



**BACKGROUND**

SCERS has prepared a CAFR since 2000. This year's CAFR will be submitted to the Government Finance Officers Association (GFOA) to determine its eligibility for the Certificate of Achievement for Excellence in Financial Reporting. SCERS has received this award each year, and we are optimistic that this year's report will earn the award once again.

**ATTACHMENTS**

Comprehensive Annual Financial Report for the fiscal years ended June 30, 2017 and 2016.

Prepared by:

/S/

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Kathryn T. Regalia  
Chief Operations Officer

Reviewed by:

/S/

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Annette St. Urbain  
Assistant Retirement Administrator  
and former Interim CEO

2016-17

# COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Years Ended  
June 30, 2017 and 2016

Sacramento · California



Sacramento County Employees' Retirement System





## **COMPREHENSIVE ANNUAL FINANCIAL REPORT**

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For the Fiscal Years Ended June 30, 2017 and 2016

Issued by:

**ANNETTE ST. URBAIN**  
Interim Chief Executive Officer

**KATHRYN T. REGALIA**, CPA, CGMA  
Chief Operations Officer

**THUYET DANG**  
Senior Accounting Manager

**SACRAMENTO COUNTY  
EMPLOYEES' RETIREMENT SYSTEM**  
980 9th Street, Suite 1900  
Sacramento, CA 95814

**[WWW.SCERS.ORG](http://WWW.SCERS.ORG)**

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**INTRODUCTORY**

# LETTER OF TRANSMITTAL



Executive Staff  
Annette St. Urbain  
Interim Chief Executive Officer  
Steve Davis  
Chief Investment Officer  
Robert L. Gaumer  
General Counsel  
Kathryn T. Regalia  
Chief Operations Officer  
John W. Gobel Sr.  
Chief Benefits Officer  
Stephen Hawley  
Chief Strategy Officer

December 7, 2017

Board of Retirement  
Sacramento County Employees' Retirement System  
980 9th Street, Suite 1900  
Sacramento, CA 95814

Dear Board Members:

As Interim Chief Executive Officer of the Sacramento County Employees' Retirement System (SCERS or the System), I am pleased to present this Comprehensive Annual Financial Report (CAFR or the Report) for the fiscal years ended June 30, 2017 and 2016.

## [The System](#)

SCERS is a cost-sharing multiple-employer public employee retirement system, enacted and administered in accordance with the provisions of the County Employees Retirement Law of 1937 (California Government Code Section 31450, et seq.) (1937 Act) and the California Public Employees' Pension Reform Act of 2013 (CalPEPRA). Since its establishment by the Sacramento County Board of Supervisors in 1941, SCERS has provided retirement, disability, and survivors' benefits to eligible participants of the System. Under Article XVI, Section 17 of the Constitution of the State of California, the SCERS Board of Retirement is vested with plenary authority and fiduciary responsibility for the investment of monies and the administration of the System. Together, the provisions of the State Constitution and the 1937 Act establish SCERS as a separate and independent governmental entity from the public employers that participate in SCERS. At June 30, 2017, the County of Sacramento; Superior Court of California, County of Sacramento; and eleven Special Districts participated in SCERS.

## [The Comprehensive Annual Financial Report](#)

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation in this CAFR rests with the management of the System. To the best of management's knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System.

I trust that readers of this Report and participants of the System will find this information helpful in understanding SCERS and its commitment to financial integrity and participant service.



### SCERS Mission Statement and Core Values

We are dedicated to providing the highest level of retirement services and managing System resources in an effective and prudent manner.

In fulfilling our mission as a retirement system, we are committed to:

- ◇ The highest levels of professionalism and fiduciary responsibility
- ◇ Acting with integrity
- ◇ Competent, courteous and respectful service to all
- ◇ Open and fair processes
- ◇ Safeguarding confidential information
- ◇ Cost-effective operations
- ◇ Stable funding and minimal contribution volatility
- ◇ Effective communication and helpful education
- ◇ Maintaining a highly competent and committed staff
- ◇ Continuous improvement
- ◇ Planning strategically for the future

### Accounting System and Reports

Management of SCERS is responsible for establishing and maintaining internal controls designed to ensure that the System's assets are protected from loss, theft, or misuse. Responsibility for the accuracy, completeness, and fair presentation of information, and all disclosures in this CAFR and in the System's records, rests with SCERS' management. Brown Armstrong Accountancy Corporation, a certified public accounting firm, has audited the financial statements and related disclosures. The financial statement audit provides reasonable assurance that SCERS' financial statements are presented in conformity with accounting principles generally accepted in the United States and are free from material misstatements. The internal controls are designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that: (1) The cost of a control should not exceed the benefits likely to be derived; and (2) The assessment of costs and benefits requires estimates and judgments by management.

This report has been prepared in accordance with generally accepted accounting principles (GAAP) as promulgated by the Governmental Accounting Standards Board (GASB). GAAP requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of management's discussion and analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The System's MD&A can be found immediately following the independent auditor's report.

### Investments – General Authority and SCERS

Article XVI, Section 17 of the Constitution of the State of California provides that "...notwithstanding any other provisions of law or this Constitution, the Retirement Board (the Board) of a public pension or retirement system shall have plenary authority and fiduciary responsibility for investment of monies and administration of the system..." Article XVI, Section 17(a) further provides that "...the Retirement Board of a public pension or retirement system shall have sole and exclusive fiduciary responsibility over the assets..."

SCERS maintains an overall investment policy designed to achieve a diversified investment portfolio. An integral part of the investment policy is the strategic asset allocation, which is designed to provide an optimal mix of asset classes with return expectations that correspond to expected liabilities. The strategic asset allocation also emphasizes maximum diversification of the portfolio to protect the System from the possibility that a particular asset class may experience poor investment performance in a given period.

