

A magnifying glass with a silver handle and frame is positioned over a large puzzle piece. The puzzle piece is blue and features the word "PENSION" in bold, white, sans-serif capital letters. The puzzle piece is surrounded by other white puzzle pieces, and the entire scene is set against a light gray background. The magnifying glass's lens is centered on the blue puzzle piece, highlighting it.

PENSION

Comprehensive Annual Financial Report
For the Fiscal Years Ended June 30, 2018 and 2017

Oklahoma Police Pension and Retirement System
A Component Unit of the State of Oklahoma

Oklahoma Police Pension and Retirement System

MISSION

To provide secure retirement benefits for members and their beneficiaries.

VISION

To be the best State Retirement System in Oklahoma through outstanding communication, education, customer service and financial stability.

VALUES AND BEHAVIORS

*The Oklahoma Police Pension and Retirement System values its **members**, both active and retired, and the important contributions they make **protecting the citizens** of Oklahoma.*

*Expect the OPPRS **staff** to exhibit integrity, ethical conduct, professionalism and a **commitment to superior performance** through teamwork, communication, mutual respect and cooperation driven to produce results.*

*Effectively **communicate** new statute and rule changes to municipalities, members and staff. Use technology, such as the OPPRS website, to provide information in a timely manner.*

*Use every opportunity to continually **educate** members, municipalities, the OPPRS board and staff.*

*Utilize the most current **technology** to manage and operate the OPPRS.*

*Provide every member a forum for timely and fair **due process** regarding applications and appeals.*

*Strive to maintain **financial stability** by actively managing a broadly diversified investment portfolio designed to cover the current and future cost of benefits.*

GOALS

Provide exceptional communication and education to our membership.

Adopt new technology that can be effectively and efficiently utilized to manage the OPPRS.

Encourage teamwork and training to provide workflow continuity as staffing evolves.

Support the Oklahoma State Legislature regarding laws impacting the OPPRS and its members.



Oklahoma Police Pension and Retirement System

A Component Unit of the State of Oklahoma

Comprehensive Annual Financial Report

For the Fiscal Years Ended June 30, 2018 and 2017

Ginger Sigler

Executive Director

Prepared by the Finance Department of the Oklahoma Police Pension and Retirement System

Deric Berousek

Chief Financial Officer

Ann Burrows

Comptroller

1001 NW 63rd Street, Suite 305
Oklahoma City, OK 73116-7335
(Phone) 405-840-3555
(Fax) 405-840-8465
(Toll Free) 1-800-347-6552
<http://www.opprs.ok.gov>

Oklahoma Police Pension and Retirement System
2018 Comprehensive Annual Financial Report

Table of Contents

<u>Introductory Section</u>	<u>Page</u>	<u>Actuarial Section</u>	<u>Page</u>
Letter of Transmittal	5	Actuarial Valuation Certification	92
Board of Trustees	8	Summary of Actuarial Valuation Results	94
Board Districts, Appointees and Designees	9	Schedule of Active Member Valuation Data	95
Organizational Chart	10	Schedule of Retirants Added to and Removed from Rolls	95
Professional Advisors and Consultants	10	Schedule of Funding Progress (Actuarial)	95
Certificate of Achievement for Excellence in Financial Reporting	11	Solvency Test	96
		Analysis of Financial Experience	97
		Summary of Actuarial Assumptions/Methods	98
		Summary of System Provisions	103
		<u>Statistical Section</u>	
<u>Financial Section</u>		Statistical Section Narrative	109
Independent Auditor's Report	14	Schedule of Changes in Fiduciary Net Position	110
Management's Discussion and Analysis	17	Schedule of Revenues by Source	111
Financial Statements		Schedule of Expenses by Type	111
Statements of Fiduciary Net Position	22	Schedule of Benefit Payments and Refunds by Type	112
Statements of Changes in Fiduciary Net Position	23	Funded Ratio Chart	112
Notes to the Financial Statements	24	Rate of Return by Investment Type	113
Required Supplementary Information		Schedule of Retired Members by Benefit Type	114
Schedule of Changes in Employers' Net Pension Liability	68	Schedule of Average Benefit Payments	115
Schedule of Employers' Net Pension Liability	70	Principal Participating Employers	116
Schedule of Contributions from Employers and Other Contributing Entities	71	Participating Employers	117
Schedule of Investment Returns	72	Membership Statistics Data	118
Notes to Required Supplementary Information	73		
Other Supplementary Information			
Schedule of Investment Expenses	75		
Schedule of Administrative Expenses	76		
Schedule of Professional/Consultant Fees	77		
<u>Investment Section</u>			
Investment Consultant's Report	80		
Schedule of Largest Asset Holdings	83		
Investment Portfolio by Type and Manager	84		
Private Equity by Strategy and Manager	85		
Net Performance by Investment Manager	86		
Asset Allocation Comparison	87		
Schedule of Investment Fees and Commissions	87		
Schedule of Brokerage Commissions	88		



Introductory Section

- 5 - Letter of Transmittal
- 8 - OPPRS Board of Trustees
- 9 - OPPRS Board Districts, Appointees and Designees
- 10 - OPPRS Organizational Chart
- 10- Professional Advisors and Consultants
- 11- Certificate of Achievement for Excellence in Financial Reporting



Introductory Section



OKLAHOMA POLICE PENSION & RETIREMENT SYSTEM

1001 N.W. 63RD STREET, SUITE 305

OKLAHOMA CITY, OK 73116-7335

TELEPHONE (405) 840-3555 · FAX (405) 840-8465 · 1-800-347-6552

WWW.OPPRS.OK.GOV

Letter of Transmittal

November 30, 2018

To the Board of Trustees and Members of the Oklahoma Police Pension and Retirement System:

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the Oklahoma Police Pension and Retirement System (OPPRS) for the fiscal years ended June 30, 2018 and June 30, 2017. The objective of this report is to present a concise and complete picture of the Plan's financial, actuarial and investment results.

Responsibility for the accuracy of data, as well as the completeness and fairness of the presentation of this report, rests with the OPPRS management. Management relies on a comprehensive framework of internal controls to provide a reasonable, but not absolute, assurance that the financial statements are free of material misstatements. Management has established internal controls to protect the assets of OPPRS from loss, theft, or misuse, and continually reviews the control structure to ensure that the costs are reasonable in relation to the benefits provided.

The basic financial statements are prepared in accordance with generally accepted accounting principles as promulgated by the Governmental Accounting Standards Board. Finley & Cook, PLLC, has audited the financial statements included in this report and issued an unmodified opinion on the financial statements for the years ended June 30, 2018 and 2017, respectively. The Independent Auditors' Report is located at the front of the financial section within this report.

Management's Discussion and Analysis (MD&A) immediately follows the Independent Auditors' Report and provides a narrative introduction, overview and analysis of the basic financial statements. The MD&A compliments this letter of transmittal and should be read in conjunction with it.

Profile of the System

The Oklahoma Police Pension and Retirement System (the "System") was established by legislative act and became effective on January 1, 1981. The System is administrator of a multi-employer, cost-sharing defined benefit pension plan that provides participants with retirement, death, and disability benefits as well as a deferred option plan (the "Deferred Option"), as established by the State of Oklahoma. These plans are considered a single plan for financial reporting purposes. The System is a component unit of the State of Oklahoma financial reporting entity, and is combined with other similar defined benefit pension trust funds to comprise the fiduciary-pension trust funds within the State's financial reports. The System covers substantially all police officers employed by the 144 participating municipalities and state agencies within the State of Oklahoma. The mission of the System is to provide secure retirement benefits for the members of the System and their beneficiaries.

The Oklahoma Police Pension and Retirement Board is comprised of thirteen (13) members. Seven Board members are elected by members of the System (six are active police officers, and one is a retired member). One Board member is appointed by the Governor, one by the Speaker of the House, one by the President Pro Tempore of the Senate and one by the President of the Oklahoma Municipal League. The two remaining Board members are the State Insurance Commissioner or the Commissioner's designee and the Director of the Office of Management and Enterprise Services or the Director's designee.

The Oklahoma Police Pension and Retirement Board of Trustees (the "Board") is responsible for the operation, administration and management of the System. The Board also determines the general investment policy of the System's assets.

Revenues and Funding

A pension plan is considered well funded when it has sufficient reserves to meet all expected future obligations to its plan members. A pension plan must also have revenue sources sufficient to keep pace with future obligations. The primary sources of revenue for the System are member contributions, employer contributions, dedicated revenue from the State of Oklahoma, and investment income. For fiscal year 2018, contributions totaled \$103.9 million, a \$6.8 million increase from the prior year. Fiscal 2018 again produced solid investment gains of \$205.4 million, down slightly from the \$242.4 million in investment gains for 2017. Significant equity returns, primarily domestically in 2018, and a moderate but positive fixed income environment combined to produce solid investment returns for fiscal 2018 and 2017, adding almost \$450 million in gains over the 2 year period.

The System's funded status improved in fiscal 2018 to 102.8% from 101.8% in the prior year. This increase in the funded status of the plan is due primarily to slower than expected growth in the System's liabilities over the last year combined with steady normal costs and robust investment returns. The System had unamortized deferred actuarial losses of \$23 million at the end of fiscal 2018, down significantly from the \$52 million at the end of fiscal 2017, again reflective of the strong investment returns realized over the last 2 years.

The System's primary expenses are the payment of member retirement benefits. These payments include normal retirement benefits, refunds, deferred option payments and death benefits. The System also incurs administrative expenses in the form of employee salaries and benefits, legal fees, investment fees, data processing fees, and medical and travel costs. For fiscal 2018, total expenses of the system were \$141.3 million, a decrease of \$4.5 million from the prior fiscal year. This decrease was primarily due to a slight increase in normal benefit payments combined with substantially reduced deferred option payments for the year. Refunds and administrative expenses decreased slightly for the year, due primarily to fewer refund payments being made.

Investments

In order to fulfill their fiduciary responsibilities, the Board retains investment managers to ensure that the assets of the system are being adequately invested at all times, and to assist with the development and implementation of a prudent asset allocation to maximize investment results while mitigating excessive risk. The Board utilizes an investment consultant firm to provide performance measurement of the portfolio, and this firm also compares the management of funds and the investment returns against other similar funds and trusts to ensure the effectiveness of implemented investment strategies.

The primary objective of the System's investment strategy is to obtain the highest maximum return on invested assets within an acceptable level of risk. The cornerstone of the investment strategy is to identify, locate and purchase investments that complement the existing portfolio of assets. New portfolio additions are generally anticipated to offer strong investment performance while improving the diversification of the portfolio. Likewise, investments that have underperformed their expectations, or that no longer fit within the allocation model, are sold as it is prudent to do so. Additionally, the Board periodically reviews the strategic asset allocation to ensure that

expected return and risk (as measured by standard deviation) is consistent with the Systems long-term objectives and tolerance for risk. As a result of this investment structure, the System had a net yield on assets of 8.34% for fiscal 2018, slightly behind the strong 11.1% returns of 2017. These returns are well ahead of the 7.5% actuarial expectations, all while seeking to mitigate risk as much as possible due to the System's strong funded position.

Legislation and Outlook

The following plan provision changes pertaining to the Oklahoma Police Pension and Retirement System were enacted by the Oklahoma Legislature during the 2018 and 2017 legislative sessions:

2018

House Bill 1340 – Provides for a single, one-time, non-permanent increase in the payment of retirement benefits. A single payment of 2% of the gross annual retirement benefit will be paid to qualifying members, subject to a cap and floor on the payment. Dependent on the funded status of the plan, the maximum payment will be between \$1,000.00 and \$1,400.00. Additionally, qualifying members with at least 20 years of service will receive a payment of at least \$350.00.

House Bill 2515 – Clarifies that all benefits payable from the OPPRS, including payments from deferred option plans, shall be paid from the general assets of the fund. HB 2515 further provides that a permanent and total impairment equates to one hundred percent (100%) of the accrued retirement benefit.

2017

House Bill 1119 – Updates the rules for distributions to include rollover contributions for SIMPLE IRAs that are structured and timed in accordance with the IRS's SIMPLE IRA regulations. Authorizes the Board to obtain records from the Council on Law Enforcement Education and Training to verify any person's eligibility for membership in the System. Authorizes the Board to audit participating member municipalities to ensure compliance with the System's statutes and rules, including, but not limited to, compensation used to determine a member's paid base salary.

Awards and Acknowledgements

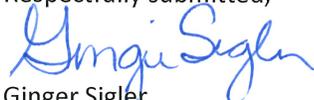
The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Oklahoma Police Pension and Retirement System for its Comprehensive Annual Financial Report for the fiscal year ended June 30, 2017.

To earn this certificate an entity must publish a comprehensive annual financial report that conforms to GFOA's program requirements and standards. The CAFR must be efficiently and effectively presented, and must satisfy all legal requirements as well as conform to generally accepted accounting principles.

The GFOA Certificate of Achievement only covers a one year period. The Oklahoma Police Pension and Retirement System received its first Certificate for the fiscal year ended June 30, 2011. We believe this report continues to meet GFOA's Certificate program requirements, and we are submitting it to them.

The preparation of this report would not have been possible without the efficient and dedicated service of the entire OPPRS staff. We would also like to credit the Board of Trustees for their unwavering efforts to maintain the highest level of professionalism in the financial management of the Oklahoma Police Pension and Retirement System.

Respectfully submitted,



Ginger Sigler
Executive Director



Deric Berousek
Chief Financial Officer

OPPRS Board of Trustees



Chris Cook
Chairman
District 1



David Roberts
Vice Chairman
District 6



Rob Groseclose
District 2



Thomas Cooper
District 3



Jeff Russell
District 4



Ryan Perkins
District 5



Jeff Cealka
District 7



Andy McPherson
Governor Appointee



Timothy Foley
Speaker of the House of
Representatives Appointee



Chris Chandler
Senate President Pro
Tempore Appointee



Tony Davenport
Oklahoma Municipal
League Appointee

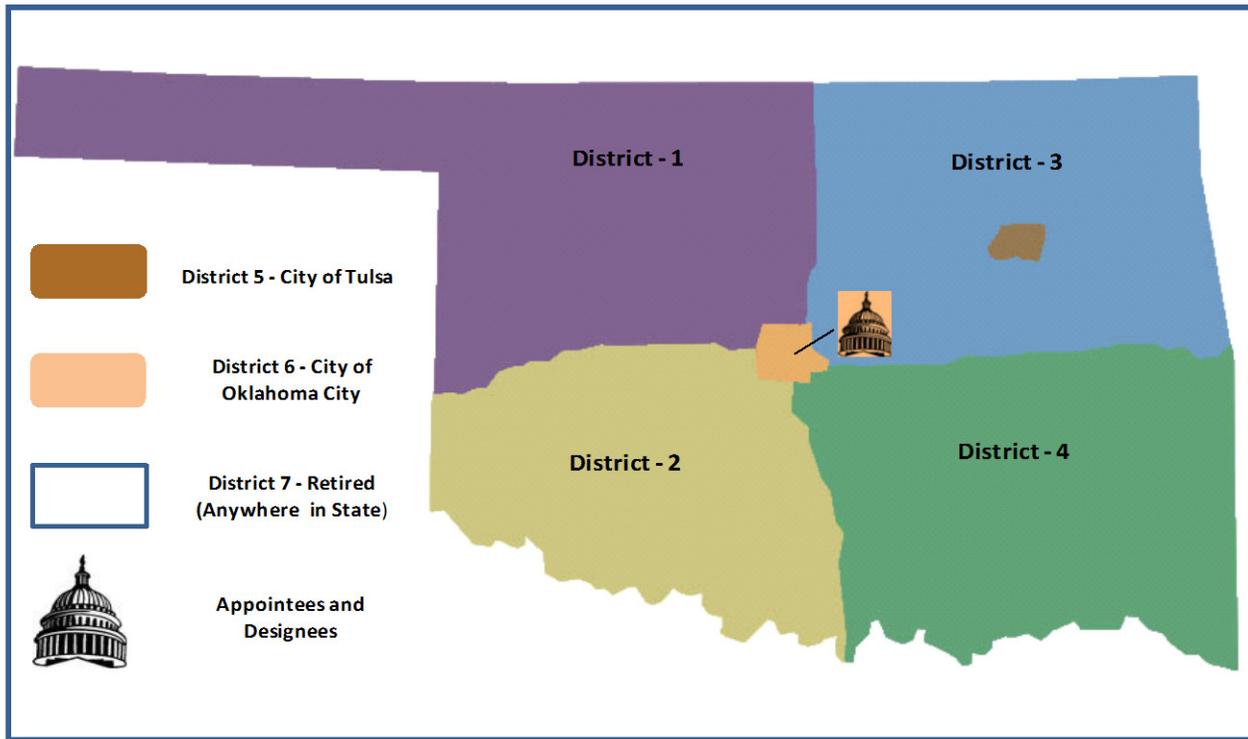


Sandra LaVenue
Designee of the State
Insurance Commissioner



Brandy Manek
Designee-Director of the
Office of Management
and Enterprise Services

Oklahoma Police Pension Board - Districts, Appointees and Designees



District 1 Board Member- North of I-40 and west of I-35, excluding any area comprising Oklahoma City.

District 2 Board Member- South of I-40 and west I-35, excluding any area comprising Oklahoma City.

District 3 Board Member- North of I-40 and east of I-35, excluding any area comprising Oklahoma City or Tulsa.

District 4 Board Member- South of I-40 and east of I-35, excluding any area comprising Oklahoma City.

District 5 Board Member - Comprising the area within the City of Tulsa.

District 6 Board Member - Comprising the area within the City of Oklahoma City.

District 7 Board Member - The entire area of the State, but must be retired.

8th Member of the Board - Appointed by the Speaker of the House of Representatives.

9th Member of the Board - Appointed by the President Pro Tempore of the Senate.

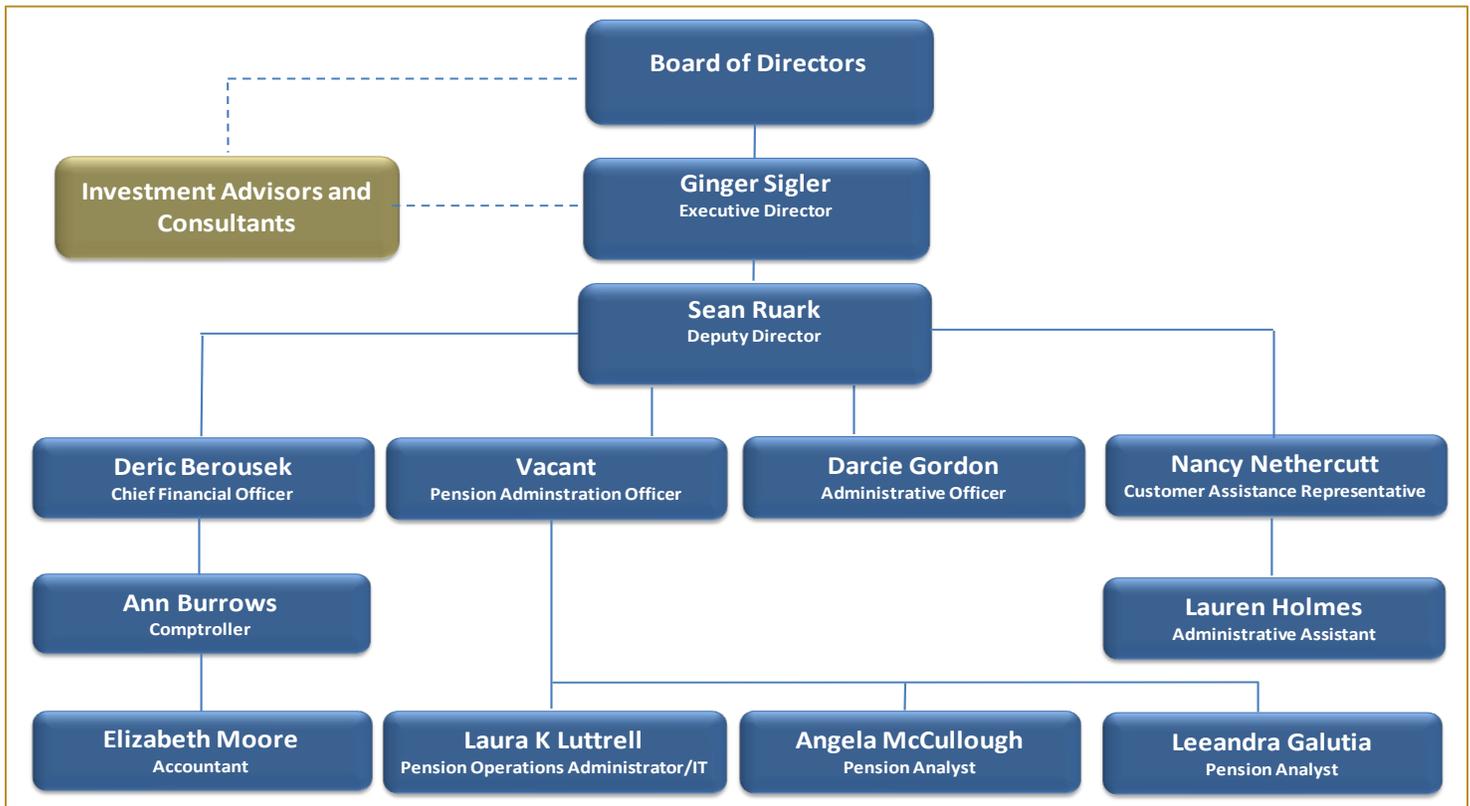
10th Member of the Board - Appointed by the Governor.

11th Member of the Board - Appointed by the President of the Oklahoma Municipal League.

12th Member of the Board - The State Insurance Commissioner or the Commissioner’s designee.

13th Member of the Board - The Director of Management and Enterprise Services (formerly the Office of State Finance), or the Director’s designee.

Organization of the Oklahoma Police Pension and Retirement System



Professional Advisors and Consultants*

Actuary

Cavanaugh Macdonald Consulting
3906 Raynor Parkway, Suite 106
Bellevue, NE 68123

Property Management Services

Wiggin Properties, LLC
5801 N. Broadway, Suite 120
Oklahoma City, OK 73118

Investment Consultant

Asset Consulting Group, LLC
231 S. Bemiston, 14th Floor
St. Louis, MO 63105

Independent Auditor

Finley & Cook, PLLC
1421 E. 45th Street
Shawnee, OK 74804

Legal Services (Tax and Pensions)

Davis, Graham & Stubbs, LLC
1550 Seventeenth Street, Suite 500
Denver, CO

Master Trustee (Custodian)

Bank of New York Mellon
135 Santilli Highway, 026-0313
Everett, MA 02149

* - The schedule of Investment Expenses and Professional Consultant Fees in the Other Supplementary Information Section and the Schedule of Investment Fees (pg. 87) & Broker Commissions (pg. 88) in the Investment Section contain additional information regarding professional advisors and consultants.



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Oklahoma Police
Pension & Retirement System

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2017

Christopher P. Morill

Executive Director/CEO



Financial Section

14 - Independent Auditors' Report
17 - Management Discussion and Analysis

BASIC FINANCIAL STATEMENTS

22 - Statements of Fiduciary Net Position
23 - Statements of Changes in Fiduciary Net Position
24 - Notes to the Financial Statements

REQUIRED SUPPLEMENTARY INFORMATION (RSI)

68 - Schedule of Changes in Employers' Net Pension Liability (Exhibit 1)
70 - Schedule Employers' Net Pension Liability (Exhibit 2)
71 - Schedule of Contributions from Employers and Other Contributing Entities (Exhibit 3)
72 - Schedule of Investment Returns (Exhibit 4)
73 - Notes to RSI

OTHER SUPPLEMENTARY INFORMATION

75 - Schedule of Investment Expenses (Schedule 1)
76 - Schedule of Administrative Expenses (Schedule 2)
77 - Schedule of Professional/Consultant Fees (Schedule 3)



Financial Section



INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of
the Oklahoma Police Pension and Retirement System

Report on the Financial Statements

We have audited the accompanying financial statements of the Oklahoma Police Pension and Retirement Plan (the "Plan"), administered by the Oklahoma Police Pension and Retirement System, which is a part of the State of Oklahoma financial reporting entity, which comprise the statements of fiduciary net position as of June 30, 2018 and 2017, and the related statements of changes in fiduciary net position for the years 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; 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.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States 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 from 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 auditors' 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 auditors consider 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.

(Continued)

INDEPENDENT AUDITORS' REPORT, CONTINUED

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Plan as of June 30, 2018 and 2017, and the changes in fiduciary net position of the Plan for the years then ended in accordance with accounting principles generally accepted in the United States.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States require that the management's discussion and analysis on pages 17 through 21 and the schedule of changes in the employers' net pension liability, the schedule of employers' net pension liability, the schedule of contributions from employers and other contributing entities, the schedule of investment returns, and the notes to the required supplementary information in Exhibits I, II, III, IV, and V 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, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the Plan's basic financial statements. The introductory section, the investment section, the actuarial section, the statistical section, and Schedules I, II, and III are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplementary information in Schedules I, II, and III is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits 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. In our opinion, the supplementary information in Schedules I, II, and III is fairly stated in all material respects in relation to the financial statements as a whole.

(Continued)

INDEPENDENT AUDITORS' REPORT, CONTINUED**Other Matters, Continued***Other Information, Continued*

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audits of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated September 17, 2018, on our consideration of the Plan'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 Plan's internal control over financial reporting and compliance.

Finley + Cook, PLLC

Shawnee, Oklahoma
September 17, 2018

Management's Discussion and Analysis

This discussion and analysis is presented by the management of the Oklahoma Police Pension and Retirement System, administrator of the Oklahoma Police Pension and Retirement Plan (collectively the "System" or "OPPRS"). This narrative and analysis offers a summary review of the System's financial activity for the fiscal years ended June 30, 2018, 2017 and 2016. The letter of transmittal preceding this narrative and the System's financial statements which follow should be referred to in conjunction with this analysis.

Financial Highlights

	For the Fiscal Year Ended June 30,			% Change 2018 from 2017	% Change 2017 from 2016	% Change 2016 from 2015
	(amounts in thousands)					
	2018	2017	2016			
Fiduciary Net Position	\$2,563,446	\$2,395,381	\$2,201,671	7.0%	8.8%	-2.8%
Contributions:						
Participating Cities	40,135	38,887	38,533	3.2%	0.9%	3.4%
Plan members	24,747	23,916	23,787	3.5%	0.5%	4.0%
Insurance Premium Tax	39,028	34,283	35,915	13.8%	-4.5%	1.2%
Net Investment Income (loss)	205,439	242,415	(21,104)	-15.3%	N/M	-128.3%
Benefits paid, including refunds and deferred option benefits	139,563	144,092	138,625	-3.1%	3.9%	-2.2%
Change in Fiduciary Net Position	168,065	193,710	(63,325)	-13.2%	N/M	-338.7%
Funded Ratio of the Plan	102.8%	101.8%	98.7%	1.0%	3.1%	0.5%
Total Plan Membership	9,448	9,220	9,049	2.5%	1.9%	2.4%

* - (N/M) Percentage change is not meaningful when prior period comparative amount is negative.

