



# Teachers' Retirement System of Oklahoma

Financial Statements as of and for the  
Year Ended June 30, 2017  
Required Supplementary Information, and  
Related Independent Auditor's Reports

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## Independent Auditor's Report

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

### Report on the Financial Statements

We have audited the accompanying financial statements of the Teachers' Retirement System of Oklahoma (the System), a component unit of the state of Oklahoma, which comprise the statement of fiduciary net position as of June 30, 2017, and the related statement of changes in fiduciary net position, for the year then ended, and the related notes to the financial statements.

### Management's Responsibility for the Financial Statements

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

### Auditor's Responsibility

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

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

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

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**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective statements of fiduciary net position of the Teachers' Retirement System of Oklahoma, as of June 30, 2017, and the respective changes in changes in fiduciary net position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

**Change in Accounting Principle**

As discussed in Note 2 to the financial statements, the System has adopted Governmental Accounting Standards Board (GASB) Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pensions*, which has resulted in a separate presentation of the balances and activities to the OPEB Plan as well as expanded disclosures.

**Alternative Investments**

As discussed in Notes 2 and 3 to the financial statements, total system investments include investments valued at \$2,478,336,160 (14.1% of total assets), as of June 30, 2017, 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.

**Other Matters****Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the required supplementary information on pages 4 to 9 and 32 to 41 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

**Other Information**

The additional supplementary information accompanying financial information listed as other supplementary information on pages 42 to 44 are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the accompanying financial information listed as supplemental schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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

In accordance with *Government Auditing Standards*, we have also issued our report dated October 20, 2017, 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 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 internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

A handwritten signature in black ink that reads "Eide Bailly LLP". The signature is written in a cursive, flowing style.

October 20, 2017  
Oklahoma City, Oklahoma

**Management's Discussion and Analysis  
Teachers' Retirement System of Oklahoma  
June 30, 2017 and 2016**

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, 2017 and 2016. The System is responsible for administering retirement benefits for the following plans: an Internal Revenue (IRC) section 401(a) defined benefit plan, (401(a) Plan) defined contribution plan, and an IRC Section 401(h) medical supplement, (OPEB Plan) defined benefit plan. The 401(a) Plan is available for all educational employees of the state of Oklahoma. The 401(h) Plan is available for all eligible members. Finally the 403(b) defined contribution plan is a voluntary tax-advantaged retirement savings plan available to all educational employees of the State.

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 clients.

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) *statement of fiduciary net position*, 2) *statement of changes in fiduciary net position*, and 3) *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, 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 located 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, 2017 and 2016**

The following are condensed schedules of financial information about the Plans in the System for the years ended June 30, 2017 and 2016 and the results of the years then ended:

**Condensed Financial Information**

*Fiduciary net position as of June 30:*

|  | OPEB Plan      | 401(a) Plan       | 403(b) Plan    | System Total      |                   | 2017     |
|--|----------------|-------------------|----------------|-------------------|-------------------|----------|
|  |                |                   |                | 2017              | 2016 *            | % Change |
| <b>Assets</b>                                      |                |                   |                |                   |                   |          |
| Cash   | \$ -           | \$ 6,982,258      | \$ -           | \$ 6,982,258      | \$ 19,857,301     | -64.8%   |
| Receivables  | 5,722,604      | 229,174,282       | -              | 234,896,886       | 389,393,726       | -39.7%   |
| Long- and short-term investments, at fair value    | 474,612,559    | 14,974,759,390    | 174,463,992    | 15,623,835,941    | 14,058,889,353    | 11.1%    |
| Capital assets, net                                | 131,425        | 4,161,879         | -              | 4,293,304         | 4,072,745         | 5.4%     |
| Total investments and other assets                 | 480,466,588    | 15,215,077,809    | 174,463,992    | 15,870,008,389    | 14,472,213,125    | 9.7%     |
| Securities lending institutional daily assets fund | 52,039,348     | 1,647,945,451     | -              | 1,699,984,799     | 1,624,015,378     | 4.7%     |
| Total assets                                       | 532,505,936    | 16,863,023,260    | 174,463,992    | 17,569,993,188    | 16,096,228,503    | 9.2%     |
| <b>Liabilities</b>                                 |                |                   |                |                   |                   |          |
| Investment settlements and other liabilities       | 7,108,368      | 225,102,733       | -              | 232,211,101       | 478,182,808       | -51.4%   |
| Payable under securities lending agreement         | 52,039,348     | 1,647,945,451     | -              | 1,699,984,799     | 1,624,015,378     | 4.7%     |
| Total liabilities                                  | 59,147,716     | 1,873,048,184     | -              | 1,932,195,900     | 2,102,198,186     | -8.1%    |
| <b>Net Position</b>                                |                |                   |                |                   |                   |          |
| Net position restricted for pensions and OPEB      | \$ 473,358,220 | \$ 14,989,975,076 | \$ 174,463,992 | \$ 15,637,797,288 | \$ 13,994,030,317 | 11.8%    |

\* Prior year column has not been restated for the effect of the adoption of GASB Statement No. 74

**Management's Discussion and Analysis  
Teachers' Retirement System of Oklahoma  
June 30, 2017 and 2016**

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

|  | OPEB Plan      | 401(a) Plan       | 403(b) Plan    | System Total      |                   | 2017     |
|--|----------------|-------------------|----------------|-------------------|-------------------|----------|
|  |                |                   |                | 2017              | 2016 *            | % Change |
| <b>Additions:</b>                                    |                |                   |                |                   |                   |          |
| Member contributions                                 | \$ -           | \$ 292,949,337    | \$ -           | \$ 292,949,337    | \$ 294,459,091    | -0.5%    |
| Employer contributions                               | 6,513,158      | 396,743,812       | -              | 403,256,970       | 409,753,221       | -1.6%    |
| Matching contributions                               | -              | 23,027,846        | -              | 23,027,846        | 25,787,244        | -10.7%   |
| Dedicated tax revenue                                | -              | 278,924,055       | -              | 278,924,055       | 289,884,752       | -3.8%    |
| Member tax shelter contributions                     | -              | -                 | 2,548,206      | 2,548,206         | 2,222,812         | 14.6%    |
| Net investment income gain (loss)                    | 62,027,961     | 1,937,463,392     | 11,750,940     | 2,011,242,293     | (362,477,638)     | -654.9%  |
| Security lending net income                          | 270,066        | 8,435,583         | -              | 8,705,649         | 7,870,757         | 10.6%    |
| Total additions                                      | 68,811,185     | 2,937,544,025     | 14,299,146     | 3,020,654,356     | 667,500,239       | 352.5%   |
| <b>Deductions:</b>                                   |                |                   |                |                   |                   |          |
| Benefit payments                                     | 30,309,127     | 1,281,816,606     | -              | 1,312,125,733     | 1,257,276,705     | 4.4%     |
| Refund of member contributions and other payments    | -              | 40,944,298        | 19,762,817     | 60,707,115        | 55,841,270        | 8.7%     |
| Administrative expenses                              | 26,457         | 4,028,080         | -              | 4,054,537         | 4,458,338         | -9.1%    |
| Total deductions                                     | 30,335,584     | 1,326,788,984     | 19,762,817     | 1,376,887,385     | 1,317,576,313     | 4.5%     |
| Net increase (decrease) in net position              | 38,475,601     | 1,610,755,041     | (5,463,671)    | 1,643,766,971     | (650,076,074)     | -352.9%  |
| <b>Net Position Restricted for Pensions and OPEB</b> |                |                   |                |                   |                   |          |
| Beginning of year as restated                        | 434,882,619    | 13,379,220,035    | 179,927,663    | 13,994,030,317    | 14,644,106,391    | -4.4%    |
| End of year  | \$ 473,358,220 | \$ 14,989,975,076 | \$ 174,463,992 | \$ 15,637,797,288 | \$ 13,994,030,317 | 11.7%    |

\* Prior year column has not been restated for the effect of the adoption of GASB Statement No. 74



**Management's Discussion and Analysis  
Teachers' Retirement System of Oklahoma  
June 30, 2017 and 2016**

**Financial Highlights and Analysis**

A major change that occurred in fiscal 2017 (FY2017) was a result of TRS implementing Governmental Accounting Standards Board (GASB) Statement No. 74 "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74)." This statement requires separate presentation of the financial information related to Other Post-Employment Benefits (OPEB). TRS pays a medical insurance supplement to eligible members who elect to continue their employer provided health insurance. The supplement payment is between \$100 and \$105 per month provided the member has ten (10) years of Oklahoma service prior to retirement. The medical supplement is presented in the financial statements as the OPEB Plan.