## LETTER OF TRANSMITTAL (CONTINUED)

During the fiscal year, SCERS completed an asset/liability study that resulted in the approval of a revised strategic asset allocation. The SCERS' Board identified and prioritized several investment-related plan objectives, principles and risks that played a role in the design of the strategic asset allocation which included: 1) Reducing portfolio volatility; 2) Improving the funding status of the plan; (3) Protecting against significant drawdowns; (4) Improving the cash flow generation of the portfolio; and (5) Determining a reasonable and realistic expected investment return for the portfolio.

The revised strategic asset allocation views risk exposures through multiple lenses in order to manage and maintain allocations that are aligned with SCERS' investment philosophy and objectives. This approach used a functional framework to re-group and re-classify segments of SCERS' prior asset allocation in order to link segments of the SCERS portfolio that are exposed to similar economic environments and risk factors, and which would be expected to have similar roles and outcomes in a portfolio. The result was reorganizing asset classes into three functional asset categories of Growth (assets that tend to perform best in a high growth and low/moderate inflationary environment, including most equity and credit investments); Diversifying (assets expected to protect capital and perform better than Growth assets during dislocated and stressed market environments, including traditional fixed income and diversifying absolute return strategies), and Real Return (assets that provide a hedge against inflation, generate cash flow, and provide further portfolio diversification including real estate, infrastructure, energy, agriculture and commodities investments).

For the fiscal year ended June 30, 2017, SCERS' investments provided a 13.7% rate of return (gross of fees), compared to the investment policy benchmark return of 11.7%.

More detailed information regarding SCERS' strategic asset allocation, professional investment advisors, and investment performance can be found in the Investment Section of this Report.

### Actuarial Funding Status

SCERS' overall funding objective is to meet long-term benefit promises by maintaining a well-funded plan status through a combination of superior investment returns and employer and employee contributions which are both minimized and maintained as level as possible for each generation of active members. The greater the level of overall plan funding, the larger the ratio of assets accumulated to the actuarial accrued liability and the greater the investment potential. The advantage of a well-funded plan is that the benefits earned by participants are funded during their working careers and not by future generations of taxpayers.

To help reduce year-to-year volatility in employer contribution rates due to fluctuations in investment performance, SCERS smooths the calculation of actuarial assets over a rolling seven-year period. This not only stabilizes contribution rates but also improves the ability of the employer to plan for possible future increases or decreases in the rates.

SCERS engaged an independent actuarial consulting firm, Segal Consulting, to conduct its annual actuarial valuation as of June 30, 2017. Triennially, the System requests that its actuary perform an analysis of the appropriateness of all economic and non-economic assumptions. The most recent triennial analysis was performed as of June 30, 2016, and as a result of that analysis, the Board of Retirement approved certain changes to the actuarial assumptions, which were incorporated in the actuarial valuation as of June 30, 2017.

At June 30, 2017, SCERS' funding ratio was 81.1%, with the actuarial value of assets totaling \$8.665 billion and the actuarial accrued liability totaling \$10.681 billion. The decrease in the funding ratio (down from 87.3% as of June 30, 2016) was mainly due to changes in actuarial assumptions, including assumed investment returns decreased from 7.5% to 7.0%. Deferred losses under the smoothing methodology exceeded deferred gains by \$81.0 million as of June 30, 2017, an improvement from \$555.5 million as of June 30, 2016. Deferred investment gains/(losses) are amortized over a rolling seven-year period.

### Budget





The Board of Retirement approves SCERS' annual administrative budget. The 1937 Act limits SCERS' annual administrative expenses, excluding the costs of administration for computer software and hardware and computer technology consulting services (IT costs), to twenty-one hundredths of one percent (0.21%) of the System's actuarial accrued liability. SCERS' administrative expenses have historically been below the limitation. Administrative expenses, excluding IT costs, were \$6.0 million and \$5.5 million for the years ended June 30, 2017 and June 30, 2016, respectively. SCERS administrative expenses for both years were 0.06% of the System's actuarial accrued liability.

### Significant Events

The following are significant events which occurred during the fiscal year:

- Continued the implementation of the 2014-2018 Strategic Plan goals and objectives.
- Continued to assess SCERS' information technology system requirements, modified and enhanced SCERS' systems to accommodate operational needs and strategically planned for future information technological needs; Continued to work with Linea Solutions, Inc. (Linea) to provide SCERS with pension administration and financial systems consulting services.
- Substantially completed the assessment phase of the IT Modernization Program; Worked with Linea to issue a Request for Proposals (RFP) for Data Conversion Services and selected Icon Integration and Design, Inc. (ICON) to perform data conversion services; Worked with Linea to issue a RFP for the Pension Administration System (PAS) and received responses from five vendors.
- Made site visits to other 1937 Act retirement systems with recent PAS implementation experience to learn about the solutions, resources and organizational challenges during and post implementation.
- Worked with Sacramento County Department of Personnel Services, Department of Finance, and Department of Technology on the transition of their payroll system for special districts from Highline to COMPASS that will be effective in FY 2017-2018.
- Worked with Orangevale Recreation and Park District to complete the last phase of a 50/50 normal cost sharing arrangement in which the employees pay 50% of the combined employee and employer normal cost.
- Continued to work with Sacramento Metropolitan Fire District on a plan to pay off the unfunded actuarial accrued liability (UAAL).
- Analyzed and implemented a staffing plan to adequately support the daily business operations and the execution of the IT Modernization Program; added staff positions in benefit administration, operations and information technology; created a new functional area, Enterprise Solutions Management.
- Surveyed participating employers and developed standards and controls to ensure that SCERS employers properly enroll eligible employees in SCERS; worked with participating employers to correctly enroll eligible employees in SCERS.
- Worked with consultant to perform a compensation study for SCERS unrepresented management employees.
- Engaged a consultant to conduct the recruitment for the SCERS Chief Executive Officer position.
- Received a new Determination Letter from the Internal Revenue Service renewing SCERS' qualified plan status.
- Completed the asset/liability study for SCERS that was initiated in FY 2015-2016, and established a revised strategic asset allocation to increase diversification, reduce the potential range of portfolio outcomes, and increase cash flow generation.
- Initiated and completed implementation plans for several asset classes within the structure of SCERS' revised strategic asset allocation.
- Initiated the revision of SCERS' Master Investment Policy Statement in support of SCERS' revised strategic asset allocation.