- During the 2018 fiscal year, solid returns across most domestic equity investments increased fiduciary net position by \$168.1 million, or 7.0%, to \$2.56 billion. System fiduciary net position increased \$193.7 million, or 8.8%, to \$2.40 billion in fiscal year 2017, due to strong investment returns across most asset categories. Modest losses on investments in a challenging market environment during fiscal year 2016 decreased net position by \$(63.3) million, or (2.8)%, to \$2.2 billion.
- In fiscal 2018 the System's actuarially funded ratio increased by 1.0% to a new high of 102.8% due to slightly lower than expected liability increases for the year. The System's fiscal year 2017 actuarially funded ratio increased by 3.1% to 101.8% on lower than expected liability costs, the previous record high for the system. The System's funded ratio increased .5% in fiscal year 2016 to 98.7% from 98.2% in fiscal year 2015. This modest change resulted from primarily stable actuarial asset and liability values for the year. Overall, with an actuarially funded ratio 102.8%, the plan remains financially sound and exceptionally positioned to meet future liabilities.
- The System's net membership increased by 228 members in fiscal 2018, a slight increase over the 171 net membership increase in 2017, with both years matching expectations. The System saw its total net membership grow by 216 in fiscal year 2016, which was a return to more normal expectations after a very low change in 2015. Contributions from members and employers increased 3.5% and 3.2%, respectively, on par with historical changes after a dip in 2017. Contributions from employers and members increased 0.9% and 0.5%, respectively in fiscal 2017, as salary changes remained relatively flat

for the year. Fiscal 2016 contributions from participating employers and plan members increased by 3.4% and 4.0%, respectively, for the year. The State insurance premium tax jumped significantly for fiscal 2018 on strong collections, increasing 13.8% or \$4.7 million. The State insurance premium tax contributions dipped by – 4.5%, or \$(1.63) million in fiscal 2017 after a steady string of increases in prior years. Stable State insurance premium tax collections for fiscal 2016 increased the System’s portion of this tax slightly by 1.2%, providing \$425,000 more to the System than in fiscal 2015.

Overview of the Financial Statements

This discussion and analysis introduces the System’s basic financial statements. They are comprised of 1) *The Statement of Fiduciary Net Position*, 2) *The Statement of Changes in Fiduciary Net Position*, and 3) *Notes to the Financial Statements*. This report also includes required supplementary information and other supplemental schedules. The System is a defined benefit, cost-sharing, multi-employer pension plan and is a component unit of the State of Oklahoma. The System, combined with other similar plans, form the State of Oklahoma’s fiduciary pension trust funds. The financial statements are presented using the flow of economic resources measurement focus and the accrual basis of accounting, similar in most regards to that of private business.

The System’s *Statement of Fiduciary Net Position* presents the ending balance of assets and liabilities at a specific moment in time. Assets of the system include cash and cash equivalents, investments, receivables and capital assets. System liabilities are primarily accounts and benefits payable. The difference between assets and liabilities produce a “net position” balance representing the fair value of assets held in trust to pay future benefits. Net positions shown increasing over time indicate improving financial conditions within the System, while a decrease in net position represents a decline in financial condition.

The *Statement of Changes in Fiduciary Net Position* details the sources of income and uses of resources that affected the System’s financial performance for a specified period or periods. The System’s primary income sources are from city and member contributions, a dedicated portion of the State of Oklahoma Insurance Premium Tax, investment gains or losses and investment income. Retirement benefits, investment charges and administrative costs are the primary expenses of the System.

The *Notes to the Financial Statements* immediately following the System’s financial statements should be considered an integral part of the financial statements. The notes cover significant details about the System’s financial structure and activities, providing a more complete understanding of the System’s financial results.

A *required supplementary information* section follows the notes. It includes the schedule of changes in employers’ net pension liability, schedule of employers’ net pension liability, schedule of contributions from employers and other contributing entities, and the schedule of investment returns. These schedules offer a useful means of assessing the long-term changes in the systems assets and liabilities, total pension liabilities, changes in the Plan’s net pension liability, and how effectively contributors to the System have met the actuarially determined contributions needed.

Other supplementary information contains several schedules that provide significant details regarding investment expenses, administrative expenses, and fees paid to consultants.

Condensed Financial Analysis

Condensed financial information for the System is presented in the following tables. This information provides a summary of System's financial activity for the years ended June 30, 2018, 2017 and 2016.

Condensed Summary of Fiduciary Net Position

	For the Fiscal Year Ended June 30,			% Change 2018 from 2017	% Change 2017 from 2016	% Change 2016 from 2015
	2018	2017	2016			
	(amounts in thousands)					
Cash and cash equivalents	\$ 38,434	\$ 32,732	\$ 40,021	17.4%	-18.2%	-16.7%
Receivables	14,729	15,389	15,929	-4.3%	-3.4%	10.4%
Investments, at fair value	2,514,904	2,352,247	2,149,725	6.9%	9.4%	-2.6%
Total Assets	2,568,067	2,400,368	2,205,675	7.0%	8.8%	-2.9%
Other liabilities	4,621	4,987	4,004	-7.3%	24.6%	-26.9%
Total Liabilities	4,621	4,987	4,004	-7.3%	24.6%	-26.9%
Fiduciary Net Position	\$ 2,563,446	\$ 2,395,381	\$2,201,671	7.0%	8.8%	-2.8%

Condensed Summary of Changes in Fiduciary Net Position

	For the Fiscal Year Ended June 30,			% Change 2018 from 2017	% Change 2017 from 2016	% Change 2016 from 2015
	2018	2017	2016			
	(amounts in thousands)					
Contributions	\$ 103,910	\$ 97,086	\$ 98,235	7.0%	-1.2%	2.7%
Net investment income	205,439	242,415	(21,104)	-15.3%	N/M*	-128.3%
Total Additions	309,349	339,501	77,131	-8.9%	340.2%	-54.7%
Benefits and refunds paid	116,710	112,448	108,360	3.8%	3.8%	5.3%
Deferred option benefits paid	22,853	31,644	30,265	-27.8%	4.6%	-21.9%
Administrative expenses	1,721	1,699	1,831	1.3%	-7.2%	-6.1%
Total Deductions	141,284	145,791	140,456	-3.1%	3.8%	-2.2%
Total Changes in Fiduciary Net Position	168,065	193,710	(63,325)	-13.2%	N/M*	-338.7%
Beginning Fiduciary Net Position	2,395,381	2,201,671	2,264,996	8.8%	-2.8%	1.2%
Ending Fiduciary Net Position	\$ 2,563,446	\$ 2,395,381	\$ 2,201,671	7.0%	8.8%	-2.8%

* - (N/M) Percentage change is not meaningful when a period's comparative amount is negative.

Analysis of Overall Financial Position and Results of Operations

Fiscal 2018 was a repeat of the prior year's strong results, increasing fiduciary net position by 7.0% to \$2.56 billion. In fiscal 2017 the System experienced a solid increase in fiduciary net position to \$2.40 billion, an 8.8% increase over fiscal 2016. This was achieved in both years through strong investment returns combined with stable benefit payments and expenses for the periods. Contributions increased significantly in 2018, jumping 7.0% over the previous year. Contributions had declined slightly in 2017, falling 1.2% on weaker insurance premium tax receipts. For the fiscal year ended June 30, 2016, the System's fiduciary net position decreased \$63.3 million, or 2.8%, to \$2.20 billion, due primarily to a directionless and challenging investment climate. Contributions from participating employers and plan members registered moderate increases in FY 2016, while

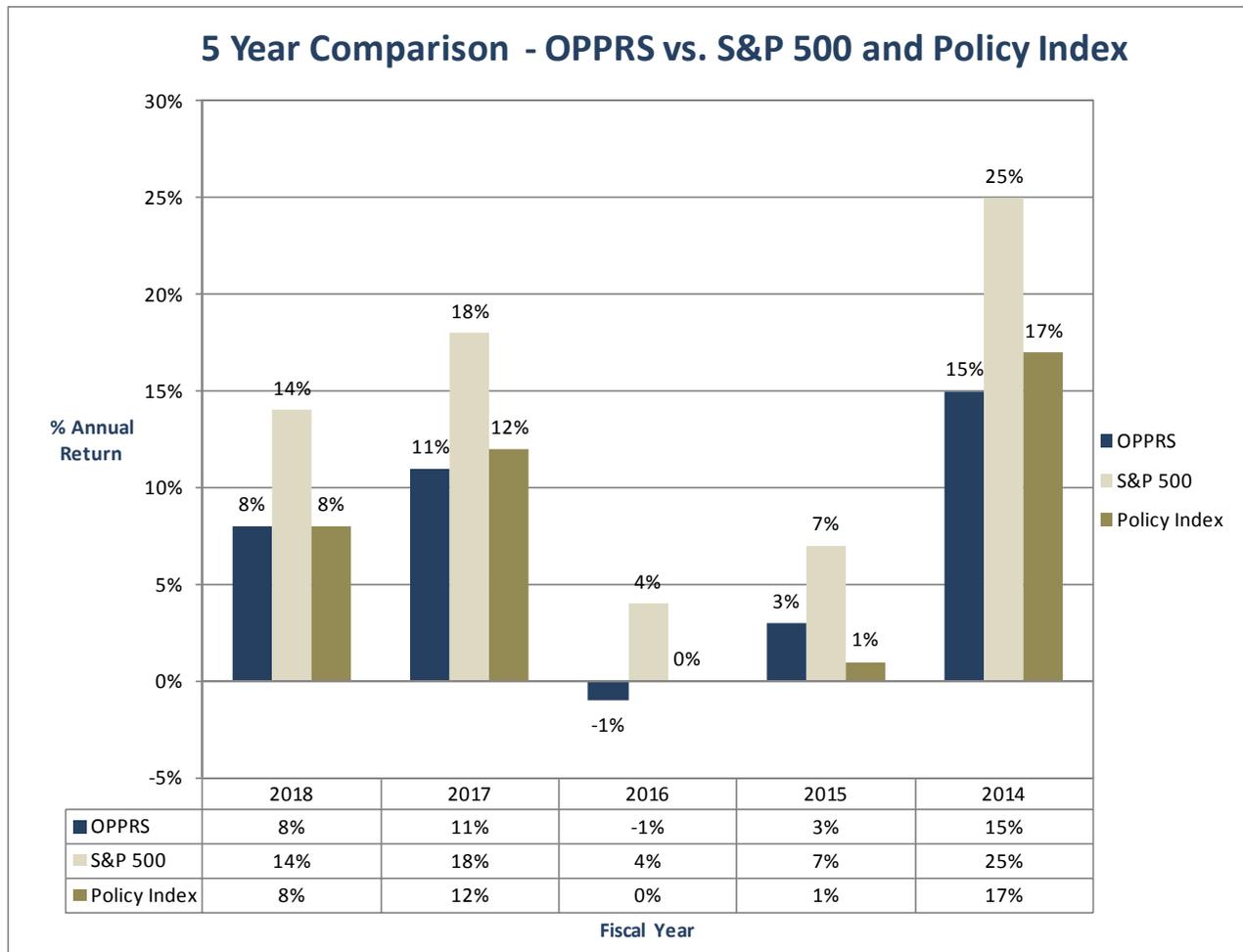
insurance premium tax collections from the State were stable and slightly improved for the year, signifying stable economic conditions. In fiscal 2018, there were 3720 members receiving benefits, a net increase of 41 over 2017, with total benefit payouts (including refunds) of \$116.7 million, \$4.3 million higher than 2017. At the fiscal year ended June, 2017, members receiving benefits increased by 102 to 3679, increasing benefit payouts (including refunds) to \$112.5 million, an increase of \$4.1 million over 2016. Members receiving benefits increased by 119 to 3,577 for fiscal year 2016, increasing benefit payments by 5.3% to \$108.4 million, an increase of \$5.4 million over fiscal year 2015. Deferred option payouts decreased significantly in 2018 to \$22.9 million, a 27.8% drop from the prior year on decreased retirements. Deferred option payouts increased slightly in 2017, up \$1.38 million over 2016, remaining relatively stable through the year. Payouts under the deferred options plan for fiscal 2016 decreased by \$8.5 million versus fiscal 2015, a 21.9% decrease for the year, as a substantially fewer members elected retirement in 2016. Since deferred option payouts are individual retirement elections, this expense can fluctuate considerably.

The System is funded by contributions from participating cities and their police officers, a dedicated percentage of the State of Oklahoma's insurance premium tax, and returns generated by investing the System's assets. In fiscal 2018 contributions increased a substantial 7.0% or \$6.82 million due primarily to a 13.8% increase in the insurance premium tax collections. For fiscal 2017, total contributions declined 1.2% or \$1.14 million due to a 4.5% decrease in insurance premium tax collections for the period. Contributions were up 2.7% during fiscal year 2016 compared to fiscal year 2015, due primarily to modest increases in member and employer contributions with a slight increase in insurance premium tax collections. Insurance premium tax collections increased by \$.4 million to \$35.9 million for 2016, while member and employer contributions increased \$.9 million and \$1.3 million, respectively. Presently the System receives 14% of the State's total insurance premium tax collected. The System received \$39.0 million, \$34.3 million, and \$35.9 million for the fiscal years ended June 30, 2018, 2017 and 2016, respectively.

Total benefit payments, including refunds and deferred options, decreased a slight 3.1% in 2018 to \$139.6 million due to a 28% decrease in deferred option benefits paid out. In fiscal 2017, total benefit payments increased 3.9% to \$144.1 million, a steady and expected increase over 2016. For fiscal year 2016, total benefit payments, including refunds and deferred option benefits, decreased 2.2% to \$138.6 million, over fiscal year 2015. This was due primarily to an easing in the number of members retiring in fiscal 2016 over the elevated number of members electing retirement in 2015. 2018, 2017 and 2016 all showed lower payments from the deferred option plans versus 2015, a period with a higher than average number of retirements.

Administrative expenses are composed primarily of payroll and related expenses for the employees of the System, legal and professional fees, data processing fees, medical and travel costs, and depreciation. 2018 administration costs increased a minimal 1.3% or \$22,000 over 2017 on relatively stable costs. Administrative expenses declined 7.2% in fiscal 2017 due to significantly reduced legal and depreciation costs. Total 2016 administrative expenses decreased 6.1% over fiscal year 2015, due primarily to a small decline in personnel related costs and a sizable decrease in depreciation charges. Administrative expenses were \$1.72 million, \$1.70 million and \$1.83 million for fiscal years 2018, 2017 and 2016, respectively.

The System's net yield on average assets was approximately 8.34% for the fiscal year ended June 30, 2018, as broad domestic equity gains offset marginally positive returns in emerging market equities and fixed income. Private equity holdings and real assets also contributed with strong returns for the fiscal year. Since the System values its investments at fair value, increasing volatility in both local and global markets can have a significant impact on the net position and operating results of the System. The System's net yield on average assets as compared to the S&P 500 stock index, an unmanaged pool of domestic equities, and its policy index, a combination of unmanaged domestic and international equity indices, were as follows for the periods ended June 30:



The System has experienced solid total return performance over the last 5 years, exceeding 8% in 3 of those years, while using broad asset diversification policies designed to provide high participation in up market returns while offering significant downside protection during difficult market conditions. Although the System is directly impacted by overall stock market changes, investments are made based on the expectation of long-term performance and in the best interest of the System’s members. With \$2.56 billion in assets allocated across a highly diversified range of investments, the System has the financial resources to maintain its current investment strategies while continually pursuing suitable investment options that will benefit its members.

Other Matters

As a matter of policy, the System attempts to stay fully invested at all times. Consequently, the System’s Fiduciary Net Position could be negatively affected should global stock and bond market volatility increase, or should such markets encounter an extended period of decline.

Requests for Information

This financial report is designed to provide a general overview of the System’s finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Executive Director or Chief Financial Officer, Oklahoma Police Pension and Retirement System, 1001 N.W. 63rd Street, Suite 305, Oklahoma City, OK 73116-7335. Additional information may also be obtained by visiting the System’s website located at www.OPPRS.ok.gov.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

STATEMENTS OF FIDUCIARY NET POSITION

<i>June 30,</i>	<i>2018</i>	<i>2017</i>
	<i>(Amounts in Thousands)</i>	
Assets		
Cash and cash equivalents	\$ 38,434	32,732
Receivables:		
Interest and dividends receivable	2,723	2,966
Contributions receivable from cities	2,275	1,794
Contributions receivable from participants	1,399	1,101
Insurance premium tax receivable	7,060	7,518
Receivable from brokers	1,272	2,010
Total receivables	14,729	15,389
Investments, at fair value:		
U.S. government securities	20,716	23,529
Domestic corporate bonds	173,620	162,104
International corporate bonds and bond funds	192,138	195,207
Domestic equities	648,955	602,164
International equities	378,142	356,206
Private equity—non-real estate	237,332	199,559
Low volatility hedge funds	193,685	186,745
Long/short hedge funds	363,676	335,626
Real estate—core and private equity	217,485	209,991
Commodities	84,855	76,866
Direct real estate—Columbus Square	4,300	4,250
Total investments, at fair value	2,514,904	2,352,247
Total assets	2,568,067	2,400,368
Liabilities		
Payable to brokers	2,646	1,214
Accounts payable	710	687
Deferred option benefits due and currently payable	1,265	3,086
Total liabilities	4,621	4,987
Fiduciary net position restricted for pensions	\$ 2,563,446	2,395,381

See Independent Auditors' Report.
See accompanying notes to financial statements.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

<i>Years Ended June 30,</i>	<i>2018</i>	<i>2017</i>
	<i>(Amounts in Thousands)</i>	
Additions		
Contributions:		
Cities	\$ 40,135	38,887
Plan members	24,747	23,916
Insurance premium tax	39,028	34,283
Total contributions	<u>103,910</u>	<u>97,086</u>
Investment income:		
From investing activities:		
Net appreciation in fair value of investments	205,758	241,989
Interest	7,311	7,241
Dividends	7,440	7,330
Other	566	310
Total investment income	<u>221,075</u>	<u>256,870</u>
Less investment expense	<u>(15,636)</u>	<u>(14,455)</u>
Income from investing activities	<u>205,439</u>	<u>242,415</u>
Net investment income	<u>205,439</u>	<u>242,415</u>
Total additions	<u>309,349</u>	<u>339,501</u>
Deductions		
Benefits paid	115,061	110,496
Deferred option benefits	22,853	31,644
Refunds of contributions	1,649	1,952
Administrative expenses	1,721	1,699
Total deductions	<u>141,284</u>	<u>145,791</u>
Net increase in net position	168,065	193,710
Net position restricted for pensions:		
Beginning of year	<u>2,395,381</u>	<u>2,201,671</u>
End of year	<u>\$ 2,563,446</u>	<u>2,395,381</u>

See Independent Auditors' Report.
See accompanying notes to financial statements.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS

June 30, 2018 and 2017

(1) NATURE OF OPERATIONS

The Oklahoma Police Pension and Retirement System (the “System”) was established by legislative act and became effective on January 1, 1981. The System is the administrator of a multiple-employer, cost-sharing defined benefit pension plan that provides participants with retirement, death, and disability benefits and a deferred option plan (the “Deferred Option”), both established by the State of Oklahoma. These plans are considered a single plan for financial reporting purposes. The System is part of the State of Oklahoma financial reporting entity and is included in the State of Oklahoma’s financial reports as a pension trust fund. The System covers substantially all police officers employed by the 144 participating municipalities and state agencies within the state of Oklahoma. The System administers the Oklahoma Police Pension and Retirement Plan (the “Plan”). For report purposes, the System is deemed to be the administrator of the Plan. The State of Oklahoma remits, through the Oklahoma Insurance Department, a portion of the insurance premium taxes collected by authority of the State. As a result of these contributions, the State is considered a non-employer contributing entity to the Plan.

The System is a part of the State of Oklahoma financial reporting entity, which is combined with other similar funds (multiple-employer, cost-sharing) to comprise the fiduciary-pension trust funds of the State of Oklahoma.

The Oklahoma Police Pension and Retirement System Board of Trustees (the “Board”) is responsible for the operation, administration, and management of the System. The Board also determines the general investment policy of the System’s assets. The Board is comprised of 13 members. Six members are active System members and represent specific geographic areas of the state. They must work for a police department physically located in the district they serve. The 7th district shall be represented by a retired member of the System and encompasses the entire state area. These elected members serve 3-year terms. The remaining six members are either governmental office holders or are appointed as follows: one by the Speaker of the House of Representatives, one by the President Pro Tempore of the Senate, one by the Governor, and one by the President of the Oklahoma Municipal League; the final two members of the Board are the State Insurance Commissioner or designee and the Director of the Office of Management and Enterprise services or designee. The appointees and office holders or designees all serve a 4-year term, with the governor appointee’s term being coterminous with that office. The appointees of the board or designees of ex officio members should have either demonstrated professional experience in investment or funds management, demonstrated experience in the banking profession, be licensed to practice law in the state and have demonstrated professional experience in commercial matters, or be licensed by the Oklahoma Accountancy Board to practice in this state as a public accountant or a certified public accountant.

See Independent Auditors’ Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(1) NATURE OF OPERATIONS, CONTINUED

The System's participants at June 30 consisted of:

	<u>2018</u>	<u>2017</u>
Retirees and beneficiaries currently receiving benefits	3,720	3,658
Vested members with deferred benefits	147	132
Deferred Option plan members	11	14
	<u>3,878</u>	<u>3,804</u>
Active plan members:		
Vested	2,505	2,446
Nonvested	3,065	2,970
Total active plan members	<u>5,570</u>	<u>5,416</u>
Total members	<u>9,448</u>	<u>9,220</u>
Number of participating municipalities and state agencies	<u>144</u>	<u>141</u>

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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

Basis of Accounting

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 in which they are earned and become measurable, and investment purchases and sales are recorded as of their trade date. The financial statements are in conformity with provisions of Governmental Accounting Standards Board Statement No. 67, *Financial Reporting for Pension Plans—an Amendment of GASB Statement No. 25* (GASB 67).

The Plan is administered by the System, a part of the State of Oklahoma financial reporting entity, which together with other similar pension and retirement funds comprises the fiduciary-pension trust funds of the State of Oklahoma. Administrative expenses are paid with funds provided by operations of the Plan.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Recent Accounting Pronouncements

In June 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75). GASB 75 addresses employer and governmental non-employer contributing entities' accounting and financial reporting when participating in an other postemployment benefit (OPEB) plan. This statement requires proper recognition of OPEB liabilities by employers and requires a more comprehensive measure of OPEB expense. More robust disclosures will also improve transparency and accountability. GASB 75 is effective for financial statements for the periods beginning after June 15, 2017. The Plan adopted GASB 75 effective July 1, 2017, for the June 30, 2018, reporting year. The adoption had no significant impact on the financial statements.

In June 2017, GASB issued Statement No. 87, *Leases* (GASB 87). GASB 87 provides accounting and reporting guidance for leases, effectively considering most leases, other than those for terms of less than one year, as capital leases. GASB 87 guides that lessee's will recognize a lease liability at the outset of the lease, and an intangible right-to-use lease asset. The liability will be amortized as payments are made, and the asset will generally be depreciated over the shorter of the lease term or the service life of the asset. The Plan will adopt GASB 87 on July 1, 2020, for the June 30, 2021, reporting year. The Plan does not expect GASB 87 to have a significant impact on the financial statements.

In March 2018, GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements* (GASB 88). GASB 88 provides certain clarifications regarding debt as a liability and identifies additional required disclosures related to debt, including direct borrowings and direct placements of debt. The Plan will adopt GASB 88 on July 1, 2019, for the June 30, 2020, reporting year. The Plan does not expect GASB 88 to have a significant impact on the financial statements.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period* (GASB 89). GASB 89 directs that interest costs incurred during the construction period of an asset be expensed in the period incurred. GASB 89 changes previous guidance regarding capitalized construction costs where such costs were typically included in the capitalized cost of the asset constructed and depreciated over time. The Plan will adopt GASB 89 on July 1, 2020, for the June 30, 2021, reporting year. The Plan does not expect GASB 89 to significantly impact the financial statements.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Use of Estimates

The preparation of the Plan's financial statements in conformity with accounting principles generally accepted in the United States requires management of the Plan to make significant estimates and assumptions that affect the reported amounts of net position restricted for pensions at the date of the financial statements and the actuarial information in Exhibits I, II, and III included in the required supplementary information as of the benefit information date, the changes in the Plan's net position during the reporting period, and when applicable, disclosures of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

Risks and Uncertainties

Contributions to the Plan and the actuarial information in Exhibits I, II, and III included in the required supplementary information are reported based on certain assumptions pertaining to interest rates, inflation rates, and employee compensation and demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions may occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the financial statements.

Plan Contributions

Contributions to the Plan are recognized when due pursuant to formal commitments, as well as statutory or contractual requirements.

Plan Benefit Payments and Refunds

Benefits and refunds of the Plan are recognized when due and payable in accordance with the terms of the Plan.

Receivables

At June 30, 2018 and 2017, the Plan had no long-term receivables. All the receivables reflected in the statements of fiduciary net position are expected to be received and available for use by the Plan in its operations. Also, no allowance for any uncollectible portions is considered necessary.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Investments

Management of the Plan is authorized to invest in eligible investments as approved by the Board as set forth in its 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 anytime the need should arise at the discretion of the Board.

Investment Allocation Policy—The Board's asset allocation policy will currently maintain approximately 60% of assets in equity instruments, including public equity, long-short hedge, venture capital, and private equity strategies; approximately 25% of assets in fixed income to include investment grade bonds, high yield and non-dollar denominated bonds, convertible bonds, low volatility hedge funds, and absolute return strategies; and 15% of assets in real assets to include real estate, commodities, and other strategies.

Significant Investment Policy Changes Made During the Year—During the years ended June 30, 2018 and 2017, there were no significant investment policy changes.