As a whole, the increase in net position of TRS was due to investment gains as a result of a significant rebound in equity markets during the System's FY2017. Every significant domestic equity index was up by double digit returns. Every significant international equity index was in positive territory. Fixed income was a different story with only the high yield index showing similar impressive returns. For the System specifically, equities led the way with a composite return of 21.63%. The fixed income composite returned a modest 3.8%. The real estate composite returns came in at 7.33%. The total investment returns for the System in FY2017 were an impressive 15.3%.

|                   | OPEB Plan 2017 | 401(a) Plan 2017  | 403(b) Plan 2017 | System Totals     |                   |
|-------------------|----------------|-------------------|------------------|-------------------|-------------------|
|                   |                |                   |                  | 2017              | 2016              |
| Plan net position | \$ 473,358,220 | \$ 14,989,975,076 | \$ 174,463,992   | \$ 15,637,797,288 | \$ 13,994,030,317 |
| Yearly % change   | 8.8%           | 12.0%             | -3.0%            | 11.7%             | -4.4%             |

The total investment return for the five year period of 11.0 percent is above the 7.5 percent actuarial assumed rate of investment return. The five year return is higher than the previous year due to strong returns for FY2017.

| <u>Total Returns</u> | <u>1 Year</u> | <u>3 Year</u> | <u>5 Year</u> | <u>10 Year</u> |
|----------------------|---------------|---------------|---------------|----------------|
| 2017                 | 15.3%         | 5.4%          | 11.0%         | 6.8%           |
| 2016                 | -2.0%         | 7.5%          | 8.3%          | 7.1%           |
| 2015                 | 3.5%          | 14.3%         | 13.4%         | 8.3%           |

Benefit payments increased 4.4 percent in FY2017 compared to FY2016. The increase is a result of a 2.8 percent increase in the number of benefit recipients and a 1.9 percent increase in the average monthly benefit. Benefit payments in FY2017 to retired members exceeded contributions from contributing members and employers by \$375 million, or a ratio of 1.38 to 1. A ratio of more than one signifies that the System is receiving less 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 on the following page reflects the ongoing employer and member contributions.

**Management's Discussion and Analysis  
Teachers' Retirement System of Oklahoma  
June 30, 2017 and 2016**

**Financial Highlights and Analysis (Continued)**

|                         | OPEB Plan 2017       | 401(a) Plan 2017        | 403(b) Plan 2017     | System Totals           |                         |
|-------------------------|----------------------|-------------------------|----------------------|-------------------------|-------------------------|
|                         |                      |                         |                      | 2017                    | 2016                    |
| Member contributions    | \$ -                 | \$ 292,949,337          | \$ -                 | \$ 292,949,337          | \$ 294,459,091          |
| Employer contributions  | 6,513,158            | 396,743,812             | -                    | 403,256,970             | 409,753,221             |
| State matching funds    | -                    | 23,027,846              | -                    | 23,027,846              | 25,787,244              |
| Dedicated tax revenue   | -                    | 278,924,055             | -                    | 278,924,055             | 289,884,752             |
| Total contributions     | <u>\$ 6,513,158</u>  | <u>\$ 991,645,050</u>   | <u>\$ -</u>          | <u>\$ 998,158,208</u>   | <u>\$ 1,019,884,308</u> |
| Benefit payments        | \$ 30,309,127        | \$ 1,281,816,606        | \$ -                 | \$ 1,312,125,733        | \$ 1,257,276,705        |
| Refund of contributions | -                    | 40,944,298              | 19,762,817           | 60,707,115              | 55,841,270              |
| Total payments          | <u>\$ 30,309,127</u> | <u>\$ 1,322,760,904</u> | <u>\$ 19,762,817</u> | <u>\$ 1,372,832,848</u> | <u>\$ 1,313,117,975</u> |

The number of benefit recipients increased 2.8 percent in FY2017 as compared to 3.0 percent in FY2016. This is comparable to FY2016. There was a net increase of 1,711 and 1,751 members that entered retirement for fiscal year 2017 and fiscal year 2016, respectively.

|                    | OPEB Plan 2017 | 401(a) Plan 2017 | 401(a) Plan 2016 |
|--------------------|----------------|------------------|------------------|
| Benefit recipients | 56,901         | 62,391           | 60,680           |
| Yearly % change    | N/A            | 2.80%            | 3.00%            |
| Net increase       | N/A            | 1,711            | 1,751            |

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 2.8 percent the table below reflects the average benefit per retiree has only increased by 1.9 percent in FY2017 as compared to FY2016. The increase in benefit recipients was .9 percent higher than the increase in average benefit payment below.

|                 | 2017     | 2016     |
|-----------------|----------|----------|
| Average benefit | \$ 1,681 | \$ 1,650 |
| Yearly % change | 1.9%     | 1.4%     |

The ratio of active members to retired members of the System is 1.41 to 1 in FY2017, compared to 1.49 to 1 in FY2016. This change is caused by the longevity of the System's retiree population and an active population that has decreased due to a statewide teacher shortage. Contributing members decreased by 2,372 while benefit recipients increased by 1,711.

|                            | 401(a) Plan 2017 | 2016   |
|----------------------------|------------------|--------|
| Members contributing       | 87,795           | 90,167 |
| Yearly % change            | -2.6%            | -0.2%  |
| Benefit recipients         | 62,391           | 60,680 |
| Yearly % change            | 2.80%            | 3.00%  |
| Ratio contributing/retired | 1.41             | 1.49   |

**Management's Discussion and Analysis  
Teachers' Retirement System of Oklahoma  
June 30, 2017 and 2016**

**Financial Highlights and Analysis (Continued)**

The change in FY7 is attributable to the transfer of the OPEB liability to the OPEB Plan. The OPEB plan resulted in a funded ratio of 110.4 percent and the 401(a) plan resulted in a 69.32 percent funded ratio.

|  | OPEB Plan 2017 | 401(a) Plan 2017  | 2016              |
|--|----------------|-------------------|-------------------|
| Total pension liability  | \$ -           | \$ 21,625,384,047 | \$ 22,193,244,472 |
| Total OPEB liability   | 428,764,003    | -                 | -                 |
| Fiduciary net position -Pensions or similar                          | 473,358,220    | 14,989,675,076    | 13,814,102,654    |
| Employers' net pension liability                                     | -              | 6,635,708,971     | 8,379,141,818     |
| Employers' net OPEB asset  | (44,594,217)   | -                 | -                 |
| Ratio of Employers' fiduciary net position to applicable liabilities | 110.40%        | 69.32%            | 62.24%            |

Under GASB Statement 67 this 401(a) Plan ratio 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 this OPEB Plan ratio represents the Total OPEB Liability compared to the Plan's total net position at fair value.

Based on the market value of assets at the end of FY2017, and the projected continuation of contribution rates and other revenue, the System's actuary projects a "funding period" of 17 years. If all assumptions hold constant the System would reach a 100% funded ratio based on the market value of assets in 17 years even with a 7.5% return assumption. If the actuarial value of assets is used with a 7.5% return assumption, the funding period would also be 17 years.

The most significant change to the Investment Policy during fiscal year 2017 reflected the results of an asset allocation review. The Board adopted a few modest adjustments to the target asset allocation resulting in a small increase in real estate and international equities and a small decrease in MLPs and domestic equities. They were not significant from a financial risk or accounting standpoint.

As discussed in Note 10, the 2017 legislative session passed HB 1162 which changed the number of years to "vest" and become eligible for a TRS pension for five (5) to seven (7) for members who become a member after November 1, 2017.