## LETTER OF TRANSMITTAL (CONTINUED)

- Conducted and completed a large cap international developed markets search within SCERS' International Equity asset class.
- Identified, performed due diligence and made direct fund investments within SCERS' Absolute Return, Private Equity, Real Assets and Opportunities asset classes.
- Presented the annual reports and annual investment plans for the Private Equity, Private Credit and Real Assets asset classes.
- Executed implementation of SCERS' Real Estate program, including: (1) Assessments of core separate account properties and open-end commingled funds; and (2) Review of opportunities in value add and opportunistic real estate.
- Prepared and presented the 2016 Investment Year in Review report.
- Evaluated the proxies utilized within SCERS' overlay program.
- Monitored and assessed the securities lending program.
- Continued to monitor and assess the investment manager lineup.
- Conducted investment education on private equity fund transparency and portfolio asset class construction.

### Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) awarded the Certificate of Achievement for Excellence in Financial Reporting to SCERS for its comprehensive annual financial report for the fiscal years ended June 30, 2016 and 2015. In order to be granted this national award, a governmental entity must publish an easily readable and efficiently organized CAFR that meets the highest standards of governmental financial reporting. This was the eighteenth consecutive year that SCERS has received this prestigious award.

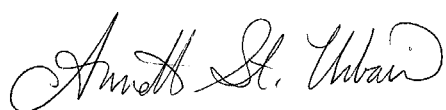
A Certificate of Achievement is valid for a period of one year. Management believes that this current comprehensive annual financial report continues to meet the requirements for earning a Certificate of Achievement, and it will be submitted to the GFOA for consideration of the award.

SCERS also received the GFOA Award for Outstanding Achievement in Popular Annual Financial Reporting for the fiscal year ended June 30, 2016. This was the eighth consecutive year SCERS has received this award.

### Acknowledgements

This Report is intended to provide complete and reliable information with respect to the responsible stewardship of SCERS. The compilation of this Report is a product of the combined and dedicated effort of the System's Staff. This Report is also a reflection of the leadership of the SCERS Board in assuring the prudent fiduciary oversight of SCERS. I would like to take this opportunity to express my thanks to the SCERS Board, Staff, and advisors for their commitment to SCERS and for working so diligently to ensure the successful operation of the System.

Respectfully submitted,



Annette St. Urbain  
Interim Chief Executive Officer



# CERTIFICATE OF ACHIEVEMENT



Government Finance Officers Association

## Certificate of Achievement for Excellence in Financial Reporting

Presented to

### **Sacramento County Employees' Retirement System California**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2016**

Executive Director/CEO



# BOARD OF RETIREMENT



## President

Richard B. Fowler II  
Appointed by Board of Supervisors  
Present term expires June 30, 2019



## Vice President

John B. Kelly  
Appointed by Board of Supervisors  
Present term expires December 31, 2018



## Vice President

Keith DeVore  
Appointed by Board of Supervisors  
Present term expires June 30, 2018



## Trustee

Steven L. Baird  
Elected by Miscellaneous Members  
Present term expires December 31, 2018



## Trustee

Kathy O'Neil  
Elected by Retired Members  
Present term expires December 31, 2019



## Trustee

James A. Diepenbrock  
Appointed by Board of Supervisors  
Present term expires June 30, 2018



## Trustee

Alan Matré  
Elected by Miscellaneous Members  
Present term expires December 31, 2019



## Ex-Officio

Ben Lamera  
Sacramento County Director of Finance  
Member mandated by law



## Trustee

Chris A. Pittman  
Elected by Safety Members  
Present term expires December 31, 2018



## Alternate Safety Trustee

John Conneally  
Elected by Safety Members  
Present term expires December 31, 2018



## Alternate Retiree Trustee

Martha Hoover  
Elected by Retired Members  
Present term expires December 31, 2019





# ORGANIZATION CHART

## BOARD OF RETIREMENT



Annette St. Urbain  
Interim Chief Executive Officer



Steve Davis  
Chief Investment Officer

Vacant  
Deputy  
Chief Investment Officer

- Investment policy and objectives
- Investment compliance and performance reporting
- Asset allocation rebalancing
- Conduct manager searches
- Manager due diligence
- Proxy voting and corporate governance
- Board education on investment issues



Robert L. Gaumer  
General Counsel

- Legal representation and counsel to SCERS Board and staff
- Coordinate and oversee the selection and work of outside legal counsel
- Evaluation of securities litigation
- Analysis of state and federal legislation
- Legislative proposals, contracts, resolutions and opinions
- Legal education programs
- Legal service planning and budgeting



John W. Gobel, Sr.  
Chief Benefits Officer



Suzanne Likarich  
Retirement Services Manager

- Service, disability, deferred, and reciprocal retirements
- Pension payroll administration
- Seminar presentations and member retirement counseling
- Retirement publications and communications
- Death benefits and service credit purchases
- Community property interest resolution



Kathryn T. Regalia  
Chief Operations Officer



Thuyet Dang  
Senior Accounting Manager

- Accounting and financial reporting
- Budgeting and cash flow analysis
- Human resources
- Facilities and safety
- Information technology and telecommunications
- Administration and records

## PARTICIPATING EMPLOYERS

<u>Employer</u>	<u>Date Entered System</u>
County of Sacramento	July 1, 1941
County of Sacramento, Elected Officials: Board of Supervisors Sheriff Assessor District Attorney	July 1, 1941
U.C. Davis Medical Center*	July 1, 1941
Sacramento Metropolitan Fire District**	March 1, 1957
Sunrise Recreation and Park District	August 1, 1961
Fair Oaks Cemetery District	March 1, 1962
Carmichael Recreation and Park District	January 1, 1967
Florin Fire District**	July 1, 1974
Mission Oaks Recreation and Park District	February 1, 1976
Sacramento Employment and Training Agency (S.E.T.A.)	June 1, 1979
Orangevale Recreation and Park District	March 3, 1987
Elk Grove Cosumnes Cemetery District	April 28, 1987
Galt-Arno Cemetery District	July 1, 1987
Superior Court of California, County of Sacramento***	June 25, 2006

\* The final participating member from UC Davis Medical Center retired in January 2013.