Rate of Return—For the years ended June 30, 2018 and 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 8.64% and 11.11%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Method Used to Value Investments—As a key part of the Plan's activities, it holds investments that are measured and reported at fair value on a recurring basis. Generally accepted accounting principles establish a fair value hierarchy for the determination and measurement of fair value. This hierarchy is based on the type of valuation inputs needed to measure the fair value of an asset. The hierarchy generally is as follows:

1. Level 1—Unadjusted quoted prices in active markets for identical assets.
2. Level 2—Quoted prices for similar assets, or inputs that are observable or other forms of market corroborated inputs.
3. Level 3—Pricing based on best available information, including primarily unobservable inputs and assumptions market participants would use in pricing the asset.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Investments, Continued

Method Used to Value Investments, Continued

Short-term investments include an investment fund composed of an investment in units of a commingled trust fund of the Plan's custodial agent (which is valued at amortized cost, which approximates fair value), commercial paper, treasury bills, and U.S. government agency securities. Active manager accounts holding debt and equity securities are reported at fair value, as determined by the Plan's custodial agent, using pricing services or prices quoted by independent brokers based on the latest reported sales prices in active markets, and at current exchange rates for securities traded on national or international exchanges. The fair value of the pro rata share of units owned by the Plan in equity index and commingled trust funds is determined by the respective fund trustee or manager based on quoted sales prices of the underlying securities. The fair value of hedge fund and private equity investments are priced by each respective manager using a combination of observable and unobservable inputs. The fair value of the real estate is determined from independent appraisals and discounted income approaches. Investments which do not have an established market are reported at estimated fair value based on primarily unobservable inputs.

Net investment income (loss) includes net appreciation (depreciation) in the fair value of investments, interest income, dividend income, investment income from real estate, securities lending income and expenses, and investment expenses, which includes investment management and custodial fees and all other significant investment related costs. Foreign currency translation gains and losses are reflected in the net appreciation (depreciation) in the fair value of investments. Investment income from real estate includes the Plan's share of income from operations, net appreciation (depreciation) in the fair value of the underlying real estate properties, and the Plan's real estate investment management fees. The fair value of the limited partnerships is determined by managers of the partnerships based on the values of the underlying assets.

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

The Plan may invest in various traditional financial instruments that fall under the broad definition of derivatives. The Plan's derivatives may include collateralized mortgage obligations, convertible stocks and bonds, and variable rate instruments. These investments do not increase investment risk beyond allowable limits specified in the Plan's investment policy.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Investments, Continued

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

The investment policy limits the concentration of each portfolio manager. Except as noted below, no investment with a single firm exceeds 5% of the Plan's net position.

The Plan invests in domestic equity index funds, domestic equity commingled trust funds, and international equity funds. The Plan shares the risk of loss in these funds with other participants in proportion to its respective investment. Because the Plan does not own any specific identifiable investment securities of these funds, the market risk associated with any derivative investments held in these funds is not apparent. The degree of market risk depends on the underlying portfolios of the funds, which were selected by the Plan in accordance with its investment policy guidelines, including risk assessment. The international funds invest primarily in equity securities of entities outside the United States and may enter into forward contracts to purchase or sell securities at specified dates in the future at a guaranteed price in a foreign currency to protect against fluctuations in exchange rates of foreign currency.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Investments, Continued

The following tables present individual investments held by a single organization that exceed 5%* of the Plan's fiduciary net position at June 30:

Classification of <u>Investment</u>	Name of <u>Organization</u>	Shares <u>Held</u>	2018	
			<u>Cost</u>	<u>Fair Value</u>
			<i>(Amounts in Thousands)</i>	
Low volatility hedge funds	PAAMCO	130,350,680	\$ 70,299	130,351
Long/short hedge funds	Grosvenor	363,676,282	215,200	363,676
Domestic equities	Northern Trust	14,854,327	308,985	455,018
International equities	Mondrian	3,939,387	56,861	138,343
Domestic corporate bonds, international corporate bonds, and private equity—non-real estate	Oaktree Capital Mgmt.	15,305,695	130,064	138,304

* While the investment with a single entity may exceed 5% of the Plan's net position, each investment is comprised of numerous individual securities. As such, no individual security exceeds the 5% threshold.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Investments, Continued

Classification of <u>Investment</u>	Name of <u>Organization</u>	Shares <u>Held</u>	2017	
			<u>Cost</u>	<u>Fair Value</u>
Low volatility hedge funds	PAAMCO	126,868,066	\$ 70,299	126,868
Long/short hedge funds	Grosvenor	335,626,204	215,200	335,626
Domestic equities	Northern Trust	15,406,610	320,452	412,054
International equities	Mondrian	3,939,387	56,861	131,552
Domestic corporate bonds, international corporate bonds, and private equity—non-real estate	Oaktree Capital Mgmt.	15,110,826	124,700	133,654

* While the investment with a single entity may exceed 5% of the Plan's net position, each investment is comprised of numerous individual securities. As such, no individual security exceeds the 5% threshold.

Repurchase/Reverse Repurchase Agreement

The Plan has a master repurchase/reverse repurchase agreement. Under the agreement, the Plan may enter into a purchase/sale of a security with a simultaneous agreement to resell/repurchase the security at a specified future date and price. The Plan did not enter into any transactions under this agreement during fiscal year 2018 or 2017.

Capital Assets

Capital assets, which consist of software, are stated at cost less accumulated depreciation. Capital assets were fully depreciated as of June 30, 2018, and June 30, 2017.

Income Taxes

The Plan is exempt from federal and state income taxes.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Plan Termination

In the event the Plan terminates, the Oklahoma Statutes contain no provision for the order of distribution of the net position of the Plan. Plan termination would take an act of the Oklahoma Legislature, at which time the order of distribution of the Plan's net position would be addressed.

Administrative Items

Operating Leases

The Plan had an operating lease which ended June 30, 2017. The lease has been renewed for the period July 1, 2017, through June 30, 2018. Total lease expense was approximately \$89,000 for each of the years ended June 30, 2018 and 2017.

Compensated Absences

Employees of the System earn annual vacation leave at the rate of 10 hours per month for up to 5 years of service, 12 hours per month for service of 5 to 10 years, 13.3 hours per month for service of 10 to 20 years, and 16.7 hours per month for over 20 years of service. Unused annual leave may be accumulated to a maximum of 480 hours. All accrued leave is payable upon termination, resignation, retirement, or death. As of June 30, 2018 and 2017, approximately \$129,000 and \$117,000, respectively, was included in accounts payable as the accrual for compensated absences.

The changes in the accrual for compensated absences for the years ended June 30 were as follows:

	<u>2018</u>	<u>2017</u>
Balance at beginning of year	\$ 116,599	129,284
Additions and transfers	86,950	80,542
Amount used	<u>(74,449)</u>	<u>(93,227)</u>
Balance at end of year	<u>\$ 129,100</u>	<u>116,599</u>

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Administrative Items, Continued

Retirement Expense

Employees of the System are eligible to participate in the Oklahoma Public Employees Retirement Plan, which is administered by the Oklahoma Public Employees Retirement System (OPERS). OPERS is a multiple-employer, cost-sharing public retirement defined benefit pension plan and a defined contribution plan. OPERS provides retirement, disability, and death benefits to its plan members and beneficiaries. OPERS issues a publicly available financial report which includes financial statements and required supplementary information for OPERS. That report may be obtained by writing to the Oklahoma Public Employees Retirement System, 5801 N. Broadway Extension, Suite 200, Oklahoma City, OK 73118.

Defined Benefit Plan

Eligible employees of the System are required to contribute 3.5% of their annual covered salary to the defined benefit plan. The System is required to contribute at an actuarially determined rate, which was 16.5% of annual covered payroll as of June 30, 2018, 2017, and 2016. During 2018, 2017, and 2016, totals of \$142,975, \$158,085, and \$151,095, respectively, were paid to OPERS. The System has contributed 100% of required contributions to OPERS for 2018, 2017, and 2016. The System's and the employees' portions of those amounts were as follows:

	<u>2018</u>	<u>2017</u>	<u>2016</u>
System's portion	\$ 117,954	130,420	124,653
Employees' portion	<u>25,021</u>	<u>27,665</u>	<u>26,442</u>
	<u>\$ 142,975</u>	<u>158,085</u>	<u>151,095</u>

The Plan adopted GASB 68 as of July 1, 2014, as it applies to its participation in OPERS. The effects on the financial statements of the Plan as a result of the adoption of GASB 68 are considered immaterial.

The Plan adopted GASB 75 as of July 1, 2017, as it applies to its participation in OPERS, OPEB, and Implicit Rate Subsidy. The effects on the financial statements of the Plan as a result of the adoption of GASB 75 are considered immaterial.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Administrative Items, Continued

Defined Contribution Plan

Effective November 1, 2015, OPERS established the Pathfinder Defined Contribution Plan (“Pathfinder”), a mandatory defined contribution plan for eligible state employees who first become employed by a participating employer on or after November 1, 2015, and have no prior participation in OPERS. Under Pathfinder, members will choose a contribution rate which will be matched by their employer up to 7%. All state employers with Pathfinder participants contribute 16.5% of salary, with contributions in excess of the matched amount going into the Defined Benefit Plan, as required by statute. During 2018 and 2017, totals of \$17,991 and \$10,346, respectively, were paid to OPERS, representing 100% of the required contributions. The System’s and employees’ contributions to Pathfinder were as follows:

	<u>2018</u>	<u>2017</u>
System's portion	\$ 12,632	7,264
Employees' portion	<u>5,359</u>	<u>3,082</u>
	<u>\$ 17,991</u>	<u>10,346</u>

Risk Management

The Risk Management Division of the Office of Management and Enterprise Services is empowered by the authority of Title 74 O.S. Supp. 1993, Section 85.34 et seq. The Division is responsible for the acquisition and administration of all insurance purchased by the State of Oklahoma or administration of any self-insurance plans and programs adopted for use by the State of Oklahoma for certain organizations and bodies outside of state government, at the sole expense of such organizations and bodies.

The Division is authorized to settle claims of the State of Oklahoma and shall govern the dispensation and/or settlement of claims against a political subdivision. In no event shall self-insurance coverage provided by the State of Oklahoma, an agency, or other covered entity exceed the limitations on the maximum dollar amount of liability specified by the Oklahoma Government Tort Claims Act, as provided by Title 51 O.S. Supp. 1988, Section 154. The Division oversees the collection of liability claims owed to the State of Oklahoma incurred as the result of a loss through the wrongful or negligent act of a private person or other entity.

See Independent Auditors’ Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Administrative Items, Continued

Risk Management, Continued

The Division is also charged with the responsibility to immediately notify the attorney general of any claims against the State of Oklahoma presented to the Division. The Division purchases insurance policies through third-party insurance carriers that ultimately inherit the risk of loss. The Division annually assesses each State agency, including the System, their pro rata share of the premiums purchased. The System has no obligations to any claims submitted against the System.

Date of Review of Subsequent Events

The Plan has evaluated subsequent events through September 17, 2018, the date that the financial statements were available to be issued, and determined that no subsequent events have occurred which require adjustment to or disclosure in the financial statements.

(3) DESCRIPTION OF THE PLAN

The following brief description of the Plan is provided for general information purposes only. Participants should refer to the Oklahoma Statutes for more complete information.

General

The Plan is a multiple-employer, cost-sharing defined benefit pension plan covering members who have actively participated in being a police officer for an Oklahoma municipality or state agency which is a member of the Plan.

Contributions

The contribution requirements of the Plan are at an established rate determined by Oklahoma statute and are not based on actuarial calculations.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(3) DESCRIPTION OF THE PLAN, CONTINUED

Contributions, Continued

An eligible municipality may join the Plan on the first day of any month. Upon approval by the Board, its membership is irrevocable. All persons employed as police officers are required to participate in the Plan upon initial employment with the police department of the participating municipality. The Oklahoma Legislature has authority to establish and amend contribution amounts. Until July 1, 1991, each municipality contributed to the System 10% of the actual base salary of each participant employed by the municipality. Beginning July 1, 1991, municipality contributions increased by 1/2% per year and continued this increase until July 1, 1996, when the contribution level reached 13%, which it remains at currently. Each participant of the Plan contributes 8% of their actual paid base salary. Additional funds are provided to the Plan by the State of Oklahoma, a non-employer contributing entity, through a 14% allocation of the tax on premiums collected by insurance companies operating in Oklahoma and by the net investment income generated on assets held by the Plan. The Plan is responsible for paying administrative costs. Administrative costs of the Plan are paid by using the earnings from the invested assets of the Plan.

Benefits

In general, the Plan provides defined retirement benefits based on members' final average compensation, age, and term of service. In addition, the retirement program provides for benefits upon disability and to survivors upon death of eligible members. The Plan's benefits are established and amended by State statute. Retirement provisions are as follows:

- The normal retirement date under the Plan is the date upon which the participant completes 20 years of credited service, regardless of age. Participants become vested upon completing 10 years of credited service as a contributing participant of the Plan. No vesting occurs prior to completing 10 years of credited service. Participants' contributions are refundable, without interest, upon termination prior to normal retirement. Participants who have completed 10 years of credited service may elect a vested benefit in lieu of having their accumulated contributions refunded. If the vested benefit is elected, the participant is entitled to a monthly retirement benefit commencing on the date the participant reaches 50 years of age or the date the participant would have had 20 years of credited service had employment continued uninterrupted, whichever is later.
- Monthly retirement benefits are calculated at 2.5% of the final average salary (defined as the average paid base salary of the officer over the highest 30 consecutive months of the last 60 months of credited service) multiplied by the years of credited service, with a maximum of 30 years of credited service considered.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(3) DESCRIPTION OF THE PLAN, CONTINUED

Benefits, Continued

- Monthly benefits for participants due to permanent disability incurred in the line of duty are 2.5% of the participants' final average salary multiplied by 20 years. This disability benefit is reduced by stated percentages for partial disability based on the percentage of impairment. After 10 years of credited service, participants who retire due to disability incurred from any cause are eligible for a monthly benefit based on 2.5% of their final average salary multiplied by the years of service. This disability benefit is also reduced by stated percentages for partial disability based on the percentage of impairment. Effective July 1, 1998, once a disability benefit is granted to a participant, that participant is no longer allowed to apply for an increase in the dollar amount of the benefit at a subsequent date.
- Survivor's benefits are payable in full to the participant's beneficiary upon the death of a retired participant. The beneficiary of any active participant killed in the line of duty is entitled to a pension benefit. Effective July 1, 1999, a \$5,000 death benefit is also paid, in addition to any survivor's pension benefits under the Plan, to the participant's beneficiary or estate for active or retired members.
- The Deferred Option allows participants otherwise eligible for a normal retirement benefit to defer terminating employment and drawing retirement benefits for a period not to exceed 5 years. Under the Deferred Option, retirement benefits are calculated based on compensation and service at the time of election and a separate account is established for each participant. During the participation period, the employee's retirement benefit is credited to the participant's account along with a portion of the employer's contribution and interest. Interest is credited at a rate of 2% below the rate of return on the investment portfolio of the Plan, with a guaranteed minimum interest equal to the assumed actuarial interest of 7.5%. Employee contributions cease once participation in the Deferred Option is elected. At the conclusion of participation in the Deferred Option, the participant will receive the balance in the separate account under payment terms allowed by the Deferred Option and will then begin receiving retirement benefit payments as calculated at the time of election.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(3) DESCRIPTION OF THE PLAN, CONTINUED

Benefits, Continued

- In the 2003 Legislative Session, Senate Bill 688 and House Bill 1464 created a “Back” DROP for members of the System. The “Back” DROP is a modified deferred retirement option plan. The “Back” DROP allows the member flexibility by not having to commit to terminate employment within 5 years. Once a member has met their normal retirement period of 20 years, the member can choose, upon retirement, to be treated as if the member had entered into the “Back” DROP. A member, however, cannot receive credit to the “Back” DROP account based upon any years prior to when the member reached their normal retirement date. Once a member is ready to retire, the member can make the election to participate in the “Back” DROP and can receive a “Back” DROP benefit based upon up to 5 years of participation. The member’s regular retirement benefit will not take into account any years of service credited to the “Back” DROP.
- In 2006, the Board approved a method of payment called the Deferred Option Payout Provision (the “Payout Provision”). The Payout Provision allows a retired member who has completed participation in the Deferred Option or the “Back” DROP the ability to leave their account balance in the Plan. The retired member’s account balance will be commingled and reinvested with the total assets, and therefore the member will not be able to direct their personal investments. Written election must be made to the Board no more than 30 days following the termination of employment.
- Upon participating in the Payout Provision, a retired member shall not be guaranteed a minimum rate of return on their investment. A retired member shall earn interest on their account as follows:
 - a) The retired member shall earn two percentage points below the net annual rate of return of the investment portfolio of the System.
 - b) If the portfolio earns less than a 2% rate of return, but more than zero, the retired member shall earn zero percentage points.
 - c) If the portfolio earns less than zero percentage points, there shall be a deduction from the retired member’s balance equal to the net annual rate of return of the investment portfolio of the System.

Interest as earned above shall be credited to the retired member’s account.

See Independent Auditors’ Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(3) DESCRIPTION OF THE PLAN, CONTINUED

Benefits, Continued

The Oklahoma Legislature has the authority to grant percentage increases or special one-time payments to persons receiving benefits from the Plan. Additionally, certain retirees are entitled to receive a cost-of-living adjustment (COLA) when a COLA is granted to active police officers in the retiree's city. Participants eligible to receive both types of benefit increases are to receive the greater of the legislative increase or the benefit increase the participant would receive pursuant to the COLA provision.

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS

Cash and Cash Equivalents

At June 30, cash and cash equivalents were composed of the following:

	<u>2018</u>	<u>2017</u>
	<i>(Amounts in Thousands)</i>	
Short-term investments:		
OK INVEST	\$ 19,150	7,913
Domestic	<u>19,283</u>	<u>24,796</u>
Total short-term investments	<u>38,433</u>	<u>32,709</u>
Cash—Commerce Bank; BNY Mellon	<u>1</u>	<u>23</u>
Total cash and cash equivalents	<u>\$ 38,434</u>	<u>32,732</u>

At June 30, 2018 and 2017, as a result of outstanding checks and deposits, the carrying amount of the Plan's OK INVEST account totaled \$19,149,718 and \$7,912,676, respectively, and the bank balance totaled \$19,879,409 and \$11,497,347, respectively. The carrying amounts of the domestic short-term investment and cash on deposit with BNY Mellon and Commerce Bank were the same as the bank balances at June 30, 2018 and 2017.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Cash and Cash Equivalents, Continued

Included in cash and cash equivalents are investments included in the State of Oklahoma's OK INVEST Portfolio. Because these investments are controlled by the State of Oklahoma and the balances change on a daily basis, they are considered cash equivalents. The balances are overnight funds consisting of U.S. agencies, mortgage-backed agencies, U.S. Treasury notes, municipal bonds, foreign bonds, tri-party repurchase agreements, certificates of deposit, commercial paper, and money market mutual funds. As of June 30, the investment balances were as follows:

	<u>2018</u>	<u>2017</u>
U.S. agencies	\$ 9,057,042	4,846,682
Mortgage-backed agencies	7,852,824	4,605,941
U.S. Treasury notes	89,842	53,037
Municipal bonds	120,133	180,048
Certificates of deposit	747,338	512,178
Commercial paper	71,885	110,153
Money market mutual funds	<u>1,940,345</u>	<u>1,189,308</u>
	<u>\$ 19,879,409</u>	<u>11,497,347</u>

The Plan's other short-term investments consist of temporary investments in commingled trust funds of the Plan's custodial agent, commercial paper, treasury bills, and U.S. government agency securities. The commingled trust funds are composed of high-grade money market instruments with short maturities. Each participant shares the risk of loss in proportion to their respective investment in the funds.

Custodial Credit Risk

Custodial credit risk is the risk that in the event of the failure of a counterparty, the Plan will not be able to recover the value of its investments. Deposits are exposed to custodial credit risk if they are uninsured and uncollateralized. Investment securities are exposed to custodial credit risk if they are uninsured, are not registered in the name of the Plan, and are held by a counterparty or the counterparty's trust department but not in the name of the Plan. While the investment policy does not specifically address custodial credit risk of deposits, it does limit the amount of cash and short-term investments to no more than 5% of each manager's portfolio. At June 30, 2018 and 2017, approximately \$19,283,000 and \$24,796,000, respectively, of cash and cash equivalents was uninsured and uncollateralized. The policy also provides that investment collateral be held by a third-party custodian with whom the Plan has a current custodial agreement in the Plan's name.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The investment policy limits foreign equity investments to 15% of total assets through its asset allocation policy. Investments in equities and fixed-income securities as of June 30 are shown by monetary unit to indicate possible foreign currency risk.

<u>Currency</u>	2018		
	<u>Equities</u>	<u>Corporate Bonds and Bond Funds</u>	<u>Total</u>
	<i>(Amounts in Thousands)</i>		
Commingled funds:			
Barings Focused International Equity Fund	\$ 122,126	-	122,126
Mondrian International Equity Fund	138,343	-	138,343
Alliance Bernstein EM Strategic Core Fund	81,104	-	81,104
Wasatch Emerging Markets Small Capitalization Fund	36,569	-	36,569
Loomis Sayles World Bond Fund	-	96,749	96,749
Oaktree Global High Yield Bond Fund	-	80,028	80,028
OCM International Convertible Fund	-	15,361	15,361
	<u>\$ 378,142</u>	<u>192,138</u>	<u>570,280</u>
<u>Currency</u>	2017		
	<u>Equities</u>	<u>Corporate Bonds and Bond Funds</u>	<u>Total</u>
	<i>(Amounts in Thousands)</i>		
Commingled funds:			
Barings Focused International Equity Fund	\$ 112,010	-	112,010
Mondrian International Equity Fund	131,552	-	131,552
Alliance Bernstein EM Strategic Core Fund	78,872	-	78,872
Wasatch Emerging Markets Small Capitalization Fund	33,772	-	33,772
Loomis Sayles World Bond Fund	-	94,897	94,897
Oaktree Global High Yield Bond Fund	-	89,732	89,732
OCM International Convertible Fund	-	10,578	10,578
	<u>\$ 356,206</u>	<u>195,207</u>	<u>551,413</u>

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Foreign Currency Risk, Continued

The Plan was exposed to foreign currency risk through investments in the following commingled funds:

- Barings Focused International Equity Fund—The fund seeks long-term capital growth by investing in a concentrated portfolio of equity securities from developed international markets combined with a limited number of equities from emerging markets.
- Mondrian International Equity Fund—The fund’s investment objective is long-term total return through a value-driven approach of equity selection. The fund pursues this strategy by investing primarily in non-U.S. and emerging market equity securities.
- Alliance Bernstein Emerging Markets Strategic Core Equity—The fund seeks long-term capital growth through a bottom-up fundamental selection of equities in global emerging markets. The fund will generally hold between 70-85 equity positions which may include up to 20% in developed-market domiciled companies that have significant emerging market exposure. The fund may also hold up to 10% in Frontier Market companies.
- Wasatch Emerging Markets Small Capitalization Fund—The fund seeks long-term capital growth by investing primarily in equity securities of small companies located in emerging markets. Companies will generally have a market capitalization of less than \$3 billion when purchased, and holdings will generally span broadly across countries and sectors.
- Loomis Sayles World Bond Fund—The fund normally invests at least 80% of its assets in fixed-income securities. The fund focuses primarily on investment grade fixed-income securities worldwide, although it may invest up to 20% of its fair value in lower rated fixed-income securities. Securities held by the fund may be denominated in any currency, may be from issuers located in emerging markets, or may be fixed-income securities of any maturity.
- Oaktree Global High Yield Bond Fund—The fund invests primarily in corporate high-yield bonds, emphasizing issuers in North America and Europe.
- OCM (Oaktree Capital Management) International Convertible Fund—The fund seeks a high level of total return through a combination of current income and capital appreciation by investing primarily in convertible securities of issuers located outside the United States. Convertible securities may consist of bonds, debentures, notes, preferred stock, or other securities that can be converted to common stock or other equity securities.

See Independent Auditors’ Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

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 investment portfolio for domestic fixed-income securities requires the portfolio to maintain an average of A+ or higher. For international fixed-income securities, the investment policy requires the portfolio to invest in securities equal to or better than Moody's Baa3 or Standard & Poor's BBB. Exposure to credit risk as of June 30 was as follows:

<u>Investment Type</u>	<u>Moody's Ratings</u> <u>(Unless Noted)</u>	<u>2018</u>	
		<u>Fair Value</u>	<u>Fair Value as a Percent of Total Fixed Maturity Fair Value</u>
		<i>(Amounts in Thousands)</i>	
U.S. government agency securities	Aaa	\$ 8,535	41.20%
U.S. Treasury securities	UST ⁽¹⁾	<u>12,181</u>	<u>58.80%</u>
Total U.S. government securities		<u>\$ 20,716</u>	<u>100.00%</u>
Domestic corporate bonds	Aaa	\$ 51,210	29.49%
	AA+ (SP)	730	0.42%
	Aa2	3,700	2.13%
	Aa3	1,919	1.11%
	A1	3,130	1.80%
	A2	6,318	3.64%
	A3	21,525	12.40%
	Baa1	27,564	15.88%
	Baa2	19,186	11.05%
	Baa3	9,540	5.49%
	Ba1	1,698	0.98%
	Not Rated ⁽²⁾	<u>27,100</u>	<u>15.61%</u>
Total domestic corporate bonds		<u>\$ 173,620</u>	<u>100.00%</u>
International corporate bonds and bond funds	Not Rated ⁽²⁾	<u>\$ 192,138</u>	<u>100.00%</u>
Total international corporate bonds and bond funds		<u>\$ 192,138</u>	<u>100.00%</u>

⁽¹⁾ U.S. Treasury securities.

⁽²⁾ Commingled funds. Management believes the underlying investments of the commingled funds meet the investment policy requiring equal to or better than Moody's Baa3 or Standard & Poor's BBB.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Credit Risk, Continued

<u>Investment Type</u>	<u>Moody's Ratings</u> <u>(Unless Noted)</u>	2017	
		<u>Fair Value</u>	Fair Value as a Percent of Total Fixed Maturity <u>Fair Value</u>
<i>(Amounts in Thousands)</i>			
U.S. government agency securities	Aaa	\$ 7,475	31.77%
U.S. Treasury securities	UST ⁽¹⁾	<u>16,054</u>	<u>68.23%</u>
Total U.S. government securities		<u>\$ 23,529</u>	<u>100.00%</u>
Domestic corporate bonds	Aaa	\$ 46,956	28.96%
	AAA (SP)	764	0.47%
	AA+ (SP)	903	0.56%
	Aa2	5,802	3.58%
	Aa3	2,431	1.50%
	A1	4,335	2.67%
	A2	7,232	4.46%
	A3	19,437	11.99%
	Baa1	33,056	20.39%
	Baa2	11,990	7.40%
	Baa3	9,953	6.14%
	Ba1	254	0.16%
	Not Rated ⁽²⁾	<u>18,991</u>	<u>11.72%</u>
Total domestic corporate bonds		<u>\$ 162,104</u>	<u>100.00%</u>
International corporate bonds and bond funds	Not Rated ⁽²⁾	<u>\$ 195,207</u>	<u>100.00%</u>
Total international corporate bonds and bond funds		<u>\$ 195,207</u>	<u>100.00%</u>

⁽¹⁾ U.S. Treasury securities.