**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

## Statements of Fiduciary Net Position June 30, 2017

|  | OPEB Plan             | 401(a) Plan              | 403(b) Plan           | Totals<br>June 30,<br>2017 |
|--|-----------------------|--------------------------|-----------------------|----------------------------|
| <b>Assets</b>  |                       |                          |                       |                            |
| Cash   | \$ -                  | \$ 6,982,258             | \$ -                  | \$ 6,982,258               |
| Short-term investments                                     | 8,863,945             | 280,697,169              | -                     | 289,561,114                |
| Accrued interest and dividends receivable                  | 1,720,642             | 54,488,077               | -                     | 56,208,719                 |
| Member contributions receivable                            | -                     | 16,406,022               | -                     | 16,406,022                 |
| Employer contributions receivable                          | 792,734               | 25,103,741               | -                     | 25,896,475                 |
| Receivable from the State of Oklahoma                      | -                     | 31,548,869               | -                     | 31,548,869                 |
| Due from brokers for securities sold                       | 3,209,228             | 101,627,573              | -                     | 104,836,801                |
| Security lending institutional daily assets<br>fund        | 52,039,348            | 1,647,945,451            | -                     | 1,699,984,799              |
| Long-term investments:                                     |                       |                          |                       |                            |
| Mutual funds   | -                     | -                        | 174,463,992           | 174,463,992                |
| U.S. government securities                                 | 45,913,029            | 1,448,524,700            | -                     | 1,494,437,729              |
| U.S. corporate bonds                                       | 45,263,282            | 1,427,932,483            | -                     | 1,473,195,765              |
| International corporate bonds and<br>government securities | 12,872,319            | 406,115,282              | -                     | 418,987,601                |
| Equity securities  | 292,378,598           | 9,224,449,045            | -                     | 9,516,827,643              |
| Private equity   | 34,868,336            | 1,100,071,124            | -                     | 1,134,939,460              |
| Real estate  | 34,453,050            | 1,086,969,587            | -                     | 1,121,422,637              |
| <b>Total long-term investments</b>                         | <b>465,748,614</b>    | <b>14,694,062,221</b>    | <b>174,463,992</b>    | <b>15,334,274,827</b>      |
| Capital assets, net  | 131,425               | 4,161,879                | -                     | 4,293,304                  |
| <b>Total assets</b>  | <b>\$ 532,505,936</b> | <b>\$ 16,863,023,260</b> | <b>\$ 174,463,992</b> | <b>\$ 17,569,993,188</b>   |
| <b>Liabilities</b>   |                       |                          |                       |                            |
| Due to brokers for securities purchased                    | 6,716,245             | 212,685,332              | -                     | 219,401,577                |
| Payable under security lending agreement                   | 52,039,348            | 1,647,945,451            | -                     | 1,699,984,799              |
| Other liabilities  | 392,123               | 12,417,401               | -                     | 12,809,524                 |
| <b>Total liabilities</b>                                   | <b>\$ 59,147,716</b>  | <b>\$ 1,873,048,184</b>  | <b>\$ -</b>           | <b>\$ 1,932,195,900</b>    |
| <b>Net Position</b>  |                       |                          |                       |                            |
| Net position restricted for pensions and OPEB              | \$ 473,358,220        | \$ 14,989,975,076        | \$ 174,463,992        | \$ 15,637,797,288          |

See Notes to Financial Statements.

## Teachers' Retirement System of Oklahoma

### Statements of Changes in Fiduciary Net Position For the Year Ended June 30, 2017

|   | OPEB Plan         | 401(a) Plan          | 403(b) Plan        | Totals<br>Year Ended June 30,<br>2017 |
|---|-------------------|----------------------|--------------------|---------------------------------------|
| <b>Additions:</b>   |                   |                      |                    |                                       |
| Members   | \$ -              | \$ 292,949,337       | \$ -               | \$ 292,949,337                        |
| Contributions to 403(b) plan                                    | -                 | -                    | 2,548,206          | 2,548,206                             |
| Employer statutory requirement from<br>local school districts   | 6,513,158         | 396,743,812          | -                  | 403,256,970                           |
| State matching funds  | -                 | 23,027,846           | -                  | 23,027,846                            |
| Dedicated tax   | -                 | 278,924,055          | -                  | 278,924,055                           |
| <b>Total contributions</b>                                      | <b>6,513,158</b>  | <b>991,645,050</b>   | <b>2,548,206</b>   | <b>1,000,706,414</b>                  |
| <b>Investment income:</b>                                       |                   |                      |                    |                                       |
| Interest and dividends  | 11,857,137        | 370,361,487          | 7,734,517          | 389,953,141                           |
| Net appreciation (depreciation) in fair value of<br>investments | 52,276,327        | 1,632,867,941        | 4,016,423          | 1,689,160,691                         |
| Investment expenses   | (2,105,503)       | (65,766,036)         | -                  | (67,871,539)                          |
| <b>Gain from investing<br/>activities</b>                       | <b>62,027,961</b> | <b>1,937,463,392</b> | <b>11,750,940</b>  | <b>2,011,242,293</b>                  |
| <b>Income from securities lending activities:</b>               |                   |                      |                    |                                       |
| Securities lending income                                       | 300,073           | 9,372,870            | -                  | 9,672,943                             |
| Securities lending expenses:<br>Management fees                 | (30,007)          | (937,287)            | -                  | (967,294)                             |
| <b>Net income from securities<br/>lending activities</b>        | <b>270,066</b>    | <b>8,435,583</b>     | <b>-</b>           | <b>8,705,649</b>                      |
| <b>Net investment gain</b>                                      | <b>62,298,027</b> | <b>1,945,898,975</b> | <b>11,750,940</b>  | <b>2,019,947,942</b>                  |
| <b>Total additions</b>  | <b>68,811,185</b> | <b>2,937,544,025</b> | <b>14,299,146</b>  | <b>3,020,654,356</b>                  |
| <b>Deductions:</b>  |                   |                      |                    |                                       |
| Retirement, death, survivor and health<br>benefits              | 30,309,127        | 1,281,816,606        | -                  | 1,312,125,733                         |
| Refund of member contributions and<br>other payments            | -                 | 40,944,298           | 19,762,817         | 60,707,115                            |
| Administrative expenses   | 26,457            | 4,028,080            | -                  | 4,054,537                             |
| <b>Total deductions</b>   | <b>30,335,584</b> | <b>1,326,788,984</b> | <b>19,762,817</b>  | <b>1,376,887,385</b>                  |
| <b>Net increase (decrease) in<br/>net position</b>              | <b>38,475,601</b> | <b>1,610,755,041</b> | <b>(5,463,671)</b> | <b>1,643,766,971</b>                  |
| <b>Net position restricted for:</b>                             |                   |                      |                    |                                       |
| Beginning of year - as restated in Note 2                       | 434,882,619       | 13,379,220,035       | 179,927,663        | 13,994,030,317                        |
| End of year   | \$ 473,358,220    | \$ 14,989,975,076    | \$ 174,463,992     | \$ 15,637,797,288                     |

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"), a cost-sharing multiple-employer benefit plan other than pensions ("OPEB Plan") as well as a tax-deferred defined contribution plan ("DC Plan").

The supervisory authority for the management and operation of the System is a 14-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 from the Governor's Office, two appointees by the Senate Pro Tempore, two appointees by the House Speaker, three Ex Officio position, and one non-voting member representing Retired Professional Oklahoma Educators. Out of the six appointees from the Governor's Office, 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 Oklahoma Teachers Retirement. The Ex Officio trustees are the State Superintendent, the Office of Management and Enterprise Services Director and the Career-Tech Director or their designee.

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 605 contributing employers in the System. The DB Plan's membership consisted of the following as of June 30, 2017:

#### Pension

|   |                |
|---|----------------|
| Inactive Plan Members or Beneficiaries Currently Receiving Benefits | 62,391         |
| Inactive Plan Members Entitled to But Not Yet Receiving Benefits*   | 11,796         |
| Active Plan Members   | 87,795         |
|   | <u>161,982</u> |

\* Does not include 13,070 of non-vested terminated members entitled to a refund of their member contributions.

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

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 1. Description of the System (Continued)

**OPEB Plan:** The OPEB Plan's membership consisted of the following as June 30, 2017:

##### **OPEB**

|   |                |
|---|----------------|
| Inactive Plan Members or Beneficiaries Currently Eligible to Receive Benefits | 56,901         |
| Inactive Plan Members Entitled to But Not Yet Receiving Benefits              | 4,974          |
| Active Plan Members   | 87,795         |
| Total Plan Members  | <u>149,670</u> |

**DC Plan:** Members are also offered a tax-deferred defined contribution plan qualified under the Internal Revenue Code ("IRC") Section 403(b). The DC Plan is also referred to by the System as the Tax-Sheltered Annuity Plan. Membership in the DC Plan is voluntary, and investments primarily consist of mutual funds and are participant directed. Voya, a service provider, is responsible for administrative services, including custody and record keeping services.

The DC Plan had approximately 3,221 participants as of June 30, 2017. Contributions are voluntary and require a minimum of \$200 per year. The maximum deferral amount is the lesser of 100 percent of the participant's compensation or the maximum amount allowed by the IRC, currently \$18,000. Participants age 50 and older may contribute an additional \$6,000 if they qualify for the catch up provision.

#### 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.

System investments are reported at fair value within the hierarchy established by generally accepted accounting principles, most recently by Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application*. The short-term investment fund is comprised primarily of investments in a money market fund, which are reported at cost, which approximates fair value. Debt and equity securities are reported at fair value, as determined by the System's custodial agent, using pricing services or prices quoted by independent brokers based on the latest reported sales prices at current exchange rates for securities traded on national or international exchanges.

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### **Note 2. Summary of Significant Accounting Policies (Continued)**

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

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

International investment managers use forward foreign exchange contracts to enhance returns or to control volatility. Currency risks arise due to foreign exchange rate fluctuations. Forward foreign exchange contracts are negotiated between two counter-parties. The System could incur a loss if its counter-parties failed to perform pursuant to the terms of their contractual obligations. The gains and losses on these contracts are included in the income in the period in which the exchange rates change. See Note 3 for additional information regarding investment derivatives as of June 30, 2017.

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



## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 2. Summary of Significant Accounting Policies (Continued)

Due to the risks associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities may occur in the near term, and those changes could materially affect the amounts reported in the statements of fiduciary net position.

