)	(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	(85,407,701)	112,690,223	(31,539,005)	(11,928,664)	10,697,941	38,475,601
Plan fiduciary net position:						
Beginning	553,278,716	440,588,493	472,127,498	484,056,162	473,358,220	434,882,619
Ending (b)	467,871,015	553,278,716	440,588,493	472,127,498	484,056,161	473,358,220
Employers' Net OPEB liability (asset) (a)-(b)	\$ (43,741,584)	\$ (127,370,772)	\$ (9,906,672)	\$ (61,832,557)	\$ (64,625,469)	\$ (44,594,217)

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 OPEB Liability (asset) (Unaudited)
Fiscal Years Ended June 30,

	2022	2021	2020	2019	2018	2017
Total OPEB liability	\$ 424,129,431	\$ 425,907,944	\$ 430,681,821	\$ 410,294,941	\$ 419,430,692	\$ 428,764,003
OPEB fiduciary net position	467,871,015	553,278,716	440,588,493	472,127,498	484,056,162	473,358,220
Employers' net OPEB liability (asset)	\$ (43,741,584)	\$ (127,370,772)	\$ (9,906,672)	\$ (61,832,557)	\$ (64,625,470)	\$ (44,594,217)
Employers' fiduciary net position as a percentage of the total OPEB liability	110.31%	129.91%	102.30%	115.07%	115.41%	110.40%
Covered payroll	\$5,015,138,698	\$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)%	(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

	2022	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	\$ 5,015,138,698	\$ 4,822,734,551	\$ 4,739,701,022	\$ 4,473,511,671	\$ 4,149,557,077	\$ 4,070,723,673
Contributions as a percentage of covered payroll	0.00%	0.13%	0.02%	0.02%	0.07%	0.16%

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

OPEB Plan	Year Ended June 30					
	2022	2021	2020	2019	2018	2017
Annual money-weighted rate of return, net of investment expenses	-10.23%	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	Fair
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, net of investment expenses	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, 2022**

Investment managers	\$ 61,099,296
Investment consultants	643,358
Investment personnel	455,530
Total investment expenses	<u>\$ 62,198,184</u>

Teachers' Retirement System of Oklahoma

Supplementary Information

**Schedule of Administrative Expenses
For the Year Ended June 30, 2022**

Salaries and benefits	\$	3,823,275
General and miscellaneous		700,151
Professional/consultant fees		606,601
Travel and related expenses		35,357
Depreciation expense		672,592
Total administrative expenses	\$	<u>5,837,976</u>

Teachers' Retirement System of Oklahoma

Supplementary Information

**Schedule of Professional/Consultant Fees
For the Year Ended June 30, 2022**

Actuarial	\$	82,008
Medical		9,300
Legal		127,137
Audit		198,657
Data processing		94,691
Miscellaneous		94,808
Total professional/consultant fees	\$	<u>606,601</u>



Investment Section

The TRS Investment Portfolio generated a -9.55% net return vs a policy benchmark return of -12.03%. The portfolio return ranked at the 66th percentile of peer funds for the fiscal year ended June 30, 2022.



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

DOMESTIC EQUITY

Frontier Capital Management Co. LLC
Geneva Capital Management Ltd.
Hotchkis & Wiley Capital Management*
Neumeier Poma Investment Counsel, LLC
Northern Trust Asset Management
Shapiro Capital Management Company
Wasatch Advisors, Inc.
Wellington Management Company*

INTERNATIONAL EQUITY

Allianz Global Investors
Causeway Capital Management, LLC
State Street Global Advisors
Wasatch Funds
Wellington Management Company

FIXED INCOME

Hoisington Investment Management Co.
Loomis, Sayles & Company
Lord Abbett & Company
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PRIVATE EQUITY

Franklin Park, LLC

REAL ESTATE

AEW Capital Management
American Realty Advisors
Angelo Gordon
Antheus Capital - Lyrical
Artemis Real Estate
Blackstone Inc.
Dune Real Estate Partners
FCP Realty Advisor
Bentall GreenOak
Harbert Real Estate
Heitman Real Estate
Invesco Real Estate
L&B Real Estate Advisors
Landmark Partners
Starwood Capital
TPG Real Estate

ADVISORS AND CONSULTANTS

Northern Trust, *Global Custodian/Securities Lending*
Aon, *Investment Consulting*
Gabriel, Roeder, Smith & Company, *Actuary*
Eide Bailly, LLP *Independent Auditor*

*Indicates that this mandate was terminated during Fiscal Year 2022.

December 6, 2022

Board of Trustees
Teachers' Retirement System of Oklahoma (TRSOK)

Market Overview

Fiscal year ending June 30, 2022 ended in stark contrast to the year prior. On the heels of exceptional growth across most capital markets, fiscal year 2022 ended with most equity and bond markets in double digit negative territory. The war in Ukraine was the prevailing story, though causes of the capital market turmoil were present prior to Russia's invasion. The lingering pandemic continued to strain global supply chains and inflationary pressures began to surface in late 2021, making the prospects of rate hikes more and more clear. As the war hit mid-year, it exacerbated the already strained supply chain and pushed inflation to levels not seen in over 40 years in the United States. The culmination of events left investors with very few places to hide.

The 2022 fiscal year didn't start off nearly as bad as it ended, though there were indications that markets were on rocky footing early on. While global growth was moving higher, it was at a slower pace as COVID-19 variants Delta and Omicron curbed economic activity and renewed fears as to whether the economy would be strained again by already fractured supply chains. Global inflation pressures began to intensify towards the end of 2021, as energy and commodity prices trended higher and as China and parts of Europe faced shortages in coal and natural gas, which further intensified the supply-demand imbalance. The prospect of tighter monetary policy around the world to combat inflation and lower growth expectations began to weigh on investors. Bond yields began to rise globally, as inflation remained elevated and central banks became incrementally more hawkish. However, despite these concerns, risk assets rose notably towards the end of the 2021 calendar year.

It wasn't until the second half of the fiscal year that these risks and concerns began to notably impact capital markets. Equities took a tumble out of the gate heading into 2022, as higher interest rates hit the technology sector hard, and markets grappled with the changing inflationary dynamics. It wasn't long into the second half of the year when geopolitical risks took center stage. On February 24th, Russia invaded Ukraine and has maintained a military presence ever since. In response, the G-7 enacted a slew of financial sanctions in an effort to deter Russia from continuing its operation, so far to no avail. And while the U.S. has banned Russian oil and gas imports, the picture in Europe is more complicated given their outsourced energy dependence.

Running parallel to the crisis evolving in Ukraine was the sharp increase in inflation and global central banks' policy tightening response to rein it in. Through the end of the fiscal year, inflation continued to rise, with U.S. CPI hitting 9.1% year-over-year in June, the fastest pace for inflation since 1981. More worrying, however, was that core inflation which excludes food and energy and hence tends to be less volatile than the headline number, had been higher than economists' estimates, suggesting that inflation



had become broader based. Similarly, UK annual inflation continued to accelerate at its highest level in 30 years as the consumer price index rose 9.4% in June and Eurozone inflation reached 8.6% year-over-year, largely due to soaring energy and food prices. What had largely been communicated as ‘transitory’ early on was soon acknowledged as persistent inflation that needed to be addressed.

Major central banks’ plans to tighten monetary policy became more urgent as inflation climbed higher. As was expected, the U.S. Federal Reserve (Fed) increased its benchmark interest rate by 25 basis points (bps) in March and formally ended quantitative easing (QE). As inflation persisted, the Fed became more aggressive with a 50bp hike in May followed by a 75bp rise in June. Further, Chair Powell indicated that the Federal Open Market Committee (FOMC) planned to reduce its \$8.5 trillion balance sheet beginning in June. Overseas, the Bank of England increased its benchmark interest rate five times since December, with the policy rate range sitting at 1.5% - 1.75% at the end of the year. Additionally, the European Central Bank (ECB) ended its emergency quantitative easing program in March and announced that it would accelerate the wind-down of its legacy QE program and potentially stop net purchases in the third quarter if economic data supported the move. As the year came to an end, even central banks started talking openly of the prospect of recession in the major economies. While we cannot be certain of this, the risks are rising sharply.

All in all, fiscal year 2022 is one that many investors would rather forget. With both equity and bond markets declining double digits, most total return investors felt notable declines from a large portion of their investment portfolios. Global equities, as defined by the MSCI All Country World IMI Index, declined 16.5% for the one-year period ending June 30, 2022. U.S. equity markets declined 14.2%, as measured by the Dow Jones U.S. Total Stock Market Index. Developed international markets fared better, only declining 6.6% in local currency terms; however, the strong dollar created little dispersion for USD investors as the MSCI EAFE declined 17.8% in USD terms. Emerging markets fared the worst, as greater sensitivity to the supply/demand imbalance, inflation and U.S. interest rates drew a 25.3% decline for the year in USD terms. There was also a notable shift towards value securities as interest rates rose, offering a headwind for growth-oriented stocks and in particular the technology sector. The Russell 3000 Value Index declined 7.5%, while the Russell 3000 Growth Index declined by more than double to -19.8%. Similar dispersion was seen across value and growth international equities as well.

As central banks worked to combat persistent inflation, most bond markets saw yields rise. In the U.S., the 10-year Treasury yield doubled from 1.5% to 3.0% by the end of the year and sent bond prices in the opposite direction. The U.S. bond market, as measured by the Bloomberg Aggregate Bond Index, declined by 10.3% over the year. An allocation that typically serves to diversify equity risk was unfortunately less effective over the year. With a risk-off sentiment, high yield bond markets declined 12.8% over the year, as measured by the Bloomberg U.S. Corporate High Yield Index.

We would be remiss not to mention the strength of commodities over the year, one of very few bright spots. As food and energy prices soared, the Bloomberg Commodity Index posted a 23.6% return over the year. And while the impact on most private market returns are yet to be fully known, we expect



alternative asset classes, especially those with lower correlations to equity markets, to offer some reprieve from the volatility experienced across public equities and bonds.

It was a tumultuous year, to say the least, and one that left investors with more uncertainty than clarity. Most total return investors experienced negative results over the year, as traditional diversification via core bonds was mostly ineffective to combat the equity market risk. Allocations across alternative asset classes served investors well during the year, offering a strong reminder as to the benefits of diversification.

Overview of TRSOK Fund Structure

The TRSOK portfolio is well-diversified across several asset classes, including U.S. and International public equities, fixed income, private equity and real estate. The asset allocation is a long-term Policy determined through periodic asset-liability studies and assessments of risk and liquidity needs. Within these asset classes, the investments are diversified across investment types, styles, regions and vintage years. A variety of investment firms are employed within each category to minimize manager- and firm-specific risks. The diversification and overall risk level of the portfolio is appropriate given the goals and objectives of the TRSOK.

During the 2022 fiscal year, the TRSOK underwent an asset-liability analysis to study the investment portfolio in light of the plan's specific circumstances, including the plan's liability profile, investment objectives and cost considerations. The 2022 asset-liability study indicated the portfolio's risk posture and liquidity profile are appropriate for its specific circumstances and showed a trend towards a fully funded status. The asset-liability study also identified an opportunity to enhance the current asset allocation via additional diversification to achieve better risk-adjusted returns. The most notable asset allocation changes include a reduction from public equity in favor of alternative investments and particularly the creation of a private debt asset class. The private debt asset class is intended to be made up of primarily direct lending and offer an attractive risk-adjusted return with a stable income component and downside protection.

The table below highlights the TRSOK's previous and newly approved long-term policy targets.

TRSOK Strategic Asset Allocation

	Effective through 1/31/2022	Effective beginning 2/1/2022
U.S. Equity	43.5%	38.3%
International Equity	19.0%	16.7%
Fixed Income	22.0%	22.0%
Real Estate	9.0%	10.0%
Private Equity	6.5%	8.0%
Private Debt	--	5.0%
Cash	0%	0%

Following the asset-liability study and approval of the updated asset allocation, TRSOK initiated the creation of the new private debt asset class and structure reviews across each of the existing asset classes. The search for private debt managers has since been completed and expectations are for initial investments to be made in early 2023.

During the year, TRSOK also completed a structure review of the U.S. equity asset class. The structure review was focused on streamlining the public market portfolios, creating efficient, cost-effective exposure and deliberate risk taking. The results of the U.S. structure review included increasing low-cost passive management to 65% of the portfolio, reducing an existing small cap bias, streamlining the manager line-up and reducing costs by an expected 11bps.

Similarly, Aon and the TRSOK Investment Team regularly review the real estate portfolio allocation, structure and manager line-up, and evaluate additional types of strategies in order to best position the fund to achieve its investment objectives. Identifying investments poised to capitalize on key investment themes was a goal over the course of the last year. Aon and the TRSOK Investment Team identified various opportunities to add complementary exposures through various commingled funds, which offer greater diversification. During the course of the 2022 calendar year, TRSOK committed to 4 closed-ended commingled funds, \$400 million in aggregate. Additionally, the 2023 annual strategic and pacing plan includes \$300 million to closed-ended strategies and \$100 million to open-ended strategies, providing the TRSOK Investment Staff with ample opportunity to achieve its investment objectives in years to come.

The TRSOK portfolio is reviewed regularly by Aon and the TRSOK Investment Team in order to ensure it is best positioned to achieve its long-term investment objectives.