\*\* Florin Fire District terminated its membership on June 30, 1996. Members are currently part of Sacramento Metropolitan Fire District.

\*\*\* Prior to June 25, 2006, Superior Court member information was included in the totals for the County of Sacramento.



# PROFESSIONAL CONSULTANTS

## Consulting Actuary

Segal Consulting

## Auditing Actuary

Cheiron

## Auditor

Brown Armstrong Accountancy Corporation

## Custodian

State Street Corporation

## Investment Consultant

Cliffwater, LLC

The Townsend Group

Verus Advisory, Inc.

## Legal Counsel

Nossaman, LLP

Public Pension Consultants

Sacramento County

Office of the County Counsel

Note: In the Investment Section of this report, investment professionals are listed on pages 102 and 103, a schedule of manager fees is located on page 99, and a schedule of equity brokerage commissions is on page 99.

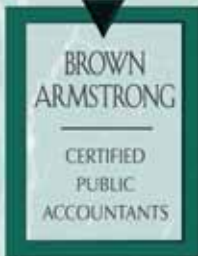






FINANCIAL

# INDEPENDENT AUDITOR'S REPORT



**BROWN ARMSTRONG**  
*Certified Public Accountants*

## INDEPENDENT AUDITOR'S REPORT

To the Board of Retirement of the  
Sacramento County Employees' Retirement System  
Sacramento, California

### Report on the Financial Statements

We have audited the accompanying Statement of Fiduciary Net Position of the Sacramento County Employees' Retirement System (SCERS) as of June 30, 2017, the related Statement of Changes in Fiduciary Net Position for the fiscal year then ended, and the related notes to the financial statements, which collectively comprise SCERS' basic financial statements as listed in the table of contents. The financial statements of SCERS as of and for the fiscal year ended June 30, 2016, were audited by other auditors, whose report dated December 2, 2016, expressed an unmodified opinion.

### Management's Responsibility for the Financial Statements

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

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free 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 auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to SCERS' 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 SCERS' 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.

#### BAKERSFIELD OFFICE

##### (MAIN OFFICE)

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FAX 661.324.4997  
EMAIL info@bacpas.com

#### FRESNO OFFICE

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TEL 559.476.3592

#### LAGUNA HILLS OFFICE

23272 MILL CREEK DRIVE  
SUITE 255  
LAGUNA HILLS, CA 92653  
TEL 949.652.5422

#### STOCKTON OFFICE

5250 CLAREMONT  
AVENUE  
SUITE 150  
STOCKTON, CA 95207  
TEL 209.451.4833

REGISTERED with the Public Company  
Accounting Oversight Board and  
MEMBER of the American Institute of  
Certified Public Accountants



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

### **Opinion**

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

### **Other Matters**

#### *Required Supplementary Information*

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

#### *Other Supplemental Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise SCERS' basic financial statements. The other supplemental information and the introductory, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

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

#### *Additional Information*

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit 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 December 7, 2017, on our consideration of SCERS' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, 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 the 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 SCERS' internal control over financial reporting and compliance.



## INDEPENDENT AUDITOR'S REPORT (CONTINUED)

### Report on Summarized Comparative Information

The financial statements of SCERS as of June 30, 2016, were audited by other auditors. Those auditors expressed an unmodified opinion on those audited financial statements in their report dated December 2, 2016. In our opinion, the summarized comparative information presented herein as of and for the fiscal year ended June 30, 2016, is consistent in all material respects with the audited financial statements from which it has been derived.

BROWN ARMSTRONG  
ACCOUNTANCY CORPORATION

*Brown Armstrong  
Accountancy Corporation*

Bakersfield, California  
December 7, 2017





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# MANAGEMENT'S DISCUSSION AND ANALYSIS

This section presents management's discussion and analysis (MD&A) of the financial activities of the Sacramento County Employees' Retirement System (SCERS or the System) for the years ended June 30, 2017 and 2016. Readers are encouraged to consider the narrative overview and information presented in this MD&A in conjunction with the Letter of Transmittal beginning on page 6 of this Report and the Basic Financial Statements, Notes to the Basic Financial Statements, Required Supplementary Information, and Other Supplemental Information that follows.

## FINANCIAL HIGHLIGHTS

As of June 30, 2017, SCERS' fiduciary net position restricted for pension benefits (net position) totaled \$8.584 billion. This represented an increase of \$903.3 million or 11.8% from the \$7.681 billion in SCERS' net position as of June 30, 2016, which, in turn, represented a decrease of \$197.9 million or 2.5% over the \$7.879 billion in net position as of June 30, 2015.

Additions to net position were \$1,342.3 million, \$214.1 million, and \$449.3 million for the years ended June 30, 2017, 2016 and 2015, respectively. Strong investment performance was the primary reason for the increase in total additions for the year ended June 30, 2017, with net gain from investment activities of \$1,137.8 million. Lower investment performance was the primary reason for the lower total additions for the fiscal year ended June 30, 2016 with net loss from investment activities of \$12.6 million.

Deductions from net position were \$439.0 million and \$412.0 million for the years ended June 30, 2017 and 2016. The total deductions for the year ended June 30, 2017 increased by \$27.0 million or 6.6% over the year ended June 30, 2016, which in turn, saw an increase in total deductions of \$31.5 million or 8.3% over the year ended June 30, 2015. Increased monthly benefit payments due to an increase in the number of retirees and the annual cost-of-living adjustment were the primary reasons for the increase in total deductions for both years.

SCERS' funding objective is to meet long-term benefit obligations through contributions and investment income. In order to help achieve level and predictable contribution costs from one year to the next, SCERS bases the determination of contribution rates on an actuarial asset valuation method that gradually adjusts to the market value of assets (asset smoothing). Under this actuarial asset valuation methodology, any investment market returns for the year that are above or below the assumed investment return rate (7.50% for fiscal years 2016-2017 and 2015-2016) are recognized over seven years (the asset smoothing period). This smoothed value is referred to as the Actuarial Value of Assets. By using the Actuarial Value of Assets to determine the contribution rates, SCERS is able to lower the year-to-year volatility in contribution rates that would come from using the market value of assets.