At June 30, 2017, the asset allocation guidelines established by the Board's investment policy were:

| <u>Category</u>             | <u>Allocation</u> |
|-----------------------------|-------------------|
| Domestic Equity             | 38.5%             |
| International Equity        | 19.0%             |
| Fixed Income                | 23.5%             |
| Private Equity              | 9.0%              |
| Real Estate                 | 5.0%              |
| Master Limited Partnerships | <u>5.0%</u>       |
| 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 11 and the required supplementary information are reported based on certain assumptions pertaining to interest rates, inflation rates, employee compensation, and demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions may occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the financial statements.

**Income taxes:** The System is exempt from federal and state income taxes and has received a favorable determination from the Internal Revenue Service (the "IRS") under Internal Revenue Code (the "IRC") Section 401(a). The System's 403(b) Plan is also tax-exempt and has received a private letter ruling from the IRS.

**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 \$205,000 at June 30, 2017.

**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:

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 2. Summary of Significant Accounting Policies (Continued)

- 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.

**New Accounting Pronouncements:** During the current year the System adopted GASB Statement No. 74, *Financial reporting for Postemployment Benefit Plans Other Than Pension Plans* during the year ended June 30, 2017. This statement's objective is to improve the usefulness of information about postemployment benefits other than pensions presented in the financial statements.

As previously discussed, the System administers the OPEB plan in accordance with GASB Statement No. 74. As a result of the implementation of GASB Statement No. 74 on July 1, 2016, a beginning balance restatement occurred as follows:

|   | OPEB Plan             | 401(a) Plan              | Combined                 |
|---|-----------------------|--------------------------|--------------------------|
| Net position restricted for pension/OPEB benefits as of June 30, 2016 | \$ -                  | \$ 13,814,102,654        | \$ 13,814,102,654        |
| Adoption of GASB 74   | 434,882,619           | (434,882,619)            | -                        |
| Net position restricted for pension/OPEB benefits as of June 30, 2016 | <u>\$ 434,882,619</u> | <u>\$ 13,379,220,035</u> | <u>\$ 13,814,102,654</u> |

#### Note 3. Cash and Cash Investments

At June 30, 2017, the carrying amount of the System's bank deposits was approximately \$6,982,000. The bank balance of the System's bank deposits at June 30, 2017 was approximately (\$65,687,000). Bank balances were overdrawn due to benefit payments made at the end of June coupled with sales of investments in transit to negate the overdrawn position.

**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:

# Teachers' Retirement System of Oklahoma

## Notes to Financial Statements

### Note 3. Cash and Investments (Continued)

- 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.

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, 2017:

|  |                   | Fair Value Measurements Using  |   |  |
|--|-------------------|--|---|--|
|  |                   | Quoted<br>Prices in<br>Active<br>Markets for<br>Identical<br>Assets<br>Level 1 | Significant<br>Other<br>Observable<br>Inputs<br>Level 2 | Significant<br>Unobservable<br>Inputs<br>Level 3 |
| <b>Investments by fair value level</b>                   |                   |  |   |  |
| Mutual Funds   | \$ 174,463,992    | \$ 174,463,992   | \$ -  | \$ -   |
| Total mutual funds                                       | 174,463,992       | 174,463,992  | -   | -  |
| Fixed Income securities                                  |                   |  |   |  |
| Asset Backed Securities                                  | 165,685,271       | -  | 145,983,796   | 19,701,475                                       |
| Bank Loans   | 15,963,090        | -  | 15,963,090  | -  |
| Commercial Mortgage-Backed                               | 46,706,779        | -  | 35,735,846  | 10,970,933                                       |
| Corporate Bonds  | 1,537,520,225     | -  | 1,536,655,564   | 864,661  |
| Corporate Convertible Bonds                              | 36,697,941        | -  | 35,559,287  | 1,138,654  |
| Government Agencies                                      | 71,791,265        | -  | 69,147,283  | 2,643,982  |
| Government Bonds   | 1,109,191,957     | 464,125,626  | 644,357,247   | 709,084  |
| Government Mortgage Backed Securities                    | 264,840,152       | -  | 259,547,235   | 5,292,917  |
| Gov't-issued Commercial Mortgage-Backed                  | 20,246,590        | -  | 18,226,933  | 2,019,657  |
| Index Linked Government Bonds                            | 99,151,086        | 53,111,287   | 46,039,799  | -  |
| Municipal/Provincial Bonds                               | 10,745,273        | -  | 10,745,273  | -  |
| Non-Government Backed C.M.O.s                            | 8,081,466         | -  | 7,272,296   | 809,170  |
| Total fixed income securities                            | 3,386,621,095     | 517,236,913  | 2,825,233,649   | 44,150,533                                       |
| Equity securities  |                   |  |   |  |
| Common Stock   | 9,234,108,163     | 9,221,300,256  | 11,424,194  | 1,383,713  |
| Convertible Equity                                       | 2,285,997         | -  | 2,285,997   | -  |
| Funds - Common Stock                                     | 9,849,416         | 9,849,416  | -   | -  |
| Funds - Equities ETF                                     | 17,369,119        | 17,369,119   | -   | -  |
| Preferred Stock  | 31,216,815        | 31,216,815   | -   | -  |
| Rights/Warrants  | 22,293            | 18,705   | 3,320   | 268  |
| Other Securities   | 1,777             | 11   | -   | 1,766  |
| Total equity securities                                  | 9,294,853,580     | 9,279,754,322  | 13,713,511  | 1,385,747  |
| Total investments by fair value level                    | \$ 12,855,938,667 | \$ 9,971,455,227   | \$ 2,838,947,160  | \$ 45,536,280                                    |
| <b>Investments measured at the net asset value (NAV)</b> |                   |  |   |  |
| Alternative investments                                  |                   |  |   |  |
| Real Estate Investments                                  | 1,121,422,637     |  |   |  |
| Private Equity Investments                               | 1,134,939,460     |  |   |  |
| Total alternative investments                            | 2,256,362,097     |  |   |  |
| Other Mutual Funds                                       | 221,974,063       |  |   |  |
| Total Investments measured at the NAV                    | 2,478,336,160     |  |   |  |
| Total Investments measured at fair value and NAV         | \$ 15,334,274,827 |  |   |  |

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 3. Cash and Investments (Continued)

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

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. Level 3 debt securities use proprietary information or single source pricing. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities.

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 interest 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 that 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<br>Value      | Unfunded<br>Commitments | Redemption<br>Frequency | Notice<br>Period |
|--|-------------------------|-------------------------|-------------------------|------------------|
| Real Estate Investments                  | \$ 1,121,422,637        | \$ 84,234,475           | N/A                     | N/A              |
| Private Equity investments               | 1,134,939,460           | 1,036,052,820           | N/A                     | N/A              |
| Other Mutual Funds                       | 221,974,063             |                         | Daily                   | 1 Day            |
| Total investments measured at<br>the NAV | <u>\$ 2,478,336,160</u> |                         |                         |                  |

**Real Estate Investments:** This type includes 10 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.

**Other 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 listed above. 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, 2017, the System had uninsured and uncollateralized deposits translated to approximately \$2,000,000 U.S. Dollars with its custodial agent.

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

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

#### Note 3. Cash and Investments (Continued)

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

| Investment Type                         | AAA        | AA        | A          | BBB        | BB         | B          |
|---|------------|-----------|------------|------------|------------|------------|
| Asset backed securities                 | \$ 79,015  | \$ 15,038 | \$ 14,681  | \$ 5,472   | \$ 1,109   |            |
| Bank loans                              | -          | -         | -          | -          | 773        | 4,633      |
| Commercial mortgage-backed              | 8,552      | 3,000     | 2,423      | 5,494      | 1,443      | 881        |
| Corporate bonds                         | 2,612      | 11,005    | 134,334    | 459,020    | 498,122    | 322,112    |
| Corporate convertible bonds             | -          | -         | -          | 4,011      | 2,885      | 4,915      |
| Government agencies                     | 13,024     | 50,649    | -          | 763        | -          | 306        |
| Government bonds                        | -          | 5,557     | 14,385     | 4,073      | 3,957      | 7,792      |
| Government mortgage-backed securities   | -          | -         | -          | -          | -          | -          |
| Gov't-issued commercial mortgage-backed | 64         | -         | -          | -          | -          | -          |
| Index linked government bonds           | -          | -         | -          | -          | -          | -          |
| Municipal/Provincial bonds              | 1,348      | 5,085     | -          | 818        | -          | 2,219      |
| Non-government backed C.M.O.s           | -          | 393       | -          | -          | -          | -          |
| Sukuk                                   | -          | -         | -          | 411        | -          | -          |
| Total fixed income                      | 104,615    | 90,727    | 165,823    | 480,062    | 508,289    | 342,858    |
| Short-term investments                  | -          | -         | -          | -          | -          | -          |
|   | \$ 104,615 | \$ 90,727 | \$ 165,823 | \$ 480,062 | \$ 508,289 | \$ 342,858 |