TRSOK Performance Overview (annualized returns)

Periods ending 6/30/2022	1 Year		3 Years		5 Years		7 Years		10 Years	
	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Total Fund	-9.5%	66	6.6%	38	6.9%	34	6.6%	43	8.7%	10
<i>Total Fund Policy Benchmark</i>	-12.0	94	6.2	49	6.8	46	6.8	37	8.2	25
Total Equity	-16.0	--	5.8	--	6.7	--	6.9	--	10.1	--
<i>Total Equities Policy Benchmark</i>	-15.7	--	7.2	--	8.1	--	8.2	--	10.2	--
Total Fixed Income	-13.3	94	-0.3	37	1.6	24	2.4	19	2.9	18
<i>Total Fixed Income Policy Benchmark</i>	-11.0	49	-0.6	55	1.3	51	2.1	38	2.4	39
Total Real Estate	24.5	--	7.4	--	7.7	--	8.5	--	N/A	--
<i>Total Real Estate Policy Benchmark</i>	29.1	--	12.5	--	10.2	--	9.8	--	10.3	--
Total Private Investments	24.7	--	25.1	--	21.3	--	18.6	--	N/A	--
<i>Total Private Equity Policy Benchmark</i>	-22.2	--	8.4	--	9.4	--	10.1	--	13.7	--

The Total Fund ended the fiscal year with approximately \$19.6 billion, representing a decrease in assets of approximately \$2.5 billion over the year primarily due to investment losses. The Total Fund declined 9.5%, net-of-fees, for the 2022 fiscal year period. During a particularly challenging year, both public equity and fixed income delivered double-digit negative returns. The portfolio's exposure to private markets, including real estate and private equity, offset the public market declines for the one-year period. On a relative basis, the Total Fund outperformed its Performance Benchmark return of -12.0% by an impressive 2.5 percentage points. Positive relative performance was driven by outperformance from Private Equity versus its policy benchmark, which consists of a small cap public market index plus 4%. Relative to a peer group of U.S. Public Pension Plans with assets over \$1 billion, the Plan ended the year ranking just below median in the 66th percentile of its peer group. Longer-term performance remains positive, as the Total Fund returned an annualized 8.7% over the ten-year period and outperformed the Total Fund Policy Benchmark by 0.5 percentage points. Additionally, the Total Fund ranked above median over the three- and five-year periods within its peer group and in the top decile over the ten-year time period.

During the year, the total equity asset class declined by 16.0%, modestly trailing its benchmark return of -15.7%. Over the year, TRSOK's U.S. equity asset class declined by 13.9%, performing in line with the performance benchmark. While TRSOK's U.S. equity factor portfolio performed well and the active managers in the U.S. equity portfolio each outperformed relative to their style-specific benchmarks over the year, the portfolio's small cap bias was a headwind to relative results. As noted earlier, as a result of the U.S. equity structure review the small cap bias within the U.S. equity portfolio has since been significantly reduced. On the international equity front, non-U.S. equities trailed the U.S. equity market. The TRSOK International equity portfolio declined by 21.2% and also trailed its performance benchmark return of -19.5%. Active manager performance was mixed, with the greatest contributor to underperformance again due to a small cap bias as well as underperformance from the active small cap



managers. Longer-term absolute performance remains strong, as the Total Equity composite has earned 10.1% over the trailing 10-year period, a return mostly in line with its performance benchmark.

The TRSOK fixed income portfolio declined 13.3% over the year, as institutional investors were faced with a rapidly rising interest rate environment. Active manager performance was mixed for the TRSOK portfolio, but a longer-duration position drove relative results. The Total Fixed Income portfolio trailed its performance benchmark return of -11.0% by 2.3 percentage points, primarily due to exposure to long duration bonds. Over the longer-term, the Fixed Income Composite has earned modest absolute results, though has outperformed its performance benchmark over the trailing three-, five- and ten-year time periods.

Across private markets, including Real Estate and Private Equity, returns were strong for the fiscal year. As the private real estate posted among its strongest returns during 2022, the TRSOK Total Real Estate composite, which includes both core and non-core real estate, earned a return of 24.5% over the year on a time-weighted return basis. The Core Real Estate portfolio returned 28.6% and the Non-Core portfolio returned 19.2%. Longer-term performance is also favorable, as the Total Real Estate composite has earned an annualized 8.5% over the trailing seven-year period. On an IRR basis, the Real Estate portfolio has earned a 9.2% internal rate of return (IRR) since its inception.

The Private Equity portfolio returned 24.7% on a time-weighted return basis over the one-year period and has been a strong source of return for the Total Fund on both an absolute and relative basis. Over the year, the TRSOK Private Equity portfolio notably outperformed its performance benchmark, which consists of the Russell 2000 Index + 4%. Benchmarking private markets is challenging and over shorter time periods these challenges are often highlighted. While this strong relative performance is favorable, we would expect the relative performance to moderate over longer time periods. Over the trailing 7-year period, the Private Equity portfolio earned 18.6% and outperformed its benchmark by 8.5 percentage points. From an internal rate of return (IRR) perspective, the preferred metric for measuring private markets performance, TRSOK's private equity portfolio has earned a 19.1% IRR since its inception through June 30, 2022.

We are pleased to report on the TRSOK portfolio and feel it is well-positioned going forward to achieve its long-term goals.

Sincerely,

Katie Comstock
Associate Partner

R. Scott Coopridner
Associate Partner

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 System, 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. The Board has retained professional internal investment staff, as well as qualified outside investment consulting and actuarial firms.

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 typically adjust 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,

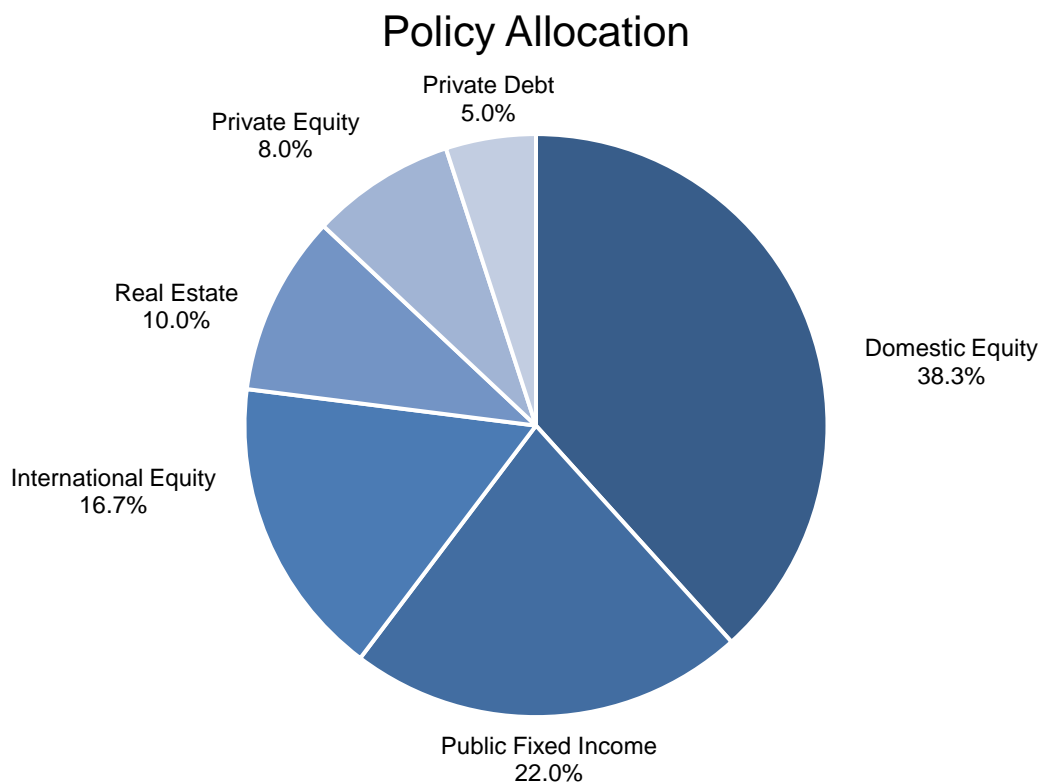


Joseph Cappello, CFA
Deputy Chief Investment Officer

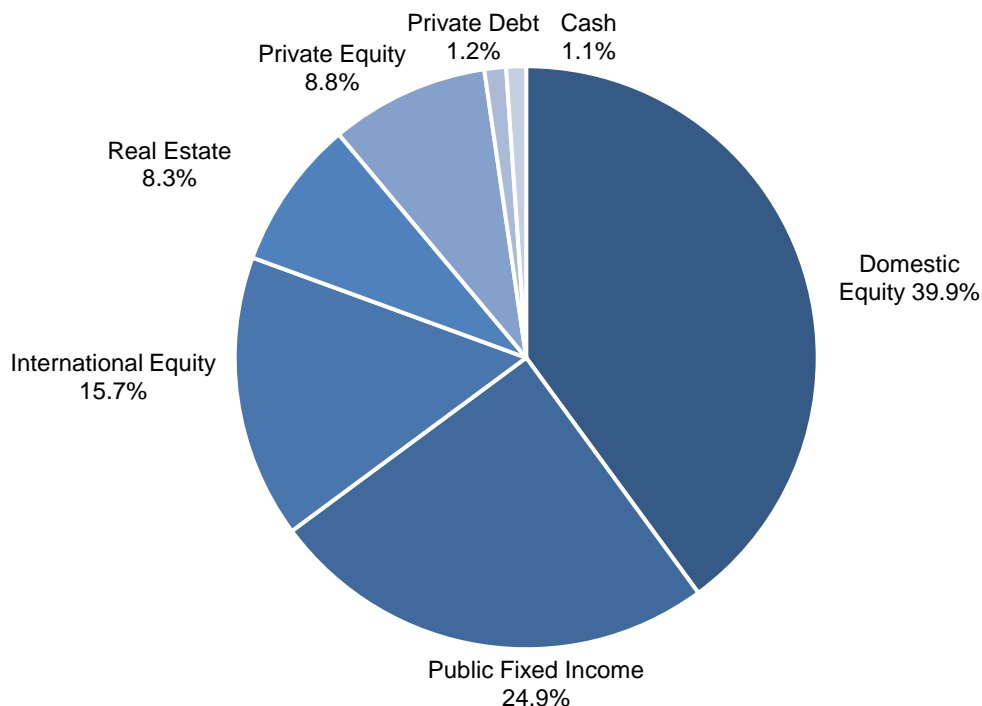
Investment Allocation Policy

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 System, in conjunction with Aon, the plan's investment consultant, and Gabriel, Roeder, Smith & Company, the plan's actuary, conducted an in-depth asset-liability study to construct the current target portfolio. The study takes into consideration the Fund's liability structure, return targets, liquidity needs, and time horizon. The resulting diversified portfolio is designed to enhance long-term returns while mitigating short-term volatility. A primary goal of the System is to achieve a net-of-fee return above a policy benchmark over a full business cycle. The policy benchmark consists of each asset class benchmark weighted by the respective asset class policy target. The System is in the process of directing the portfolio's actual allocation towards the Board-approved policy allocation.

All investments are managed by external investment management firms except for the office building that houses the System. The office building has a fair value of \$10,400,000 and it is managed by the Teachers' Retirement System. The policy allocation and the portfolio's actual allocation as of June 30th, 2022, are shown below. The System's actual allocation will hold cash and cash equivalents sufficient to maintain adequate liquidity in the portfolio to provide for member benefits and capital commitments to partnership vehicles.



Actual Allocation



The System has dedicated allocation ranges for public market investments as shown in the table below. The portfolio may be periodically re-balanced to ensure that the portfolio maintains the appropriate risk posture. Less liquid private assets such as Real Estate, Private Equity, and Private Debt are not managed within rebalancing ranges but are instead managed to target over time through the annual strategic plans, periodic pacing studies, distributions, and strategic new investments.

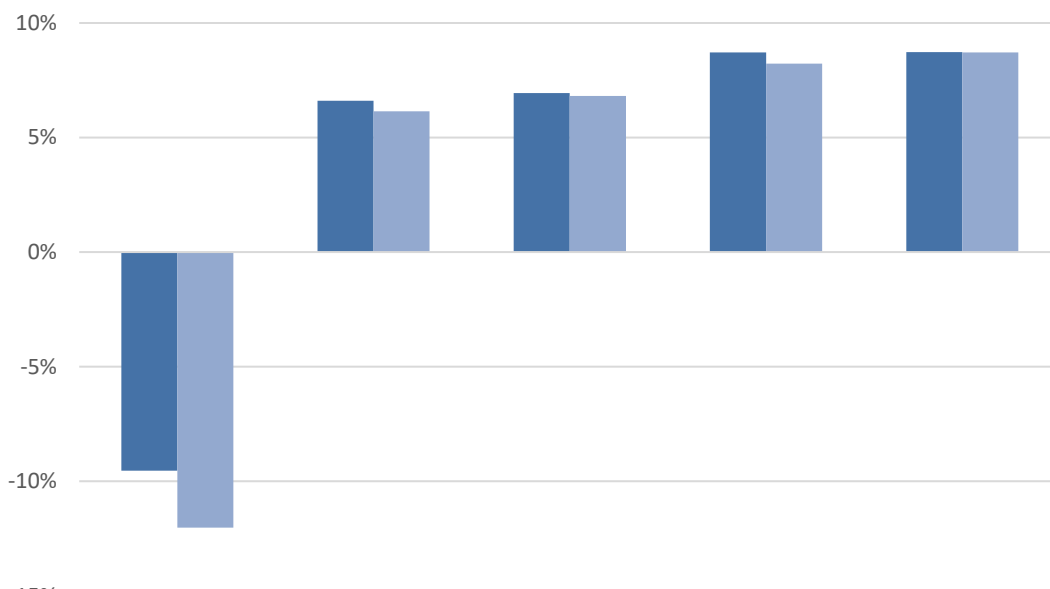
	Minimum	Target	Maximum
Domestic Equity	33.3%	38.3%	43.3%
International Equity	11.7%	16.7%	21.7%
Public Fixed Income	17.0%	22.0%	27.0%
Real Estate	N/A	10.0%	N/A
Private Equity	N/A	8.0%	N/A
Private Debt	N/A	5.0%	N/A
Cash Equiv.	N/A	0.0%	N/A

Investment Performance

For fiscal year 2022, the System realized a time weighted net-of-fee return of -9.55 percent, compared to the System’s policy benchmark return of -12.03 percent. Returns are calculated by Northern Trust, the System’s custodian bank, and are based upon the fair value of assets and accruals along with all portfolio cash flows. The System continues to have strong long-term performance and has outperformed its policy benchmark for one-, three-, five-, and ten-year time periods. The policy benchmark is designed to match the risk of our investment portfolio. The ten-year return has been 8.72 percent, outperforming the actuarially required rate of return and placing the System in the top decile of performance versus our pension System peers with assets greater than \$1 billion.