As of June 30, 2017, SCERS' total pension liability was \$10.681 billion, up from \$9.436 billion as of June 30, 2016. The employers' net pension liability increased from \$1.755 billion as of June 30, 2016 to \$2.097 billion as of June 30, 2017. This increase in employers' net pension liability is mainly due to changes in actuarial assumptions, including lowering the assumed investment rate of return from 7.5% to 7.0%. The fiduciary net position as a percentage of the total pension liability decreased from 81.4% to 80.4%.



## OVERVIEW OF THE FINANCIAL STATEMENTS

This MD&A serves as an introduction to the basic financial statements and other information accompanying the basic financial statements, which are comprised of the following components:

- ◇ Statements of Fiduciary Net Position - Pension Trust Fund
- ◇ Statements of Changes in Fiduciary Net Position - Pension Trust Fund
- ◇ Statements of Fiduciary Net Position - Agency Fund
- ◇ Notes to the Basic Financial Statements

The **Statements of Fiduciary Net Position - Pension Trust Fund** are snapshots of account balances at fiscal year end. These statements reflect assets available for future payments to retirees and their beneficiaries, and liabilities owed as of fiscal year end.

The **Statements of Changes in Fiduciary Net Position - Pension Trust Fund** reflect all the financial transactions that occurred during the year and show the impact of those activities as additions to or deductions from the plan. The trend of additions to versus deductions from the plan will indicate whether SCERS' financial position is improving or deteriorating over time.

The fiduciary fund statements report SCERS' net position restricted for pension benefits. Over time, increases or decreases in net position serve as one indicator of whether SCERS' financial health is improving or deteriorating. Other factors, such as market conditions or the System's fiduciary net position as a percentage of the employers' total pension liability should also be considered in measuring the System's overall health.

The **Statements of Fiduciary Net Position - Agency Fund** reflect assets held by SCERS in a custodial capacity or as an agent on behalf of others and do not measure the results of operations.

The **Notes to the Basic Financial Statements** are an integral part of the financial reports and provide additional information that is essential for a full understanding of the data provided in the financial statements.

In addition to the financial statements and accompanying notes, this report presents certain **Required Supplementary Information** which includes the employers' net pension liability, actuarially determined contributions (ADC), actuarial assumptions used to calculate the net pension liability and ADC, historical trends and other required supplementary information related to SCERS' defined benefit pension plan as required by GASB Statement No. 67.

Schedules of administrative expenses, investment fees and expenses, payments to consultants, and statements of changes in assets and liabilities for the agency fund are presented as **Other Supplemental Information** following the Required Supplementary Information.



### FINANCIAL ANALYSIS

#### Assets and Employers' Net Pension Liability

SCERS' net position restricted for pension benefits as of June 30, 2017 totaled \$8.584 billion, an increase of \$903.3 million or 11.8% from the \$7.681 billion in net position as of June 30, 2016, which represented a decrease of \$197.9 million or 2.5% from the \$7.879 billion in net position as of June 30, 2015. The increase in net position for the year ended June 30, 2017 was due to strong investment returns offset to some degree by the benefits and expenses paid during the year exceeding the contributions received. The decrease in net position for the year ended June 30, 2016 was due to investment returns being flat and the benefits and expenses paid during the year exceeding the contributions received.

For the fiscal year ended June 30, 2017, the total fund return, gross of fees, of 13.7% was 2.0% higher than the return of the investment policy benchmark of 11.7%. While all asset classes generated positive absolute returns during fiscal year 2016-2017, investments in the domestic equity, international equity, fixed income, absolute return, opportunities, and real assets segments outperformed the policy benchmarks, while private equity underperformed the policy benchmarks. Fiscal year 2015-2016 investments in international equity outperformed the policy benchmarks, while the domestic equity, fixed income, absolute return, private equity, and real assets segments of the portfolio underperformed the policy benchmarks. All of the net position is available to meet SCERS' obligations to plan participants and beneficiaries.

The decrease in cash and short-term investments as of June 30, 2017 compared to the prior year was the result of funding new investments and fulfilling capital commitments. The decrease in receivables and investment trades payable as of June 30, 2017 compared to the prior year were the result of a decrease in trading activity at the end of June by the external investment managers. The decrease in securities lending collateral and securities lending liability reflected a lower level of activity in the securities lending industry.

The decrease in cash and short-term investments as of June 30, 2016 compared to the prior year was the result of funding new investments and fulfilling capital commitments. The increase in receivables and investment trades payable as of June 30, 2016 compared to the prior year were the result of an increase in trading activity at the end of June by the external investment managers. The increase in securities lending collateral and securities lending liability reflected a higher level of activity in the securities lending industry.



## MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)

### NET POSITION

As of June 30

(Dollar Amounts Expressed in Millions)

Assets	2017	2016	Increase/ (Decrease)	% Change
Cash and short-term investments	\$243.5	\$416.4	\$(172.9)	(41.5%)
Receivables	62.6	140.0	(77.4)	(55.3)
Investments, at fair value	8,397.5	7,308.4	1,089.1	14.9
Securities lending collateral	352.2	422.5	(70.3)	(16.6)
Other assets	0.5	0.4	0.1	25.0
Total assets	<b>9,056.3</b>	<b>8,287.7</b>	<b>768.6</b>	<b>9.3</b>
<b>Liabilities</b>				
Other liabilities	28.9	39.5	(10.6)	(26.8)
Investments purchased payable	91.0	144.8	(53.8)	(37.2)
Securities lending liability	352.2	422.5	(70.3)	(16.6)
Total liabilities	<b>472.1</b>	<b>606.8</b>	<b>(134.7)</b>	<b>(22.2)</b>
Net position restricted for pension benefits	<b>\$8,584.2</b>	<b>\$7,680.9</b>	<b>\$903.3</b>	<b>11.8%</b>