|           |          |       |          |            |              | US<br>Government<br>Securities | Total        |
|-----------|----------|-------|----------|------------|--------------|--------------------------------|--------------|
| CCC       | CC       | C     | D        | Not Rated  |              |                                |              |
| \$ 262    | \$ -     | \$ -  | \$ -     | \$ 50,109  | \$ -         | \$ -                           | \$ 165,686   |
| 4,217     | -        | -     | 179      | 6,162      | -            | -                              | 15,964       |
| -         | -        | -     | -        | 24,655     | 258          | -                              | 46,706       |
| 56,238    | 1,173    | 63    | 4,659    | 48,182     | -            | -                              | 1,537,520    |
| 3,028     | -        | -     | -        | 21,858     | -            | -                              | 36,697       |
| -         | -        | -     | -        | 2,644      | 4,406        | -                              | 71,792       |
| -         | -        | -     | -        | 41,001     | 1,032,427    | -                              | 1,109,192    |
| -         | -        | -     | -        | 9,377      | 255,463      | -                              | 264,840      |
| -         | -        | -     | -        | 4,304      | 15,879       | -                              | 20,247       |
| -         | -        | -     | -        | -          | 99,151       | -                              | 99,151       |
| -         | -        | -     | -        | 864        | -            | -                              | 10,334       |
| 1,212     | -        | -     | -        | 6,476      | -            | -                              | 8,081        |
| -         | -        | -     | -        | -          | -            | -                              | 411          |
| 64,957    | 1,173    | 63    | 4,838    | 215,632    | 1,407,584    | -                              | 3,386,621    |
| -         | -        | -     | -        | -          | 43,896       | -                              | 43,896       |
| \$ 64,957 | \$ 1,173 | \$ 63 | \$ 4,838 | \$ 215,632 | \$ 1,451,480 | \$ -                           | \$ 3,430,517 |

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

#### Note 3. Cash and Investments (Continued)

**Interest rate risk:** Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates based upon the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. Effective duration estimates the sensitivity of a bond's price to interest rate changes and makes assumptions regarding the most likely timing and amounts of variable cash flows arising from investments such as callable bonds, collateralized mortgage obligations, and other mortgage-backed securities. While all investments are subject to market changes, securities invested in index funds are more sensitive to market risk. Although the System's investment policy does not specifically address the duration of fixed-income securities, the System's management does monitor interest rate risk by monitoring the performance of each investment manager. As of June 30, 2017, the System had the following investments with maturities (dollars in thousands):

| Investment Type                               | Fair Value          | Effective Duration in Years |
|---|---------------------|-----------------------------|
| Asset-backed securities                       | \$ 165,071          | 1.0                         |
| Commercial mortgaged-backed                   | 46,707              | 3.2                         |
| Corporate bonds                               | 1,535,363           | 4.7                         |
| Corporate convertible bonds                   | 35,009              | 3.6                         |
| Government agencies                           | 71,791              | 6.4                         |
| Government bonds                              | 1,109,192           | 13.7                        |
| Government mortgage-backed securities         | 263,899             | 4.4                         |
| Government issued commercial mortgaged-backed | 20,247              | 3.0                         |
| Index linked government bonds                 | 99,151              | 12.6                        |
| Municipal/Provincial bonds                    | 7,732               | 8.2                         |
| Non-government backed CMOs                    | 7,688               | 2.0                         |
| Sukuk   | 411                 | 1.3                         |
| Other fixed income securities                 | 24,360              | 9.7                         |
| Total fixed income                            | <u>\$ 3,386,621</u> |                             |
| Portfolio duration                            |                     | <u>7.7</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, 2017, 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, 2017 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 | Grand Total         |
|--------------------|---------------------|-----------------|------------------|----------------------------|---------------------------|---------------------|
| Argentine Peso     | \$ -                | \$ -            | \$ 287           | \$ -                       | \$ -                      | \$ 287              |
| Australian Dollar  | 78,738              | -               | -                | -                          | -                         | 78,738              |
| Brazilian Real     | 29,984              | -               | -                | -                          | 32                        | 30,016              |
| Canadian Dollar    | 102,140             | -               | -                | (245)                      | 302                       | 102,197             |
| Chilean Peso       | 208                 | -               | -                | -                          | -                         | 208                 |
| Danish Krone       | 23,978              | -               | -                | -                          | -                         | 23,978              |
| Euro               | 648,346             | 2,464           | 155              | (12)                       | 120                       | 651,073             |
| Hong Kong Dollar   | 160,193             | -               | -                | (3)                        | 42                        | 160,232             |
| Hungarian Forint   | 4,341               | -               | -                | -                          | -                         | 4,341               |
| Indonesian Rupiah  | 17,610              | -               | -                | -                          | 1                         | 17,611              |
| Israeli Shekel     | 8,486               | -               | -                | -                          | -                         | 8,486               |
| India Rupee        | -                   | -               | 1,074            | -                          | -                         | 1,074               |
| Japanese Yen       | 488,256             | -               | -                | (513)                      | 1,131                     | 488,874             |
| Malaysian Ringgit  | 10,061              | -               | -                | -                          | -                         | 10,061              |
| Mexican Peso       | 7,832               | 5,581           | 21,550           | 88                         | (87)                      | 34,964              |
| New Taiwan Dollar  | 96,940              | -               | -                | -                          | 512                       | 97,452              |
| New Zealand Dollar | 2,022               | -               | -                | -                          | -                         | 2,022               |
| Norwegian Krone    | 38,420              | -               | -                | -                          | -                         | 38,420              |
| Phillipine Peso    | 388                 | -               | -                | 255                        | -                         | 643                 |
| Polish Zloty       | 3,775               | -               | -                | -                          | -                         | 3,775               |
| Pound Sterling     | 438,820             | 491             | -                | (46)                       | 122                       | 439,387             |
| Qatari Rial        | 335                 | -               | -                | -                          | -                         | 335                 |
| Singapore Dollar   | 15,280              | -               | -                | -                          | -                         | 15,280              |
| South African Rand | 14,061              | -               | -                | (2)                        | 2                         | 14,061              |
| South Korean Won   | 96,464              | -               | -                | -                          | -                         | 96,464              |
| Swedish Krona      | 35,266              | -               | -                | -                          | -                         | 35,266              |
| Swiss Franc        | 155,763             | -               | -                | -                          | -                         | 155,763             |
| Thai Baht          | 14,939              | -               | -                | -                          | -                         | 14,939              |
| Turkish Lira       | 10,096              | -               | 2,956            | -                          | -                         | 13,052              |
| UAE Dirham         | 774                 | -               | -                | -                          | -                         | 774                 |
| <b>Total</b>       | <b>\$ 2,503,516</b> | <b>\$ 8,536</b> | <b>\$ 26,022</b> | <b>\$ (478)</b>            | <b>\$ 2,177</b>           | <b>\$ 2,539,773</b> |



## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

#### Note 3. Cash and Investments (Continued)

**Derivative instruments:** The System's investment derivatives include forward currency and futures contracts. These investments are not speculative in nature and do not increase investment risk beyond allowable limits specified in the System's investment policy. A futures contract is a contract to buy or sell units of an index or financial instrument at a specified future date at a price agreed upon when the contract is originated. The System purchases and sells futures contracts as a means of adjusting the TRS portfolio mix at a lower transaction cost than the transactions, which would otherwise occur in the underlying portfolios. During fiscal year ended June 30, 2017, S&P 500 futures and U.S. Treasury note futures were utilized. Upon entering into such a contract, the TRS pledges to the broker cash or U.S. government securities 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, 2017 was \$140,619. At June 30, 2017, the foreign currency futures contracts outstanding were as follows:

| Description        | Expiration Date | Open Position | Number of Contracts | Notional Contract Size     | Fair Value           | Notional Value       |
|--------------------|-----------------|---------------|---------------------|----------------------------|----------------------|----------------------|
| S&P 500 Index      | September 2017  | Long          | 1                   | N/A                        | \$ 10,046,735        | \$ 10,086,308        |
| U.S. Treasury note | September 2017  | Short         | 3                   | 10-year U.S. Treasury note | (60,255,000)         | (60,440,444)         |
| U.S. Treasury note | September 2017  | Short         | 1                   | 2-year U.S. Treasury note  | (36,306,375)         | (36,366,793)         |
| U.S. Treasury note | September 2017  | Long          | 3                   | 5-year U.S. Treasury note  | 53,497,516           | 53,619,256           |
| U.S. Treasury note | September 2017  | Long          | 1                   | U.S. Treasury note         | 18,288,813           | 18,146,773           |
| U.S. Treasury note | September 2017  | Long          | 2                   | 2-year U.S. Treasury note  | 56,620,656           | 56,706,625           |
|                    |                 |               |                     |                            | <u>\$ 41,892,344</u> | <u>\$ 41,751,725</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, 2017 was de minimus. At June 30, 2017, the foreign currency forward contracts outstanding were as follows:

| Description      | Notional Value | Currency | Value Date | Fair Value (U.S. Dollars) |
|------------------|----------------|----------|------------|---------------------------|
| Forward sale     | \$ (1,208,676) | JPY      | 7/5/2017   | \$ (1,212,989)            |
| Forward sale     | (1,502,286)    | MXN      | 7/6/2017   | (1,503,968)               |
| Forward sale     | (903,790)      | USD      | 7/3/2017   | (903,790)                 |
| Forward purchase | 921,314        | CAD      | 7/5/2017   | 920,375                   |
| Forward purchase | 21,928         | JPY      | 7/5/2017   | 21,880                    |
| Forward purchase | 168,062        | USD      | 7/3/2017   | 168,062                   |
| Forward purchase | 9,931          | USD      | 7/5/2017   | 9,931                     |

**Rate of return - Pension:** For the year ended June 30, 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 14.72 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, 2017, the annual money-weighted rate of return on OPEB plan investments, net of OPEB plan investment expense, was 14.72 percent. The money-weighted rate of return expresses investment performance, net of investment expense, as adjusted for the changing amounts actually invested.