Private market performance, including Real Estate, Private Equity, and Private Debt, is often lagged relative to public markets as well as to their strategy benchmark. These investments are often housed within closed-end funds structured as partnerships. The System acts as the Limited Partner and retains institutional-quality investment firms to act as the General Partner. The System invests in private markets for return enhancement, diversification, and to access investment opportunities suited for institutional investors.

Historical Performance



	1 Year	3 Year	5 Year	10 Year	Inception
■ Total Plan	-9.55%	6.61%	6.94%	8.72%	8.73%
■ Policy Benchmark	-12.03%	6.15%	6.82%	8.23%	8.71%

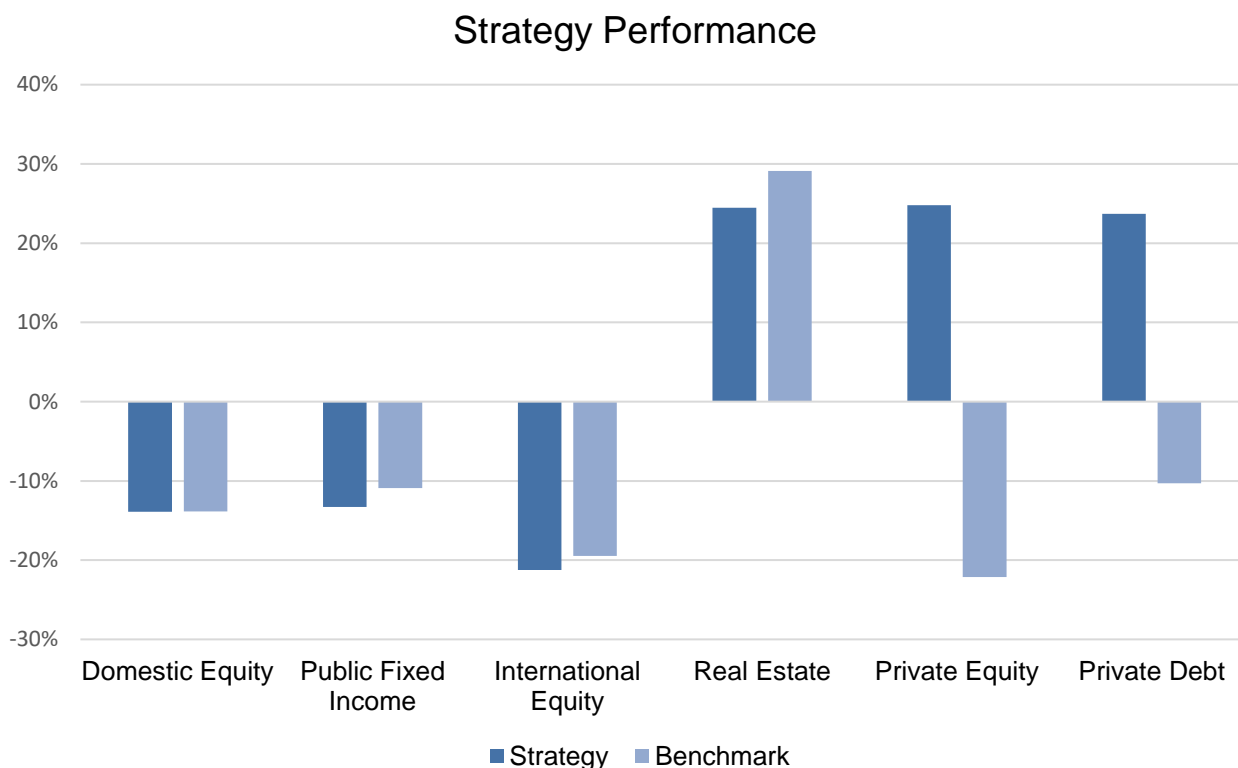
Strategy Performance

To achieve the investment goals set forth by the Teacher's Retirement System of Oklahoma Investment Policy Statement, the Board of Trustees employ a strategy of active management. During fiscal year 2022, the Private Equity strategy was the best returning strategy with an annual time-weighted rate of return of 24.77 percent.

The System's Domestic and International Equity portfolios have a greater weighting to smaller companies with value characteristics than the overall strategy benchmark. The smaller company bias was a relative net detractor from the Domestic Equity portfolio, while the value characteristic overweight was a relative net benefit. The System'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 System employs both active and passive management throughout the public markets portion of the portfolio.

The System's private market investment performance is typically lagged relative to their public market benchmarks. Private equity is benchmarked to the Russell 2000 small capitalization public market index, plus a 4% risk premium to compensate for illiquidity. Private debt is benchmarked to a broad public fixed income benchmark, the Bloomberg Barclay's U.S. Universal Index. Real Estate is benchmarked to the NCREIF ODCE plus a 0.5% risk premium.

The net-of-fee time-weighted rates of return for fiscal year 2022 for each strategy are shown below.



Strategy	AUM (\$)	Fiscal Year Return	Benchmark Return
Domestic Equity	\$ 7,803,048,185	-13.90%	-13.87%
International Equity	3,072,506,282	-21.24%	-19.46%
Public Fixed Income	4,868,983,447	-13.29%	-10.89%
Real Estate	1,627,553,528	24.48%	29.10%
Private Equity	1,720,000,478	24.77%	-22.13%
Private Debt	241,063,901	23.68%	-10.29%
Cash Equiv.	353,319,157	0.17%	-
Total	\$ 19,686,474,978	-9.55%	-12.03%

Private Market Investment Returns

In addition to the time-weighted returns shown above, the Board of Trustees, internal investment staff, and our retained investment consultant also use separate performance metrics specifically designed for closed-end vehicles, such as internal rate of return, cash distribution multiples, and peer performance when examining the private market allocations. Since-inception performance metrics are shown below.

The Private Equity portfolio currently targets 80% of commitments towards buyout, growth, and turnaround strategies and 20% towards venture capital strategies. To reduce overall fees and enhance long-term returns, the System has also participated in co-investments alongside our private equity partners. The Real Estate portfolio currently targets 50% to core real estate and 50% to value-add and opportunistic real estate. The newly approved Private Debt portfolio will target 60%-100% direct lending and 0%-40% alternative credit.

Closed-end private market vehicles distribute investment sales and income proceeds to investors. These distributions require additional commitments/investments by the System to maintain a stable allocation. Annual pacing studies are performed by the System's external consultants to ensure that the portfolio's actual allocation is guided towards the policy allocation. Details of these commitments, contributions, distributions, fair values and performance metrics are displayed below.

	Capital Committed (\$M)	Contributions (\$M)	Distributions (\$M)	Fair Value (\$M)	Total Value Multiple (x)	Net IRR (%)
Total Private Markets	4,253.0	3,811.0	3,210.4	3,562.8	1.8	13.7%
Private Equity	2,087.5	1,743.8	1,901.7	1,645.9	2.0	19.1%
Private Debt	525.0	518.6	510.4	235.4	1.4	12.7%
Real Estate	1,640.5	1,548.6	798.3	1,681.4	1.6	9.2%

Private market vehicles typically charge investors an annual management fee of between 1%-2% of invested capital, which goes to support routine, on-going expenses at the investment management firm. In addition, general partners typically collect performance fees, known as carried interest, when there is positive performance above a hurdle rate. The System's since inception management fees, accrued carried interest, and paid carried interest are shown below.

Strategy	# of Funds	Net Management Fee (\$M)	Carried Interest Accrued (\$M)	Carried Interest Paid (\$M)
Core (RE)	3	48	2	-
Opportunistic (RE)	6	18	14	-
Secondary (RE)	1	2	1	-
Value-Added (RE)	10	30	22	0
Opportunistic (PD)	1	4	6	0
Private Debt (PD)	3	24	31	21
Private Equity	74	100	171	164
Grand Total	98	226	247	185

Benchmark Returns

The System's total portfolio policy benchmark consists of 43.9% Russell 3000, 19.1% MSCI All Country World Index Ex-USA IMI, 15.4% Barclays U.S. Aggregate, 6.6% ICE BofA US High Yield, 7.0% NCREIF ODCE + 50bp and 8% Russell 2000 + 400bp. The policy benchmark will continue to adjust as the System moves the actual allocation towards our policy allocation. Below you can see the full list of the System's benchmark time-weighted returns. Large disparities between System's private market returns and their public market benchmark are largely due to timing differences and valuation techniques.

Domestic Equity	One Year	Three Year	Five Year
Oklahoma Teachers' Total Domestic Equity	-13.90%	7.37%	8.53%
<i>Russell 3000</i>	-13.87%	9.77%	10.60%
<i>Russell 1000</i>	-13.04%	10.17%	11.00%
<i>Russell Midcap</i>	-17.30%	6.59%	7.96%
<i>Russell Midcap Growth</i>	-29.57%	4.25%	8.88%
<i>Russell Mid Cap Value</i>	-10.00%	6.70%	6.27%
<i>Russell 2000</i>	-25.20%	4.24%	5.17%
<i>Russell 2000 Value</i>	-16.28%	6.18%	4.89%
<i>Russell 2000 Growth</i>	-33.43%	1.40%	4.80%
International Equity	One Year	Three Year	Five Year
Oklahoma Teachers' Total International Equity	-21.24%	1.71%	2.39%
<i>MSCI ACWI ex USA IMI</i>	-19.46%	2.01%	2.97%
<i>MSCI ACWI ex USA Value</i>	-12.14%	1.17%	1.85%
<i>MSCI ACWI ex USA Growth</i>	-25.59%	1.92%	3.77%
<i>MSCI ACWI ex USA Small Cap</i>	-22.08%	3.35%	2.96%
<i>MSCI EAFE Small Cap</i>	-23.64%	1.51%	2.11%
<i>MSCI EM Small Cap</i>	-20.29%	6.24%	3.89%
Fixed Income	One Year	Three Year	Five Year
Oklahoma Teachers' Total Fixed Income	-13.29%	-0.33%	1.65%
<i>BB Barclays US Universal</i>	-10.89%	-0.94%	0.94%
<i>70% BB Barclays US Aggregate/ 30% ML High Yield</i>	-10.97%	-0.59%	1.12%
Real Estate	One Year	Three Year	Five Year
Oklahoma Teachers' Real Estate	24.48%	7.41%	7.66
<i>NCREIF ODCE + 50bp</i>	28.01%	10.90%	9.48%
Private Equity	One Year	Three Year	Five Year
Oklahoma Teachers' Private Equity	24.77%	28.19%	23.79%
<i>Russell 2000 + 4%</i>	-22.13%	8.37%	10.60%
Private Debt	One Year	Three Year	Five Year
Oklahoma Teachers' Private Debt	23.68%	11.27%	9.78%
<i>BB Barclays US Universal</i>	-10.89%	-0.94%	0.94%
Oklahoma Teachers' Total Fund	-9.55%	6.61%	6.94%

Largest Holdings

The System's ten largest equity and fixed income holdings by fair value as of June 30, 2022, are listed below. A comprehensive list of the System's investments as of June 30, 2022, may be obtained by contacting the Investment Department. The System's top ten equity holdings represent 9.5 percent of the System's total public equity exposure. The System's top ten fixed income holdings represent 22.8 percent of the System's total public fixed income exposure.

Security	Ticker	Market Value	Shares
Apple Inc.	AAPL	\$ 224,136,170	1,639,381
Microsoft Corp.	MSFT	\$ 207,740,798	808,865
Amazon	AMZN	\$ 107,948,422	2,076,667
Alphabet Class A	GOOGL	\$ 82,136,309	37,690
Exxon Mobil	XOM	\$ 76,216,003	889,958
Bank of America	BAC	\$ 70,690,572	48,833,112
Alphabet Class B	GOOG	\$ 68,386,249	31,263
Johnson & Johnson	JNJ	\$ 68,000,531	383,080
Merck & Co Inc.	MRK	\$ 63,614,794	674,720
Pfizer Inc.	PFE	\$ 61,269,331	1,168,593

Security	Par Value	Market Value
U.S. Treasury Bond 2.5% Due 05-15-2046	\$ 281,710,000	\$ 238,771,232
U.S. Treasury Bond 2.25% Due 08-15-2046	\$ 294,230,000	\$ 237,245,923
U.S. Treasury Bond 1.375% Due 08-15-2050	\$ 214,060,000	\$ 140,903,323
U.S. Treasury Note 0.875% Due 01-31-2024	\$ 88,430,000	\$ 85,569,842
U.S. Treasury Bond 1.25% Due 05-15-2050	\$ 124,030,000	\$ 78,914,088
U.S. Treasury Note 2.75% Due 04-30-2027	\$ 76,952,000	\$ 75,911,946
U.S. Treasury Note 0.75% Due 12-31-2023	\$ 75,000,000	\$ 72,556,641
U.S. Treasury Bond 2.5% Due 02-15-2046	\$ 82,290,000	\$ 69,776,134
U.S. Treasury Note 2.875% Due 05-15-2032	\$ 57,708,000	\$ 57,058,785
U.S. Treasury Note 2.5% Due 04-30-2024	\$ 55,194,000	\$ 54,713,208

Investment Assets and Management Fees by Strategy

Below is a table detailing the investment management fees and assets under management by investment manager as of June 30, 2022. Management fees are charged to cover the normal expenses and operating costs of administering the portfolio. All fees shown below are specifically for fiscal year 2022. Carried interest and incentive fees are accrued and not included below.

