



# Teachers' Retirement System of Oklahoma

Financial Statements as of and for the  
Year Ended June 30, 2022 (with Comparative Totals  
as of June 30, 2021)

Required Supplementary Information, and  
Related Independent Auditor's Report

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## 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

#### ***Opinions***

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 opinions, 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 Opinions***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*). 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 and *Government Auditing Standards* 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 and *Government Auditing Standards*, 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 on page 4 to 10 and 33 to 42 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 identified on pages 43 to 45 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.

### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated October 12, 2022 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering System's internal control over financial reporting and compliance.



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
<b>Assets</b>							
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%
<b>Liabilities</b>							
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%
<b>Net Position</b>							
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
<b>Additions:</b>							
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%
<b>Total additions (loss)</b>	<b>(50,851,607)</b>	<b>(693,334,504)</b>	<b>(744,186,111)</b>	<b>6,680,499,193</b>	<b>1,277,963,902</b>	<b>-111.1%</b>	<b>422.7%</b>
<b>Deductions:</b>							
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%
<b>Total deductions</b>	<b>34,556,094</b>	<b>1,603,918,994</b>	<b>1,638,475,088</b>	<b>1,558,044,629</b>	<b>1,472,385,173</b>	<b>5.2%</b>	<b>5.8%</b>
<b>Net increase (decrease) in net position</b>	<b>(85,407,701)</b>	<b>(2,297,253,498)</b>	<b>(2,382,661,199)</b>	<b>5,122,454,564</b>	<b>(194,421,271)</b>	<b>-146.5%</b>	<b>-2734.7%</b>
<b>Net Position Restricted for Pensions and OPEB</b>							
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%
<b>End of year</b>	<b>\$ 467,871,015</b>	<b>\$ 19,201,536,887</b>	<b>\$ 19,669,407,902</b>	<b>\$ 22,052,069,101</b>	<b>\$ 16,929,614,537</b>	<b>-10.8%</b>	<b>30.3%</b>



**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 -12.03%. The System's actuarial assumed return is 7%.

	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 market 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 0683 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 0267 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
<b>Assets</b>				
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
<b>Long-term investments:</b>				
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
<b>Total long-term investments</b>	<b>460,120,830</b>	<b>18,718,111,281</b>	<b>19,178,232,111</b>	<b>21,516,255,428</b>
Capital assets, net	86,289	3,439,247	3,525,536	3,943,725
<b>Total assets</b>	<b>\$ 517,326,025</b>	<b>\$ 21,172,682,763</b>	<b>\$ 21,690,008,788</b>	<b>\$ 23,616,515,672</b>
<b>Liabilities</b>				
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
<b>Total liabilities</b>	<b>\$ 49,455,010</b>	<b>\$ 1,971,145,876</b>	<b>\$ 2,020,600,886</b>	<b>\$ 1,564,446,571</b>
<b>Net Position</b>				
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
<b>Additions:</b>				
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
<b>Total contributions</b>	-	1,333,476,057	1,333,476,057	1,119,101,440
<b>Investment income:</b>				
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)
<b>(Loss) Gain from investing activities</b>	(50,960,484)	(2,031,150,129)	(2,082,110,613)	5,556,807,673
<b>Income from securities lending activities:</b>				
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)
<b>Net income from securities lending activities</b>	108,877	4,339,568	4,448,445	4,590,080
<b>Net investment (loss) gain</b>	(50,851,607)	(2,026,810,561)	(2,077,662,168)	5,561,397,753
<b>Total additions</b>	(50,851,607)	(693,334,504)	(744,186,111)	6,680,499,193
<b>Deductions:</b>				
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
<b>Total deductions</b>	34,556,094	1,603,918,994	1,638,475,088	1,558,044,629
<b>Net increase (decrease) in net position</b>	(85,407,701)	(2,297,253,498)	(2,382,661,199)	5,122,454,564
<b>Net position restricted for pension and OPEB:</b>				
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

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#### 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

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#### 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:

<b>OPEB</b>	
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>166,322</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

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#### 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

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#### 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

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#### 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

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#### 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
<b>Fixed Income securities</b>				
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
<b>Equity securities</b>				
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
<b>Investments measured at the net asset value (NAV)</b>				
<b>Alternative investments</b>				
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

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#### 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

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#### 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

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

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#### 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
<b>Total</b>	<b>\$ 2,496,755</b>	<b>\$ 1,619</b>	<b>\$ 19,114</b>	<b>\$ (2,801)</b>	<b>\$ 3,426</b>	<b>\$ 36,922</b>	<b>\$ 2,555,035</b>