#### Note 4. Commitments

At June 30, 2017, the System has total capital commitments related to alternative and real estate investments of \$2,945,400,000. Of this amount, approximately \$1,120,287,000 remained unfunded.

#### Note 5. Securities Lending Activity

The System's investment policy and State statutes provide for its participation in a securities lending program. The program is administered by the System's master custodian, and there are no restrictions on the amount of loans that can be made. Certain securities of the System are loaned to participating brokers, who must provide collateral in the form of cash, U. S. Treasury or government agency securities, or letters of credit issued by approved banks.

Under the terms of the agreement, collateralization of the fair value of the loaned securities must be provided in the amount of 102 percent when the security to be loaned and the collateral are in the same currency and 105 percent when the loan and collateral currencies are dissimilar. The securities on loan as of June 30, 2017 collateralized by cash were approximately \$1,660,886,000 and the cash collateral received for those securities on loan was approximately \$1,699,985,000. Securities on loan as of June 30, 2017 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, 2017 (dollars in thousands):

|   | Fair Value<br>of Securities<br>on Loan | Collateral<br>Value | Collateral<br>Percentage |
|---|--|---------------------|--------------------------|
| Governmental loans compared to collateral | \$ 359,410                             | \$ 367,599          | 102%                     |
| Equity loans compared to collateral       | 1,099,728                              | 1,125,951           | 102%                     |
| Corporate loans compared to collateral    | 201,748                                | 206,435             | 102%                     |
|   | <u>\$ 1,660,886</u>                    | <u>\$ 1,699,985</u> |                          |

At June 30, 2017, the System had no credit risk exposure since the amounts the System owed to borrowers exceeded the amounts borrowers owed the System. The contract with the System's lending agent requires it to indemnify the System if the borrowers fail to return the lent securities. In the event of a collateral shortfall due to a loss in value of investments made with cash collateral, such loss would be the responsibility of the System.

All securities loans can be terminated on demand by either the System or the borrower. Cash collateral is invested in a separate account for the System in accordance with investment guidelines approved by the System. At June 30, 2017, the weighted average maturity of the cash collateral investments was 19 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.

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 6. Capital Assets

Capital assets consist of the following at June 30, 2017:

|                          |                     |
|--------------------------|---------------------|
| Furniture and fixtures   | \$ 4,607,941        |
| Accumulated depreciation | (314,637)           |
| Capital assets, net      | <u>\$ 4,293,304</u> |

The System has commitments to lease building space as well as leases on certain equipment. The future minimum commitment for operating leases as of June 30, 2017 was approximately \$200,000. The System's leases are one-year renewable contracts. Rental expense for all operating leases amounted to approximately \$200,000 for the year ended June 30, 2017.

#### Note 7. Member and Employer Contributions

All contribution rates are defined or amended by the Oklahoma Legislature. All active members contribute to the System; however, the employer may elect to make 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, 2017 were \$403,256,970. Employers satisfied 100 percent of their contribution requirements for 2017.

All members must contribute 7 percent of regular annual compensation, not to exceed the member's maximum compensation level, which for the year ended June 30, 2017 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 years 2017 are applied on the full amount of the member's regular annual compensation up to certain limits prescribed by the IRC.

#### Note 8. Benefits

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

Benefit provisions include:

- Members become 100 percent vested in retirement benefits earned to date after five years of credited Oklahoma service. Members who joined the System on June 30, 1992 or prior are eligible to retire at maximum benefits when age and years of creditable service total 80. Members joining the System after June 30, 1992 are eligible for maximum benefits when their age and years of creditable service total 90. Members whose age and service do not equal the eligible limit may receive reduced benefits as early as age 55, and at age 62 receive unreduced benefits based on their years of service. The maximum retirement benefit is equal to 2 percent of final compensation for each year of credited service.
- 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

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 8. Benefits (Continued)

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.
- Members may elect to make additional contributions to a tax-sheltered annuity program up to the exclusion allowance provided under the IRC under Code Section 403(b).

#### 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 \$30,309,000 in 2017 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, 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 0.15% of normal cost, as determined by an actuarial valuation.

Each employer in the OPEB Plan will begin disclosing the employer's own apportioned elements of the OPEB plan.

**Assumptions:** For OPEB, the actuarial valuation date was performed as of June 30, 2017. The measurement date was June 30, 2017. An assumption change was made to the OPEB Plan during the current valuation lowering the rate of participation in the supplemental insurance benefit from 100% to 50%, based on historical data. The benefits are only available to those retirees that participate and have at least 10 years of service credit at retirement.

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 9. Dedicated Tax

The plan receives funds provided by the State of Oklahoma, a non-employer contributing entity, through 5.0 percent of the State's sales, use, and corporate and individual income taxes collected as dedicated tax. The System receives 1 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 \$278,924,000 from the State in 2017. Amounts due from the State were approximately \$31,549,000 at June 30, 2017.

#### Note 10. Plan Amendments

The 2017 legislative session passed HB 1162 which changed the number of years to "vest" and become eligible for a TRS pension from five (5) to seven (7) for members who become a member after November 1, 2017.

#### Note 11. DB Plans (Pension and OPEB Actuarial Information)

The components of the net pension liability of the employers at June 30, 2017 were as follows:

|                                  |    |                      |
|----------------------------------|----|----------------------|
| Total pension liability          | \$ | 21,625,384,047       |
| Plan fiduciary net position      |    | (14,989,975,076)     |
| Employers' net pension liability | \$ | <u>6,635,408,971</u> |

Plan fiduciary net position as a percentage of the total pension liability 69.32%

The components of the net OPEB asset at June 30, 2017 were as follows:

|                             |    |                     |
|-----------------------------|----|---------------------|
| Total OPEB liability        | \$ | 428,764,003         |
| Plan fiduciary net position |    | (473,358,220)       |
| Employers' net OPEB asset   | \$ | <u>(44,594,217)</u> |

Plan fiduciary net position as a percentage of the total OPEB asset 110.40%

The total pension and OPEB liability and total pension and OPEB asset as of June 30, 2017, were determined based on actuarial valuations prepared as of June 30, 2017 using the following actuarial assumptions:

- Actuarial Cost Method—Entry Age Normal
- Inflation—2.50 percent
- Future Ad Hoc Cost-of-living Increases—None
- Salary Increases—Composed of 3.25 percent wage inflation, including 2.50 percent price inflation, plus a service-related component ranging from 0.00 percent to 8.00 percent based on years of service
- Investment Rate of Return—7.50 percent
- Retirement Age—Experience-based table of rates based on age, service, and gender. Adopted by the Board in May 2015 in conjunction with the five year experience study for the period ending June 30, 2014
- Mortality Rates after Retirement—Males: RP-2000 Combined Healthy mortality table for males with White Collar Adjustments. Generational mortality improvements in accordance with Scale BB from the table's base year of 2000. Females: GRS Southwest Region Teacher Mortality Table, scaled at 105%. Generational mortality improvements in accordance with Scale BB from the table's base year of 2012.
- Mortality Rates for Active Members—RP-2000 Employee Mortality tables, with male rates multiplied by 60% and female rates multiplied by 50%

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 11. 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, 2017, a single discount rate of 7.50% 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, 2017 are summarized in the following table:

| Asset Class          | Target Asset Allocation | Long-Term Expected Real Rate of Return |
|----------------------|-------------------------|--|
| Domestic Equity      | 38.5%                   | 7.5%                                   |
| International Equity | 19.0%                   | 8.5%                                   |
| Fixed Income         | 23.5%                   | 2.5%                                   |
| Real Estate          | 9.0%                    | 4.5%                                   |
| Alternative Assets   | 10.0%                   | 6.1%                                   |
| Total                | 100.0%                  |  |

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

# Teachers' Retirement System of Oklahoma

## Notes to Financial Statements

### Note 11. 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, 2017. 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<br>(6.50%)  | Current<br>Discount<br>Rate (7.50%) | 1% Increase<br>(8.50%)  |
|-----------------------|-------------------------|-------------------------------------|-------------------------|
| Net pension liability | <u>\$ 9,139,040,005</u> | <u>\$ 6,635,048,971</u>             | <u>\$ 4,539,581,835</u> |
|                       | 1% Decrease<br>(6.50%)  | Current<br>Discount<br>Rate (7.50%) | 1% Increase<br>(8.50%)  |
| Net OPEB asset        | <u>\$ (1,866,630)</u>   | <u>\$ (44,594,218)</u>              | <u>\$ (81,125,635)</u>  |

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

### Note 12. New Accounting Pronouncements Issued, Not Yet Adopted

The following GASB statements were implemented during the fiscal year:

GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pensions* improves the usefulness of information about OPEB to be included in general purpose external financial reports of OPEB plans. As previously discussed, the implementation of GASB 74 resulted in a restatement of restricted net position at the beginning of the year, disaggregating amounts.