Domestic Equity

Account Manager	Strategy	AUM (\$)	Total Fees (\$)
Hotchkis & Wiley	Domestic Mid Cap*	740,277	983,702
Wellington	Domestic Mid Cap*	731,627	1,227,432
Frontier	Domestic Small Cap	195,403,189	1,663,014
Geneva Capital	Domestic Small Cap	186,023,574	1,833,690
Neumeier Poma	Domestic Small Cap	220,799,967	1,801,829
Shapiro Cap	Domestic Small Cap	385,165,865	3,405,647
Wasatch Adv	Domestic Small Cap	177,754,860	2,246,565
Northern Trust	Russell 3000 Index	3,790,601,597	**
Northern Trust	Russell 1000 Index*	3,719,287	153,557
Northern Trust	Russell Mid Cap Index*	1,621,727	94,700
Northern Trust	SciBeta US 6 Factor Index	2,840,486,215	2,220,090

International Equity

Account Manager	Strategy	AUM (\$)	Total Fees (\$)
Allianz	International Large Cap	1,098,347,035	3,325,618
Causeway Capital	International Large Cap	532,540,652	1,913,356
Wellington	International Large Cap	557,824,230	3,843,114
Wasatch	International Small Cap	308,487,874	3,262,523
Wellington	International Small Cap	251,221,756	1,259,969
SSGA	Emerging Mkts Small Cap	324,084,735	2,518,784

Fixed Income

Account Manager	Strategy	AUM (\$)	Total Fees (\$)
Hoisington Investment Co.	Active Duration	771,281,083	765,242
Loomis Sayles	Core Plus Fixed Income	1,391,359,949	3,020,745
Lord Abbett	Core Plus Fixed Income	1,349,659,824	2,046,527
Mackay Shields	Core Plus Fixed Income	1,356,682,590	2,673,410

*Indicates that the investment mandate was terminated during Fiscal Year 2022.

**The Northern Trust Russell 3000 Index mandate began in June of 2022 and has not yet earned a management fee.

Real Estate

Account Manager	Strategy	AUM (\$)	Management Fees (\$)
AEW	Core Real Estate	434,451,400	3,121,424
Heitman America Real Estate	Core Real Estate	435,306,341	2,922,324
L&B Core Income Partners	Core Real Estate	32,120,768	172,508
American Strategic Value	Non-Core Real Estate	124,314,665	1,138,293
Angelo Gordon X	Non-Core Real Estate	52,068,151	812,359
Artemis Real Estate III	Non-Core Real Estate	37,886,487	674,712
Artemis Real Estate IV	Non-Core Real Estate	63,495	51,370
Dune Real Estate III	Non-Core Real Estate	35,079,799	490,877
Dune Real Estate IV	Non-Core Real Estate	27,153,564	856,172
FCP Realty Fund IV, L.P.	Non-Core Real Estate	39,971,163	403,642
FCP Realty Fund V, L.P.	Non-Core Real Estate	26,343,943	1,250,001
GreenOak US II	Non-Core Real Estate	22,826,770	220,732
GreenOak US III	Non-Core Real Estate	40,465,400	528,214
Harbert European Real Estate V	Non-Core Real Estate	36,921,561	€ 657,987
Invesco Strategic Realty	Non-Core Real Estate	18,041,173	390,256
L&B Golden Driller	Non-Core Real Estate	78,857,681	240,430
Landmark Real Estate VII	Non-Core Real Estate	7,337,870	92,752
Lyrical-OTRS Realty Partner IV	Non-Core Real Estate	65,857,270	516,808
Teachers' Retirement System	Non-Core Real Estate	10,400,000	-
Starwood Opportunity X	Non-Core Real Estate	14,065,335	1,500,000
Starwood Opportunity XI	Non-Core Real Estate	55,163,255	271,567
Starwood Opportunity XII	Non-Core Real Estate	32,857,436	609,047

Private Equity / Private Debt

Account Manager	Strategy	AUM (\$)	Management Fees (\$)
Franklin Park	Private Equity	1,711,009,771	1,954,308
Franklin Park	Private Equity - Legacy	8,990,707	-
PIMCO Bravo	Special Opportunities	82,034	-
PIMCO Bravo II	Special Opportunities	24,205,443	589,122
PIMCO Bravo III	Special Opportunities	172,313,717	2,217,639
PIMCO COF II	Special Opportunities	44,462,707	1,701,810

Cash & Other Investment Expenses

Account Manager	Strategy	AUM (\$)	Total Fees (\$)
Northern Trust	STIF Account	221,440,234	494,807.17
Northern Trust	Tax Reclaims / Transition	4,556,773	-
Northern Trust	Custody		25,000
Aon Investment Consulting	Investment Consulting		725,000
Meketa Investment Group	Private Market Admin		335,000
Investment Staff			366,387
Net Pending Purchases/Sales		127,322,150	

Schedule of Stock Brokerage Commissions

Brokerage commissions are paid to execute trades and transactions on behalf of the System. Trades are executed as part of the normal management of publicly traded securities as well as transition management services when a mandate is changed or terminated. Brokerage commissions also cover a portion of the external portfolio manager's research needs.

Brokerage Firm	Commissions Paid (\$)	Shares Traded	Commission per Share (\$)
Jefferies, LLC	824,076	99,243,803	0.008
Citigroup Global Markets, Inc.	727,420	288,401,869	0.003
Abel Noser	489,276	16,309,188	0.030
Bank of America Merrill Lynch	322,133	30,373,946	0.011
J.P. Morgan Securities, LLC	311,684	68,947,625	0.005
Goldman, Sachs, and Co.	227,266	45,833,584	0.005
Morgan Stanley & Co., LLC	144,749	24,708,265	0.006
UBS Securities, LLC	123,355	14,988,835	0.008
Stifel, Nicholas & Co., LLC	97,635	3,737,880	0.026
Macquarie Capital Inc.	95,286	41,041,758	0.002
Summary of remaining brokerage firms	1,381,254	220,693,190	0.006
Total	4,744,134	854,279,943	

Summary of Investments
June 30, 2022

<u>Type of Investment</u>	<u>Fair Value</u>	<u>Percentage of Total Fair Value</u>
Fixed Income:		
U S Government Securities	\$ 1,770,679,012	8.99%
Corporate Bonds	2,371,902,106	12.05%
International Bonds	621,790,185	3.16%
Total Fixed Income	<u>4,764,371,303</u>	<u>24.20%</u>
Equities:		
Domestic	8,082,678,549	41.06%
International	2,705,991,177	13.75%
Total Equities	<u>10,788,669,726</u>	<u>54.80%</u>
Other Investments		
Private Equity	1,997,702,497	10.15%
Real Estate	1,627,488,585	8.27%
Total Other Investments	<u>3,625,191,082</u>	<u>18.41%</u>
Short-Term Investments:		
Short-term Investments Northern Trust	410,145,963	2.08%
Money Markets	98,096,903	0.50%
Total Short-Term Investments	<u>508,242,866</u>	<u>2.58%</u>
Total Investments	<u><u>\$ 19,686,474,978</u></u>	<u><u>100.0%</u></u>





Actuarial Section

For fiscal year ending June 30, 2022, TRS' funded status was 73.5% on an actuarial basis.





October 7, 2022

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, 2022

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, 2022, 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, 2022 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.

Board of Trustees
 October 7, 2022
 Page 2

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 percentage to 3.50% for FY 2021. HB 2894 passed during the 2021 legislative session which restored the percentage to 5.00% for FY 2022 and then changed the percentage to 5.25% for FY 2023 through FY 2027. The percentage 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 7.6% of payroll when the percentage of State tax revenues is 5.00% and 8.0% of payroll when the percentage of State tax revenues is 5.25%.

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 2023 is 8.0% of applicable payroll. These "grant matching" contributions are equivalent to a contribution rate of approximately 0.7% of covered payroll.

On a combined basis, we expect that the contributing entities will contribute 18.0% of covered payroll ($9.3\% + 8.0\% + 0.7\% = 18.0\%$) from FY 2023 through FY 2027, decreasing to 17.6% ($9.3\% + 7.6\% + 0.7\% = 17.6\%$) 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 -9.5% for the fiscal year ending June 30, 2022. The actuarial value of assets returned 7.5% due to the asset smoothing method which exceeded the assumed rate of 7.00% for FY 2022. This excess return on the actuarial value of assets resulted in an asset gain of \$101 million and an increase in the System's funded ratio of about 0.3%. 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 \$20.469 billion is \$800 million higher than the market value of assets of \$19.669 billion, and the actuarial value of assets is approximately 104.1% of the market value.

PROGRESS TOWARD ELIMINATING UAAL

The unfunded actuarial accrued liability (UAAL) as of June 30, 2021 was \$7.703 billion based on the actuarial value of assets and it decreased to \$7.366 billion this year. As a result, the System's funded ratio—actuarial value of assets divided by the actuarial accrued liability—increased from 71.5% to 73.5% as of June 30, 2022. The increase in the funded ratio on the actuarial value of assets was primarily due to the level of expected contributions, the 7.5% return on the actuarial value of assets exceeding the assumed rate of 7.00%, and actual contributions higher than expected.

If measured on the market value of assets, the funded ratio is 70.7%.

The System is expected to eliminate the current UAAL in 14 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% (16 years assuming the market value of assets returns 7.00%).

BENEFIT PROVISIONS

Our actuarial valuation as of June 30, 2022 reflects the benefit and contribution provisions set forth in current statutes. There were no bills enacted during the 2022 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".



Board of Trustees
 October 7, 2022
 Page 4

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 at least 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 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. Further, we believe the assumptions and methods comply with the Actuarial Standards of Practice. 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, 2022 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, 2022 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



Executive Summary

Item	2022	2021
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 	99,844 68,330 14,096 12,896 <hr/> 195,166	89,945 67,016 13,650 13,562 <hr/> 184,173
	\$ 5,152 million	\$ 4,793 million
Statutory contribution rates <ul style="list-style-type: none"> • Employers in EESIP • Regional universities • Federal/grant salaries • Members • State (% of tax revenues) 	FY 2023 9.50% 8.55% 8.00% 7.00% 5.25%	FY 2022 9.50% 8.55% 7.90% 7.00% 5.00%
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 	\$ 19,669 million \$ 20,469 million -9.5% 7.5% \$ 967 million -1.6% 104.1%	\$ 22,052 million \$ 19,330 million 33.3% 11.4% \$ 776 million -2.0% 87.7%
Actuarial Information on Actuarial Value <ul style="list-style-type: none"> • Normal cost % • Unfunded actuarial accrued liability (UAAL) • Funded ratio • Funding period (years) 	10.51% \$ 7,366 million 73.5% 14	10.54% \$ 7,703 million 71.5% 17
Actuarial Information on Market Value <ul style="list-style-type: none"> • Unfunded actuarial accrued liability (UAAL) • Funded ratio • Funding period (years) 	\$ 8,166 million 70.7% 16	\$ 4,981 million 81.6% 9
Gains/(losses) <ul style="list-style-type: none"> • Asset experience • Liability experience • Legislative Changes • Assumption Changes • Total 	\$ 101 million (62) million 0 million 0 million <hr/> \$ 39 million	\$ 771 million 158 million 0 million 0 million <hr/> \$ 929 million

Schedule of Active Member Valuation Data Periods Ended June 30

<u>Valuation Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
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%
2022	99,844	5,152,457,100	51,605	-3.16%

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, 2022. 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:

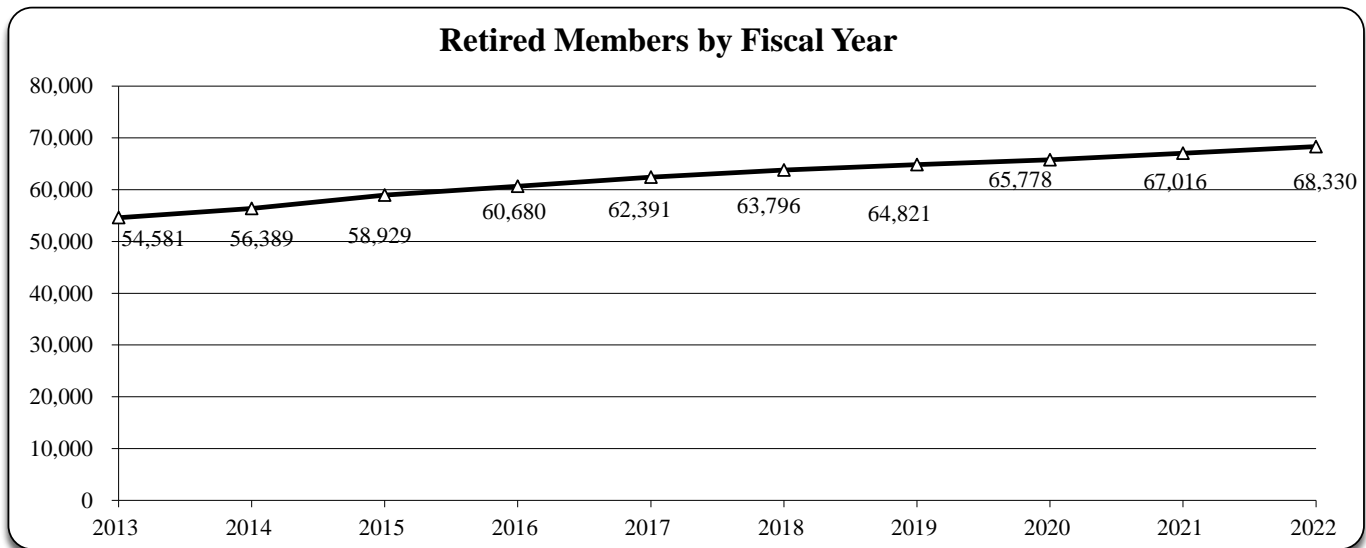
1% Decrease 6.00%	Current Single Rate Assumption 7.00%	1% Increase 8.00%
\$11,558,854,353	\$8,209,378,657	\$5,455,716,502