⁽²⁾ Commingled funds. Management believes the underlying investments of the commingled funds meet the investment policy requiring equal to or better than Moody's Baa3 or Standard & Poor's BBB.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, 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. While all investments are subject to market changes, securities invested in index funds are more sensitive to market risk. Although the investment policy does not specifically address the duration of fixed-income securities, the Plan does monitor interest rate risk by monitoring the performance of each investment manager. As of June 30, the Plan had the following investments with maturities.

<u>Investment Type</u>	2018				<u>Total Fair Value</u>
	<u>Investment Maturities at Fair Value (in Years)</u>				
	<u>Less Than 5</u>	<u>5 or More, Less Than 10</u>	<u>10 or More</u>	<u>Investments with No Duration</u>	
	<i>(Amounts in Thousands)</i>				
U.S. government securities:					
U.S. government agency	\$ -	-	8,535	-	8,535
U.S. Treasury	-	1,479	10,702	-	12,181
Total U.S. government securities	<u>-</u>	<u>1,479</u>	<u>19,237</u>	<u>-</u>	<u>20,716</u>
Domestic corporate bonds:					
Commercial mortgage-backed securities	-	-	3,386	-	3,386
Corporates and other credit	54,849	24,156	18,770	-	97,775
U.S. government mortgages	139	2,942	42,278	-	45,359
Venture capital	-	-	-	11,937	11,937
U.S. fixed-income funds	-	-	-	15,163	15,163
Total domestic corporate bonds	<u>54,988</u>	<u>27,098</u>	<u>64,434</u>	<u>27,100</u>	<u>173,620</u>
International corporate bonds and bond funds	<u>-</u>	<u>-</u>	<u>-</u>	<u>192,138</u>	<u>192,138</u>
	<u>\$ 54,988</u>	<u>28,577</u>	<u>83,671</u>	<u>219,238</u>	<u>386,474</u>

As noted above, the Plan had approximately \$45,359,000 of investments in U.S. government mortgages, of which \$23,574,000 represents FNMA loans and \$21,785,000 represents FHLMC mortgages. U.S. government agency securities of \$8,535,000 represent GNMA mortgages.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Interest Rate Risk, Continued

<u>Investment Type</u>	2017				<u>Total Fair Value</u>
	<u>Investment Maturities at Fair Value (in Years)</u>				
	<u>Less Than 5</u>	<u>5 or More, Less Than 10</u>	<u>10 or More</u>	<u>Investments with No Duration</u>	
	<i>(Amounts in Thousands)</i>				
U.S. government securities:					
U.S. government agency	\$ -	-	7,475	-	7,475
U.S. Treasury	4,498	-	11,556	-	16,054
Total U.S. government securities	<u>4,498</u>	<u>-</u>	<u>19,031</u>	<u>-</u>	<u>23,529</u>
Domestic corporate bonds:					
Commercial mortgage-backed securities	-	-	3,384	-	3,384
Corporates and other credit	52,774	23,631	21,109	-	97,514
U.S. government mortgages	312	2,889	39,014	-	42,215
Venture capital	-	-	-	10,459	10,459
U.S. fixed-income funds	-	-	-	8,532	8,532
Total domestic corporate bonds	<u>53,086</u>	<u>26,520</u>	<u>63,507</u>	<u>18,991</u>	<u>162,104</u>
International corporate bonds and bond funds	<u>-</u>	<u>-</u>	<u>-</u>	<u>195,207</u>	<u>195,207</u>
	<u>\$ 57,584</u>	<u>26,520</u>	<u>82,538</u>	<u>214,198</u>	<u>380,840</u>

As noted above, the Plan had approximately \$42,215,000 of investments in U.S. government mortgages, of which \$22,516,000 represents FNMA loans and \$19,699,000 represents FHLMC mortgages. U.S. government agency securities of \$7,475,000 represent GNMA mortgages.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value

	Amounts Measured at Fair Value	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<i>June 30, 2018</i>				
<u>Investments by Fair Value Level</u>				
Cash and cash equivalents:				
OK INVEST—State managed short-term high liquidity	\$ 19,151	-	19,151	-
BNY Mellon—STIF-type investment; high liquidity	19,283	-	19,283	-
Total cash equivalents measured at fair value	<u>\$ 38,434</u>	<u>-</u>	<u>38,434</u>	<u>-</u>
Debt securities:				
U.S. government agency	\$ 8,535	-	8,535	-
U.S. Treasury	12,181	12,181	-	-
Domestic corporate bonds:				
Commercial mortgage-backed securities	3,386	-	3,386	-
Corporate bonds	97,775	-	97,775	-
U.S. government mortgages	45,359	-	45,359	-
Oaktree High Income Convertible Fund	11,937	-	11,937	-
Oaktree Commingled U.S. Fixed Income Fund	15,163	-	15,163	-
International corporate bonds:				
Oaktree Global High Yield Bond Fund	80,028	-	80,028	-
OCM International Convertible Bond Fund	15,361	-	15,361	-
Loomis Sayles World Bond Fund	96,749	-	96,749	-
Total debt securities	<u>386,474</u>	<u>12,181</u>	<u>374,293</u>	<u>-</u>
Equity securities—domestic:				
Common stock—custodial account	183	183	-	-
Domestic Large Cap—				
Northern Trust Russell 1000 Index Fd	455,018	-	455,018	-
Domestic Small Cap Value Focus—Boston Partners	90,086	90,086	-	-
Domestic Small Cap Growth Focus—Cortina	103,668	103,668	-	-
Total domestic equities	<u>648,955</u>	<u>193,937</u>	<u>455,018</u>	<u>-</u>

(Continued)

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

	Amounts Measured at <u>Fair Value</u>	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets <u>(Level 1)</u>	Significant Other Observable Inputs <u>(Level 2)</u>	Significant Unobservable Inputs <u>(Level 3)</u>
<i>June 30, 2018</i>				
<u>Investments by Fair Value Level, Continued</u>				
Equity securities—international:				
Intl. Equities—Barings Focused Intl Equity Fund (developed mkts)	122,126	-	122,126	-
Intl. Equities—Value Focus—Mondrian Partners	138,343	-	138,343	-
Intl. Emerging Markets—Wasatch EM Small Cap Fund	36,569	-	36,569	-
Intl. Emerging Markets—AB EM Strategic Core	<u>81,104</u>	-	<u>81,104</u>	-
Total international equities	<u>378,142</u>	-	<u>378,142</u>	-
Private equity:				
Private equity—non-real estate focused	237,332	-	-	237,332
Real estate	<u>52,417</u>	-	-	<u>52,417</u>
Total private equity	<u>289,749</u>	-	-	<u>289,749</u>
Real estate—direct ownership—income producing:				
Total direct ownership real estate	<u>4,300</u>	-	-	<u>4,300</u>
Investments measured at net asset value (NAV):				
Low Volatility Hedge Fund—PAAMCO	130,351			
Long/Short Equity Hedge Fund— Grosvenor Class A & B	363,676			
Wellington Global Total Return Fund	63,334			
Core Real Estate—JP Morgan Strategic Property Fund	123,954			
Core Real Estate—Blackstone Property Partners	41,114			
Commodities—Gresham Partners—TAP Fund	53,155			
Commodities—Mt. Lucas—MLM Macro-Peak	<u>31,700</u>			
Total investments measured at NAV	<u>807,284</u>			
Total investments measured at fair value	<u>\$ 2,514,904</u>			

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

	Amounts Measured at Fair Value	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<i>June 30, 2017</i>				
<u>Investments by Fair Value Level</u>				
Cash and cash equivalents:				
OK INVEST—State managed short-term high liquidity	\$ 7,936	-	7,936	-
BNY Mellon—STIF-type investment; high liquidity	24,796	-	24,796	-
Total cash equivalents measured at fair value	<u>\$ 32,732</u>	<u>-</u>	<u>32,732</u>	<u>-</u>
Debt securities:				
U.S. government agency	\$ 7,475	-	7,475	-
U.S. Treasury	16,054	16,054	-	-
Domestic corporate bonds:				
Commercial mortgage-backed securities	3,384	-	3,384	-
Corporate bonds	97,514	-	97,514	-
U.S. government mortgages	42,215	-	42,215	-
Oaktree High Income Convertible Fund	10,459	-	10,459	-
Oaktree Commingled U.S. Fixed Income Fund	8,532	-	8,532	-
International corporate bonds:				
Oaktree Global High Yield Bond Fund	89,732	-	89,732	-
OCM International Convertible Bond Fund	10,578	-	10,578	-
Loomis Sayles World Bond Fund	94,897	-	94,897	-
Total debt securities	<u>380,840</u>	<u>16,054</u>	<u>364,786</u>	<u>-</u>
Equity securities—domestic:				
Common stock—custodial account	183	183	-	-
Domestic Large Cap—				
Northern Trust Russell 1000 Index Fd	412,054	-	412,054	-
Domestic Small Cap Value Focus—Boston Partners	108,372	108,372	-	-
Domestic Small Cap Growth Focus—Cortina	81,555	81,555	-	-
Total domestic equities	<u>602,164</u>	<u>190,110</u>	<u>412,054</u>	<u>-</u>

(Continued)

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

		Fair Value Measurements at		
		Reporting Date Using		
	Amounts	Quoted	Significant	Significant
	Measured at	in Active	Other	Unobservable
	Fair Value	Markets for	Observable	Inputs
		Identical	Inputs	Inputs
		Assets	(Level 2)	(Level 3)
		(Level 1)		
<i>(Amounts in Thousands)</i>				
<u>June 30, 2017</u>				
<u>Investments by Fair Value Level, Continued</u>				
Equity securities—international:				
Intl. Equities—Barings Focused Intl Equity Fund (developed mkts)	112,010	-	112,010	-
Intl. Equities—Value Focus—Mondrian Partners	131,552	-	131,552	-
Intl. Emerging Markets—Wasatch EM Small Cap Fund	33,772	-	33,772	-
Intl. Emerging Markets—AB EM Strategic Core	<u>78,872</u>	-	<u>78,872</u>	-
Total international equities	<u>356,206</u>	-	<u>356,206</u>	-
Private equity:				
Private equity—non-real estate focused	199,559	-	-	199,559
Real estate	<u>56,263</u>	-	-	<u>56,263</u>
Total private equity	<u>255,822</u>	-	-	<u>255,822</u>
Real estate—direct ownership—income producing:				
Total direct ownership real estate	<u>4,250</u>	-	-	<u>4,250</u>
Investments measured at net asset value (NAV):				
Low Volatility Hedge Fund—PAAMCO	126,868			
Long/Short Equity Hedge Fund— Grosvenor Class A & B	335,626			
Wellington Global Total Return Fund	59,877			
Core Real Estate—JP Morgan Strategic Property Fund	115,904			
Core Real Estate—Blackstone Property Partners	37,824			
Commodities—Gresham Partners—TAP Fund	47,297			
Commodities—Mt. Lucas—MLM Macro-Peak	<u>29,569</u>			
Total investments measured at NAV	<u>752,965</u>			
Total investments measured at fair value	<u>\$ 2,352,247</u>			

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Cash and Cash Equivalents—Short-term investments include cash equivalents held at the State Treasurer’s office and an investment fund composed of units of a commingled trust fund of the Plan’s custodial agent, commercial paper, treasury bills, and U.S. government agency securities. These investments offer high, immediate liquidity and are readily converted to cash. The funds are comprised primarily of very short-term debt instruments, and are valued at amortized cost, which also approximates fair value. For determining fair value, the instruments held are valued using actual quoted prices or by using matrix pricing, a method of pricing securities based on their relationship to benchmark quoted market prices. Both of these investments are classified in Level 2 of the fair value hierarchy based on the development of an aggregate daily value of the individual instruments in each fund that are typically classified in either Level 1 or Level 2 of the fair value hierarchy.

Fair Value of Debt Securities—The Plan holds a diversified mix of debt instruments through an active domestic bond manager, Agincourt, and has international debt exposure through the Loomis Sayles Global Bond Fund. Agincourt generally holds a mix of U.S. government agency securities and U.S. government mortgages, U.S. Treasury securities, domestic corporate bonds and commercial mortgage-backed securities. U.S. Treasury securities are classified in Level 1 of the fair value hierarchy, using quoted prices in active markets. The remaining debt securities are classified in Level 2 of the fair value hierarchy, valued using a matrix pricing technique. This method values securities based on their relationship to benchmark quoted prices. The Loomis Sayles Global Bond Fund is a global debt instrument commingled fund, and is classified in Level 2 of the fair value hierarchy based on the development of a total value through the aggregation of Level 1 and Level 2 quoted prices for instruments held by the fund.

The Plan also holds as an actively managed investment account with Oaktree Capital Management that focuses primarily on domestic and international fixed income and debt type securities. The account holds the following four separate investment mandates:

- High Income Convertible Fund
- Commingled U.S. Fixed Income Fund
- Global High Yield Bond Fund
- International Convertible Bond Fund

The investments in these different style mandates are held in commingled accounts where the underlying investments are priced in either Level 1 or Level 2 of the fair value hierarchy, using either quoted prices in active markets or other market corroborated inputs. The Oaktree account is classified in Level 2 of the fair value hierarchy based on the aggregation of the investments held in the various funds. Oaktree prices the various funds monthly and offers monthly liquidity.

See Independent Auditors’ Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Equity Securities—The Plan holds equity securities through a number of managers, both actively and passively managed. They are as follows:

DOMESTIC

Northern Trust Collective Russell 1000 Index Fund—The Plan holds a proportionate share of a fund managed by Northern Trust that seeks to correlate the holdings of the Russell 1000 index fund, a basket of passively managed holdings to serve as a benchmark for the U.S. equity market. The equities that comprise this index are all domestic, publicly traded securities and are daily priced. The Northern Trust Collective Russell 1000 Index Fund is a commingled fund and is classified in Level 2 of the fair value hierarchy, as its total value is calculated daily through the aggregation of Level 1 quoted prices, providing the equivalent of the Russell 1000 index, a daily priced basket of assets. The Plan has daily liquidity access to its investment in this fund.

Boston Partners (Small Cap Value Focus)—The Plan has an active investment manager that focuses on domestic small to mid-capitalization sized companies with a mandate to follow the value style of investing. Boston Partners manages an account through the Plan's custodian, and purchases securities in the primary active domestic equity markets. The Boston Partners account is classified in Level 1 of the fair value hierarchy since all securities are priced at quoted market prices in active markets for identical assets.

Cortina (Small Cap Growth Focus)—The Plan has an active investment manager focused on the small to micro segment of the equities market with a mandate to pursue the growth style of investing. Cortina actively manages an account through the Plan's custodian and deals in equity securities in the domestic market. The Cortina account is classified in Level 1 of the fair value hierarchy since all securities are priced at quoted market prices in active markets for identical securities.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Equity Securities—Continued

INTERNATIONAL

AllianceBernstein (AB) Emerging Markets Strategic Core Equity—The Plan initiated an investment with AllianceBernstein in November 2016 from the liquidation of its holdings in the NT EM Index fund. The AB fund is a commingled fund that focuses on companies located in emerging markets or that have significant exposure to emerging markets. This fund is classified in Level 2 of the fair value hierarchy since the price of the fund is derived from securities that are all priced as quoted market prices in active markets. The fund prices on a daily basis and provides liquidity on a monthly (30-day notice) basis.

Barings Focused International Equity—The Plan participates in a commingled equity fund that focuses on a smaller number of equity securities located primarily in international developed markets. This investment is a commingled fund of international equity securities that are typically priced based on quoted market prices in active markets around the globe. This fund is classified in Level 2 of the fair value hierarchy, as the price of the fund is derived from securities that are all priced at quoted market prices in active markets. This fund prices and provides liquidity to its investors on a monthly basis.

Mondrian Partners International Equity Fund L.P.—The Plan participates in a fund managed by Mondrian Partners that invests primarily in non-US equity securities, with a focus on the value style of investing. This fund is classified in Level 2 in the fair value hierarchy since the price of the fund is derived from securities that are all priced at quoted market prices in active markets. The fund prices and provides liquidity to its investors on a monthly basis.

Wasatch Emerging Markets Small Capitalization Fund—The Plan invests in a Wasatch fund that is focused on small-capitalization equity securities that are located in non-U.S. emerging markets. The Wasatch fund is a commingled investment trust that is managed for institutional investors. The fund is classified in Level 2 of the fair value hierarchy, as the holdings of the fund are all priced at quoted market prices in active markets, allowing the fund sponsor to develop daily net asset value pricing and liquidity.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Private Equity—The Plan participates in a number of private equity partnerships as a limited partner. Private equity investments are structured to be operated by a general partner, usually highly experienced in the specific focus of the fund, who calls for investments from the limited partners when a suitable investment opportunity arises. As such, investments in private equity can generally never be redeemed, but instead participate in distributions from the fund as liquidation of the underlying assets are realized.

Several of the limited partnerships invest in equity securities outside of the United States and may enter into forward contracts to purchase or sell securities at specified dates in the future at a guaranteed price in a foreign currency to protect against fluctuations in exchange rates of foreign currency. In addition, some of the partnerships may engage in hedging transactions involving derivative instruments as a part of their investment strategy.

The Plan's private equity (PE) investments have a long investment horizon of 5 to 10 years, are not liquid, and the Plan generally holds this type of investment to maturity. Depending on the type of holdings within a given partnership, the investment horizon can be extended if the general partner deems the remaining investments in the fund still hold significant future value and a majority of limited partners concur. The Plan's PE general partners typically make fair value determinations on the investments in each of their respective funds quarterly using a variety of pricing techniques including, but not limited to, observable transaction values for similar investments, third-party bids, appraisals of both properties and businesses, and public market capitalization of similar or like businesses. Each PE fund then calculates the fair value of the Plan's ownership of the partners' capital on a quarterly basis. The Plan classifies all private equity investments in Level 3 of the fair value hierarchy, as most investments of this type require unobservable inputs and other ancillary market metrics to determine fair value. Although most PE interests are marketable in a secondary market, the Plan generally does not sell its interests early at values less than its interest in the partnership.

At June 30, 2018, the Plan was invested in 64 different private equity strategies (7 of which were in real estate PE) and had remaining commitments of \$187 million for the non-real estate PE partnerships and \$26 million for the real estate PE partnerships. The Plan entered into 3 new private equity partnership agreements during fiscal year 2018 (3 non-real estate PE partnerships), 2 which have an average contract maturity of 10 years, and one with a 5-year maturity. These new PE investments will require total commitments of \$53 million.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Private Equity—Continued

The Plan had commitments of \$160 million remaining at June 30, 2018, to PE partnership investments entered into prior to 2018, with an estimated maturity between 2 and 9 years. Since the Plan follows a rolling year PE strategy, new PE investments are made as older PE investments reach their expiration.

At June 30, 2017, the Plan was invested in 63 different private equity strategies (7 of which were in real estate PE) and had remaining commitments of \$177 million for the non-real estate PE partnerships and \$31 million for the real estate PE partnerships. The Plan entered into 6 new private equity partnership agreements during fiscal year 2017 (5 non-real estate PE partnerships and 1 real estate PE partnership), each having an average contract maturity of 10 years. These PE investments will require total commitments of \$63 million for the non-real estate partnerships and \$10 million for the real estate partnership.

The Plan had commitments of \$135 million remaining at June 30, 2017, to PE partnership investments entered into prior to 2017, with an estimated maturity between 2 and 9 years.

The Plan is invested in the following private equity strategies:

BUYOUT—This private equity strategy seeks to invest capital in mature businesses that have the potential for growth in value from efficiencies gained through structural, strategic management, and operational improvements.

DISTRESSED—Under the distressed strategy, a fund will invest in the debt of companies that are struggling, with the intent of influencing the process by which the company restructures its debt, narrows its focus, or implements a plan for a turnaround in its operations. Distressed investments of this nature can be debt, equity, or other types of lending.

MEZZANINE—Private equity funds that pursue the mezzanine strategy will usually make unsecured loans or purchase preferred equity, often in smaller capitalization companies, where the unsecured risk is typically offset by the prospect of higher returns.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Private Equity—Continued

VENTURE CAPITAL—The venture strategy primarily seeks to invest in early-stage, high-potential, high-growth companies. This type of investment is usually through equity ownership in the company, where the private equity general partner can lend expertise and facilitate growth. Investment returns are usually realized if the portfolio company is taken public through an IPO or the fund may sell its equity investment to another investor.

EMERGING MARKETS AND OTHER—Private equity investment in emerging markets may make use of one or more of the above-listed strategies in smaller global markets in an effort to realize returns by identifying and capitalizing on new startup companies, as well as market inefficiencies. Investments in the other category are generally highly focused private equity funds that seek to maximize returns through a specific market segment, such as energy or healthcare.

FUND OF FUNDS—Under a fund of funds private equity investment, the general partner seeks to build a combination of private equity investments that will work synergistically together to maximize returns and minimize the risk of loss.

REAL ESTATE—Private equity investment in real estate may encompass several of the above-mentioned strategies, based on the skill and experience of the general partner. Generally, real estate private equity investments seek to capitalize on distressed situations, as well as seek to identify lucrative investments that produce a high level of current income.

The Plan is invested with four separate private equity real estate managers, some with more than one fund by a given manager. The Plan's managers are Siguler Guff, The Realty Associates, Cerberus, and Hall Capital Partners. The fair value of real estate investments are determined by each manager respectively at each valuation date and rely primarily on third-party appraisals and other unobservable inputs. Siguler Guff's advisory board may request an independent appraisal of any portfolio investment within 30 days of the fund's audited financial statements. The Realty Associates utilizes independent appraisers to value properties at a frequency of no less than once every 3 years after acquisition. Cerberus follows detailed internal valuation policies and procedures and may engage independent valuation consultants on an as-needed basis. Hall Capital Partners values investments in the fund on an income approach rather than base valuations on cyclical appraisals.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Investments Measured at Net Asset Value (NAV)

Low-Volatility Hedge Fund—PAAMCO—The Plan is invested in a hedge fund managed by Pacific Alternative Asset Management Company (PAAMCO) structured as a fund of funds to manage and moderate volatility of the value of the investment. The fund uses a number of sub-managers to achieve its desired level of diversification, but is limited to a maximum number of 55 sub-managers. This fund uses a multitude of investment strategies and will invest in debt, equities, credit instruments, distressed debt, merger arbitrage, and sovereign and convertible debt, as well as take both long and short equity positions. This investment is valued at NAV monthly and provides quarterly redemptions with at least 60 days' written notice.

Wellington Global Total Return (GTR) Fund—The Plan invested in Wellington's Global Total Return Fund in fiscal 2017. The GTR Fund is an absolute return fund designed to be without directional dependence, or correlation to, equities, bonds and credit markets. The fund pursues opportunistic strategies in long/short exposure to global interest rates, currencies and credit, and will invest globally to pursue this strategy. This investment is valued at NAV daily and provides daily liquidity.

Long/Short Equity Hedge Fund—Grosvenor Class A & B—The Plan has two hedge fund investments with Grosvenor Capital Management. Both of these investments are structured as fund of funds and utilize a number of sub-managers that invest in long and short positions of U.S. and international equity securities. The Class A investment is highly diversified and will generally have between 20 and 30 sub-managers at any given time that will be selected and managed by Grosvenor at its discretion. The Class B investment is more concentrated and will generally have 15 or fewer sub-managers that are selected by the System's investment consultant, ACG, with confirmation by Grosvenor and the approval of the OPPRS board. Grosvenor does not have primary investment discretion over the Class B shares, but performs due diligence on the investment for addition to their menu of investible funds. While the Class A investment takes a more market neutral approach to allocations, the Class B investment is designed to capture more upside movement within the markets and has a greater focus on long bias positions. These funds are valued at NAV monthly, and the Class A shares are redeemable at the end of each calendar quarter with 70 days' prior written notice. The Class B shares are redeemable at any time, subject to any gates or lockups by the underlying sub-managers. Recent additions to the Class B fund subject to lockup were \$5.9 million on July 1, 2018.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(4) CASH, CASH EQUIVALENTS, AND INVESTMENTS, CONTINUED

Investments Measured at Fair Value, Continued

Fair Value of Investments Measured at Net Asset Value (NAV), Continued

Core Real Estate—JP Morgan Strategic Property and Blackstone Property Partners—

The Plan invests in two core real property funds: the JP Morgan Strategic Property fund and the Blackstone Property Partners Limited Partnership. Both of these funds invest in core real properties seeking to realize capital appreciation on its portfolio while also generating a high level of current income. These funds both make strategic property acquisitions primarily in the U.S. As part of JPMorgan's and Blackstone Property Partners' valuation process, independent appraisers value properties on an annual basis (at a minimum). Both funds are valued at NAV monthly. The JP Morgan fund allows withdrawals once per quarter subject to "available cash" as determined by a pool trustee with 45 days' advance written notice. The Blackstone Property Partners fund has an initial lockup period of 24 months, after which withdrawals are available at the end of each quarter with 90 days' advance written notice. The Plan's lockup period in the Blackstone Property partnership expired on December 31, 2017.

Commodities—Gresham Partners (TAP Fund) and MLM Macro Peak—

The Plan has investments in two commodities funds with distinctly different approaches. The Gresham TAP (Tangible Asset Program) fund is a commingled investment fund that invests in long-only, fully collateralized tangible commodity futures. It seeks to provide diversification to a portfolio of traditional investments through low correlation to stocks and bonds, and trades across most commodities markets. The MLM Macro-Peak Fund, structured as a liquid limited partnership, is a global macro strategy managed by Mount Lucas. This fund trades in the world's major asset classes and financial markets, including equity, global fixed income, currency, and commodity sectors following internally developed proprietary trading models. Both of these funds are priced at NAV on a monthly basis. The Gresham TAP Fund offers monthly liquidity with at least 5 days' written notice. The MLM Macro-Peak Fund also offers monthly liquidity with at least 10 days' written notice. Under the MLM Macro-Peak Fund, 90% of the cash proceeds are ordinarily paid within 10 days, with the remaining 10% balance paid within 60 days.

Foreign Currency Transactions

The Plan has certain investment managers that trade on foreign exchanges. Foreign currency gains and losses are calculated at the transaction date using the current exchange rate, and assets are remeasured to U.S. dollars using the exchange rate as of each month end. During the years ended June 30, 2018 and 2017, there were no foreign currency gains and no remeasurement losses.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(5) DERIVATIVES AND OTHER INSTRUMENTS

Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates, or financial indexes. They include futures contracts, swap contracts, options contracts, and forward foreign currency exchange. The Plan's investment policy notes that in order to achieve maximum returns, the Plan may diversify between various investments, including common stocks, bonds, real estate, private equity, venture equity and other hedge fund strategies, short-term cash instruments, and other investments deemed suitable. The investment policy also requires investment managers to follow certain controls and documentation and risk management procedures. The Plan did not have any direct derivative investments at June 30, 2018 or 2017. Investments in limited partnerships (alternative investments) and commingled funds may include derivatives. The Plan's investments in alternative investments are reflected at fair value, and any exposure is limited to its investment in the partnership and any unfunded commitment. Commingled funds have been reviewed to ensure they are in compliance with the Plan's investment policy.