GASB Statement No. 77, *Tax Abatement Disclosures* provides additional disclosure related to certain types of tax abatements. This statement had no effect on the Plan.

GASB Statement No. 78, *Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans* addresses practice issues regarding the scope of GASB-68, *Accounting and Financial Reporting for Pensions* and certain multiple-employer plans that are not state or local governmental pension plans and that may provide defined benefit pensions to both governmental and non-governmental employees. This statement had no effect on the Plan.

GASB Statement No. 80, *Blending Requirements for Certain Component Units* also addresses a practice issue regarding the presentation of not-for-profit corporations and similar component units where a primary government is the sole corporate member of the component unit. This statement had no effect on the plan.

GASB Statement No. 82, *Pension Issues – An Amendment to GASB Statements No. 67, No. 68, and No. 73* (GASB 82). The objective of GASB 82 is to address certain issues that have been raised with respect to Statements No. 67, *Financial Reporting for Pension Plans*, No. 68, *Accounting and Financial Reporting for Pensions*, and No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*. Specifically, this Statement addresses issues regarding (1) the presentation of payroll-related measures in

## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### Note 12. New Accounting Pronouncements Issues, Not Yet Adopted (Continued)

required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The Plan made certain clarifications in the Required Supplementary Information with regard to payroll-related measures to conform to the provisions of GASB 82.

In addition, the following accounting pronouncements have been issued by the GASB, but not yet adopted:

##### Fiscal Year Ended June 30, 2018:

For the fiscal year ended June 30, 2018, the Plan will assist employers of the State in their implementation of GASB Statement No. 75 (GASB 75), *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. GASB 75 requires employers to provide additional information regarding OPEB in their financial statements. The Plan will provide such information in the form of additional schedules.

GASB Statement No. 81 (GASB 81), *Irrevocable Split-Interest Agreements* provides additional accounting and financial reporting information for circumstances when a government is a beneficiary or and administrator of such agreements. As of the date of the financial statements, the Plan is currently evaluating the effects of this pronouncement.

GASB Statement No. 85 (GASB 85), *Omnibus 2017* addresses practice issues identified in the implementation and application of existing GASB Statements. The issues involve certain situations involving blending component units, goodwill, fair value measurement and application, pensions and OPEB. As of the date of the financial statements, the Plan is currently evaluating the effects of this pronouncement.

GASB Statement No. 86 (GASB 86), *Certain Debt Extinguishment Issues* improves consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired only with existing resources – resources other than the proceeds of refunding debt – are placed in an irrevocable trust for the sole purpose of extinguishing debt. As of the date of the financial statements, the Plan is currently evaluating the effects of this pronouncement.

##### Fiscal Year Ended June 30, 2019 (and beyond):

GASB Statement No. 83 (GASB 83), *Certain Asset Retirement Obligations* addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance. GASB 83 is effective for reporting periods beginning after June 15, 2018. As of the date of the financial statements, the Plan is currently evaluating the effects of this pronouncement.

GASB Statement No. 84 (GASB 84), *Fiduciary Activities* seeks to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. GASB-84 establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. GASB 84 is effective for reporting periods beginning after December 15, 2018. As of the date of the financial statements, the Plan is currently evaluating the effects of this pronouncement.

GASB Statement No. 87 (GASB 87), *Leases* increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the



## Teachers' Retirement System of Oklahoma

### Notes to Financial Statements

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#### **Note 12. New Accounting Pronouncements Issues, Not Yet Adopted (Continued)**

contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this GASB 87, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. GASB 87 is effective for reporting periods beginning after December 15, 2019. As of the date of the financial statements, the Plan is currently evaluating the effects of this pronouncement.

#### **Note 13. Subsequent Events**

The System has performed an evaluation of subsequent events through, the date the basic financial statements were available to be issued. As listed in Note 10, legislation passed HB 1162 which changed the number of years to "best" and become eligible for a TRS pension from five (5) to seven (7) years. No other events were identified.

# 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      |                         |                         |                         |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  | 2017                    | 2016                    | 2015                    | 2014                    |
| Total pension liability:                         |                         |                         |                         |                         |
| Service cost                                     | \$ 446,728,754          | \$ 428,904,761          | \$ 415,702,261          | \$ 409,199,801          |
| Interest   | 1,599,025,933           | 1,609,511,334           | 1,538,893,982           | 1,491,722,137           |
| Difference between actual and expected return    | (373,928,623)           | (36,212,168)            | (159,980,414)           | (105,344,633)           |
| Assumption changes                               | (482,042,966)           | 933,294,515             | 346,488,630             | -                       |
| Benefit payments                                 | (1,281,816,606)         | (1,257,276,705)         | (1,201,350,907)         | (1,153,051,607)         |
| Refunds  | (40,944,298)            | (36,109,832)            | (35,240,176)            | (28,718,256)            |
| <b>Net change in total pension liability</b>     | <b>(132,977,806)</b>    | <b>1,642,111,905</b>    | <b>904,513,376</b>      | <b>613,807,442</b>      |
| Total pension liability:                         |                         |                         |                         |                         |
| Beginning  | 21,758,361,853          | 20,551,132,567          | 19,646,619,191          | 19,032,811,749          |
| Ending (a)                                       | 21,625,384,047          | 22,193,244,472          | 20,551,132,567          | 19,646,619,191          |
| Plan fiduciary net position:                     |                         |                         |                         |                         |
| Contributions-Employer/State                     | 698,695,713             | 725,425,216             | 728,442,070             | 707,052,675             |
| Contributions-Members                            | 292,949,337             | 294,459,090             | 303,677,304             | 301,300,811             |
| Net investment income                            | 1,945,898,975           | (357,443,247)           | 428,855,747             | 2,571,707,952           |
| Benefit payments                                 | (1,281,816,606)         | (1,257,276,705)         | (1,201,350,906)         | (1,153,051,607)         |
| Refunds  | (40,944,298)            | (36,109,832)            | (35,240,176)            | (28,718,256)            |
| Administrative expense                           | (4,028,080)             | (4,458,336)             | (4,358,938)             | (4,282,605)             |
| <b>Net change in plan fiduciary net position</b> | <b>1,610,755,041</b>    | <b>(635,403,814)</b>    | <b>220,025,101</b>      | <b>2,394,008,970</b>    |
| Plan fiduciary net position:                     |                         |                         |                         |                         |
| Beginning  | 13,379,220,035          | 14,449,506,469          | 14,229,481,368          | 11,835,472,398          |
| Ending (b)                                       | 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>\$ 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      |                         |                         |                         |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  | 2017                    | 2016                    | 2015                    | 2014                    |
| Total pension liability  | \$ 21,625,384,047       | \$ 22,193,244,472       | \$ 20,551,132,567       | \$ 19,646,619,191       |
| Plan fiduciary net position  | 14,989,675,076          | 13,814,102,655          | 14,449,506,469          | 14,229,481,368          |
| <b>Employers' net Pension liability</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 | 69.32%                  | 62.24%                  | 70.31%                  | 72.43%                  |
|  |                         |                         |                         |                         |
| Covered payroll  | \$ 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              | 163.00%                 | 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)