### NET POSITION

As of June 30

(Dollar Amounts Expressed in Millions)

Assets	2016	2015	Increase/ (Decrease)	% Change
Cash and short-term investments	\$416.4	\$659.0	\$(242.6)	(36.8%)
Receivables	140.0	79.0	61.0	77.2
Investments, at fair value	7,308.4	7,293.0	15.4	0.2
Securities lending collateral	422.5	320.6	101.9	31.8
Other assets	0.4	1.2	(0.8)	(66.7)
Total assets	<b>8,287.7</b>	<b>8,352.8</b>	<b>(65.1)</b>	<b>(0.8)</b>
<b>Liabilities</b>				
Other liabilities	39.5	38.0	1.5	3.9
Investments purchased payable	144.8	115.4	29.4	25.5
Securities lending liability	422.5	320.6	101.9	31.8
Total liabilities	<b>606.8</b>	<b>474.0</b>	<b>132.8</b>	<b>28.0</b>
Net position restricted for pension benefits	<b>\$7,680.9</b>	<b>\$7,878.8</b>	<b>\$(197.9)</b>	<b>(2.5%)</b>



GASB Statement No. 67 replaced GASB Statement No. 25 and redefined pension liability and expense for financial reporting purposes but does not apply to contribution amounts for pension funding purposes. When measuring the total pension liability, GASB uses the same actuarial cost method and the same type of discount rate as SCERS uses for funding. Therefore, the employers' total pension liability measured for financial reporting shown in this report is determined on the same basis as SCERS' actuarial accrued liability measured for funding.

SCERS retains an independent actuarial firm, Segal Consulting, to perform annual actuarial valuations to determine the employers' total pension liability (expected future benefits) and ADC. The annual actuarial valuation measures the current and projected assets and liabilities of the retirement system, as well as the system's funded status. This information forms the basis for establishing the actuary's recommendations for the employer and employee contribution rates for the upcoming fiscal year to pay the expected future benefits.

SCERS has also retained an independent actuarial firm, Cheiron, to perform an actuarial audit of the June 30, 2016 actuarial valuation and actuarial experience study. A summary of Cheiron's review is in the Actuarial Section on page 109 of this report.

As of June 30, 2017, the employers' total pension liability was \$10.681 billion, and the net pension liability (the total pension liability less the fiduciary net position) was \$2.097 billion. The plan fiduciary net position as a percentage of the total pension liability was 80.4%. In general terms, this ratio means that as of June 30, 2017, SCERS had approximately 80 cents available for each dollar of anticipated future liability. As of June 30, 2016, the employers' total pension liability was \$9.436 billion, and the net pension liability (the total pension liability less the fiduciary net position) was \$1.755 billion. The plan fiduciary net position as a percentage of the total pension liability was 81.4%.

The Required Supplementary Information presents additional information regarding the net pension liability and the Actuarial Section of this report provides additional actuarial funding information.

### Reserves

SCERS' reserves are established in accordance with the requirements of the 1937 Act, utilizing contributions and the accumulation of investment income, after satisfying administrative and investment expenses. Under GASB Statement No. 67, investments are stated at fair value instead of cost and include the recognition of unrealized gains and losses. However, for actuarial funding purposes, SCERS utilizes a seven-year smoothing methodology under which a portion of the market gains and losses is recognized and allocated to the reserves through interest crediting. The difference between the market value of assets (equivalent to the net position restricted for pension benefits) and the smoothed actuarial value of assets is tracked in the market stabilization reserve.

Higher-than-expected investment performance increased SCERS' market stabilization reserve from \$(555.5) million as of June 30, 2016 to \$(81.0) million as of June 30, 2017.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)

### NET POSITION RESTRICTED FOR BENEFITS AT FAIR VALUE AS OF JUNE 30

(Dollar Amounts Expressed in Millions)

	2017	2016	2015
Employee reserves	\$796.9	\$758.4	\$727.0
Employer reserves	2,800.5	2,722.1	2,621.6
Retiree reserves	5,004.3	4,658.7	4,393.3
Retiree death benefit reserves	16.6	16.1	15.8
Contingency reserve	46.9	81.1	81.1
Total allocated reserves and designations	8,665.2	8,236.4	7,838.8
Market stabilization reserve	(81.0)	(555.5)	40.0
Net position restricted for benefits, at fair value	<u>\$8,584.2</u>	<u>\$7,680.9</u>	<u>\$7,878.8</u>

### Changes in Fiduciary Net Position - Pension Trust Fund

The following tables present the changes in fiduciary net position for the fiscal years ended June 30, 2017, 2016, and 2015, respectively.

#### CHANGE IN FIDUCIARY NET POSITION

For the Fiscal Years Ended June 30

(Dollar Amounts Expressed in Millions)

	2017	2016	Increase/ (Decrease)	% Change
<b>Additions</b>				
Employee contributions	\$89.5	\$77.5	\$12.0	15.5%
Employer contributions	203.9	209.0	(5.1)	(2.4)
Net gain/(loss) from investment activities	1,137.8	(12.6)	1,150.4	9,130.2
Net income from securities lending	2.5	1.9	0.6	31.6
Other income/(expense)	(7.5)	(2.3)	(5.2)	226.1
Investment fees and expenses	(83.9)	(59.4)	(24.5)	41.2
Total additions	<u>1,342.3</u>	<u>214.1</u>	<u>1,128.2</u>	<u>527.0</u>
<b>Deductions</b>				
Withdrawal of contributions	2.3	2.3	-	-
Administrative expenses	6.9	6.4	0.5	7.8
Benefits paid	429.8	403.3	26.5	6.6
Total deductions	<u>439.0</u>	<u>412.0</u>	<u>27.0</u>	<u>6.6</u>
Increase/(decrease) in net position	903.3	(197.9)	1,101.2	556.4
Net position restricted for pension benefits, beginning	7,680.9	7,878.8	(197.9)	(2.5)
Net position restricted for pension benefits, ending	<u>\$8,584.2</u>	<u>\$7,680.9</u>	<u>\$903.3</u>	<u>11.8%</u>