The Plan invests in mortgage-backed securities, which are reported at fair value in the statements of fiduciary net position and are based on the cash flows from interest and principal payments by the underlying mortgages. As a result, they are sensitive to prepayments by mortgagees, which are likely in declining interest rate environments, thereby reducing the values of these securities. The Plan invests in mortgage-backed securities to diversify the portfolio and increase the return while minimizing the extent of risk. Details regarding interest rate risks for these investments are included under the interest rate risk disclosures.

(6) INVESTMENT IN BUILDING

The Plan owns a building (Columbus Square) originally purchased for approximately \$1.5 million, and it is held as a long-term investment. The building is accounted for at fair value based on periodic appraisals. Rental income and expenses associated with the building are reported currently. The Plan utilizes part of the building for its administrative offices and charges itself rent, which is reflected as administrative expense and other investment income. The fair value of the building at June 30, 2018 and 2017, was estimated at approximately \$4.3 million and \$4.25 million, respectively.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(7) CAPITAL ASSETS

The Plan has only one class of capital assets, consisting of software. A summary as of June 30 is as follows:

	<u>Balance at</u> <u>June 30, 2017</u>	<u>Additions</u>	<u>Disposals</u>	<u>Balance at</u> <u>June 30, 2018</u>
Cost	\$ 1,014,045	-	-	1,014,045
Accumulated amortization	<u>(1,014,045)</u>	<u>-</u>	<u>-</u>	<u>(1,014,045)</u>
Capital assets, net	<u>\$ -</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>Balance at</u> <u>June 30, 2016</u>	<u>Additions</u>	<u>Disposals</u>	<u>Balance at</u> <u>June 30, 2017</u>
Cost	\$ 1,014,045	-	-	1,014,045
Accumulated amortization	<u>(1,014,045)</u>	<u>-</u>	<u>-</u>	<u>(1,014,045)</u>
Capital assets, net	<u>\$ -</u>	<u>-</u>	<u>-</u>	<u>-</u>

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(8) DEFERRED OPTION BENEFITS

As noted previously, the Plan has Deferred Option, "Back" DROP, and Payout Provision benefits available to its members. A summary of the changes in the various options as of June 30 is as follows:

	2018			
	<u>Deferred Option</u>	<u>"Back" DROP</u>	<u>Payout Provision</u>	<u>Total</u>
	<i>(Amounts in Thousands)</i>			
Beginning balance	\$ 1,703	3,086	1,593	6,382
Employer contributions	68	1,645	-	1,713
Member contributions	-	2,025	-	2,025
Deferred benefits	520	14,553	-	15,073
Payments	(265)	(24,122)	(287)	(24,674)
Interest	144	4,078	86	4,308
Ending balance	<u>\$ 2,170</u>	<u>1,265</u>	<u>1,392</u>	<u>4,827</u>
	2017			
	<u>Deferred Option</u>	<u>"Back" DROP</u>	<u>Payout Provision</u>	<u>Total</u>
	<i>(Amounts in Thousands)</i>			
Beginning balance	\$ 2,630	2,201	3,391	8,222
Employer contributions	81	2,082	-	2,163
Member contributions	-	2,561	-	2,561
Deferred benefits	668	17,974	-	18,642
Payments	(1,874)	(26,903)	(1,983)	(30,760)
Interest	198	5,171	185	5,554
Ending balance	<u>\$ 1,703</u>	<u>3,086</u>	<u>1,593</u>	<u>6,382</u>

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(9) NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

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

	<u>2018</u>	<u>2017</u>
	<i>(Amounts in Thousands)</i>	
Total pension liability	\$ 2,515,811	2,403,073
Plan fiduciary net position	<u>2,563,446</u>	<u>2,395,381</u>
Employers' net pension (asset) liability	<u>\$ (47,635)</u>	<u>7,692</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>101.89%</u>	<u>99.68%</u>

Actuarial assumptions—The total pension liability was determined by an actuarial valuation as of July 1, 2018 and 2017, using the following actuarial assumptions, applied to all prior periods included in the measurement:

Inflation:	2.75% (3.00% as of July 1, 2017)
Salary increases:	3.5% to 10.0% average, including inflation (4.5% to 17.0% average, including inflation as of July 1, 2017)
Investment rate of return:	7.5% net of pension plan investment expense
Cost-of-living adjustments:	Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer, based on an increase in base salary.
Mortality rates:	Active employees (pre-retirement): RP-2000 Combined Blue Collar Healthy Table with age set back 4 years with fully generational improvement using Scale AA. Active employees (post-retirement) and nondisabled pensioners: RP-2000 Combined Blue Collar Healthy Table with fully generational improvement using scale AA. Disabled pensioners: RP-2000 Combined Blue Collar Healthy Table with age set forward 4 years.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(9) NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS, CONTINUED

The actuarial assumptions used in the July 1, 2018, valuation were based on the results of an actuarial experience study for the period of July 2012 to June 2017. The July 1, 2017, valuations were based on the results of an actuarial experience study for the period July 2007 to June 2012.

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 inflation factor added back was 2.26% for both 2018 and 2017. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30 (see discussion of the pension plan's investment policy at Note 2) are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>	
	<u>2018</u>	<u>2017</u>
	(includes inflation factor)	
Fixed income	4.53%	4.51%
Domestic equity	5.86%	6.62%
International equity	8.83%	9.70%
Real estate	6.58%	6.96%
Private equity	9.21%	9.86%
Commodities	5.06%	5.18%

Discount rate—The discount rate used to measure the total pension liability was 7.5% for 2018 and 2017. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from employers will be made at contractually required rates, determined by the Oklahoma Statutes. Projected cash flows also assume the State of Oklahoma will continue contributing 14% of the insurance premium, as established by statute. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make 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.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(9) NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS, CONTINUED

Sensitivity of the net pension liability to changes in the discount rate—The following presents the net pension liability of the employers, calculated using the discount rate of 7.5%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (6.5%) or 1 percentage point higher (8.5%) than the current rate:

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
<i>(Amounts in Thousands)</i>			
<u>2018</u>			
Employers' net pension liability (asset)	\$ 220,964	(47,635)	(274,705)
<u>2017</u>			
Employers' net pension liability (asset)	\$ 259,969	7,692	(205,394)

(10) PLAN TERMINATION AND STATE FUNDING

The Plan has not developed an allocation method if it were to terminate. The Oklahoma Legislature is required by statute to make such appropriation as necessary to assure that benefit payments are made.

A suggested minimum contribution from the State of Oklahoma is computed annually by an actuary hired by the State of Oklahoma. However, funding by the State of Oklahoma to the Plan is based on statutorily determined amounts rather than the actuarial calculations of the amount required to fund the Plan.

(11) FEDERAL INCOME TAX STATUS

As an instrumentality of the State of Oklahoma, the Plan is tax-exempt. It is not subject to the Employee Retirement Income Security Act of 1974, as amended. The Plan has received favorable determination from the Internal Revenue Service (IRS) regarding its tax-exempt status. The Plan has been amended since receiving the determination letter. However, the plan administrator believes that the Plan is designed and is currently being operated in substantial compliance with the applicable requirements of the Internal Revenue Code.

See Independent Auditors' Report.

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS, CONTINUED

(12) HISTORICAL INFORMATION

Historical trend information designed to provide information about the Plan's progress made in accumulating sufficient assets to pay benefits when due is presented in Exhibits I, II, III, and IV.

(13) LEGISLATIVE AMENDMENTS

The following is a summary of significant plan provision changes that were enacted by the Oklahoma Legislature during 2018 and 2017:

2018

- House Bill 1340—Provides for a single, one-time, non-permanent increase in the payment of retirement benefits. A single payment of 2% of the gross annual retirement benefit will be paid to qualifying members, subject to a cap and floor on the payment. Dependent on the funded status of the plan, the maximum payment will be between \$1,000.00 and \$1,400.00. Additionally, qualifying members with at least 20 years of service will receive a payment of not less than \$350.00.
- House Bill 2515—Clarifies that all benefits payable from the OPPRS, including payments from deferred option plans, shall be paid from general assets of the fund. HB 2515 further provides that a permanent and total impairment equates to one hundred percent (100%) of the accrued retirement benefit.

2017

- House Bill 1119—Updates the rules for distributions to include rollover contributions for SIMPLE IRAs that are structured and timed in accordance with the IRS's SIMPLE IRA regulations. Authorizes the Board to obtain records from the Council on Law Enforcement Education and Training to verify any person's eligibility for membership in the System. Authorizes the Board to audit participating member municipalities to ensure compliance with the System's statutes and rules, including, but not limited to, compensation used to determine a member's paid base salary.

(14) CONTINGENCIES

The Plan is involved in legal proceedings in the normal course of operations, none of which, in the opinion of management, will have a material effect on the net position or changes in net position of the Plan.

See Independent Auditors' Report.

REQUIRED SUPPLEMENTARY INFORMATION

Exhibit I

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY**Last 10 Fiscal Years (Dollar Amounts in Thousands)**

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
Total pension liability										
Service cost	\$ 62,896	63,029	58,695	54,592	53,042	56,160	54,059	66,974	65,756	62,139
Interest	175,092	171,306	165,076	164,141	159,256	150,394	144,742	174,238	169,827	161,028
Changes of benefit terms	2,161	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(13,155)	(41,985)	596	(12,764)	(18,258)	7,194	(10,069)	(96,100)	(38,037)	(7,660)
Changes in assumptions	25,307	-	-	-	-	(2,444)	-	(422,901) *	-	-
Benefit payments, including refunds of member contributions	<u>(139,563)</u>	<u>(144,092)</u>	<u>(138,625)</u>	<u>(141,693)</u>	<u>(119,241)</u>	<u>(114,835)</u>	<u>(113,300)</u>	<u>(104,044)</u>	<u>(110,427)</u>	<u>(94,114)</u>
Net change in total pension liability	112,738	48,258	85,742	64,276	74,799	96,469	75,432	(381,833)	87,119	121,393
Total pension liability—beginning	<u>2,403,073</u>	<u>2,354,815</u>	<u>2,269,073</u>	<u>2,204,797</u>	<u>2,129,998</u>	<u>2,033,529</u>	<u>1,958,097</u>	<u>2,339,930</u>	<u>2,252,811</u>	<u>2,131,418</u>
Total pension liability—ending (a)	<u>\$2,515,811</u>	<u>2,403,073</u>	<u>2,354,815</u>	<u>2,269,073</u>	<u>2,204,797</u>	<u>2,129,998</u>	<u>2,033,529</u>	<u>1,958,097</u>	<u>2,339,930</u>	<u>2,252,811</u>

*The decrease was due to legislation which changed the actuarial assumptions to no longer include cost-of-living adjustments (COLA's).

(Continued)

See Independent Auditors' Report.
See accompanying notes to required supplementary information.

Exhibit I, Continued

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY, CONTINUED**Last 10 Fiscal Years (Dollar Amounts in Thousands)**

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
Plan fiduciary net position										
Contributions—employers (cities)	\$ 40,135	38,887	38,533	37,261	35,547	34,645	32,896	31,846	32,240	31,675
Contributions—members	24,747	23,916	23,787	22,867	22,131	21,518	20,113	19,489	19,626	19,139
Contributions—State of Oklahoma, a non-employer contributing entity	39,028	34,283	35,915	35,490	31,329	31,412	28,092	24,645	22,292	26,913
Net investment income (loss)	205,439	242,415	(21,104)	74,554	294,897	221,174	8,374	282,305	163,058	(283,519)
Benefit payments, including refunds of member contributions	(139,563)	(144,092)	(138,625)	(141,693)	(119,241)	(114,835)	(113,300)	(104,044)	(110,427)	(94,114)
Administrative expense	<u>(1,721)</u>	<u>(1,699)</u>	<u>(1,831)</u>	<u>(1,949)</u>	<u>(1,862)</u>	<u>(2,053)</u>	<u>(1,952)</u>	<u>(1,712)</u>	<u>(1,708)</u>	<u>(2,176)</u>
Net change in plan fiduciary net position	168,065	193,710	(63,325)	26,530	262,801	191,861	(25,777)	252,529	125,081	(302,082)
Plan fiduciary net position—beginning	<u>2,395,381</u>	<u>2,201,671</u>	<u>2,264,996</u>	<u>2,238,466</u>	<u>1,975,665</u>	<u>1,783,804</u>	<u>1,809,581</u>	<u>1,557,052</u>	<u>1,431,971</u>	<u>1,734,053</u>
Plan fiduciary net position—ending (b)	<u>\$ 2,563,446</u>	<u>2,395,381</u>	<u>2,201,671</u>	<u>2,264,996</u>	<u>2,238,466</u>	<u>1,975,665</u>	<u>1,783,804</u>	<u>1,809,581</u>	<u>1,557,052</u>	<u>1,431,971</u>
Plan's net pension liability (asset) (a) - (b)	<u>\$ (47,635)</u>	<u>7,692</u>	<u>153,144</u>	<u>4,077</u>	<u>(33,669)</u>	<u>154,333</u>	<u>249,725</u>	<u>148,516</u>	<u>782,878</u>	<u>820,840</u>

See Independent Auditors' Report.

See accompanying notes to required supplementary information.

Exhibit II

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY**Last 10 Fiscal Years (Dollar Amounts in Thousands)**

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
Total pension liability	\$ 2,515,811	2,403,073	2,354,815	2,269,073	2,204,797	2,129,998	2,033,529	1,958,097	2,339,930	2,252,811
Plan fiduciary net position	<u>2,563,446</u>	<u>2,395,381</u>	<u>2,201,671</u>	<u>2,264,996</u>	<u>2,238,466</u>	<u>1,975,665</u>	<u>1,783,804</u>	<u>1,809,581</u>	<u>1,557,052</u>	<u>1,431,971</u>
Plan's net pension liability (asset)	<u>\$ (47,635)</u>	<u>7,692</u>	<u>153,144</u>	<u>4,077</u>	<u>(33,669)</u>	<u>154,333</u>	<u>249,725</u>	<u>148,516</u>	<u>782,878</u>	<u>820,840</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>101.89%</u>	<u>99.68%</u>	<u>93.50%</u>	<u>99.82%</u>	<u>101.53%</u>	<u>92.75%</u>	<u>87.72%</u>	<u>92.42%</u>	<u>66.54%</u>	<u>63.56%</u>
Covered payroll	<u>\$ 308,731</u>	<u>299,131</u>	<u>296,408</u>	<u>295,307</u>	<u>289,502</u>	<u>279,014</u>	<u>266,038</u>	<u>257,505</u>	<u>249,583</u>	<u>253,956</u>
Plan's net pension liability (asset) as a percentage of covered payroll	<u>(15.43)%</u>	<u>2.57%</u>	<u>51.67%</u>	<u>1.38%</u>	<u>(11.63)%</u>	<u>55.31%</u>	<u>93.87%</u>	<u>57.67%</u>	<u>313.67%</u>	<u>323.22%</u>

See Independent Auditors' Report.
See accompanying notes to required supplementary information.

Exhibit III

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF CONTRIBUTIONS FROM EMPLOYERS AND OTHER CONTRIBUTING ENTITIES

Last 10 Fiscal Years (*Dollar Amounts in Thousands*)

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
Actuarially determined contribution	\$ <u>32,798</u>	<u>51,417</u>	<u>45,054</u>	<u>63,908</u>	<u>90,283</u>	<u>79,314</u>	<u>64,746</u>	<u>146,816</u>	<u>132,456</u>	<u>102,610</u>
Contributions in relation to the actuarially determined contribution:										
Employers (Cities)	40,135	38,887	38,533	37,261	35,547	34,645	32,896	31,846	32,240	31,675
State of Oklahoma, a non-employer contributing entity	<u>39,028</u>	<u>34,283</u>	<u>35,915</u>	<u>35,490</u>	<u>31,329</u>	<u>31,412</u>	<u>28,092</u>	<u>24,645</u>	<u>22,292</u>	<u>26,913</u>
	<u>79,163</u>	<u>73,170</u>	<u>74,448</u>	<u>72,751</u>	<u>66,876</u>	<u>66,057</u>	<u>60,988</u>	<u>56,491</u>	<u>54,532</u>	<u>58,588</u>
Contribution (excess) deficiency	\$ <u>(46,365)</u>	<u>(21,753)</u>	<u>(29,394)</u>	<u>(8,843)</u>	<u>23,407</u>	<u>13,257</u>	<u>3,758</u>	<u>90,325</u>	<u>77,924</u>	<u>44,022</u>
Covered payroll	\$ <u>308,731</u>	<u>299,131</u>	<u>296,408</u>	<u>295,307</u>	<u>289,502</u>	<u>279,014</u>	<u>266,038</u>	<u>257,505</u>	<u>249,583</u>	<u>253,956</u>
Contributions as a percentage of covered payroll	<u>25.64%</u>	<u>24.46%</u>	<u>25.12%</u>	<u>24.64%</u>	<u>23.10%</u>	<u>23.68%</u>	<u>22.92%</u>	<u>21.94%</u>	<u>21.85%</u>	<u>23.07%</u>

See Independent Auditors' Report.

See accompanying notes to required supplementary information.

Exhibit IV

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF INVESTMENT RETURNS**Last 6 Fiscal Years**

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Annual money-weighted rate of return, net of investment expense	8.64%	11.11%	(0.94)%	3.36%	15.04%	12.56%

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

See Independent Auditors' Report.

See accompanying notes to required supplementary information.

Exhibit V

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

June 30, 2018

The information presented in the required supplementary schedules was determined as part of an actuarial valuation by an independent enrolled actuary (Cavanaugh Macdonald Consulting, LLC for 2018, 2017, and 2016, and by Buck Consultants, LLC for all other years presented) at the dates indicated. Additional information as of the July 1, 2018, valuation follows:

Assumptions

Actuarial cost method:	Entry age
Amortization method:	Level dollar—open
Remaining amortization:	30 years
Asset valuation method:	5-year smoothed

Actuarial assumptions:

Investment rate of return:	7.5%, net of pension plan investment expense
Projected salary increases*:	3.5% to 10.0%
Cost-of-living adjustments:	Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer, based on an increase in base salary of 3.5% (wage inflation).

* Includes inflation at 3.5%.

See Independent Auditors' Report.

SUPPLEMENTARY INFORMATION

See Independent Auditors' Report.

Schedule I

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF INVESTMENT EXPENSES

<i>Years Ended June 30,</i>	<i>2018</i>	<i>2017</i>
	<i>(Amounts in Thousands)</i>	
Investment management fees:		
Fixed income managers:		
Global Fixed Income	\$ 1,245	1,283
Low Volatility	1,309	1,208
Equity managers:		
Domestic Equity	3,108	2,805
International Equity	2,754	2,314
Private Equity	2,885	2,591
Real estate:		
Real estate	2,778	2,741
Commodities	697	658
Total investment management fees	14,776	13,600
Investment consultant fees	650	650
Investment custodial fees	210	205
Total investment expenses	\$ 15,636	14,455

See Independent Auditors' Report.

Schedule II

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF ADMINISTRATIVE EXPENSES

<i>Years Ended June 30,</i>	<i>2018</i>	<i>2017</i>
	<i>(Amounts in Thousands)</i>	
Staff salaries	\$ 828	852
FICA and retirement	196	225
Insurance	123	136
Total personnel services	<u>1,147</u>	<u>1,213</u>
Actuarial	69	43
Audit	87	62
Legal	118	70
Total professional/consultant services	<u>274</u>	<u>175</u>
Office space and equipment	100	93
Total rental	<u>100</u>	<u>93</u>
Travel	56	48
Maintenance	55	78
Computer/data	-	11
Other	89	81
Total miscellaneous	<u>200</u>	<u>218</u>
Total administrative expenses	<u>\$ 1,721</u>	<u>1,699</u>

See Independent Auditors' Report.

Schedule III

OKLAHOMA POLICE PENSION AND RETIREMENT PLAN
Administered by
OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

SCHEDULE OF PROFESSIONAL/CONSULTANT FEES

<i>Years Ended June 30,</i>	<i>2018</i>	<i>2017</i>
	<i>(Amounts in Thousands)</i>	
<u>Professional/Consultant</u>	<u>Service</u>	
Cavanaugh MacDonald Consulting	69	43
Finley & Cook, PLLC	67	62
Crawford & Associates	20	-
Davis, Graham, Stubbs, LLP	103	55
Attorney General	15	15
	<u>\$ 274</u>	<u>175</u>

See Independent Auditors' Report.



Investment Section

- 80 – Investment Consultant Letter
- 83 – Schedule of Largest Assets Held
- 84 – Investment Portfolio by Type and Manager
- 85 – Schedule of Private Equity Managers
- 86 – Net Performance Summary
- 87 – Asset Allocation - Portfolio versus Policy Comparison
- 87 - Schedule of Investment Fees
- 88 - Schedule of Broker Commissions



Investment Section



231 South Bemiston Avenue
 14th Floor
 Saint Louis, Missouri 63105
 T 314.862.4848
 F 314.862.5967
 www.acgnet.com

REPORT ON INVESTMENT ACTIVITIES

October 16, 2018

Asset Consulting Group works with the Oklahoma Police Pension & Retirement System's (OPPRS) Board to maintain an Investment Policy and asset allocation strategy that are designed to meet the long-term objectives of OPPRS. We meet formally with the Board on a monthly basis to assess the capital markets, the overall investment landscape and the unique considerations of OPPRS. We report on current investment activity, provide perspective on the market environment and make recommendations as appropriate to enhance or modify the investment strategy and/or its component parts. We provide monthly reports and more comprehensive quarterly reports to inform the Board of progress towards meeting the long-term objectives of OPPRS and to highlight areas of interest, opportunity and/or for potential discussion. In addition, we provide education on an ongoing basis in the areas most relevant to the investment objectives and needs of OPPRS.

The Oklahoma Police Pension and Retirement System's investment portfolio has been constructed with an emphasis on risk mitigation and a goal of achieving favorable long-term risk-adjusted returns. Because of the strength of the Retirement System's funded status, special attention is given to reduced volatility and downside protection. For the fiscal year ending June 30, 2018, the OPPRS' portfolio generated a gross investment return of 8.83%, which was ahead of the policy benchmark return of 7.83%. Over the 3-year period ending June 30, 2018, the total portfolio has produced an annualized return of 6.61% relative to a return of 6.42% for its policy benchmark. For the recent 10-year period, the OPPRS' portfolio has generated an annualized return of 6.20% versus 6.45% for its benchmark. The OPPRS' portfolio has achieved its results over each of these time periods with approximately 25% less volatility than that of its benchmark. OPPRS' risk conscious approach over the long-term has resulted in a more favorable risk-adjusted return profile than its median peer and benchmark and is influenced by the overall health of the Retirement System's assets relative to its liabilities. The calculation methodology used in our performance reports and this investment section is consistent with the methodology prescribed by the CFA Institute, including time-weighted rates of return and the fair market value of assets. In providing these results, we rely on the timeliness and accuracy of financial data provided by the OPPRS' custodian bank and its investment managers.

Total Portfolio Statistics - 10 Years (Annualized) Periods Ending June 30, 2018

	OPPRS	Total Fund Policy
Return	6.20%	6.45%
Standard Deviation	7.78%	10.28%
Sharpe Ratio	0.76	0.60

The major asset category returns are also summarized as follows:

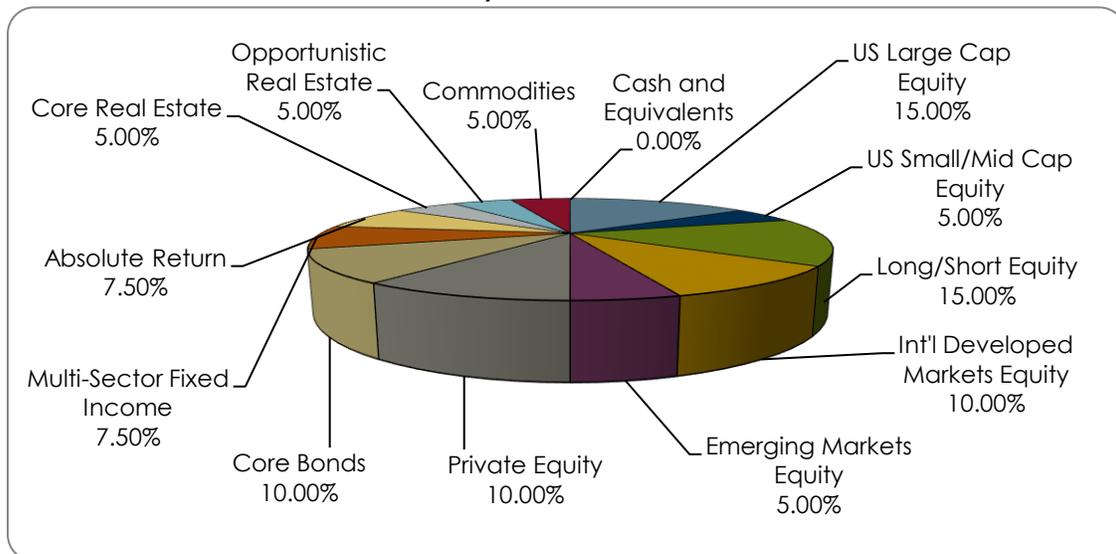
Total Portfolio Rates of Return Summary & Universe Comparison
Periods Ending June 30, 2018

	10 Years
Total Fund	6.20%
<i>Policy Index¹</i>	6.45%
<i>Median Total Fund (55-70% Equity)</i>	6.78%
Total Equity Composite	7.25%
<i>MSCI ACWI</i>	6.37%
Global Bonds Composite	4.28%
<i>BloomBar Universal</i>	4.07%
Real Assets Composite	3.72%
<i>NFI ODCE Net</i>	4.33%

¹As of 04-30-18 The index consists of 60.0% MSCI ACWI, 25.0% BloomBar Universal, 10.0% NFI ODCE Net, 5.0% BloomBar Commodity

The OPPRS' investment strategy has been developed, reviewed and periodically modified following thorough analysis of many alternatives evaluated and the current investment opportunity set. The strategy is refined as appropriate to ensure compatibility with the expected long-term return objectives, unique considerations of OPPRS' and the Board's risk tolerance. The primary objective of this approach is to implement a plan of action which will result in the highest probability of meeting long-term investment objectives within an acceptable level of risk. The portfolio is highly diversified across asset classes, strategies, styles, geographies, currencies, capitalizations, liquidity, type, number of instruments and other methods. As of June 30, 2018, the OPPRS' targeted asset allocation consisted of:

Periods Ending June 30, 2018
Policy Asset Allocation



In summary, ACG believes that OPPRS has adopted and implemented a sound Investment Policy and portfolio strategy, recognizing its healthy funded status in designing a portfolio structured to achieve strong risk-adjusted returns while maintaining a protective stance against significant asset loss. This portfolio strategy is monitored and revised as appropriate.