|   | 2017                    | 2016                    | 2015                    | 2014                    |
|---|-------------------------|-------------------------|-------------------------|-------------------------|
| Actuarially determined contributions                                  | \$ 689,580,590          | \$ 723,528,050          | \$ 550,652,420          | \$ 602,936,966          |
| Contributions in relation to the actuarially determined contribution: |                         |                         |                         |                         |
| Employers (Schools)   | 396,743,812             | 409,753,221             | 392,051,458             | 386,895,127             |
| State of Oklahoma, a non-employer contributing entity                 | 301,951,901             | 315,671,995             | 336,390,612             | 320,157,548             |
| <b>Contribution deficiency (excess)</b>                               | <b>\$ (9,115,123)</b>   | <b>\$ (1,897,166)</b>   | <b>\$ (177,789,650)</b> | <b>\$ (104,115,709)</b> |
| 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> |
| Contributions as a percentage of covered payroll                      | <u>17.16%</u>           | <u>17.25%</u>           | <u>16.79%</u>           | <u>16.43%</u>           |
|   | 2012                    | 2011                    | 2010                    | 2009                    |
| Actuarially determined contributions                                  | \$ 588,287,377          | \$ 822,419,996          | \$ 742,286,289          | \$ 714,367,558          |
| Contributions in relation to the actuarially determined contribution: |                         |                         |                         |                         |
| Employers (Schools)   | 376,635,234             | 364,025,589             | 366,282,238             | 338,974,512             |
| State of Oklahoma, a non-employer contributing entity                 | 304,995,663             | 274,452,205             | 254,375,139             | 279,672,051             |
| <b>Contribution deficiency (excess)</b>                               | <b>\$ (93,343,520)</b>  | <b>\$ 183,942,202</b>   | <b>\$ 121,628,912</b>   | <b>\$ 95,720,995</b>    |
| Covered payroll   | <u>\$ 3,924,800,000</u> | <u>\$ 3,773,300,000</u> | <u>\$ 3,854,800,000</u> | <u>\$ 3,807,900,000</u> |
| Contributions as a percentage of covered payroll                      | <u>17.37%</u>           | <u>16.92%</u>           | <u>16.10%</u>           | <u>16.25%</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.

## Teachers' Retirement System of Oklahoma

### Required Supplementary Information

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#### Schedule of Investment Returns (Unaudited) Fiscal Year Ended June 30, 2017

|  | Year Ended June 30 |        |       |        |
|--|--------------------|--------|-------|--------|
|  | 2017               | 2016   | 2015  | 2014   |
| Annual money-weighted rate of return, net of investment expenses | 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 5.0% of revenues from sales taxes, use taxes, corporate and individual income taxes and lottery proceeds. An additional contribution is made for members whose salary is paid from federal funds or certain grant money.

Beginning with fiscal year ending June 30, 2016, the Actuarially Determined Employer Contribution (ADEC) is determined as the employer contribution amount necessary to discharge the Unfunded Actuarial Accrued Liability over a period equal to the funding period for the current actuarial valuation for plan funding purposes (i.e., 20 years as of June 30, 2016). 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 (0.16% of pay for FY2017) is allocated to the OPEB Plan and reported under GASB 74. As a result, these contributions are not included in either the actual or actuarially determined contributions above.

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

#### Methods and assumptions used to determine contribution rates:

|                               |   |
|-------------------------------|---|
| Actuarial cost method         | Entry age normal  |
| Amortization method           | Level percentage of payroll   |
| Remaining Amortization period | 20 years  |
| Asset valuation method        | 5-year smooth market  |
| Inflation                     | 2.50%   |
| Salary increase               | Composed of 2.5% inflation, plus 0.75% productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service  |
| Investment rate of return     | 7.50%   |
| Retirement age                | Experience-based table of rates based on age, service and gender. Adopted by the Board in May 2015 in conjunction with the five year experience study for the period ending June 30, 2014   |
| Mortality                     | RP-2000 Combined Mortality Table for males with White Collar Adjustments with fully generational projection by Scale BB from the table's base year of 2000. For females, the GRS Southwest Region Teacher Mortality Table, scaled at 105%, with fully generational projection by Scale BB from the table's base year of 2012. |

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

# Teachers' Retirement System of Oklahoma

## Required Supplementary Information

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

|  | <u>2017</u>                          |
|--|--------------------------------------|
| Total OPEB liability:                                |                                      |
| Service cost   | \$ 6,647,749                         |
| Interest on the total OPEB liability                 | 31,728,895                           |
| Benefit changes                                      | -                                    |
| Difference between actual and expected return        | (14,186,133)                         |
| Assumption changes                                   | -                                    |
| Benefit payments                                     | <u>(30,309,127)</u>                  |
| <b>Net change in total OPEB liability</b>            | <b>(6,118,616)</b>                   |
| Total OPEB liability:                                |                                      |
| Beginning  | <u>434,882,619</u>                   |
| Ending (a)   | 428,764,003                          |
| Plan fiduciary net position:                         |                                      |
| Employer contributions                               | 6,513,158                            |
| Employee contributions                               | -                                    |
| OPEB net investment income                           | 62,298,027                           |
| Benefit payments                                     | (30,309,127)                         |
| Administrative expense                               | <u>(26,457)</u>                      |
| <b>Net change in plan fiduciary net position</b>     | <b>38,475,601</b>                    |
| Plan fiduciary net position:                         |                                      |
| Beginning  | <u>434,882,619</u>                   |
| Ending (b)   | <u><u>473,358,220</u></u>            |
| <b>Employers' Net OPEB liability (asset) (a)-(b)</b> | <b>\$ <u><u>(44,594,217)</u></u></b> |

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

|  | <u>2017</u>                   |
|--|-------------------------------|
| Total OPEB liability                         | \$ 428,764,003                |
| OPEB fiduciary net position                  | <u>473,358,220</u>            |
| <b>Employers' net OPEB liability (asset)</b> | <b><u>\$ (44,594,217)</u></b> |

|   |         |
|---|---------|
| Employers' fiduciary net position as a percentage of the total OPEB liability | 110.40% |
|---|---------|

|                 |     |
|-----------------|-----|
| Covered payroll | N/A |
|-----------------|-----|

|   |     |
|---|-----|
| Employers' net OPEB liability (asset) as a percentage of covered OPEB payroll | N/A |
|---|-----|

\*\*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 Contributions From Employers

|   | <u>2017</u>                    |
|---|--------------------------------|
| Actuarially determined contributions  | \$ 6,513,158                   |
| Contributions in relation to the actuarially<br>determined contribution:<br>Employers | <u>6,513,158</u>               |
| <b>Contribution deficiency (excess)</b>   | <u><u>\$ -</u></u>             |
| Covered payroll   | <u><u>\$ 4,070,723,673</u></u> |
| Contributions as a percentage of covered<br>payroll                                   | <u><u>0.16%</u></u>            |

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

## Teachers' Retirement System of Oklahoma

### Required Supplementary Information

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#### Teachers' Retirement System of Oklahoma

##### Schedule of OPEB Investment Returns (Unaudited) Fiscal Year Ended June 30, 2017

###### OPEB Plan

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Year Ended  
June 30  
2017

Annual money-weighted rate of return, net of investment expenses

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        | Market  |
| Inflation                     | 2.50%   |
| Salary increase               | Composed of 2.5% inflation, plus 0.75% productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service  |
| Investment rate of return     | 7.50%   |
| Retirement age                | Experience-based table of rates based on age, service and tier.   |
| Mortality                     | RP-2000 Combined Mortality Table for males with White Collar Adjustments with fully generational projection by Scale BB from the table's base year of 2000. For females, the GRS Southwest Region Teacher Mortality Table, scaled at 105%, with fully generational projection by Scale BB from the table's base year of 2012. |
| 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.<br>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, 2017

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|                                  |                                    |
|----------------------------------|------------------------------------|
| Investment managers              | \$ 66,491,987                      |
| Investment consultants           | 1,062,000                          |
| Investment personnel             | <u>317,552</u>                     |
| <b>Total investment expenses</b> | <b><u><u>\$ 67,871,539</u></u></b> |

## Teachers' Retirement System of Oklahoma

### Supplementary Information

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#### Schedule of Administrative Expenses For the Year Ended June 30, 2017

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|                                      |                            |
|--------------------------------------|----------------------------|
| Salaries and benefits                | \$ 2,908,106               |
| General and miscellaneous            | 522,901                    |
| Professional/consultant fees         | 568,763                    |
| Travel and related expenses          | 38,126                     |
| Depreciation expense                 | 16,641                     |
| <b>Total administrative expenses</b> | <u><u>\$ 4,054,537</u></u> |

## Teachers' Retirement System of Oklahoma

### Supplementary Information

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#### Schedule of Professional/Consultant Fees For the Year Ended June 30, 2017

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|   |                          |
|---|--------------------------|
| Actuarial                                 | \$ 88,819                |
| Medical                                   | 8,027                    |
| Legal                                     | 67,774                   |
| Audit                                     | 181,169                  |
| Data processing                           | 118,774                  |
| Miscellaneous                             | 104,200                  |
| <b>Total professional/consultant fees</b> | <b><u>\$ 568,763</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 Teachers' Retirement System of Oklahoma (the System), which comprise the statements of fiduciary net position as of June 30, 2017, and the related statements 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 20, 2017.

**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) to determine the 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.

**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 determination of financial statement amounts. 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.

A handwritten signature in black ink that reads "Eide Bailly LLP". The signature is written in a cursive, flowing style.

Oklahoma City, Oklahoma  
October 20, 2017