Schedule of Increases and Decreases of Benefit Recipients Defined Benefit Pension Plan 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**		
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
2022	3,557	92,173,853	2,243	40,145,154	68,330	1,549,250,188	3.5%	22,673

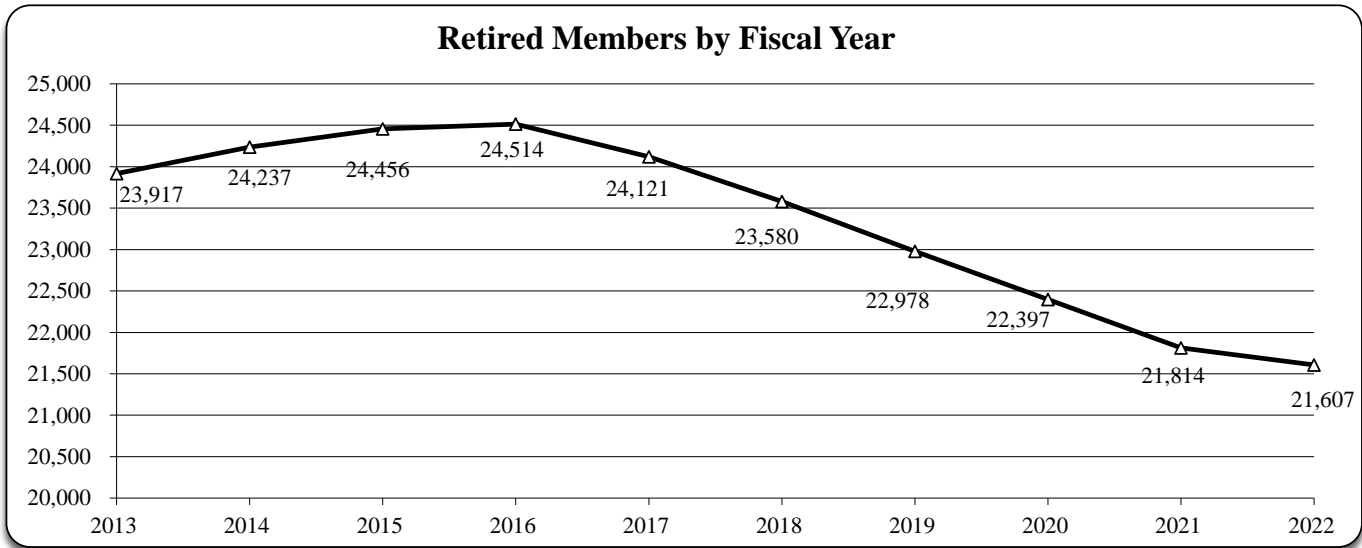
* Includes post-retirement increases for members who retired in previous years and changes occurring due to plan options which offer a continuing monthly benefit payment to beneficiaries.

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



Schedule of Increases and Decreases of Benefit Recipients Defined Benefit OPEB Plan 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		
2013	1,219	1,490,688	1,147	1,415,316	23,917	29,422,656	0.3%	1,230
2014	1,552	1,898,400	1,232	1,518,768	24,237	29,802,288	1.3%	1,230
2015	1,455	1,779,552	1,236	1,523,136	24,456	30,058,704	0.9%	1,229
2016	1,372	1,677,840	1,314	1,617,780	24,514	30,118,764	0.2%	1,229
2017	1,270	1,552,956	1,663	2,043,984	24,121	29,627,736	-1.6%	1,228
2018	1,040	1,271,772	1,581	1,944,120	23,580	28,955,388	-2.3%	1,228
2019	905	1,107,012	1,507	1,852,536	22,978	28,209,864	-2.6%	1,228
2020	798	975,864	1,379	1,695,972	22,397	27,489,756	-2.6%	1,227
2021	1,004	1,227,648	1,587	1,951,200	21,814	26,766,204	-2.6%	1,227
2022	1,190	1,455,264	1,397	1,716,804	21,607	26,504,664	-1.0%	1,227



Investment Experience Gain or Loss

Item (1)	Year Ending June 30, 2022 (2)	Year Ending June 30, 2021 (3)
1. Actuarial assets, beginning of year	\$ 19,330,293,468	\$ 17,769,313,155
2. Contributions during year	\$ 1,333,476,057	\$ 1,119,101,440
3. Benefits and refunds paid	\$ (1,632,637,112)	\$ (1,552,568,676)
4. Administrative expenses	\$ (5,837,976)	\$ (5,475,953)
5. Assumed net investment income at 7.0%:		
a. Beginning of year assets	\$ 1,353,120,543	\$ 1,243,851,921
b. Contributions	46,671,662	39,168,550
c. Benefits and refunds paid	(57,142,299)	(54,339,904)
d. Administrative expenses	(204,329)	(191,658)
e. Total	\$ 1,342,445,577	\$ 1,228,488,909
6. Expected actuarial assets, end of year (Sum of Items 1 through 5)	\$ 20,367,740,014	\$ 18,558,858,875
7. Actual actuarial assets, end of year	\$ 20,469,231,290	\$ 19,330,293,468
8. Asset gain (loss) for year (Item 7 - Item 6)	\$ 101,491,276	\$ 771,434,593

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)
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%
2022	6,464.3	125%	15,376.9	298%	975.6	19%	5,018.2	97%	20,469.2	100%	91%	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, 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%
June 30, 2022	\$20,469.2	\$27,835.0	\$7,365.8	73.5%	\$5,152.5	143.0%

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. Effective July 1, 2021, all eligible non-classified employees must make an irrevocable election whether or not to become a participant in TRS within 30 days of their initial date of employment. 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.

<u>Fiscal Year</u>	<u>State Contribution Percentage</u>
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 percentage 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 percentage to 5.00% for FY 2022 and modified the percentage to 5.25% for FY 2023 through FY 2027. The percentage 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.

<u>Fiscal Year</u>	<u>Federal/Grant Contribution Percentage</u>
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%
FY 2023	8.00%

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

The Initial Funding Surcharge, which was an additional contribution made by the comprehensive universities equal to 2.50% of the payroll 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.

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 a rate equivalent to that of the actuarially assumed rate of return for the System. 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 1988 through FY 1995:

Fiscal Year	Contribution Percentage
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.

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 2022	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)		Mortality Rates *	
	Males	Females	Males	Females	Males	Females
40	166.1	168.5	46.3	49.4	0.000609	0.000383
45	161.7	165.0	41.0	44.1	0.000943	0.000637
50	155.9	160.3	35.8	38.9	0.001635	0.001069
55	148.4	154.0	30.7	33.8	0.003054	0.001822
60	138.9	145.8	25.9	28.7	0.004602	0.002639
65	126.5	134.7	21.1	23.8	0.007874	0.004678
70	111.7	120.9	16.7	19.1	0.014204	0.008875
75	94.7	104.5	12.7	14.8	0.025623	0.016831
80	76.4	85.9	9.3	10.9	0.046222	0.031929
85	58.0	66.3	6.4	7.6	0.083379	0.060565

* Mortality rates with generational improvements for year 2022

- 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 probably 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 indicating the non-classified employees, 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, 2022, TRS
retirees earned an
average annual
retirement benefit of
\$22,404.00.



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 118 through page 129 provide data depicting active membership, level of monthly benefits, years of service, and retirement options.

The schedules on page 130 through page 136 provide financial data showing revenues, expenses, and changes in net position.

On page 137 through page 141, 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, 2022

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	7,332	4,239	2,368	360	114	251	3,602	1,293	1,806	349	282
\$501-\$1,000	10,605	7,047	2,056	756	91	655	4,881	1,819	2,765	823	317
\$1,001-\$1,500	8,889	6,888	667	807	19	508	3,498	1,401	2,803	988	199
\$1,501-\$2,000	12,720	11,498	205	724	7	286	4,337	2,636	4,225	1,248	274
\$2,001-\$2,500	13,356	12,525	74	675	2	80	4,218	2,665	4,731	1,406	336
\$2,501-\$3,000	6,746	6,387	29	309	1	20	2,317	1,102	2,421	783	123
\$3,001-\$3,500	3,557	3,398	14	133	1	11	1,271	508	1,321	381	76
\$3,501-\$4,000	1,929	1,865	4	58	0	2	692	230	778	196	33
Over \$4,000	3,196	3,067	8	113	2	6	1,091	268	1,376	396	65
Totals		56,914	5,425	3,935	237	1,819	25,907	11,922	22,226	6,570	1,705

* 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 member, the designated beneficiary will continue to receive the same monthly benefit for life.

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 monthly benefit to the designated beneficiary is one-half of the benefit of the member.

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 date of retirement, the beneficiary continues to receive the member's monthly benefit until the 120th monthly retirement benefit has been paid.

Retired Members by Type of Benefit OPEB Plan

Fiscal Year Ended June 30, 2022

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	655	382	228	0	0	44	347	152	117	21	18
\$501-\$1,000	1,917	1,404	344	0	0	168	952	400	418	97	50
\$1,001-\$1,500	2,456	2,144	162	0	1	149	1,026	473	698	205	54
\$1,501-\$2,000	4,411	4,260	62	0	0	90	1,626	988	1,288	414	95
\$2,001-\$2,500	5,063	5,012	25	0	0	26	1,708	1,047	1,606	576	126
\$2,501-\$3,000	2,906	2,886	13	0	0	7	1,029	490	975	361	51
\$3,001-\$3,500	1,611	1,602	5	0	0	4	590	243	571	180	27
\$3,501-\$4,000	942	939	2	0	0	1	350	115	371	92	14
Over \$4,000	1,646	1,638	4	1	1	3	594	138	686	195	33
Totals		20,267	845	1	2	492	8,222	4,046	6,730	2,141	468

* 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 member, the designated beneficiary will continue to receive the same monthly benefit for life.

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 monthly benefit to the designated beneficiary is one-half of the benefit of the member.

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 date of retirement, the beneficiary continues to receive the member's monthly benefit until the 120th monthly retirement benefit has been paid.

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 7/1/2012 to 6/30/2013								
Average monthly benefit	\$407	\$755	\$1,179	\$1,630	\$2,158	\$2,672	\$3,391	\$4,156
Average final average salary	\$36,664	\$39,047	\$43,676	\$44,648	\$47,877	\$53,711	\$58,958	\$64,715
Number of retired members	203	320	342	519	578	536	350	166
Period 7/1/2013 to 6/30/2014								
Average monthly benefit	\$407	\$798	\$1,180	\$1,704	\$2,189	\$2,794	\$3,520	\$4,443
Average final average salary	\$35,420	\$40,470	\$43,464	\$46,152	\$48,554	\$55,661	\$60,987	\$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	\$1,673	\$2,259	\$2,749	\$3,566	\$4,121
Average final average salary	\$35,345	\$38,407	\$44,188	\$45,736	\$50,004	\$55,046	\$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	\$1,264	\$1,773	\$2,319	\$2,786	\$3,650	\$4,362
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	\$745	\$1,268	\$1,846	\$2,359	\$2,976	\$3,932	\$4,519
Average final average salary	\$39,571	\$38,864	\$46,334	\$53,050	\$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	\$437	\$764	\$1,281	\$1,776	\$2,388	\$2,968	\$3,745	\$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	\$792	\$1,296	\$1,808	\$2,448	\$2,980	\$3,985	\$4,607
Average final average salary	\$38,602	\$41,518	\$47,917	\$52,545	\$56,265	\$61,585	\$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	\$813	\$1,233	\$1,793	\$2,482	\$3,100	\$4,034	\$4,790
Average final average salary	\$41,419	\$42,846	\$46,435	\$52,200	\$56,946	\$63,415	\$71,465	\$74,653
Number of retired members	267	405	372	395	448	396	184	126
Period 7/1/2020 to 6/30/2021								
Average monthly benefit	\$428	\$831	\$1,232	\$1,869	\$2,523	\$3,190	\$3,884	\$4,760
Average final average salary	\$37,754	\$44,030	\$46,809	\$53,300	\$58,318	\$64,829	\$68,102	\$74,318
Number of retired members	281	360	347	439	444	551	285	214
Period 7/1/2021 to 6/30/2022								
Average monthly benefit	\$493	\$862	\$1,264	\$1,976	\$2,530	\$3,448	\$4,360	\$5,181
Average final average salary	\$43,611	\$45,503	\$47,975	\$57,344	\$59,242	\$70,241	\$77,012	\$80,548
Number of retired members	333	392	500	491	479	558	272	200

Principal Participating Employers

Current Year (2022) and Nine Years Ago (2013)