Sincerely,

A handwritten signature in cursive script that reads "George A. Tarlas". The signature is written in black ink and is positioned to the left of the printed name.

George A. Tarlas, CFA
Senior Managing Director

Schedule of Largest Assets Held For the Fiscal Year Ended June 30, 2018

The Plan's ten largest stock, fixed income and partnership holdings at June 30, 2018.

Largest Stock Holdings (by Fair Value)

Security	Shares Held	Fair Value
Liveperson Inc.	77,777	\$ 1,641,095
Ollie's Bargain Outlet Holding	22,025	1,596,813
SLM Corp	139,260	1,594,527
Atricure	57,815	1,563,896
Cutera Inc.	37,450	1,509,235
Walker & Dunlop Inc.	26,735	1,487,803
Tactile Systems Technology Inc.	27,190	1,413,880
Axon Enterprise Inc.	22,057	1,393,561
Boingo Wireless Inc.	59,527	1,344,715
Cray Inc.	54,596	1,343,062

Largest Fixed Income Holdings (by Fair Value)

Security	Par Value	Fair Value
U.S. Treasury Bond 4.5%	6,980,000	\$ 8,703,431
FNMA Pool #OMA3120	6,572,034	6,555,735
GNMA II Pool #OMA0783	4,796,292	4,853,416
FHLMC Pool #G0-8741	4,246,903	4,113,337
FHLMC Pool #G0-8653	3,789,982	3,681,664
GNMA II Pool #OMA4837	2,797,242	2,810,556
FHLMC Pool #C0-4444	2,702,229	2,638,727
FNMA Pool #OAB2092	2,208,654	2,268,464
JPMorgan Chase 4.35% 08/15/2021	2,195,000	2,257,316
FHLMC Pool #G0-8710	2,323,689	2,252,863

Largest Limited Partnership Holdings (by Fair Value)

Limited Partnership	Fair Value
FirstMark Capital I	\$ 22,178,478
LBC Credit Partners IV	18,604,260
Weathergage Venture Capital II	11,451,915
Newstone Capital III	11,337,357
Francisco Partners IV	10,693,991
FirstMark Capital II	8,408,148
Arsenal II	8,160,620
Warburg Pincus X	7,832,561
Warburg Pincus XI	7,318,155
Arsenal III	6,913,331

A complete list of portfolio holdings may be requested from the OPPRS Accounting Department at 1001 NW 63rd Street, Suite 305, Oklahoma City, OK, 73116-7335.

Portfolio by Investment Type and Manager For the Period Ended June 30, 2018

Investment Managers by Investment Type	Investment Class	Fair Value (000s)	% of Asset Class (boxed)	% of Total Portfolio
International Equity				
Baring Focused	Equity	\$ 122,126	7.5%	4.8%
Mondrian International Equity Fund, LP	Equity	138,343	8.5%	5.4%
AllianceBernstein EM Strategic Core	Equity	81,104	5.0%	3.2%
Wasatch Small Cap	Equity	36,569	2.2%	1.4%
Domestic Equity				
Small/Mid Cap				
Common Stock - Custodial account	Equity	183	0.0%	0.0%
Boston Partners - Value	Equity	90,086	5.5%	3.5%
Cortina - Growth	Equity	103,668	6.4%	4.1%
Large Cap				
Northern Trust Index Russell 1000	Equity	455,018	27.9%	17.8%
Long/Short Equity				
Grosvenor A	Equity	204,203	12.5%	8.0%
Grosvenor B	Equity	159,473	9.8%	6.2%
Private Equity				
Various Managers *	Equity	237,332 (*)	14.6%	9.3%
Global Fixed Income				
Agincourt- Core	Fixed Income	167,236	28.8%	6.5%
Oaktree Capital Management	Fixed Income	122,489	21.1%	4.8%
Loomis Sayles	Fixed Income	96,749	16.7%	3.8%
Low Volatility Strategies				
PAAMCO - Newport Mesa	Fixed Income	130,351	22.5%	5.1%
Wellington Global Total Return	Fixed Income	63,334	10.9%	2.5%
Real Assets				
MLM Macro - Peak Partners L.P.	Commodities	31,700	10.3%	1.2%
The TAP Fund/Gresham	Commodities	53,155	17.3%	2.1%
JP Morgan Core Real Estate	Core RE	123,954	40.4%	4.9%
Blackstone Core Real Estate	Core RE	41,114	13.4%	1.6%
Cerberus Fund III	Opportunistic	13,451	4.4%	0.5%
Cerberus Fund IV	Opportunistic	4,729	1.5%	0.2%
Columbus Square - Direct Ownership	Opportunistic	4,300	1.4%	0.2%
Siguler Guff - Opportunistic	Opportunistic	6,900	2.3%	0.3%
Siguler Guff II- Opportunistic	Opportunistic	7,680	2.5%	0.3%
Siguler Guff IIB- Opportunistic	Opportunistic	1,029	0.3%	0.0%
Hall Capital III	Opportunistic	5,713	1.9%	0.2%
TA Associates Realty X - Opportunistic	Opportunistic	12,915	4.2%	0.5%
Cash and Cash Equivalents				
OK Invest	Cash & Cash Eq.	19,151	49.8%	0.8%
Cash at BNY Mellon	Cash & Cash Eq.	19,283	50.2%	0.8%
Total Investments and Cash and Cash Equivalents		\$ 2,553,338		100.0%

(*) See the following page for a detailed listing of Private Equity Managers.

Private Equity by Strategy and Manager For the Period Ended June 30, 2018

Investment Focus and Manager	Market Value
Private Equity Investment Focus - Buyout	
Apollo Investment Fund VIII	\$ 6,705,442
Apollo Investment Fund XI	(54,190)
Arsenal Capital Partners Fund II, L.P.	8,160,620
Arsenal Capital Partners Fund III, L.P.	6,913,331
Calera Capital Fund IV	1,189,907
CenterOak Equity I	3,861,050
Francisco Partners Fund IV	10,693,991
Francisco Partners Fund V	1,281,668
Leonard Green Equity Investors VII	2,800,017
Levine Leichtman Capital Partners III, L.P.	72,647
Levine Leichtman Capital Partners IV, L.P.	3,827,687
Sun Capital Fund V	5,589,687
Thompson Street Capital Partners II GP, LP	1,738,934
Thompson Street Capital Partners III GP, LP	4,877,981
Thompson Street Capital Partners VI GP, LP	5,263,075
Subtotal - Buyout	<u>62,921,847</u>
Private Equity Investment Focus - Distressed	
Apollo European Principal Finance Fund III	1,461,718
Oaktree Opportunity Fund V	56,477
Oaktree Opportunity Fund VI	49
Oaktree Opportunity Fund VII	531,972
Oaktree Opportunity Fund VIIb	468,240
Oaktree Opportunity Fund VIII	844,740
Oaktree Opportunity Fund IX	6,009,284
Oaktree Opportunity Fund X	5,960,408
Oaktree Opportunity Fund XB	186,611
Oaktree European Dislocation	650,541
Siguler Guff Distressed Opportunity Fund II	599,131
Siguler Guff Distressed Opportunity Fund III	2,759,595
Subtotal - Distressed	<u>19,528,766</u>
Private Equity Investment Focus - Fund of Funds	
Lexington Cap VI-B	2,469,982
Subtotal - Fund of Funds	<u>2,469,982</u>
Private Equity Investment Focus - Mezzanine	
LBC Credit Partners Fund IV	18,604,260
Newstone Capital Partners I, LP	20,297
Newstone Capital Partners II, LP	1,712,200
Newstone Capital Partners III, LP	11,337,357
TCW/Crescent Mezzanine III, L.P.	330,197
TCW/Crescent Mezzanine IV, L.P.	25,381
TCW/Crescent Mezzanine V, L.P.	661,511
Subtotal - Mezzanine	<u>32,691,203</u>
Private Equity Investment Focus - Venture Capital	
Accel Europe, L.P.	991,602
FirstMark Cap Opportunity Fund I	6,493,435
FirstMark Cap Opportunity Fund II	1,703,808
FirstMark Capital Fund I	22,178,478
FirstMark Capital Fund II	8,408,148
FirstMark Capital Fund III	5,529,278
FirstMark Capital Fund IV	1,452,062
KnightsBridge	6,642,014
Lightspeed Venture Partner Fund VI, L.P.	135,067
Warburg Pincus X	7,832,561
Warburg Pincus XI	7,318,155
Warburg Pincus XII	5,935,275
Weathergage Capital	5,970,555
Weathergage Capital II	11,451,915
Weathergage Capital IV	2,884,613
Subtotal - Venture Capital	<u>94,926,966</u>
Private Equity Investment Focus - Emerging Markets	
Actis 4 Global	6,898,000
Subtotal - Emerging Markets	<u>6,898,000</u>
Private Equity Investment Focus - Other	
Arclight Energy VI	6,798,634
EnCap Energy Fund IX	5,133,198
EnCap Energy Fund X	5,297,852
EnCap Energy Fund XI	664,935
Subtotal - Other	<u>17,894,619</u>
Total Private Equity Investments	<u>\$ 237,331,383</u>

OPPRS Private Equity Investments

Private equity investments usually consist of a general partner as the active investor with a number of passive limited partners (like OPRRS) where all contribute to a combined fund and invest according to one of the following strategies:

Buyout - this strategy will invest capital in more mature businesses that have the potential for growth in value from efficiencies gained through structural, strategic management and operational improvements.

Distressed – under this strategy, the general partner will invest in the debt of companies that are struggling, with the intent of influencing the process by which the company restructures its debt, narrows its focus or implements a plan to turn around its operations. Distressed positions can involve debt, equity and lending investments.

Fund of Funds – this strategy combines many different investments approaches into a single investment.

Mezzanine – this strategy typically involves the partnership making either unsecured loans or purchasing preferred equity, often in smaller companies, where the unsecured risk is offset by higher returns.

Venture Capital – this strategy seeks to invest funds in early-stage, high-potential, high growth companies. This type of investment is usually through equity ownership in the developing company.

Emerging Markets – this strategy focuses on investing in companies in emerging economies around the globe.

Other – for this strategy, investments will usually be concentrated within a specific industry or region.

Net Performance Summary by Investment Manager For the Period Ended June 30, 2018

Investment Managers by Investment Type	Investment Performance*			
	One Quarter	One Year	Three Years	Five Years
International Equity				
Baring Focused	0.64%	10.01%	8.28%	7.98%
Mondrian	-1.98%	5.16%	4.26%	6.49%
MSCI EAFE	-0.97%	7.37%	5.41%	6.93%
AllianceBernstein EM Strategic Core	-9.14%	2.83%	N/A	N/A
MSCI Emerging markets	-7.86%	8.59%	5.98%	5.39%
Wasatch Emerging Markets - Small Cap	-6.06%	9.88%	4.10%	3.84%
MSCI Emerging Markets Small Cap	-8.54%	5.96%	2.85%	4.63%
Domestic Equity Managers				
Small/Mid Capitalization Equity				
Boston Partners - Value	2.58%	9.66%	9.71%	11.86%
Russell 2500 Value	5.80%	11.49%	9.76%	10.78%
Cortina- Growth	16.21%	27.81%	16.72%	N/A
Russell 2000 Growth	7.23%	21.86%	10.60%	13.65%
Large Capitalization Equity				
Northern Trust Russell 1000 Index Fund	3.57%	14.53%	11.65%	13.38%
Russell 1000	3.57%	14.54%	11.64%	13.37%
Long/Short Equity				
Grosvenor	2.32%	8.84%	4.57%	6.82%
MSCI ACWI	0.72%	11.31%	8.78%	10.00%
HFRI FOF Strategic	0.86%	6.66%	2.52%	4.22%
Private Equity				
	1.74%	11.71%	7.71%	10.82%
Global Fixed Income Managers				
Agincourt- Core Bonds	-0.17%	-0.08%	2.16%	2.71%
Oaktree Capital Management	1.18%	2.75%	5.02%	5.45%
BloomBar US Aggregate	-0.16%	-0.40%	1.72%	2.27%
Loomis Sayles	-4.08%	2.28%	3.80%	1.90%
Citigroup World Gov't Bond	-3.35%	1.90%	2.81%	1.11%
Low Volatility Strategies Managers				
PAAMCO - Newport Mesa	1.93%	3.67%	1.02%	3.21%
HFRI FOF Conservative	0.99%	4.09%	1.90%	3.00%
Wellington Global Total Return	2.49%	6.04%	N/A	N/A
LIBOR 3 Month	0.55%	1.63%	1.00%	0.70%
Real Assets				
MLM Macro - Peak Partners L.P. (Commodities)	-2.98%	8.40%	2.19%	6.22%
Gresham Tap Fund (Commodities)	1.93%	12.38%	-3.57%	N/A
Bloomberg Commodity	0.40%	7.35%	-4.54%	6.40%
Private Real Estate (Opportunistic)	4.44%	9.72%	11.14%	11.60%
Columbus Square (Opportunistic-Plan owned)	3.08%	4.28%	8.98%	7.96%
Blackstone Property Partners (Core RE)	2.64%	10.37%	14.97%	N/A
JP Morgan (Core RE)	1.95%	7.90%	8.97%	10.85%
NFI ODCE(net)	1.82%	7.48%	8.38%	10.03%
Cash and Cash Equivalents				
OK Invest	0.49%	1.82%	1.91%	1.91%
Cash at BNY Mellon ^	0.47%	1.43%	2.58%	1.52%
Total Portfolio	1.59%	8.83%	6.61%	7.76%
Total Portfolio Net of Fees	1.48%	8.34%	6.16%	7.30%
<i>Policy Index (1)</i>	<i>0.57%</i>	<i>7.83%</i>	<i>6.42%</i>	<i>7.35%</i>

Source: Asset Consulting Group, Report June 30, 2018. All returns based on investment industry standards for return calculations.

* - Returns are calculated using time-weighted return rates with trade date reporting, daily weighting of cash flows and accruals due.

^ - Cash with custodian includes miscellaneous equity securities in process of liquidation.

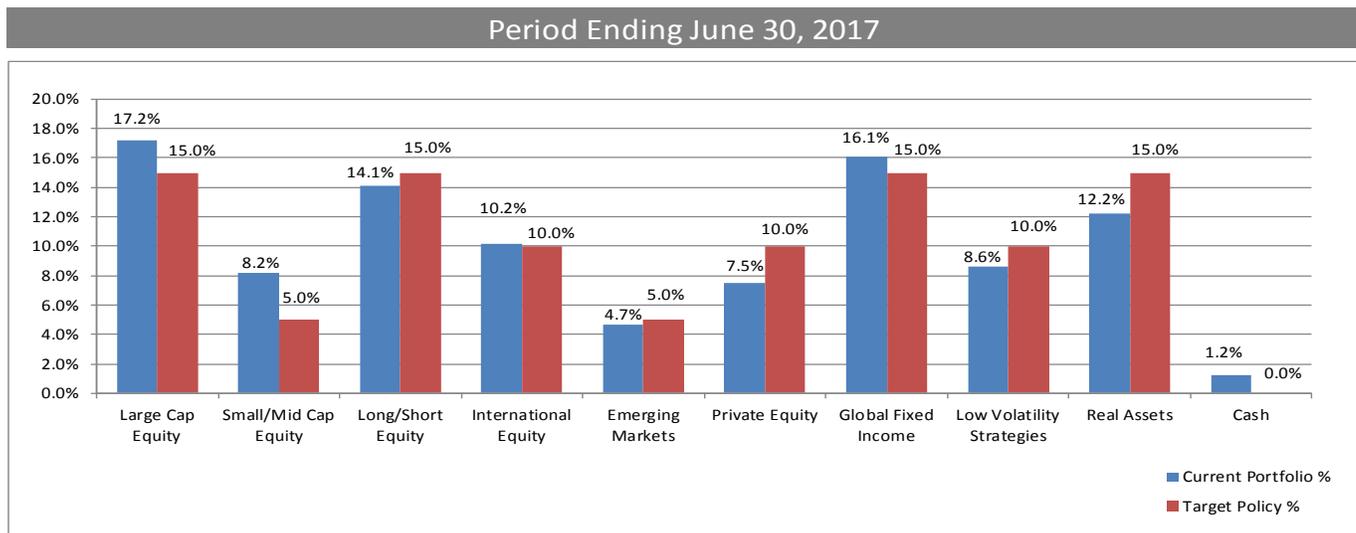
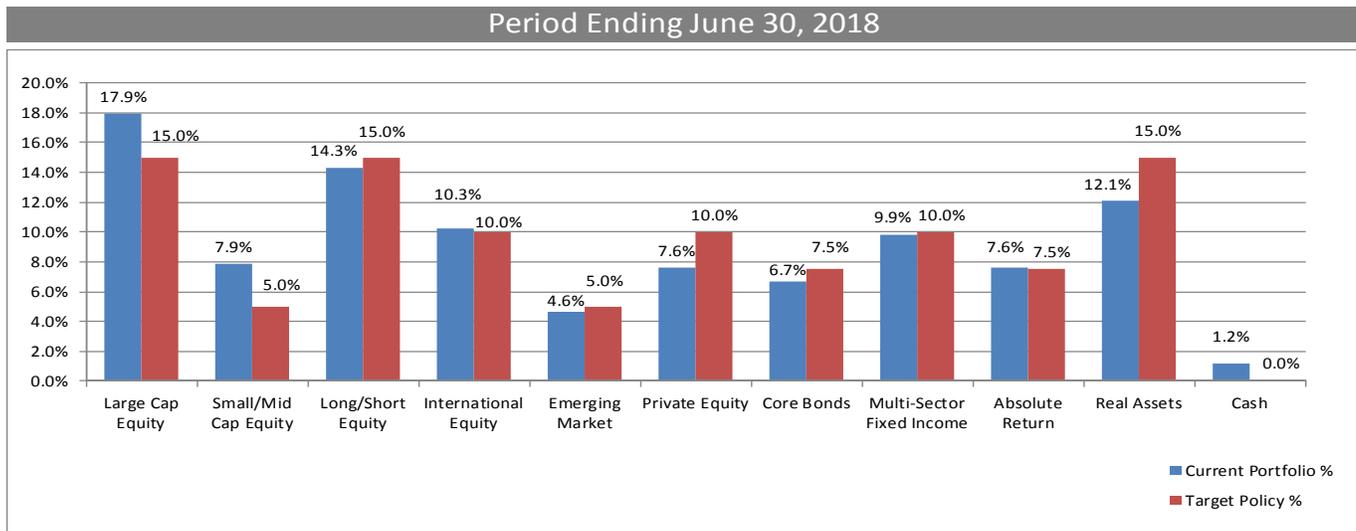
(1) The Total Fund Policy Index History (by effective date of change)

08/2012 - The policy index consisted of 65.0% MSCI ACWI, 30.0% Barclays Universal, 5.0% NFI ODCE Net

08/2014 - The policy index consisted of 60.0% MSCI ACWI, 30.0% Barclays Universal, 5.0% NFI ODCE Net, 5.0% Bloomberg Commodity

04/2016 - The policy index consisted of 60.0% MSCI ACWI, 25.0% BloomBar Universal, 10.0% NFI ODCE Net, 5.0% Bloomberg Commodity

Current Portfolio versus Target Policy Allocation For the Fiscal Years Ended June 30, 2018 and June 30, 2017



Schedule of Investment Fees For the Fiscal Years Ended June 30, 2018 and 2017

Investment Managers Fees	2018	2017
Domestic Equity	\$ 3,108,000	\$ 2,805,000
Private Equity	2,885,000	2,591,000
International Equity	2,754,000	2,314,000
Real Estate	2,778,000	2,741,000
Commodities	697,000	658,000
Fixed Income-Low Volatility	1,309,000	1,208,000
Fixed Income	1,245,000	1,283,000
Subtotal - Investment Managers Fees	14,776,000	13,600,000
Custodian fee	210,000	205,000
Investment Consultant fee	650,000	650,000
Total Investment Management Fees	\$ 15,636,000	\$ 14,455,000

Schedule of Broker Commissions

For the Fiscal Year Ended June 30, 2018

Schedule of Broker Commissions				
Broker Name\Location	Base Commission	Base amount Traded	Units Traded	Commission per Share
B RILEY AND CO LLC, NEW YORK	577	271,883	19,318	0.02987
BAIRD, ROBERT W & CO INC, MILWAUKEE	12,610	6,406,500	346,797	0.03636
BARCLAYS CAPITAL INC./LE, NEW JERSEY	58	237,713	2,915	0.02000
BARCLAYS CAPITAL LE, NEW YORK	330	372,472	13,207	0.02500
BERNSTEIN SANFORD C & CO, NEW YORK	961	2,071,699	41,709	0.02305
BNY CAPITAL MARKETS INC, NEW YORK	39,931	18,993,741	1,361,115	0.02934
BNY CONVERGEX, NEW YORK	600	262,073	16,904	0.03550
BTIG LLC, NEW YORK	1,932	659,157	69,968	0.02762
BUCKINGHAM RESEARCH, NEW YORK	1,347	1,053,075	44,912	0.03000
CANTOR CLEARING SERV, NEW YORK	422	323,160	14,829	0.02848
CANTOR FITZGERALD & CO INC, NEW YORK	5,069	3,079,931	200,493	0.02528
CITIGROUP GBL MKTS INC, NEW YORK	140	163,958	5,947	0.02360
CONVERGEX EXECUTION SOLUTION, NEW YORK	21,126	12,625,386	786,436	0.02686
CORNERSTONE MACRO LLC, NEW YORK	2,275	1,758,811	75,846	0.03000
COWEN AND CO LLC, NEW YORK	6,197	4,451,946	251,008	0.02469
CRAIG HALLUM, NEW YORK	1,744	1,007,591	64,959	0.02685
CREDIT SUISSE, NEW YORK (CSUS)	6,384	9,980,221	281,145	0.02271
DAVIDSON(D A) & CO INC, NEW YORK	1,289	1,216,249	41,805	0.03084
DEUTSCHE BK SECS INC, NY (NWSCUS33)	163	65,235	6,397	0.02548
FIRST CLEARING LLC, RICHMOND	945	221,913	37,542	0.02516
FRIEDMAN, BILLINGS AND RAMSEY, NEW YORK	927	506,184	46,357	0.02000
GOLDMAN SACHS & CO, NY	21,588	36,454,780	1,396,624	0.01546
GOLDMAN SACHS EXECUTION & CLEARING, NY	1,467	1,659,085	66,919	0.02192
GUGGENHEIM CAPITAL MARKETS LLC, NEW YORK	129	11,382	4,297	0.03000
GUGGENHEIM CAPITAL MARKETS LLC, NEW YORK	2,369	3,340,659	79,114	0.02994
HSBC SECURITIES (USA) INC, NEW YORK	11	3,549	268	0.04000
ICBC FINCL SVCS, NEW YORK	1,350	1,292,799	49,478	0.02727
INSTINET CLEARING SER INC, NEW YORK	179	113,017	6,749	0.02654
INSTINET CORP, NEW YORK	103	45,113	3,465	0.02984
INVESTMENT TECH GROUP INC, NEW YORK	157	634,782	15,687	0.01003
ISI GROUP INC, NEW YORK	463	205,920	11,565	0.04000
ITG INC, NEW YORK	62	386,308	8,834	0.00700
J.P MORGAN SECURITIES INC, NEW YORK	4,441	5,481,862	182,085	0.02439
J.P. MORGAN CLEARING CORP, NEW YORK	2,014	956,409	56,170	0.03586
JANNEY MONTGOMERY SCOTT, PHILADELPHIA	84	156,792	4,189	0.02000
JEFFERIES & CO INC, NEW YORK	22,622	14,971,788	733,973	0.03082
JONESTRADING INST SVCS LLC, NEW YORK	3,662	2,202,433	140,022	0.02615
TOTAL - THIS PAGE	\$165,729	\$133,645,576	6,489,048	0.02554

Continued on the following page

Schedule of Broker Commissions (continued from previous page)

For the Fiscal Year Ended June 30, 2018

Schedule of Broker Commissions				
Broker Name\Location	Base Commission	Base amount Traded	Units Traded	Commission per Share
KEEFE BRUYETTE + WOODS INC, NEW YORK	2,611	1,618,281	93,837	0.02783
KEYBANC CAPITAL MARKETS INC, NEW YORK	775	589,899	25,161	0.03080
LEERINK SWANN AND COMPANY, NEW YORK	1,202	676,227	38,525	0.03121
LIQUIDNET INC, NEW YORK	14,672	9,593,509	566,665	0.02589
LONGBOW SECURITIES LLC, NEW YORK	52	217,838	2,624	0.02000
MACQUARIE CAPITAL (USA) INC., NEW YORK	777	204,639	19,430	0.04000
MACQUARIE SECS USA INC, NEW YORK	1,156	348,398	29,979	0.03855
MERRILL LYNCH PIERCE FENNER SMITH INC NY	17,545	13,476,765	665,824	0.02635
MERRILL LYNCH PROFESSIONAL CLRG, PURCHAS	505	298,656	12,614	0.04000
MORGAN STANLEY & CO INC, NY	2,496	2,268,468	85,487	0.02920
NATIONAL FINL SVCS CORP, NEW YORK	11,467	6,443,211	379,875	0.03019
NEEDHAM AND CO LLC, NEW YORK	1,951	1,408,551	58,655	0.03326
NORTHLAND SECURITIES INC., NEW YORK	1,291	847,229	43,026	0.03000
OPPENHEIMER & CO INC, NEW YORK	3,161	3,303,887	104,462	0.03026
PERSHING LLC, JERSEY CITY	37,046	17,143,360	1,083,801	0.03418
PIPER JAFFRAY & CO., JERSEY CITY	13,217	7,330,690	357,402	0.03698
PIPER JAFFRAY & CO, MINNEAPOLIS	1,514	588,755	37,859	0.04000
RAYMOND JAMES & ASSOC INC, ST PETERSBURG	15,714	9,525,960	431,274	0.03644
RBC CAPITAL MARKETS LLC, NEW YORK	3,546	1,572,750	113,902	0.03113
SANDLER ONEILL AND PARTNER LP, NEW YORK	738	279,792	19,165	0.03849
SEAPORT GROUP SECURITIES, LLC, NEW YORK	1,728	1,568,049	59,452	0.02906
SIDOTI AND COMPANY LLC, NEW YORK	669	320,216	23,590	0.02837
SJ LEVINSON AND SONS LLC, NEW YORK	1,353	667,900	55,336	0.02445
STATE STREET GLOBAL MARKETS LLC, BOSTON	55	29,559	1,844	0.03000
STEPHENS INC, LITTLE ROCK	2,443	1,580,934	70,621	0.03460
STIFEL NICOLAUS	3,973	2,750,677	121,176	0.03278
STRATEGAS SECURITIES LLC, NEW YORK	2,163	1,444,842	72,096	0.03000
SUNTRUST CAPITAL MARKETS INC, NEW YORK	1,708	917,567	44,578	0.03831
THE BENCHMARK CO LLC, NEW YORK	954	562,783	26,957	0.03538
UBS SECURITIES LLC, STAMFORD	9,590	11,199,007	404,363	0.02372
VIRTU AMERICAS LLC, JERSEY CITY	276	172,141	9,188	0.03000
WEDBUSH MORGAN SECS INC, LOS ANGELES	1,504	1,089,357	95,100	0.01581
WEEDEN & CO, NEW YORK	570	353,333	28,520	0.02000
WELLS FARGO SECURITIES LLC, CHARLOTTE	165	32,632	4,133	0.04000
WELLS FARGO SECURITIES, LLC, NEW YORK	1,994	1,540,375	60,797	0.03279
WILLIAM BLAIR & CO, CHICAGO	6,841	3,098,024	189,393	0.03612
TOTAL - THIS PAGE	\$167,422	\$105,064,261	5,436,711	0.03079
GRAND TOTAL	\$333,151	\$238,709,837	11,925,759	0.02794



Actuarial Section

- 92 - Actuarial Certification Letter
- 94 - Summary of Actuarial Valuation Results
- 95 - Schedule of Active Member Data
- 95 - Schedule of Retirants Added\Removed from Rolls
- 95 - Schedule of Funding Progress (Actuarial)
- 96 - Solvency Test
- 97 - Analysis of Financial Experience
- 98 - Summary of Actuarial Assumptions and Methods
- 103 - Summary of System Provisions



Actuarial Section



Cavanaugh Macdonald
3802 Raynor Parkway, Suite 202
Bellevue, NE 68123

Phone (402) 905-4462
Fax (402) 905-4464
www.CavMacConsulting.com

November 16, 2018

Board of Trustees
Oklahoma Police Pension and Retirement System
1001 NW 63rd Street, Suite 305
Oklahoma City, OK 73116-7335

Members of the Board:

We have completed an actuarial valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2018 for the purpose of determining the actuarial contribution rate and calculating and analyzing key financial measurements. Actuarial valuations are performed annually. This valuation reflects the benefit provisions and contribution rates in effect as of July 1, 2018.