**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

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#### 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

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#### 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

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#### 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

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#### 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

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#### 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%

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%

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% 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

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#### 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:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
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	<u>100.0%</u>	

\*\* 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

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**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
<b>Total pension liability:</b>									
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	247,417,000	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)
<b>Net change in total pension liability</b>	<b>803,298,123</b>	<b>628,358,591</b>	<b>2,709,350,910</b>	<b>1,073,451,925</b>	<b>571,071,948</b>	<b>(132,977,806)</b>	<b>1,642,111,905</b>	<b>904,513,376</b>	<b>613,807,442</b>
<b>Total pension liability:</b>									
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
<b>Plan fiduciary net position:</b>									
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)
<b>Net change in plan fiduciary net position</b>	<b>(2,297,253,498)</b>	<b>5,009,764,341</b>	<b>(162,882,267)</b>	<b>506,835,518</b>	<b>1,155,133,717</b>	<b>1,610,755,041</b>	<b>(635,403,814)</b>	<b>220,025,101</b>	<b>2,394,008,970</b>
<b>Plan fiduciary net position:</b>									
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
<b>Plan's net pension liability (a)-(b)</b>	<b>\$ 8,209,378,657</b>	<b>\$ 5,108,827,036</b>	<b>\$ 9,490,196,786</b>	<b>\$ 6,617,963,609</b>	<b>\$ 6,051,347,202</b>	<b>\$ 6,635,408,971</b>	<b>\$ 8,379,141,817</b>	<b>\$ 6,101,626,098</b>	<b>\$ 5,417,137,823</b>

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	
<b>Employers' net Pension liability</b>	<b>\$ 8,209,378,657</b>	<b>\$ 5,108,827,036</b>	<b>\$ 9,490,232,786</b>	<b>\$ 6,617,999,609</b>	<b>\$ 6,051,383,202</b>	<b>\$ 6,635,708,971</b>	<b>\$ 8,379,141,817</b>	<b>\$ 6,101,626,098</b>	<b>\$ 5,417,137,823</b>	
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	<u>471,548,132</u>	<u>311,290,424</u>	<u>359,365,710</u>	<u>371,671,157</u>	<u>344,610,101</u>
<b>Contribution deficiency (excess)</b>	<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	<u>301,951,901</u>	<u>315,671,995</u>	<u>336,390,612</u>	<u>320,157,548</u>	<u>327,505,309</u>
<b>Contribution deficiency (excess)</b>	<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**

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**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

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### 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)
<b>Net change in total OPEB liability</b>	<b>(1,778,513)</b>	<b>(4,773,877)</b>	<b>20,386,880</b>	<b>(9,135,751)</b>	<b>(9,333,311)</b>	<b>(6,118,616)</b>
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)
<b>Net change in plan fiduciary net position</b>	<b>(85,407,701)</b>	<b>112,690,223</b>	<b>(31,539,005)</b>	<b>(11,928,664)</b>	<b>10,697,941</b>	<b>38,475,601</b>
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
<b>Employers' Net OPEB liability (asset) (a)-(b)</b>	<b>\$ (43,741,584)</b>	<b>\$ (127,370,772)</b>	<b>\$ (9,906,672)</b>	<b>\$ (61,832,557)</b>	<b>\$ (64,625,469)</b>	<b>\$ (44,594,217)</b>

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
<b>Employers' net OPEB liability (asset)</b>	<b>\$ (43,741,584)</b>	<b>\$ (127,370,772)</b>	<b>\$ (9,906,672)</b>	<b>\$ (61,832,557)</b>	<b>\$ (64,625,470)</b>	<b>\$ (44,594,217)</b>
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
<b>Contribution deficiency (excess)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
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

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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

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### 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

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#### Schedule of Investment Expenses For the Year Ended June 30, 2022

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

## Teachers' Retirement System of Oklahoma

### Supplementary Information

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

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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
<b>Total administrative expenses</b>	<b>\$</b>	<b><u>5,837,976</u></b>

# Teachers' Retirement System of Oklahoma

## Supplementary Information

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

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



**Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards***

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

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the Teachers' Retirement System of Oklahoma (the System), which comprise the statement of fiduciary net position as of June 30, 2022, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated October 12, 2022.

**Report on Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

*A deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.



## **Report on Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

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

Oklahoma City, Oklahoma  
October 12, 2022