Participating Employer	Fiscal Year 2022			Fiscal Year 2013		
	Covered Members	Rank	Percentage of Total System	Covered Members	Rank	Percentage of Total System
OKLAHOMA CITY PUBLIC SCHOOLS	5,173	1	4.85%	5,020	1	5.33%
TULSA PUBLIC SCHOOLS	4,364	2	4.09%	3,775	3	4.01%
OKLAHOMA STATE UNIVERSITY	3,126	3	2.93%	4,135	2	4.39%
EDMOND PUBLIC SCHOOLS	3,063	4	2.87%	2,401	6	2.55%
MOORE PUBLIC SCHOOLS	2,894	5	2.71%	2,570	5	2.73%
UNIVERSITY OF OKLAHOMA	2,783	6	2.61%	2,663	4	2.83%
PUTNAM CITY PUBLIC SCHOOLS	2,495	7	2.34%	1,754	8	1.86%
OU HEALTH SCIENCES CENTER	2,208	8	2.07%	1,966	7	2.09%
BROKEN ARROW PUBLIC SCHOOLS	2,137	9	2.00%	1,654	10	1.76%
NORMAN PUBLIC SCHOOLS	2,027	10	1.90%	1,565	12	1.66%
* All Other	76,409		71.63%	66,680		70.80%

Total (599 Employers)	106,679		100.00%	94,183		100.00%
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*In Fiscal Year 2022, "all other" consisted of:

Type	Participating Employers	Members
School Districts	503	56,887
Higher Education	24	9,038
Other	15	4,542
Career Technology	28	4,509
State Agencies	19	1,433
Total	589	76,409

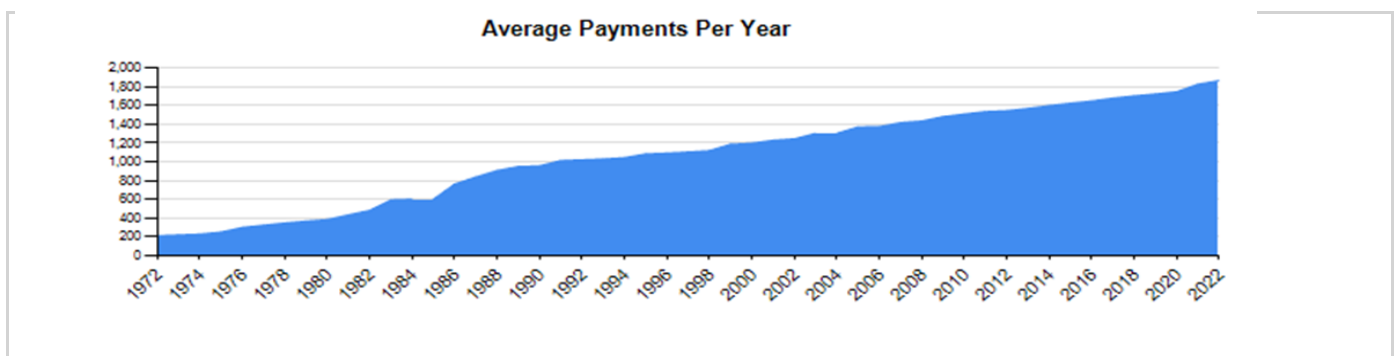
Schedule of Average Payment Amounts

Fiscal Year Ended June 30

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
June 30, 2022	\$1,869	\$0

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



Active Personnel

Fiscal Year Ended June 30, 2022

Years of Service	All Active Personnel
Under 5 years	43,259
5-9	18,497
10-14	12,359
15-19	9,929
20-24	8,232
25-29	4,635
30-34	1,989
35-39	673
40-44	217
45-49	45
50-54	6
55-59	3
Totals	99,844

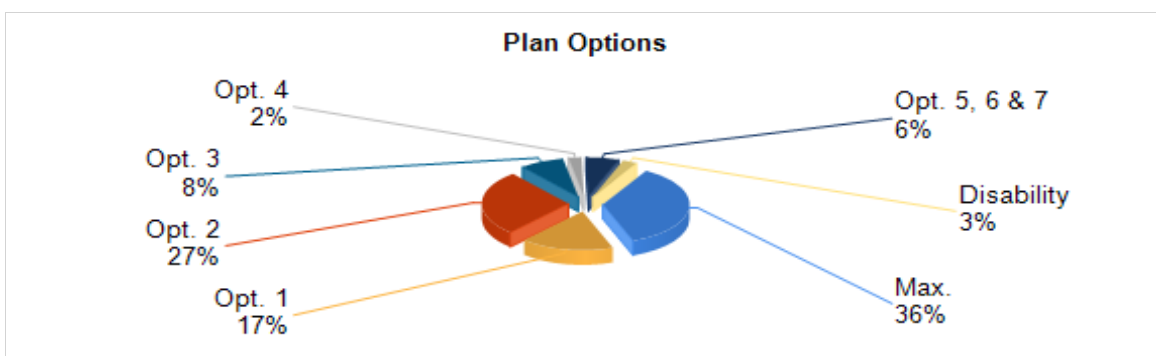
Salary Range	All Active Personnel
Under \$5,000	2,469
\$5,001-\$10,000	2,660
\$10,001-\$15,000	6,135
\$15,001-\$20,000	6,861
\$20,001-\$25,000	4,896
\$25,001-\$30,000	3,772
\$30,001-\$35,000	5,809
\$35,001-\$40,000	11,771
\$40,001-\$45,000	13,269
\$45,001-\$50,000	10,838
\$50,001-\$55,000	7,597
\$55,001-\$60,000	5,389
\$60,001-\$65,000	3,848
\$65,001-\$70,000	2,853
\$70,001-\$75,000	2,243
\$75,001 and Above	9,434
Totals	99,844

Average Age (years)	45.5
Average Salary	\$44,579.51
Average Service (years)	9.1

Schedule of Retired Members by Type of Benefits

Selected Plan Options
Fiscal Year Ended June 30, 2022

Option	Retired Members			Average Monthly Payment	% of Total
	Male	Female	Total		
Maximum	4,328	20,237	24,565	\$1,765	36%
Option 1	2,391	9,529	11,920	\$1,760	17%
Option 2	8,864	9,720	18,584	\$2,110	27%
Option 3	1,927	3,690	5,617	\$2,232	8%
Option 4	435	1,218	1,653	\$1,672	2%
Options 5, 6 & 7	1,252	2,920	4,172	\$1,604	6%
Disability	464	1,355	1,819	\$1,098	3%
Totals	19,661	48,669	68,330	\$1,867	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 beneficiary continues to receive the member’s monthly benefit until the 120th monthly retirement benefit has been paid.

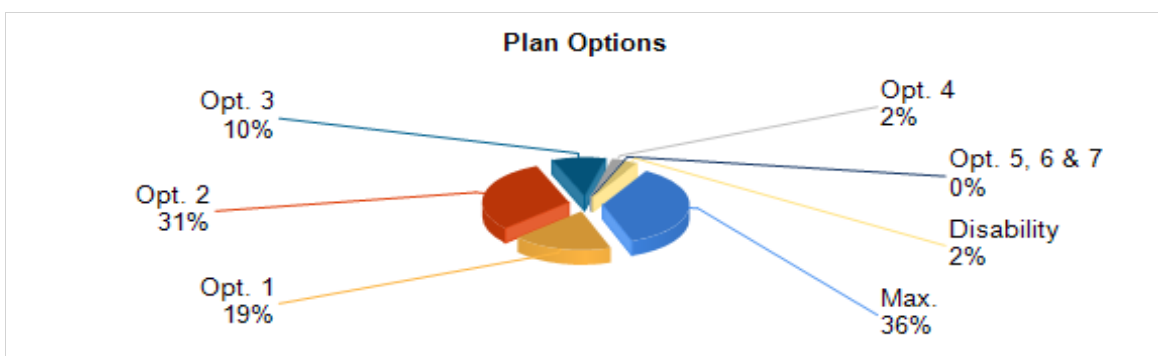
Options 5, 6 & 7 – represents beneficiaries of options 2, 3 & 4.

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

Schedule of Retired Members by Type of Benefits OPEB Plan

Selected Plan Options
Fiscal Year Ended June 30, 2022

Option	Retired Members			Average Monthly Payment	% of Total
	Male	Female	Total		
Maximum	1,385	6,430	7,815	\$2,233	36%
Option 1	865	3,181	4,046	\$2,052	19%
Option 2	3,214	3,430	6,644	\$2,508	31%
Option 3	819	1,321	2,140	\$2,498	10%
Option 4	128	339	467	\$2,163	2%
Options 5, 6 & 7	0	2	2	\$3,219	0%
Disability	102	391	493	\$1,209	2%
Totals	6,513	15,094	21,607	\$2,285	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 beneficiary continues to receive the member’s monthly benefit until the 120th monthly retirement benefit has been paid.

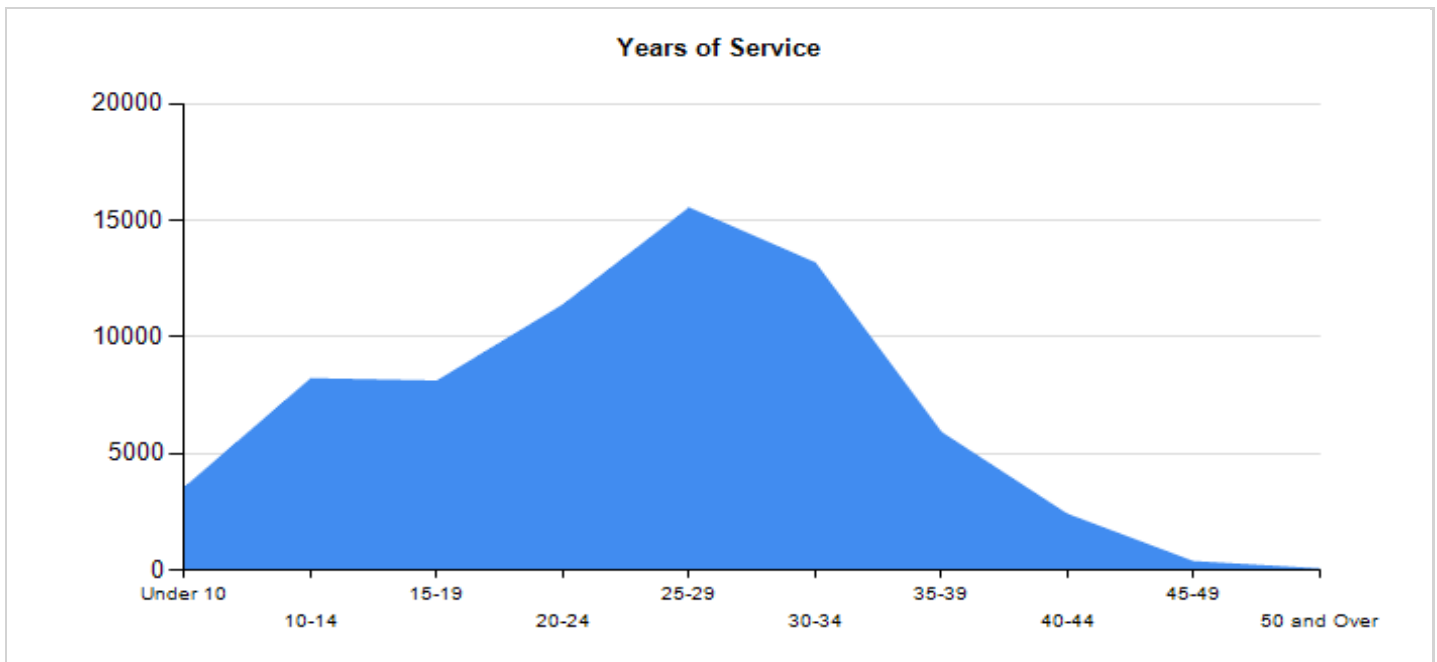
Options 5, 6 & 7 – represents beneficiaries of options 2, 3 & 4.

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

Distribution by Years of Service

Fiscal Year Ended June 30, 2022

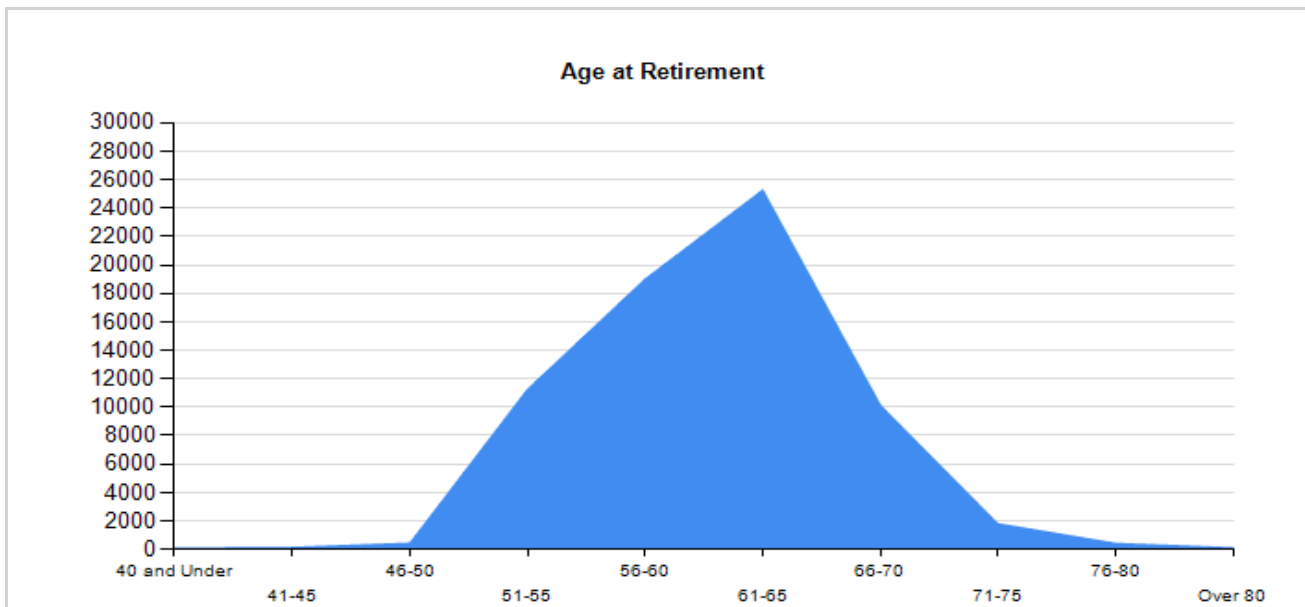
Years of Creditable Service	Retired Members			Average Monthly Payment
	Male	Female	Total	
	Under 10	1,161	2,375	
10-14	2,170	5,998	8,168	\$657
15-19	2,066	5,999	8,065	\$1,047
20-24	2,501	8,818	11,319	\$1,528
25-29	4,187	11,268	15,455	\$2,039
30-34	4,320	8,789	13,109	\$2,508
35-39	2,138	3,746	5,884	\$3,251
40-44	945	1,438	2,383	\$3,978
45-49	144	214	358	\$4,611
50 and Over	29	24	53	\$5,444
Totals	19,661	48,669	68,330	\$1,867