In preparing the valuation, we, as the actuary, relied on the data provided by the System. As part of our work, we performed a limited review of the data for consistency and reasonableness and did not find material defects in the data.

All of the information and supporting schedules in the Actuarial Section have been provided by Cavanaugh Macdonald Consulting, LLC, including:

- *Summary of Actuarial Results*
- *Schedule of Active Member Valuation Data*
- *Schedule of Retirants and Beneficiaries Added to and Removed from the Annuity Roles*
- *Schedule of Funding Progress*
- *Solvency Test*
- *Analysis of Financial Experience*

We also prepared the following exhibits shown in the financial section of the Comprehensive Annual Financial Report:

- *Schedule of Funding Progress*
- *Schedule of Employer Contributions*

All historical information that references a valuation date prior to July 1, 2016 was prepared by the prior actuarial firm.

The assumptions recommended by us and adopted by the Board are, in the aggregate, reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System and meet the parameters for the disclosures under statements issued by the Governmental Accounting Board.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

This is to certify that the independent consulting actuaries, Brent Banister and Bryan Hoge, are Members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. They have experience in performing valuations for public retirement systems. The valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board. In particular, the actuarial assumptions and methods used for determining the funding requirements were developed under the applicable Actuarial Standards of Practice. The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Respectfully submitted,



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



Bryan K. Hoge, FSA, EA, FCA, MAAA
Senior Actuary

Oklahoma Police Pension & Retirement System

Actuarial Section

The Oklahoma Police Pension and Retirement System is funded on a statutory basis, with contribution rates for employee, employer and the non-employer contributing entity established by statute. The Board, in conjunction with advice from the actuary, reviews the adequacy and appropriateness of the funding policy on a long-term basis. The System's actuary annually calculates an actuarially determined contribution (ADC) to assist with this determination. The actuarial section presents data primarily from a funding perspective, which can differ from the results determined for financial reporting purposes in the financial section. The actuarial assumptions used to calculate both the funding perspective and the financial perspective are materially the same. Exhibit III in the Required Supplementary Information portion of the Financial Section presents the ADC required and the contribution effort made toward the ADC by employers and the State of Oklahoma, a non-employer contributing entity.

Summary of Actuarial Valuation Results

As of July 1, 2018

	Actuarial Valuation as of		
	July 1, 2018	July 1, 2017	% Change
Summary of Costs			
Required State Contributions for Current Year	\$ -	\$ -	- %
Actual State Contributions Received in Prior Year	39,028,000	34,283,000	13.84
Funded Status			
Actuarial Accrued Liability	\$ 2,515,811,000	\$ 2,403,073,000	4.69 %
Actuarial Value of Assets	2,586,061,000	2,447,351,000	5.67
Unfunded Actuarial Accrued Liability	(70,250,000)	(44,278,000)	58.66
Funded Ratio	102.8%	101.8%	0.93
Market Value of Assets and Additional Liabilities			
Market Value of Assets	\$ 2,563,446,000	\$ 2,395,381,000	7.02 %
Actuarial Present Value of Accumulated System Benefits (ASC 960)	2,336,401,000	2,287,633,000	2.13
Present Value of Projected System Future Benefits	3,099,448,000	2,977,220,000	4.11
Summary of Data			
Number of Members in Valuation			
Active Paid Members (vested and not vested)	4,791	4,695	2.04 %
Deferred Option Plan Members	11	14	(21.43)
Terminated Members with Refunds Due	779	721	8.04
Terminated Members with Deferred Benefits	147	132	11.36
Retired Members	2,802	2,769	1.19
Beneficiaries	778	748	4.01
Disabled Members	140	141	(0.71)
Total	9,448	9,220	2.47
Active Member Statistics			
Total Projected Annual Compensation	\$ 323,111,811	\$ 313,087,696	3.20 %
Average Compensation	\$ 67,441	\$ 66,685	1.13
Average Age	40.0	40.0	-
Average Service	12.0	12.0	-

Schedule of Active Member Valuation Data

Valuation Date July 1,	Number of Members	Projected Annual Payroll	Average Annual Payroll	Percentage Change in Average Payroll
2009	4,497	253,955,863	56,472	4.87%
2010	4,305	249,582,676	57,975	2.66%
2011	4,368	253,989,944	58,148	0.30%
2012	4,441	263,529,629	59,340	2.05%
2013	4,467	276,920,177	61,992	4.47%
2014	4,557	287,105,267	63,003	1.63%
2015	4,570	293,483,501	64,220	1.93%
2016	4,679	312,751,104	66,841	4.08%
2017	4,695	313,087,696	66,685	-0.23%
2018	4,791	323,111,811	67,441	1.13%

Schedule of Retirants/Beneficiaries Added to/Removed from Rolls

Fiscal Year Ended June 30,	Added to Rolls		Removed from Rolls		Rolls at Year End		Percentage Increase	Average Annual Benefits
	Number of Additions	Annual Benefits	Number of Removals	Annual Benefits	Year End Roll Count	Annual Benefits		
2009	125	4,465,126	59	1,644,802	2,785	80,449,214	3.6%	28,887
2010	259*	8,245,373	51	1,619,770	2,993	87,074,817	8.2%	29,093
2011	127	2,261,138	60	1,652,074	3,060	87,683,881	0.7%	28,655
2012	139	4,587,513	51	1,073,612	3,148	91,197,782	4.0%	28,970
2013	151	4,773,719	60	694,596	3,239	95,276,905	4.5%	29,416
2014	123	3,873,758	42	1,303,391	3,320	97,847,272	2.7%	29,472
2015	175	6,613,773	47	947,483	3,448	103,513,562	5.8%	30,021
2016	175	6,489,659	73	2,024,379	3,550	107,978,842	4.3%	30,417
2017	181	6,601,023	73	2,234,813	3,658	112,345,052	4.0%	30,712
2018	177	6,561,513	115	3,252,707	3,720	115,653,858	2.9%	31,090

* - Total headcount increased by 97 as a result of QDRO's (Qualified Domestic Relation Orders) being reported as a separate record.

Schedule of Funding Progress (Actuarial Basis)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
7/1/2009	1,717,566,000	2,253,133,775	535,567,775	76.2%	253,955,863	210.9%
7/1/2010	1,754,372,000	2,341,619,152	587,247,152	74.9%	249,582,676	235.3%
7/1/2011	1,822,702,000	1,959,976,006	137,274,006	93.0%	257,504,567	53.3%
7/1/2012	1,834,170,000	2,034,485,171	200,315,171	90.2%	266,038,359	75.3%
7/1/2013	1,902,581,000	2,131,172,172	228,591,172	89.3%	279,013,522	81.9%
7/1/2014	2,086,297,000	2,204,797,154	118,500,154	94.6%	289,502,327	40.9%
7/1/2015	2,229,272,000	2,269,073,426	39,801,426	98.2%	295,307,065	13.5%
7/1/2016	2,323,407,000	2,354,815,000	31,408,000	98.7%	296,407,692	10.6%
7/1/2017	2,447,351,000	2,403,073,000	(44,278,000)	101.8%	299,131,000	-14.8%
7/1/2018	2,586,061,000	2,515,811,000	(70,250,000)	102.8%	308,731,000	-22.8%

Solvency Test

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

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

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

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

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

Valuation Year July 1,	Aggregate Accrued Liability and Valuation Assets (in thousands)				Reported Assets *	Portion of Accrued Liabilities Covered by Assets			Funded Ratio of Total Actuarial Liability
	Active Member Contributions (Liability 1)	Retirees, Beneficiaries and Terminated Vested Members (Liability 2)	Employer Financed Portion of Active Members (Liability 3)	Total Liability (1 + 2 + 3)		(1)	(2)	(3)	
2009	166,888	1,045,726	1,040,520	2,253,134	1,717,566	100%	100%	48.5%	76.2%
2010	174,026	1,111,075	1,056,518	2,341,619	1,754,372	100%	100%	44.4%	74.9%
2011	184,781	944,082	831,113	1,959,976	1,822,702	100%	100%	83.5%	93.0%
2012	189,460	983,507	861,518	2,034,485	1,834,170	100%	100%	76.7%	90.2%
2013	199,233	1,037,457	894,482	2,131,172	1,902,581	100%	100%	74.4%	89.3%
2014	209,577	1,057,854	937,367	2,204,798	2,086,297	100%	100%	87.4%	94.6%
2015	214,686	1,112,856	941,532	2,269,074	2,229,272	100%	100%	95.8%	98.2%
2016	223,255	1,176,401	955,159	2,354,815	2,323,407	100%	100%	96.7%	98.7%
2017	238,151	1,193,676	971,246	2,403,073	2,447,351	100%	100%	104.6%	101.8%
2018	245,909	1,225,406	1,044,496	2,515,811	2,586,061	100%	100%	106.7%	102.8%

* - Actuarial Value of assets based on the smoothing technique adopted by the Board.

Analysis of Financial Experience

As of July 1, 2018

1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at July 1, 2017	\$ 2,403,073,000
b. Normal Cost and Expenses for Plan Year Ended June 30, 2018	58,508,000
c. Benefit Payments and Expenses for Plan Year Ending June 30, 2018	(139,563,000)
d. Change in Actuary	-
e. Interest on (a), (b), (c) and (d)	179,480,000
f. Change in Actuarial Accrued Liability at July 1, 2018 due to changes in Actuarial Assumptions	25,307,000
g. Change in Actuarial Accrued Liability at July 1, 2018 due to changes in System Provisions (2018 Stipend)	2,161,000
h. Expected Actuarial Accrued Liability at July 1, 2018	2,528,966,000
2. Actuarial Accrued Liability at July 1, 2018	2,515,811,000
3. Actuarial Liability Gain/(Loss) (1h. - 2)	13,155,000
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at July 1, 2017	2,447,351,000
b. Contributions Made for Plan Year Ending June 30, 2018	103,910,000
c. Benefit Payments and Expenses for Plan Year Ending June 30, 2018	(141,284,000)
d. Interest on (a + b - c) to End of Year	182,175,000
e. Expected Actuarial Value of Assets at July 1, 2018	2,592,152,000
5. Actuarial Value of Assets at July 1, 2018	2,586,061,000
6. Actuarial Asset Gain/(Loss) (5 - 4e.)	(6,091,000)
7. Actuarial Gain/(Loss) (3 + 6)	7,064,000

The actuarial gain/(loss) is comprised of both the liability gain/(loss) and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2018.

Summary of Actuarial Assumptions and Methods

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding. Sometimes called the “funding method,” this is a particular technique used by actuaries for establishing the amount of the annual actuarial cost of pension benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the System is comprised of (1) the normal cost; and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the Normal Cost is computed as the level percentage of pay which, if paid from the earliest time each member would have been eligible to join the System had it existed (thus entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the System.

The Actuarial Accrued Liability under this method, at any point in time, is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The Unfunded Actuarial Accrued Liability is the excess of the actuarial accrued liability over the actuarial value of System assets on the valuation date.

Under this method, experience gains or losses, i.e. decreases or increases in actuarial accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

Asset Valuation Method

The actuarial value of assets is based on a five-year moving average of expected and actual market values determined as follows:

- at the beginning of each fiscal year, a preliminary expected actuarial asset value is calculated as the sum of the previous year’s actuarial value increased with a year’s interest at the System valuation rate plus net cash flow adjusted for interest (at the same rate) to the end of the previous fiscal year;
- the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous fiscal year;
- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous year;
- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous fiscal years, but in no case more than 120% of the market value or less than 80% of the market value.

Amortization Method

The unfunded actuarial accrued liability is amortized as a level dollar amount over a 5-year open period. Surplus, if any, is amortized as a level dollar amount over a 30-year open period.

Valuation Procedures

The wages used in the projection of benefits and liabilities are pay for the year ending June 30, 2018 (including longevity bonuses). These amounts were projected into the valuation year using the valuation salary scale.

In computing accrued benefits, average earnings were determined using the valuation salary scale. Historical earnings for the past five years have been retained.

Retired Members were assumed to be married according to the probability of marriage assumption. For those in the Baker group, the assumption is 100% married.

The impact from compensation limit under IRC Section 401(a)(17) and from the dollar limitation required by the Internal Revenue Code Section 415 for governmental plans were considered in this valuation and was determined to be *de minimis*.

The calculations for the required state contribution are determined as of mid-year. Since the agency contributions, member contributions and State insurance premium tax allocations are made on a monthly basis throughout the year, a mid-year determination date represents an average weighting of the contributions.

Economic Assumptions

- 1. Inflation 2.75% per annum, compound annually.
- 2. Investment Return 7.5%, net of investment expenses, per annum, compound annually.
- 3. Salary Scale Sample rates are shown below:

Attained Service	Inflation %	Merit %	Increase %
0	3.50	6.50	10.00
1	3.50	5.50	9.00
2	3.50	4.50	8.00
3	3.50	3.50	7.00
4-12	3.50	2.50	6.00
13	3.50	1.50	5.00
14	3.50	1.00	4.50
15	3.50	0.50	4.00
16+	3.50	0.00	3.50

Demographic Assumptions

- 1. Retirement Rates Sample rates are shown below:

Attained Service	Annual Rates of Retirement
20	15%
21	8
22	8
23	8
24	8
25	20
26	10
27	10
28	10
29	15
30	20
31	30
32	40
33	50
34	75
35	100

2. Mortality Rates

(a) Active participants

RP-2000 Combined Blue Collar Healthy Employees (Fully generational using Scale AA) with age set back four years

(b) Active participants (post-retirement) and nondisabled pensioners

RP-2000 Combined Blue Collar Healthy Employees with Generational Projection

(c) Disabled pensioners

RP-2000 Combined Blue Collar Healthy Combined with age set forward four years

3. Disability Rates

Sample rates are shown below:

Age	Rate
20-24	.0002
25-29	.0002
30-34	.0004
35-39	.0006
40-44	.0008
45-49	.0010
50-54	.0012
55-59	.0014

4. Withdrawal Rates

Sample rates are shown below:

Service Range	Rate
0	.150
1	.120
2	.100
3	.080
4	.070
5	.060
6	.050
7	.045
8	.040
9	.035
10	.030
11	.025
12	.020
13	.015
14-20	.010
Over 20	.000

5. Marital Status

- (a) Percentage married: Males: 85%; Females: 85%
- (b) Age difference: Males are assumed to be three (3) years older than females.

Other Assumptions:

1. Deferred Benefits Begin at: Age 50, or the date at which the participant would have achieved twenty years of service, if later.
2. Provision for Expenses: Administrative Expenses, as budgeted by the Oklahoma Police Pension and Retirement System.
3. Percentage of Disability: Members becoming disabled have a 50%-74% impairment.
4. Duty-Related Death: All pre-retirement deaths are duty-related.
5. Cost-of-Living Allowance: Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer, based on an increase in base salary of 3.5% (wage inflation).
6. Deferred Option Plan: Members currently participating in the Deferred Option plan (DOP) are assumed to remain in the DOP for the maximum of five years. Active members leaving active service are assumed to retroactively elect to join the DOP for the maximum allowable period. DOP account balances are assumed to accumulate at 11.00% (to reflect the interest rate guarantee prior to retirement) for future Back DOP elections and members are assumed to elect a lump sum at retirement. All balances held in Deferred Option payout accounts are assumed to be paid immediately upon the end of employment.

Summary of System Provisions

Effective Date and Plan Year:	The System became effective July 1, 1981 and has been amended each year since then. The plan year is July 1 to July 30.
Administration:	The System is administered by the Oklahoma Police Pension Retirement Board consisting of thirteen Members. The Board shall be responsible for the policies and rules for the general administration of the System.
Plan Type:	Defined benefit plan.
Employers Included:	An eligible employer may join the System on the first day of any month. An application of affiliation must be filed in the form of a resolution before the eligible municipality can become a participating municipality.
Eligibility:	All persons employed full-time as officers working more than 25 hours per week or any person undergoing police training to become a permanent police officer with a police department of a participating municipality, with ages not less than twenty-one (21) nor more than forty-five (45) when accepting membership.
Salary Considered:	<p>Base salary used in the determination of benefits does not include payment for accumulated sick and annual leave upon termination of employment or any uniform allowances.</p> <p>Final average salary means the average paid base salary for normally scheduled hours of an officer over the highest 30 consecutive months of the last 60 months of credited service.</p>
Service Considered:	Credited service consists of the period during which the Member participated in the System or predecessor municipal pay as an active employee, plus any service prior to the establishment of the municipal plan which was credited under the predecessor municipal systems of credited service granted by the State Board, plus any applicable military service.
State Contributions:	Insurance premium tax allocation. Historically, the System has received 14% of these collected taxes. For the fiscal years beginning July 1, 2004 and ending June 30, 2009, the System received 17% of these collected taxes. For the fiscal year thereafter, the System received 14% of these collected taxes. Beginning in fiscal year July 1, 2006, the System began receiving 26% of a special allocation established to refund the System for reduced allocations of insurance premium taxes resulting from increases in insurance premium tax credits. Beginning in fiscal year July, 1 2010, the amount of insurance premium tax apportioned to the System will be applied prior to the calculation of the Home Office Credit.
Member Contributions:	8% percent of paid salary. These contributions shall “be picked up” after December 31, 1988 pursuant to Section 414(h)(2) of the Internal Revenue Code.
Municipality Contributions:	Contribution is 13% percent as of July 1, 1996.

Normal Retirement Benefit:

Normal Retirement Eligibility: 20 years of credited service.

Benefit Amount: 2 1/2% of the final average salary multiplied by the years of credited service, with a maximum of 30 years of credited service considered.

Normal Form of Benefit: The benefit is paid as a Joint and 100% Survivor Annuity if the Member was married 30 months prior to death.

Termination Benefit:

Less than 10 Years of Service: Refund of contributions without interest.

More than 10 Years of Service: If greater than 10 years of service, but not eligible for the normal retirement benefit, the benefit is payable at the date the Member would have had 20 years of service in an amount equal to 2 1/2% of the greater of final average salary or the salary paid to active employees as described under “salary considered” multiplied by the years and completed months of credited service.

Disability Benefit (Duty):

Total Disability

Upon determination of disability incurred as a result of the performance of duty, the normal disability benefit is 50% of final average salary.

Partial Disability

Upon determination of partial disability incurred as a result of the performance of duty, the normal disability is reduced according to the percentage of impairment, as outlined in the “American Medical Association’s Guide to the Evaluation of Permanent Impairment.” The following shows the percent of normal disability benefit payable as related to the percent of impairment.

% Impairment	% of Benefit
1% to 49%	50%
50% to 74%	75%
75% to 100%	100%

Disability Benefit (Non-Duty): Upon determination of disability after 10 years of service due to causes other than duty, the benefit equals the accrued benefit of 2 ½% of final average salary times years of credited service (maximum of 30 years) times:

- 100%, if permanent and total, or
- The following percentages, if partial disability.

1% to 24%	25%
25% to 49%	50%
50% to 74%	75%
75% to 99%	90%

Death Benefits Payable to Beneficiaries:

Prior to Retirement (Duty): The greater of:

- 1) 2 ½% of final average salary times years of credited service (maximum of 30 years), or
- 2) 50% of final average salary.

Prior to Retirement (Non-Duty): After 10 years of service, a benefit equal to 2 ½% of final average salary times years of credited service (maximum if 30 years).

Prior to 10 years of service, a refund of the accumulated contributions made by the Member will be paid to the estate.

After Retirement: 100% of the Member’s retirement or deferred vested benefit, payable when the Member would have been eligible to receive it, payable to the beneficiary.

Lump Sum: The beneficiary shall receive a lump-sum amount of \$5,000.

Beneficiary: Surviving spouses must be married to the member 30 months prior to the date of death (waived in the case of duty related death).

If the beneficiary is a child, the benefits are payable to age 18, or to age 22 if a full-time student. If the beneficiary is a spouse to whom the Member was married for at least 30 months prior to death, if the death was not duty related, the benefits are payable for life.

Postretirement Adjustments: Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order receive an adjustment of 1/3 to ½ of the increase or decrease of any adjustment to the base salary of a regular police officer.

Deferred Option Plan:

A Member with 20 or more years of service may elect to participate in the Deferred Option Plan (DOP). Participation in the DOP shall not exceed five years. The members' contributions cease upon entering the Plan, but the agency contributions are divided equally between the Retirement System and Deferred Option Plan. The monthly retirement benefits that the member is eligible to receive are paid into the Deferred Option Plan account.

Members can elect to retroactively join the DOP as of a back-drop-date which is no earlier than the member's normal retirement date or five years before his termination date. The monthly retirement benefits and employee contributions that would have been payable had the member elected to join the DOP are credited to the member's DOP account with interest.

The retirement benefits are not recalculated for service and salary past the election date to join the Deferred Option Plan. However, the benefits are increased by cost-of-living increases applicable to retired members during the DOP period.

When the Member actually terminates employment, the Deferred Option Plan account balance may be paid in a lump sum or to an annuity provider. Monthly retirement benefits are then paid directly to the retired Member.

This Plan became effective during the July 1, 1991 to June 30, 1992 Plan Year. The Deferred Option Plan account is guaranteed a minimum of the valuation interest rate for investment return, or 2% less than the fund rate of return, if greater.



Statistical Section

- 109 – Statistical Narrative
- 110 – Schedule of Changes in Net Position (& Graph)
- 111 – Schedule of Revenue by Source
- 111 – Schedule of Expenses by Type
- 112 – Schedule of Benefits & Refunds by Type
- 112 – Funded Ratio (Graph)
- 113 – Schedule of Investment Returns by Type (& Graph)
- 114 - Schedule of Retired Members by Benefit Type
- 115 - Schedule of Average Benefit Payments
- 116 - Schedule of Principal Participating Employers
- 117 - Schedule of Participating Employers
- 118 - Membership Statistics Data



Statistical Section

Oklahoma Police Pension and Retirement System Statistical Section

This section provides additional detailed information covering extended time spans to facilitate a better understanding of the System's results presented in the financial statements, notes to the financial statements and required supplementary information. Multi-year presentations of financial and operational results help to assess the economic condition and long-term economic stability of the Oklahoma Police Pension and Retirement System (OPPRS).

Financial Trends

Financial trend information helps determine whether or not the financial position of the System has improved or declined over time. Trend information also provides a long-term comparison of financial activity to assess the affect decisions and changes have had on the System's financial position. The following schedules present financial trend information:

Schedule of Changes in Fiduciary Net Position
Schedule of Revenue by Source
Schedule of Benefit Payments and Refunds by Type

Schedule of Expenses by Type
*Funded Ratio (Chart)**

Revenue Capacity

Revenue capacity information helps assess the System's performance in generating its own-source revenue. As a pension plan, the System generates revenue primarily through investing available assets with the goal of generating investment income and positive investment returns. The following schedule presents revenue capacity information:

*Schedule of Rate of Return by Investment Type***

Operating and Demographic Information

Operating and demographic information helps to assess changes in the System's membership, resources and operating performance over time. This information provides a better understanding of the employers that participate in the System, the size and types of payments made to participants, and the changes to the size of the System's active and retired membership. The following schedules present operating and demographic information:

Schedule of Retired Members by Type of Benefit
Schedule of Principal Participating Employers
*Membership Statistics Data**

*Schedule of Average Benefit Payments**
Schedule of Participating Employers

Unless otherwise noted, information is derived from OPRRS internal sources.

* - Based on schedules and data provided by actuarial consultant, Cavanaugh Macdonald Consulting, LLC.