Distribution by Age at Retirement

Fiscal Year Ended June 30, 2022

Age at Retirement	Retired Members			Average Monthly Payment	Average Length of Service (Years)
	Male	Female	Total		
40 and Under	21	64	85	\$764	13.0
41-45	32	100	132	\$1,052	15.9
46-50	113	316	429	\$1,308	20.2
51-55	3,922	7,273	11,195	\$2,119	28.6
56-60	4,993	13,930	18,923	\$1,854	25.7
61-65	6,655	18,496	25,151	\$1,756	23.1
66-70	3,053	7,046	10,099	\$1,916	22.8
71-75	658	1,134	1,792	\$1,958	23.2
76-80	172	245	417	\$1,844	23.5
Over 80	41	66	107	\$1,707	24.2
Totals	19,660	48,670	68,330	\$1,867	24.6

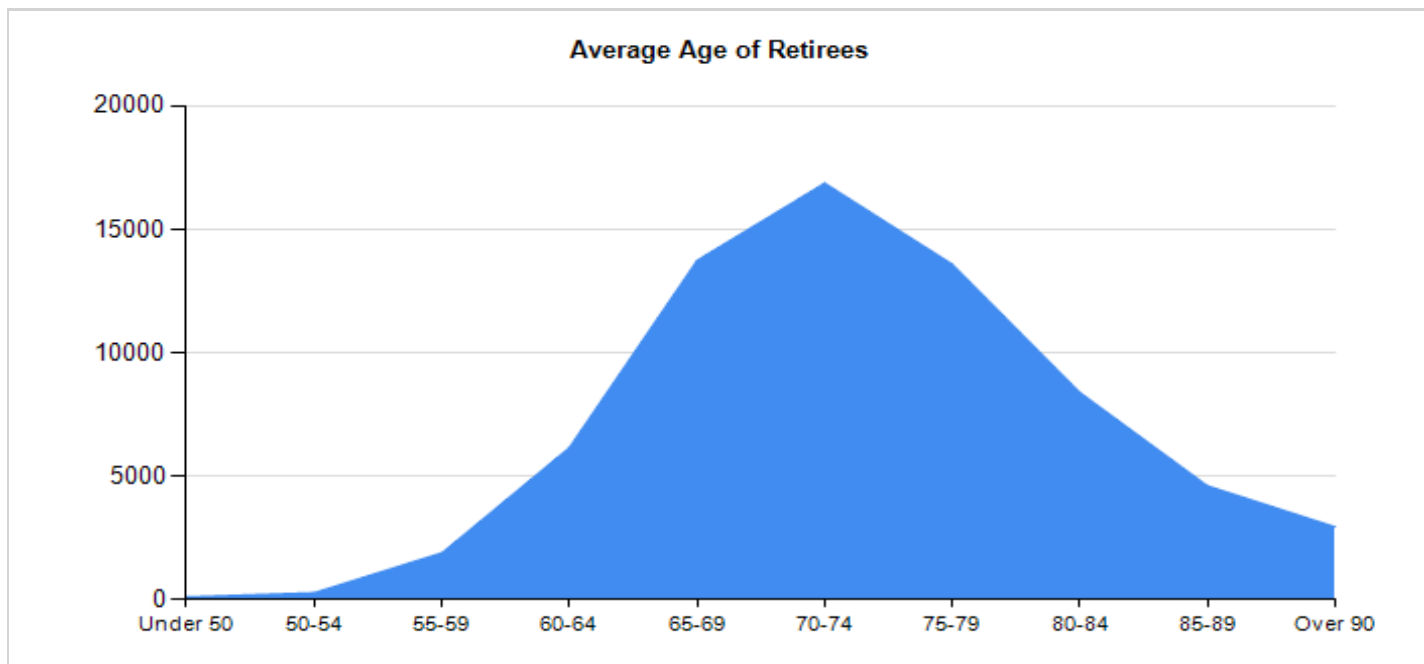


Distribution by Retiree Age

Fiscal Year Ended June 30, 2022

Age	Total Retired Members	Average Length of Service	Average Monthly Payment
Under 50	112	19.5	\$1,500
50-54	283	23.9	\$2,144
55-59	1,893	27.3	\$2,446
60-64	6,144	25.8	\$2,226
65-69	13,688	24.4	\$2,027
70-74	16,798	24.5	\$1,920
75-79	13,524	24.7	\$1,808
80-84	8,357	24.3	\$1,605
85-89	4,594	23.9	\$1,440
Over 90	2,937	24.8	\$1,356
Totals	68,330	24.6	\$1,867

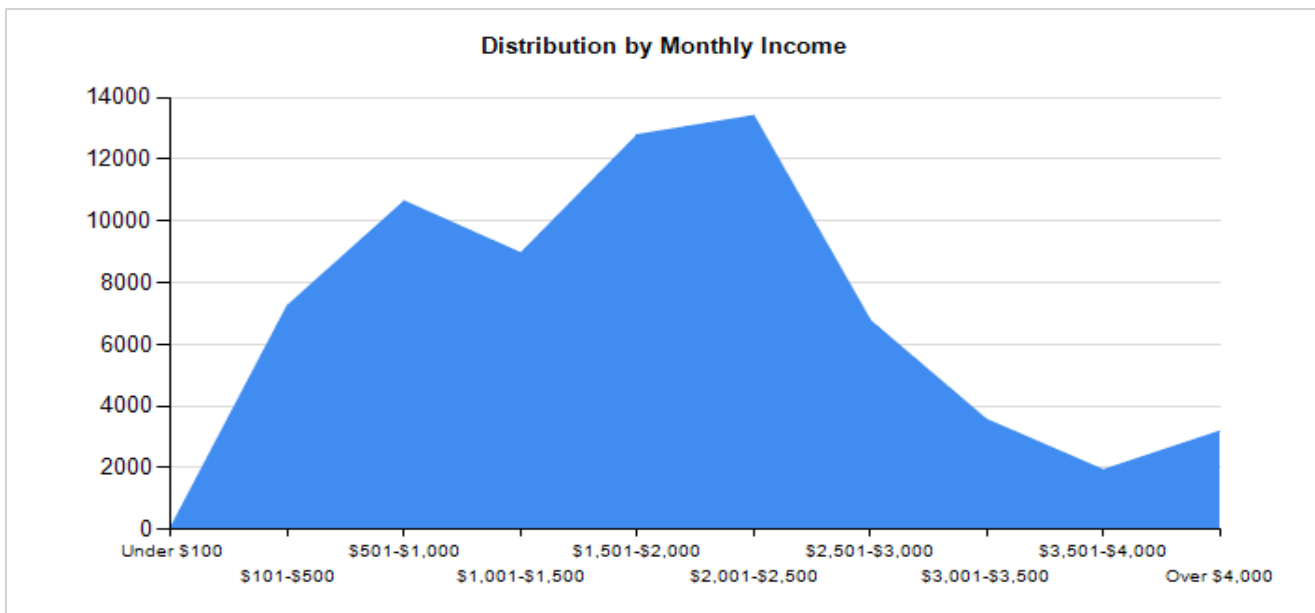
Average age of retired members is 73.0 years.



Distribution by Monthly Income

Fiscal Year Ended June 30, 2022

Monthly Income	Retired Members	Total	Average Payment
Under \$100	90	\$7,605	\$84
\$101-\$500	7,238	\$2,400,912	\$330
\$501-\$1,000	10,599	\$7,869,977	\$739
\$1,001-\$1,500	8,922	\$11,239,532	\$1,254
\$1,501-\$2,000	12,738	\$22,576,518	\$1,764
\$2,001-\$2,500	13,354	\$29,915,518	\$2,230
\$2,501-\$3,000	6,752	\$18,448,424	\$2,720
\$3,001-\$3,500	3,548	\$11,508,544	\$3,229
\$3,501-\$4,000	1,921	\$7,197,259	\$3,729
Over \$4,000	3,168	\$16,892,019	\$5,309
Totals	68,330	\$128,056,307	\$1,866



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						
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
2021 *	\$ 366,066,840	\$ 495,861,085	\$ 471,548,132	\$ (2,026,810,561)	\$ 1,559,682,030	\$ 38,398,988	\$ 5,837,976	\$ (2,297,253,498)

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

Schedule of Changes in Net Position OPEB 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
2022 *	\$ -	\$ (50,851,607)	\$ 34,556,094	\$ -	\$ (85,407,701)

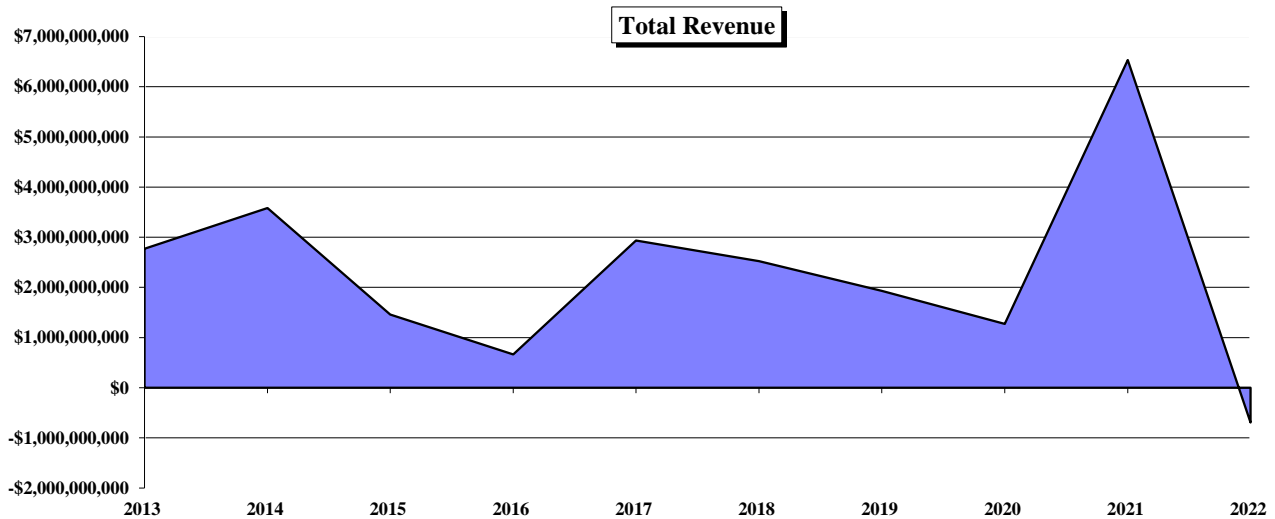
* - Net investment income includes both securities lending income and realized and unrealized gains and losses on investments.

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>
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
2022 *	\$ 366,066,840	\$ 495,861,085	\$ 471,548,132	\$ (2,031,150,129)	\$ 4,339,568	\$ (693,334,504)

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



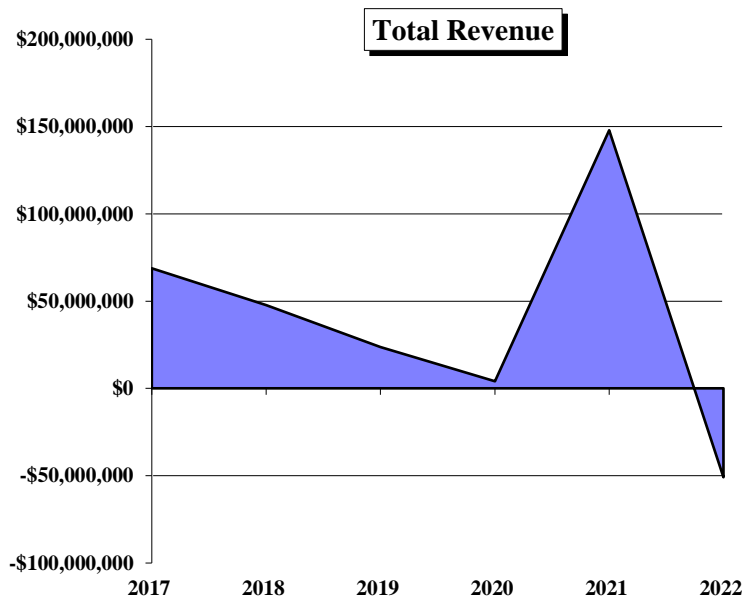
Schedule of Revenue by Source OPEB Plan

For Periods 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
2022 *	\$ -	\$ (50,851,607)	\$ (50,851,607)