** - Based on data provided by investment consultant, Asset Consulting Group.

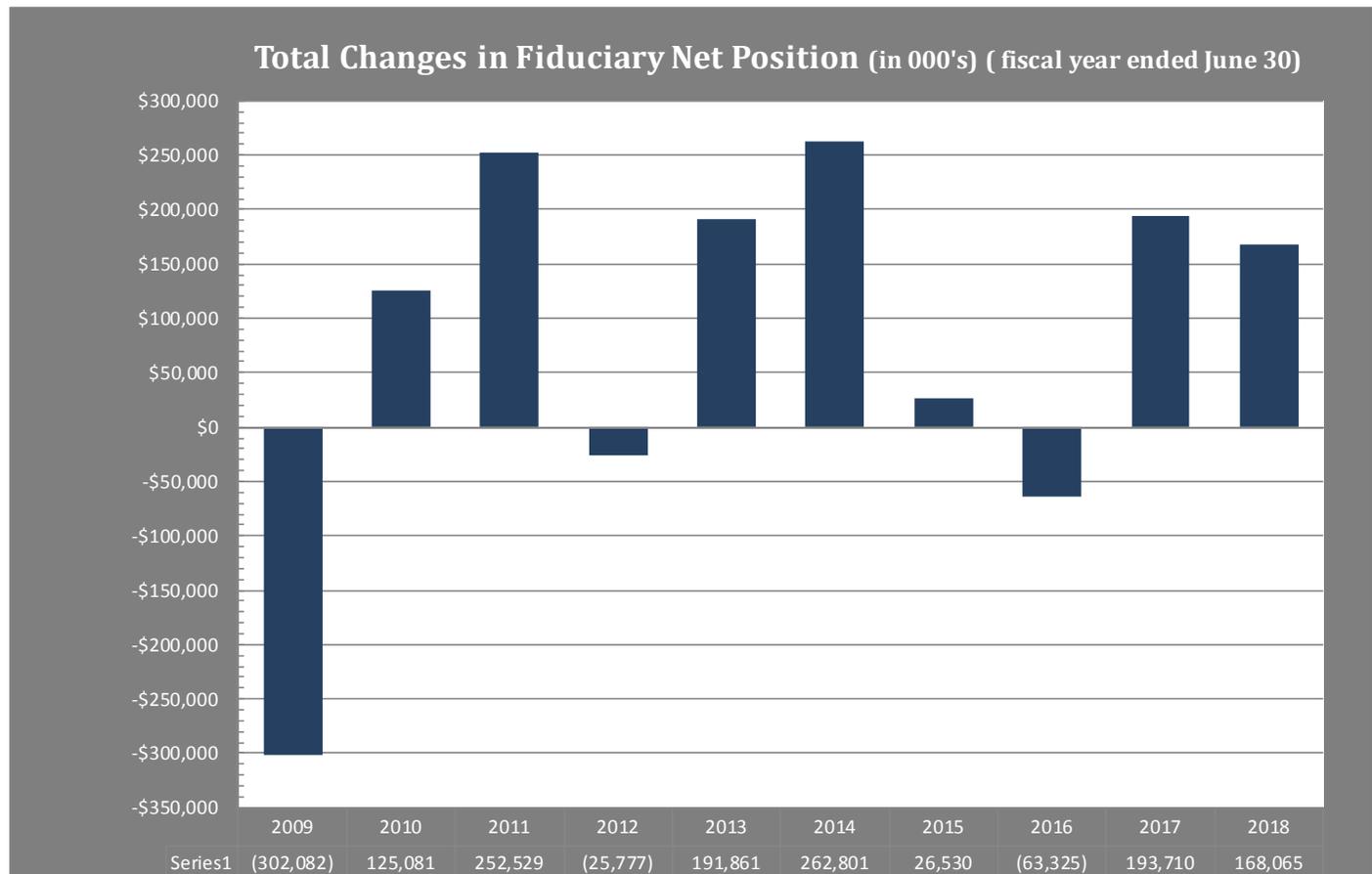
Schedule of Changes in Fiduciary Net Position (in Thousands)

Fiscal Year Ended June 30,	Additions				Deductions				Total Changes in Fiduciary Net Position
	Member Contributions	Employer Contributions	Insurance Premium Tax	Net Investment Income (Loss)	Benefit Payments *	Deferred Option Payments**	Refund of Contributions	Administrative Expenses	
2009	19,139	31,675	26,913	(283,519)	80,238	12,726	1,150	2,176	(302,082)
2010	19,626	32,240	22,292	163,058	82,799	26,208	1,420	1,708	125,081
2011	19,489	31,846	24,645	282,305	86,843	15,084	2,117	1,712	252,529
2012	20,113	32,896	28,092	8,374	89,691	22,039	1,570	1,952	(25,777)
2013	21,518	34,645	31,412	221,174	93,987	19,018	1,830	2,053	191,861
2014	22,131	35,547	31,329	294,897	97,361	20,121	1,759	1,862	262,801
2015	22,867	37,261	35,490	74,554	100,889	38,769	2,035	1,949	26,530
2016	23,787	38,533	35,915	(21,104)	106,326	30,265	2,034	1,831	(63,325)
2017	23,916	38,887	34,283	242,415	110,496	31,644	1,952	1,699	193,710
2018	24,747	40,135	39,028	205,439	115,061	22,853	1,649	1,721	168,065

Total Cumulative Change in Net Position for the Last 10 Years \$ 829,393

* - Benefit Payments include survivor and death benefit payments.

** - Deferred Option Payments include the Deferred Option and back DROP plans.



Schedule of Revenue by Source (in Thousands)

Fiscal Year Ended June 30,	Member Contributions	Employer Contributions	Insurance Premium Tax*	Net Investment Income (Loss)**	Total Revenue by Source
2009	19,139	31,675	26,913	(283,519)	(205,792)
2010	19,626	32,240	22,292	163,058	237,216
2011	19,489	31,846	24,645	282,305	358,285
2012	20,113	32,896	28,092	8,374	89,475
2013	21,518	34,645	31,412	221,174	308,749
2014	22,131	35,547	31,329	294,897	383,904
2015	22,867	37,261	35,490	74,554	170,172
2016	23,787	38,533	35,915	(21,104)	77,131
2017	23,916	38,887	34,283	242,415	339,501
2018	24,747	40,135	39,028	205,439	309,349

* - The Oklahoma Police Pension and Retirement System receives a portion of the Insurance Premium Tax (14%) that is assessed and collected by the State of Oklahoma.

** - Investment income includes both realized and unrealized gains and losses on investments, net of investment expenses.

Schedule of Expenses by Type (in Thousands)

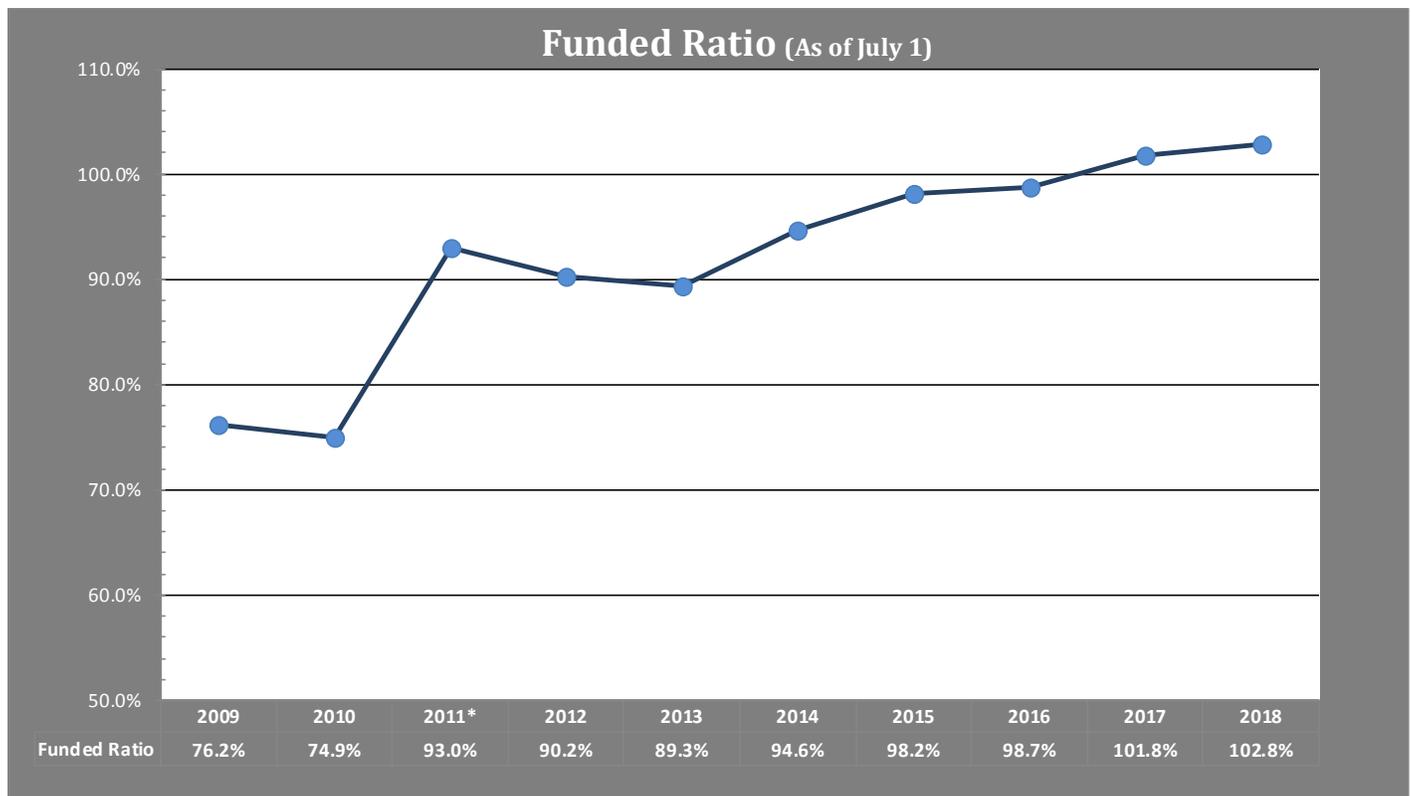
Fiscal Year Ended June 30,	Pension Benefits	Death Benefits	Deferred Option Benefits	Refunds	Administrative Expenses	Total
2009	79,988	250	12,726	1,150	2,176	96,290
2010	82,639	160	26,208	1,420	1,708	112,135
2011	86,638	205	15,084	2,117	1,712	105,756
2012	89,451	240	22,039	1,570	1,952	115,252
2013	93,672	315	19,018	1,830	2,053	116,888
2014	97,031	330	20,121	1,759	1,862	121,103
2015	100,684	205	38,769	2,035	1,949	143,642
2016	106,055	271	30,265	2,034	1,831	140,456
2017	110,256	240	31,644	1,952	1,699	145,791
2018	114,721	340	22,853	1,649	1,721	141,284

Schedule of Benefit Payments and Refunds by Type (in Thousands)

Fiscal Year Ended June 30,	Benefit Payments by Type				Deferred Option Benefits*	Refunds		Total Benefit Payments and Refunds
	Service Retirement	Beneficiaries	Disabled	Death Benefit		Withdrawal	Member Death	
2009	62,943	14,608	2,437	250	12,726	1,113	37	94,114
2010	64,425	15,855	2,359	160	26,208	1,381	39	110,427
2011	68,211	16,071	2,356	205	15,084	1,956	161	104,044
2012	70,411	16,699	2,341	240	22,039	1,552	18	113,300
2013	73,610	17,711	2,351	315	19,018	1,752	78	114,835
2014	76,020	18,635	2,376	330	20,121	1,642	117	119,241
2015	79,384	18,989	2,311	205	38,769	1,733	302	141,693
2016	84,106	19,616	2,333	271	30,265	2,007	27	138,625
2017	87,788	20,036	2,432	240	31,644	1,832	120	144,092
2018	91,154	21,150	2,417	340	22,853	1,643	6	139,563

* - Deferred Option Payments may vary considerably from year-to-year based on the number of members electing this benefit.

Funded Ratio (Actuarial Basis, at July 1)

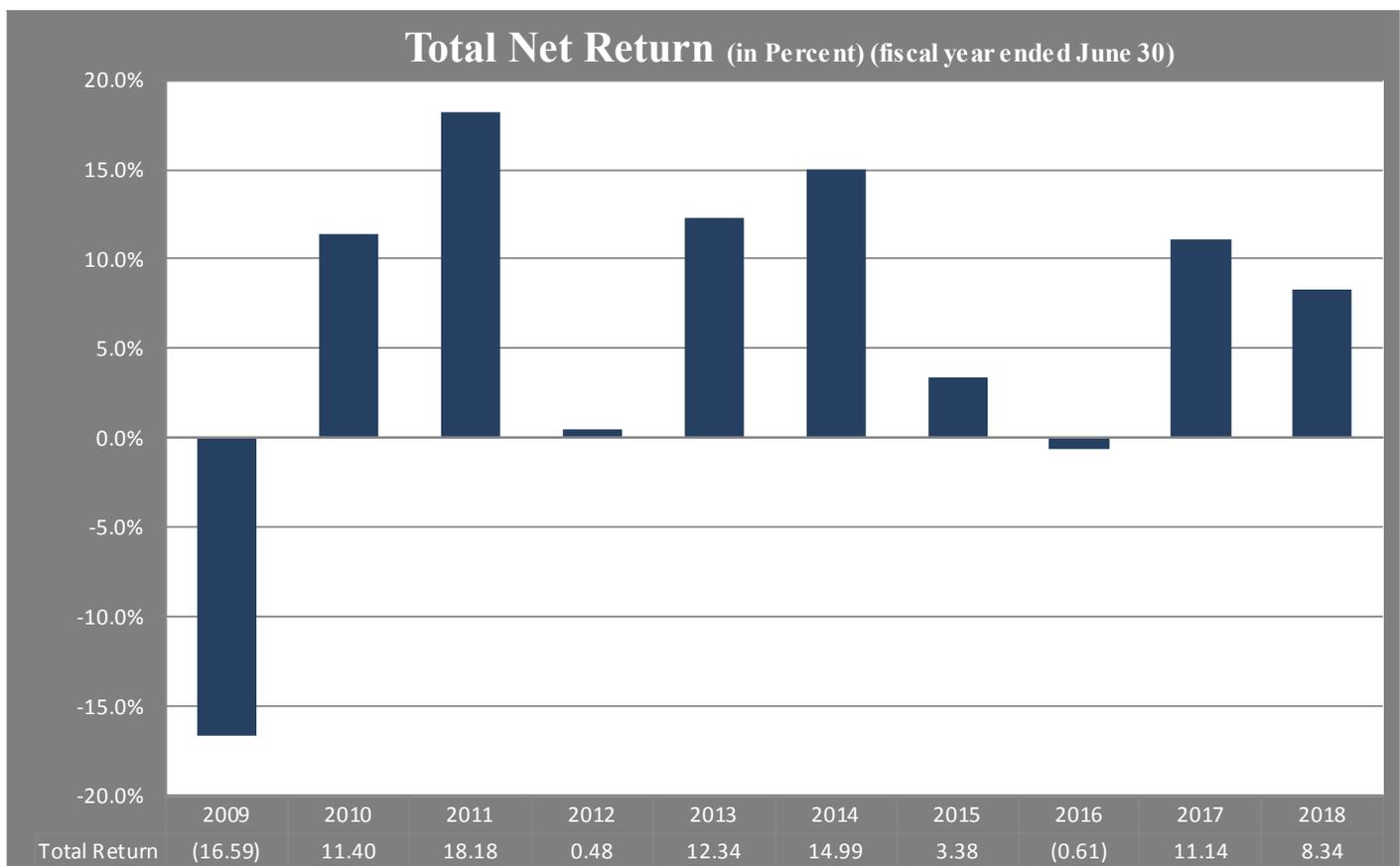


* - Beginning in 2011, funded ratio calculations do not include Cost-of-Living-Adjustments (COLA's) due to legislation requiring all ad-hoc COLA's be prefunded by the Oklahoma Legislature.

Schedule of Returns by Investment Type (Net, in Percent)

Fiscal Year Ended June 30,	U.S. Equity	International Equity	Private Equity	Fixed Income	Real Estate and Commodity	Total Return (net of fees)
2009	(17.06)	(32.27)	(3.36)	(22.09)	(15.55)	(16.59)
2010	9.50	6.42	17.01	8.80	(3.90)	11.40
2011	21.40	27.64	18.14	9.00	3.61	18.18
2012	(11.95)	10.78	7.18	2.88	7.45	0.48
2013	14.77	24.86	7.93	2.64	15.52	12.34
2014	20.36	18.13	16.03	9.48	10.88	14.99
2015	7.03	(1.84)	15.26	(0.42)	3.53	3.38
2016	(1.60)	(6.77)	5.78	1.00	5.05	(0.61)
2017	17.84	18.48	5.47	3.82	5.52	11.14
2018	13.41	6.68	11.71	2.74	9.10	8.34

Total Annual Return (Net, in Percent)



Schedule of Retired Members by Type of Benefit For the Fiscal Year Ended June 30, 2018

Monthly Benefit Amount	Number of Retirees and Beneficiaries	Number of Retirees and Beneficiaries by Type of Retirement*						
		1	2	3	4	5	6	7
\$ 0 - 1,000	252	18	58	108	45	8	11	4
1,001 - 1,500	308	39	59	27	31	4	141	7
1,501 - 2,000	515	90	30	10	17	4	348	16
2,001 - 2,500	751	127	18	4	9	2	578	13
2,501 - 3,000	688	100	3	2	7	3	570	3
3,001 - 3,500	539	88	2	0	5	0	438	6
3,501 - 4,000	330	63	0	0	4	1	258	4
4,001 - 4,500	170	36	1	0	0	0	132	1
4,501 - 5,000	83	10	0	0	0	0	73	0
5,001 - 5,500	40	3	0	0	0	0	37	0
5,501 - 6,000	28	0	0	0	0	0	28	0
6,001 - 6,500	11	0	0	0	0	0	11	0
6,501 - 7,000	3	0	0	0	0	0	3	0
7,001 - 7,500	3	1	0	0	0	0	2	0
7,501 - 8,000	1	0	0	0	0	0	1	0
8,001 - 8,500	2	0	0	0	0	0	2	0
8,501 - 9,000	1	0	0	0	0	0	1	0
Totals:	<u>3,725</u>	<u>575</u>	<u>171</u>	<u>151</u>	<u>118</u>	<u>22</u>	<u>2,634</u>	<u>54</u>

* Type of Retirement

- Type 1 - *CONTINUANCE* - benefits paid to the beneficiaries of a deceased retired member.
- Type 2 - *DEFERRED VESTED* - accrued benefits paid to members for completing at least 10 years of service, but less than 20.
- Type 3 - *QUALIFIED DOMESTIC RELATIONS ORDER* - court ordered assignment of member benefits to an alternate payee.
- Type 4 - *DUTY DISABILITY* - benefits paid to members disabled in the performance of their duty.
- Type 5 - *NON-DUTY DISABILITY* - benefits paid to members disabled outside the line of duty.
- Type 6 - *SERVICE* - normal retirement benefits paid to members completing at least 20 years of credited service.
- Type 7 - *SURVIVORSHIP* - benefits paid to beneficiaries of deceased active members.

Schedule of Average Benefit Payments

Retirement Effective Dates (Note A) July 1, 2008 to June 30, 2018	Years of Credited Service*				
	10-15	15-20	20-25	25-30	30+
Period 07/01/08 to 06/30/09					
Average Monthly Benefit	\$ -	\$ 2,012	\$ 2,347	\$ 3,517	\$ 4,071
Average Final Average Salary	\$ -	\$ 4,392	\$ 4,449	\$ 5,223	\$ 5,429
Number of Retired Members	0	6	52	14	8
Period 07/01/09 to 06/30/10					
Average Monthly Benefit	\$ 1,628	\$ 2,170	\$ 2,499	\$ 3,513	\$ 4,261
Average Final Average Salary	\$ 4,449	\$ 5,083	\$ 4,736	\$ 5,062	\$ 5,682
Number of Retired Members	1	2	83	24	11
Period 07/01/10 to 06/30/11					
Average Monthly Benefit	\$ -	\$ 1,662	\$ 2,761	\$ 3,834	\$ 4,341
Average Final Average Salary	\$ -	\$ 4,023	\$ 5,224	\$ 5,558	\$ 5,787
Number of Retired Members	0	2	65	13	8
Period 07/01/11 to 06/30/12					
Average Monthly Benefit	\$ -	\$ 1,614	\$ 2,726	\$ 3,587	\$ 4,090
Average Final Average Salary	\$ -	\$ 3,650	\$ 5,164	\$ 5,134	\$ 5,454
Number of Retired Members	0	2	72	23	6
Period 07/01/12 to 06/30/13					
Average Monthly Benefit	\$ -	\$ -	\$ 2,721	\$ 3,891	\$ 4,880
Average Final Average Salary	\$ -	\$ -	\$ 5,187	\$ 5,674	\$ 6,507
Number of Retired Members	0	0	79	16	11
Period 07/01/13 to 06/30/14					
Average Monthly Benefit	\$ -	\$ -	\$ 2,899	\$ 3,617	\$ 4,483
Average Final Average Salary	\$ -	\$ -	\$ 5,410	\$ 5,413	\$ 5,978
Number of Retired Members	0	0	70	15	4
Period 07/01/14 to 06/30/15					
Average Monthly Benefit	\$ -	\$ -	\$ 3,017	\$ 4,432	\$ 4,848
Average Final Average Salary	\$ -	\$ -	\$ 5,652	\$ 6,556	\$ 6,464
Number of Retired Members	0	0	86	34	11
Period 07/01/15 to 06/30/16					
Average Monthly Benefit	\$ 1,034	\$ 2,187	\$ 2,973	\$ 4,081	\$ 4,992
Average Final Average Salary	\$ 3,255	\$ 5,047	\$ 5,598	\$ 6,113	\$ 6,656
Number of Retired Members	5	4	72	21	20
Period 07/01/16 to 06/30/17					
Average Monthly Benefit	\$ 855	\$ 2,136	\$ 3,088	\$ 3,808	\$ 4,696
Average Final Average Salary	\$ 3,323	\$ 4,970	\$ 5,784	\$ 5,528	\$ 6,262
Number of Retired Members	2	8	78	21	14
Period 07/01/17 to 06/30/18					
Average Monthly Benefit	\$ 1,997	\$ 2,064	\$ 3,051	\$ 4,122	\$ 4,653
Average Final Average Salary	\$ 4,426	\$ 4,664	\$ 5,352	\$ 5,704	\$ 6,222
Number of Retired Members	5	3	73	10	16

Note A - Schedule includes service retirements as of July 1, 2018 and does not include disability retirements. For participants in the Deferred Option Plan, the Retirement Effective Date is the date the member left active service and the final average salary is determined as of the date the member effectively entered the Deferred Option Plan.

* - The plan vesting period is 10 years, so no average benefit is earned or paid for service credit of less than 10 years.

Schedule of Principal Participating Employers Current Year and Nine Years Prior

10 Largest Participating Cities\Municipalities\Towns	Fiscal Year 2018			Fiscal Year 2009		
	Covered Members	Rank	% of Total Covered Members	Covered Members	Rank	% of Total Covered Members
Oklahoma City	1098	1	22.92%	1063	1	23.40%
Tulsa	801	2	16.72%	824	2	18.14%
Lawton	180	3	3.76%	164	3	3.61%
Norman	166	4	3.46%	139	4	3.06%
Broken Arrow	140	5	2.92%	121	5	2.66%
Edmond	112	6	2.34%	106	6	2.33%
Enid	96	7	2.00%	94	7	2.07%
Midwest City	96	8	2.00%	91	8	2.00%
Moore	87	9	1.82%	78	10	1.72%
Muskogee	85	10	1.77%	88	9	1.94%
Total-10 Largest Employers	2861		59.72%	2768		60.93%
All Other Cities\Towns	1930		40.28%	1775		39.07%
Total Covered Members	4791		100.00%	4543		100.00%

This table presents the ten largest participating employers by number of covered employees in the System.

Schedule of Participating Employers

For the Fiscal Year Ended June 30, 2018

Oklahoma State Agencies (3)		
ABLE Commission	Bureau of Narcotics	OK State Bureau of Investigation
Oklahoma Cities, Municipalities and Towns (141)		
Ada	Fort Gibson	Oologah
Altus	Frederick	Owasso
Alva	Garber	Pauls Valley
Anadarko	Glenpool	Pawhuska
Arapaho	Grandfield	Perkins
Ardmore	Granite	Perry
Atoka	Grove	Piedmont
Bartlesville	Guthrie	Ponca City
Bethany	Guymon	Poteau
Bixby	Harrah	Prague
Blackwell	Haskell	Pryor Creek
Blair	Henryetta	Purcell
Blanchard	Hinton	Ringling
Boynton	Hobart	Sallisaw
Bristow	Hominy	Sand Springs
Broken Arrow	Hugo	Sapulpa
Calumet	Idabel	Savanna
Catoosa	Jenks	Sawyer
Chandler	Jones	Sayre
Checotah	Kingfisher	Seminole
Chickasha	Kiowa	Shawnee
Choctaw	Krebs	Skiatook
Chouteau	Lamont	Spencer
Claremore	Lawton	Stigler
Cleveland	Lexington	Stillwater
Clinton	Lindsay	Sulphur
Collinsville	Luther	Tahlequah
Comanche	Madill	Tecumseh
Commerce	Mangum	The Village
Coweta	Mannford	Tishomingo
Crescent	Marlow	Tonkawa
Cromwell	McAlester	Tulsa
Cushing	Miami	Tuttle
Davis	Midwest City	Valley Brook
Del City	Moore	Vinita
Dewey	Muskogee	Wagoner
Disney	Mustang	Warner
Drummond	Newcastle	Warr Acres
Drumright	Newkirk	Watonga
Duncan	Nichols Hills	Waurika
Durant	Nicoma Park	Weatherford
Edmond	Noble	Weleetka
El Reno	Norman	Wetumka
Elk City	Nowata	Wewoka
Enid	Okeene	Wister
Eufaula	Oklahoma City	Woodward
Forest Park	Okmulgee	Yukon

Membership Statistics Data

Employer and Member Statistics	As of July 1,	2018	2017
Participating Cities, Municipalities and Towns		144	141
Active Members		4,791	4,695
Deferred Option Members		11	14
Terminated Members with Refund Due		779	721
Terminated Members with Deferred Benefits		147	132
Retired Members		2,802	2,769
Beneficiaries Receiving Benefits		778	748
Disabled Members Receiving Benefits		140	141

Active Member Statistics	As of July 1,	2018	2017
Total Annual Compensation (1)		\$ 323,111,811	\$ 313,087,696
Average Compensation(1)		\$ 67,441	\$ 66,685
Average Active Member Age		40.0	40.0
Average Years of Credited Service		12.0	12.0

(1) - Compensation is projected one year based on salary increase assumptions.

Fiscal Year 2018 Refund and Benefit Payment Statistics	Count of Payments Made	Average Amount
Refunds to Terminated Members	167	\$ 9,872
Regular Payments to Service Retirement Members	44,642	\$ 2,570
Payment of Death Benefits to Beneficiaries	68	\$ 5,000
Payments under the Forward DOP	3	\$ 88,195
Payments under the Back DOP	88	\$ 274,108
Payments under the Payout Provision	1	\$ 287,250