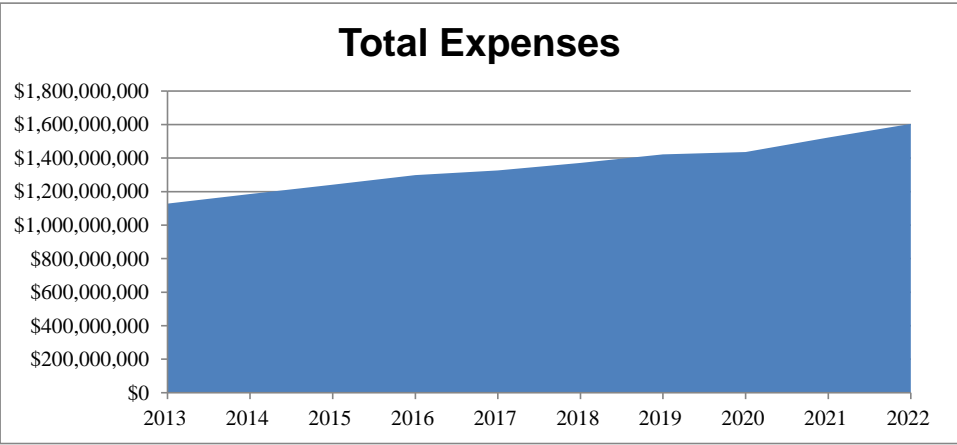
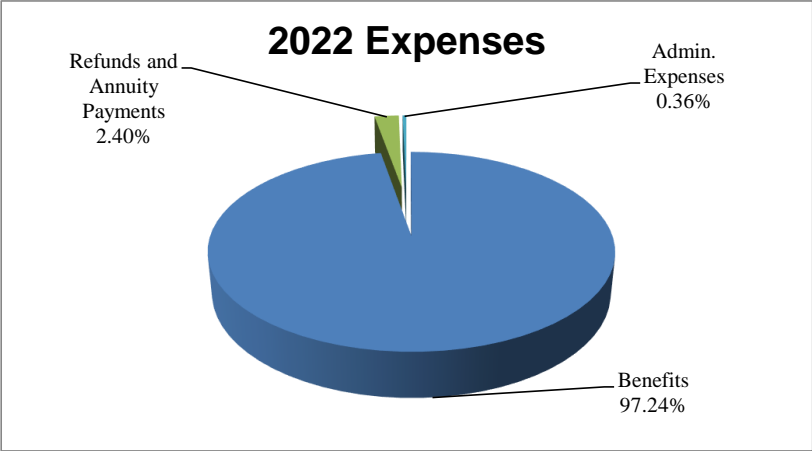
* - Investment income includes both realized and unrealized gains and losses on investments.

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



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

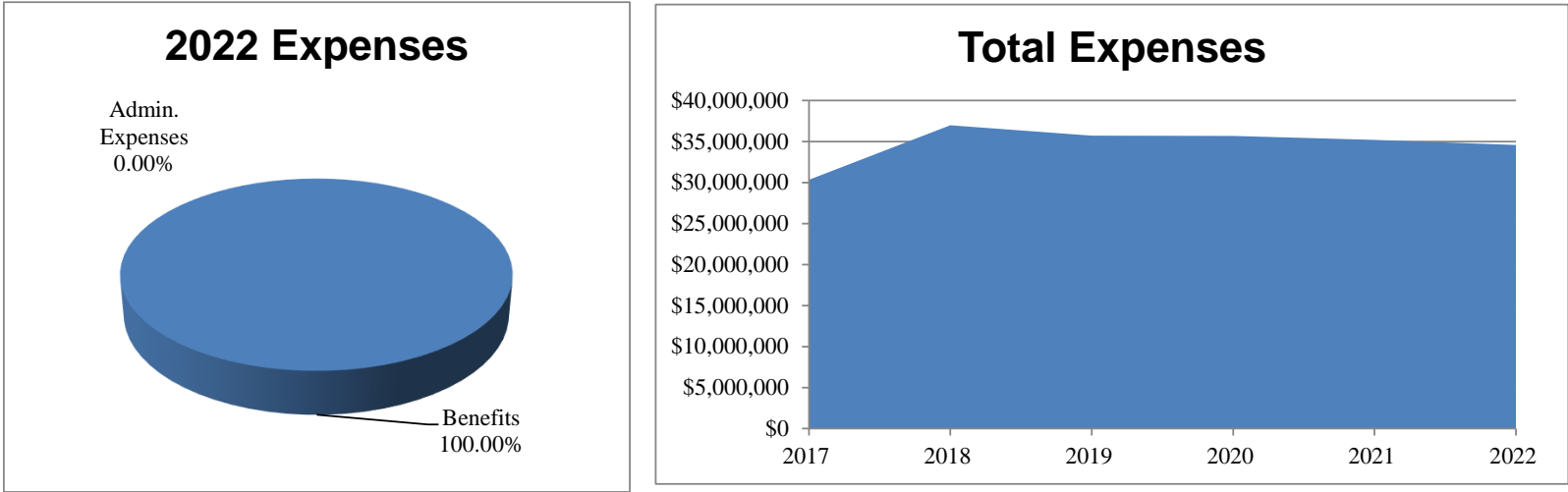
<u>Year</u>	<u>Benefits</u>	<u>Refunds and Annuity Payments</u>	<u>Administrative Expenses</u>	<u>Total</u>
2013	\$ 1,095,144,055	\$ 28,894,193	\$ 4,156,867	\$ 1,128,195,115
2014	\$ 1,153,051,607	\$ 28,718,256	\$ 4,282,605	\$ 1,186,052,468
2015	\$ 1,201,350,907	\$ 35,240,176	\$ 4,358,938	\$ 1,240,950,021
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
2022	\$ 1,559,682,030	\$ 38,398,988	\$ 5,837,976	\$ 1,603,918,994



Schedule of Expenses by Type OPEB Plan For Periods Ended June 30

<u>Year</u>	<u>Benefits</u>	<u>Administrative 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
2022	\$ 34,556,094	\$ -	\$ 34,556,094

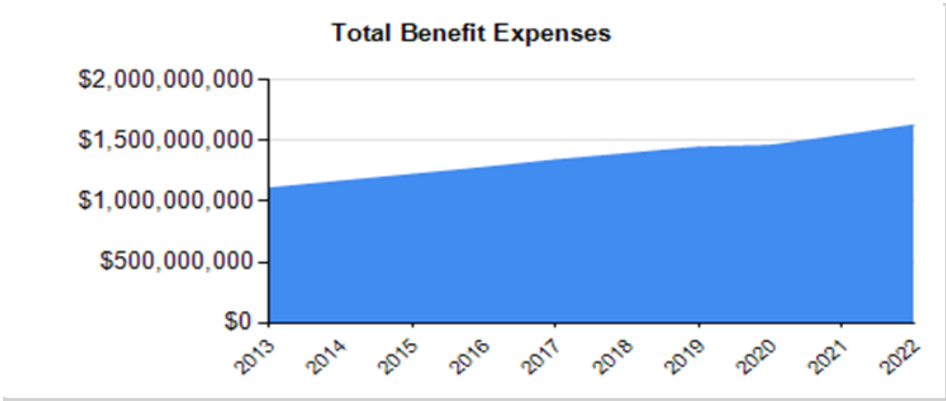
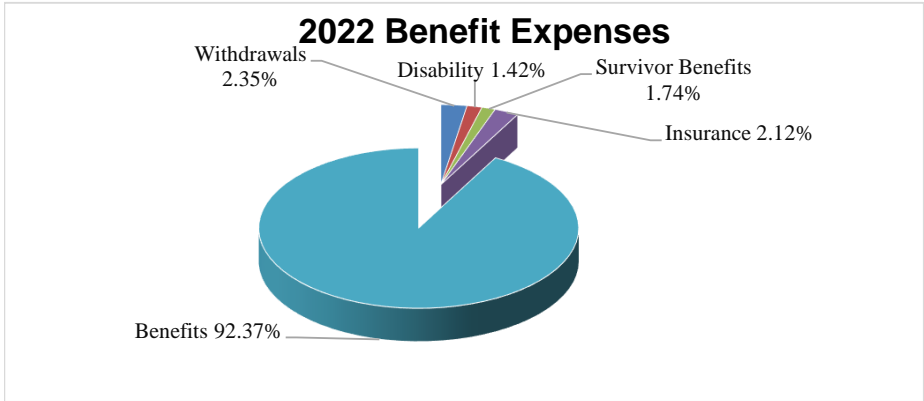
Information to present a 10-year history is not readily available.



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
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	\$ 1,441,195,213	\$ 22,953,408	\$ 35,159,837	\$ 21,320,403	\$ 31,939,815	\$ 1,552,568,676
2022	\$ 1,508,097,257	\$ 23,112,637	\$ 34,556,094	\$ 28,472,136	\$ 38,398,988	\$ 1,632,637,112



Retirees in the State of Oklahoma by County

Of the 67,931 pensioners and beneficiaries in the Teachers' Retirement System of Oklahoma, 88% or 60,042 remain state of Oklahoma residents. As such, benefit payments of approximately \$1,378,560,169.33 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
Adair	413	\$9,223,033.23
Atoka	258	\$5,534,839.27
Carter	764	\$16,135,546.06
Choctaw	251	\$5,505,904.51
Cotton	109	\$2,386,481.90
Creek	912	\$19,073,156.41
Grady	766	\$17,128,663.00
Greer	109	\$2,387,242.52
Johnston	277	\$5,975,264.23
Kingfisher	277	\$6,841,320.74
Logan	580	\$12,064,227.19
Major	156	\$3,391,960.07
Muskogee	1,342	\$29,895,237.34
Nowata	115	\$2,474,521.34
Payne	2,426	\$60,671,782.97
Pontotoc	919	\$20,936,840.32
Seminole	410	\$8,660,223.01
Stephens	700	\$15,629,556.15
Tillman	138	\$3,057,105.05
Woods	246	\$5,639,922.30
Beckham	339	\$7,655,909.04
Blaine	187	\$4,137,976.47
Bryan	888	\$21,255,347.80
Caddo	637	\$14,114,028.37
Delaware	519	\$11,793,110.58
Dewey	138	\$2,903,259.96
Ellis	64	\$1,356,607.80
Garfield	851	\$20,769,332.83
Garvin	454	\$10,105,741.49
Kiowa	213	\$5,018,940.87
Latimer	216	\$4,478,277.80
Le Flore	814	\$18,543,705.53
Lincoln	507	\$10,661,780.21
Oklahoma	11,238	\$262,189,699.93
Okmulgee	756	\$16,636,030.16
Osage	213	\$4,349,639.52
Ottawa	683	\$14,242,590.61
Tulsa	8,472	\$200,927,888.69
Wagoner	488	\$11,017,452.03

County	Recipients	Annual Payment
Washington	669	\$13,105,249.22
Washita	224	\$5,371,189.24
Cimarron	46	\$822,259.13
Cleveland	4,156	\$104,110,690.23
Coal	98	\$2,035,324.70
Comanche	1,765	\$39,812,503.74
Harper	81	\$1,733,762.89
Haskell	268	\$5,660,124.35
Hughes	216	\$4,456,582.69
Jackson	436	\$11,109,191.98
Mayes	669	\$15,489,528.08
Mcclain	795	\$16,906,630.55
Mccurtain	631	\$13,069,802.04
Mcintosh	447	\$9,218,842.74
Murray	220	\$4,973,021.93
Pottawatomie	1,015	\$23,479,517.20
Pushmataha	202	\$4,312,881.27
Roger Mills	81	\$1,742,993.70
Rogers	1,138	\$26,002,611.78
Alfalfa	112	\$2,529,133.35
Beaver	93	\$2,105,532.25
Canadian	1,882	\$43,282,158.33
Cherokee	1,117	\$25,876,775.91
Craig	236	\$4,760,365.13
Custer	651	\$15,951,668.67
Grant	95	\$2,117,073.49
Harmon	71	\$1,408,741.06
Jefferson	89	\$1,988,252.50
Kay	682	\$14,714,895.35
Love	114	\$2,166,600.28
Marshall	308	\$6,872,931.42
Noble	200	\$4,257,837.67
Okfuskee	209	\$4,361,736.75
Pawnee	238	\$5,374,330.41
Pittsburg	736	\$16,250,875.61
Sequoyah	729	\$15,942,895.15
Texas	223	\$4,656,616.36
Woodward	255	\$5,758,894.88
Total	60,042	\$1,378,560,169.33

2022 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	EUFAULA
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

2022 Participating Employers

Public School Districts (continued)

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

2022 Participating Employers

Public School Districts (continued)

PUTNAM CITY	SHIDLER	THOMAS-FAY-CUSTER	WAURIKA
QUAPAW	SILO	TIMBERLAKE INDEPEN	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
SHATTUCK	THACKERVILLE	WATTS	
SHAWNEE	THE ACADEMY OF SEMINOLE	WAUKOMIS	

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

2022 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 BLENDED LEARNING	OFFICE OF EDUCATIONAL QUALITY AND ACCOUNTABILITY	STATEWIDE VIRTUAL CHARTER SCHOOL BOARD
BOARD OF REGENTS FOR HIGHER ED	EPIC ONE ON ONE CHARTER	OKLA SCHOOL OF SCIENCE & MATH	STREET SCHOOL
CAREER TECH	FIVE STAR INTERLOCAL	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	HARDING INDEPEN CHRTR DIST	OMES	TULSA SCHOOL OF ARTS & SCIENCES
COMANCHE ACADEMY SCHOOL	JOHN REX CHARTER ELEM SCHOOL	OSAGE COUNTY INTERLOCAL COOP	WESTERN GATEWAY
DEPT OF CORRECTIONS	KIPP OKC COLLEGE PREP	QUARTZ MOUNTAIN	WESTERN VILLAGE CHARTER SCHOOL
DEPT OF EDUCATION	KIPP TULSA COLLEGE PREP	REGIONAL UNIVERSITY SYSTEM OF OKLA	
DEPT OF REHAB SERVICE	LE MONDE INTERNATIONAL SCHOOL	SOVEREIGN COMMUNITY SCHOOL	