CHANGE IN FIDUCIARY NET POSITION  
For the Fiscal Years Ended June 30  
(Dollar Amounts Expressed in Millions)

	2016	2015	Increase/ (Decrease)	% Change
<b>Additions</b>				
Employee contributions	\$77.5	\$68.1	\$9.4	13.8%
Employer contributions	209.0	223.0	(14.0)	(6.3)
Net gain/(loss) from investment activities	(12.6)	217.3	(229.9)	(105.8)
Net income from securities lending	1.9	1.0	0.9	90.0
Other income/(expense)	(2.3)	1.3	(3.6)	(276.9)
Investment fees and expenses	(59.4)	(61.4)	2.0	(3.3)
<b>Total additions</b>	<b>214.1</b>	<b>449.3</b>	<b>(235.2)</b>	<b>(52.3)</b>
<b>Deductions</b>				
Withdrawal of contributions	2.3	2.3	0.0	0.0
Administrative expenses	6.4	5.8	0.6	10.3
Benefits paid	403.3	372.4	30.9	8.3
<b>Total deductions</b>	<b>412.0</b>	<b>380.5</b>	<b>31.5</b>	<b>8.3</b>
Increase/(decrease) in net position	(197.9)	68.8	(266.7)	387.6
Net position restricted for pension benefits, beginning	7,878.8	7,810.0	68.8	0.9
Net position restricted for pension benefits, ending	<u>\$7,680.9</u>	<u>\$7,878.8</u>	<u>(\$197.9)</u>	<u>(2.5%)</u>

Additions to Net Position

Financing for the benefits SCERS provides to its members comes primarily through the collection of employer and member (employee) contributions and from income on investments. For the fiscal years ended June 30, 2017, 2016, and 2015, total additions were \$1.342 billion, \$214.1 million, and \$449.3 million, respectively.

For the fiscal years ended June 30, 2017, 2016, and 2015, combined employer and employee contributions were \$293.4 million, \$286.5 million, and \$291.1 million, respectively. Fiscal years 2016-2017 and 2015-2016 employee contributions increased, while the employer contributions decreased mainly as a result of the employees in legacy benefit tiers paying more of the normal cost pursuant to collective bargaining or other employment agreements.

Net investment income/(loss) was \$1.049 billion, \$(72.4) million, and \$158.2 million for the fiscal years ended June 30, 2017, 2016, and 2015, respectively. The net investment gains and losses were driven primarily by investment performance of the portfolio. The Investment Section of this report provides a detailed discussion of the investment markets and investment performance.





### Deductions from Net Position

SCERS' net position was primarily used for the payment of benefits to members and their beneficiaries, for the payment of contribution refunds to terminated employees, and for the cost of administering the System. For the years ended June 30, 2017, 2016, and 2015, total deductions were \$439.0 million, \$412.0 million, and 380.5 million, respectively.

Deductions increased \$27.0 million or 6.6% in the year ended June 30, 2017 and \$31.5 million or 8.3% in the year ended June 30, 2016. The primary cause of the increase in deductions in both years was due to the increase in monthly benefit payments resulting from an increase in the number of retired members and the annual cost-of-living adjustment paid to retirees and beneficiaries.

The Board of Retirement approves SCERS' annual administrative budget. The 1937 Act limits SCERS' annual administrative expenses, excluding the costs of administration for computer software and hardware and computer technology consulting services (IT costs), to twenty-one hundredths of one percent (0.21%) of the System's actuarial accrued liability. Administrative expenses of \$6.0 million for the fiscal year ended June 30, 2017 and \$5.5 million for the fiscal year ended June 30, 2016, excluding IT costs, were 0.06% of the System's actuarial accrued liability. SCERS' administrative expenses have historically been below the limitation.

### SCERS' FIDUCIARY RESPONSIBILITIES

SCERS' Board of Retirement and management staff are fiduciaries of the pension trust fund. Under the California Constitution and California state law, the net position must be used exclusively for the benefit of plan participants and their beneficiaries.

### REQUESTS FOR INFORMATION

This report is designed to provide the Board of Retirement, SCERS members, participating employers, taxpayers, and other stakeholders and interested parties with a general overview of SCERS' finances and to show accountability for the money SCERS receives.

Questions about this report or requests for additional financial information may be addressed to:

Sacramento County Employees' Retirement System  
980 9th Street, Suite 1900  
Sacramento, CA 95814

Copies of this report are available at the above address and on the System's web site at [www.scers.org](http://www.scers.org).



# STATEMENTS OF FIDUCIARY NET POSITION

## PENSION TRUST FUND

AS OF JUNE 30, 2017 AND 2016

(Dollar Amounts Expressed in Thousands)

	2017	2016
<b>Assets</b>		
Cash and short-term investments		
Cash invested with Sacramento County Treasurer	\$4,065	\$9,316
Other cash and cash equivalents	32,268	80,211
Short-term investments with fiscal agents	207,129	326,914
Total cash and short-term investments	<u>243,462</u>	<u>416,441</u>
Receivables		
Employee and employer contributions	4,508	8,073
Accrued investment income	15,589	17,917
Securities sold	42,467	113,982
Total receivables	<u>62,564</u>	<u>139,972</u>
Investments, at fair value		
Domestic equity	1,975,845	2,035,218
International equity	2,123,935	1,380,130
U.S. government and agency securities	531,534	492,250
Domestic fixed income	920,136	937,418
International fixed income	148,639	126,189
Real assets	1,123,888	973,077
Real assets - mortgages payable	(63,500)	(63,500)
Absolute return	766,986	724,682
Private equity	693,885	537,706
Opportunities	176,176	165,182
Securities lending collateral	352,234	422,520
Total investments, at fair value	<u>8,749,758</u>	<u>7,730,872</u>
Other assets	501	378
Total assets	<u>9,056,285</u>	<u>8,287,663</u>
<b>Liabilities</b>		
Warrants payable	903	962
Accounts payable and other accrued liabilities	28,026	38,485
Investments purchased payable	90,897	144,831
Securities lending liability	352,234	422,520
Total liabilities	<u>472,060</u>	<u>606,798</u>
<b>Net position restricted for pension benefits</b>	<u>\$8,584,225</u>	<u>\$7,680,865</u>

The notes to the basic financial statements are an integral part of these statements.



# STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

## PENSION TRUST FUND

FOR THE FISCAL YEARS ENDED JUNE 30, 2017 AND 2016

(Dollar Amounts Expressed in Thousands)

	2017	2016
<b>Additions</b>		
Contributions		
Employee	\$89,489	\$77,494
Employer	203,928	209,020
Total contributions	<u>293,417</u>	<u>286,514</u>
Investment income		
From investment activities		
Net appreciation/(depreciation) in investment fair value:		
Securities	707,836	(179,823)
Real assets	69,432	1,126
Absolute return	66,922	(24,123)
Private equity	9,999	26,693
Opportunities	95,857	4,652
Interest	41,833	38,302
Dividends	78,909	77,392
Real assets	29,309	23,708
Private equity	13,854	8,989
Opportunities	23,812	10,525
Net gain/(loss) from investment activities	<u>1,137,763</u>	<u>(12,559)</u>
From securities lending activities		
Securities lending income	3,881	1,805
Securities lending expense		
Borrower rebate income/(expense)	(605)	539
Securities lending management fees	(751)	(489)
Net income from securities lending	<u>2,525</u>	<u>1,855</u>
Other expense	(7,464)	(2,317)
Investment fees and expenses	(83,909)	(59,378)
Net investment income/(loss)	<u>1,048,915</u>	<u>(72,399)</u>
Total additions	<u>1,342,332</u>	<u>214,115</u>
<b>Deductions</b>		
Withdrawal of contributions	2,312	2,346
Administrative expenses	6,906	6,362
Benefits paid	429,754	403,356
Total deductions	<u>438,972</u>	<u>412,064</u>
<b>Net increase/(decrease)</b>	<b>903,360</b>	<b>(197,949)</b>
<b>Net position restricted for pension benefits, beginning</b>	<b>7,680,865</b>	<b>7,878,814</b>
<b>Net position restricted for pension benefits, ending</b>	<b><u>\$8,584,225</u></b>	<b><u>\$7,680,865</u></b>

The notes to the basic financial statements are an integral part of these statements.



# STATEMENTS OF FIDUCIARY NET POSITION

AGENCY FUND  
AS OF JUNE 30, 2017 AND 2016  
(Dollar Amounts Expressed in Thousands)

	2017	2016
<b>Assets</b>		
Accounts receivable	\$28	\$47
<b>Total assets</b>	<b>\$28</b>	<b>\$47</b>
<b>Liabilities</b>		
Accounts payable	\$28	\$47
<b>Total liabilities</b>	<b>\$28</b>	<b>\$47</b>

The notes to the basic financial statements are an integral part of these statements.



# NOTES TO THE BASIC FINANCIAL STATEMENTS

## NOTE 1 - PLAN DESCRIPTION

The Sacramento County Employees' Retirement System (SCERS or the System) is a cost-sharing multiple-employer public employee retirement system which operates under the County Employees Retirement Law of 1937 (Section 31450 et seq. of the California Government Code) and the California Public Employees' Pension Reform Act of 2013 (CalPEPRA). The System was created by resolution of the Sacramento County (the County) Board of Supervisors on July 1, 1941, to provide retirement, disability, and death benefits for qualified employees of Sacramento County and participating Special Districts (Special Districts or Member Districts). SCERS is governed by a nine member Board of Retirement. Four are appointed by the County Board of Supervisors; four are elected by the members of the System (two by the Miscellaneous members, one by the Safety members and one by the Retiree members); and the County Director of Finance serves as an Ex-Officio member. An alternate Safety member and an alternate Retiree member are also elected by those respective member groups. The System is legally and fiscally independent of the County.

At June 30, 2017 and 2016, participating local government employers consisted of the County of Sacramento; Superior Court of California, County of Sacramento (Superior Court); and eleven Special Districts.

The System's membership consists of the following categories:

- Safety Tier 1 - Includes employees whose principal duties consist of law enforcement or fire suppression work or who occupy positions designated by law as safety positions and who have a membership start-date prior to June 25, 1995.
- Safety Tier 2 - Includes employees whose principal duties consist of law enforcement or fire suppression work or who occupy positions designated by law as safety positions and who have a membership start-date on or after June 25, 1995 but prior to January 1, 2012.
- Safety Tier 3 - Includes employees whose principal duties consist of law enforcement or fire suppression work or who occupy positions designated by law as safety positions and who have a membership start-date on or after January 1, 2012 but prior to January 1, 2013.
- Safety Tier 4 - Includes employees whose principal duties consist of law enforcement or fire suppression work or who occupy positions designated by law as safety positions and who have a membership start-date on or after January 1, 2013.
- Miscellaneous Tier 1 - Includes all members other than Safety who have a membership start-date prior to September 27, 1981.
- Miscellaneous Tier 2 - Includes all members other than Safety who have a membership start-date on or after September 27, 1981 and prior to June 27, 1993 and who elected not to become members of Miscellaneous Tier 3.
- Miscellaneous Tier 3 - Includes all members other than Safety who have a membership start-date on or after June 27, 1993, and those Miscellaneous Tier 2 members who elected to become members of this class. The Miscellaneous Tier 3 is closed to employees of Sacramento County who have a membership start-date on or after January 1, 2012.
- Miscellaneous Tier 4 - Includes members other than Safety who are employees of Sacramento County and have a membership start-date on or after January 1, 2012 but prior to January 1, 2013.
- Miscellaneous Tier 5 - Includes all members other than Safety who have a membership start-date on or after January 1, 2013.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

At June 30, 2017 and 2016, the System's membership consisted of:

Current Members:	2017	2016
Vested		
Miscellaneous Tier 1	65	83
Miscellaneous Tier 2	57	62
Miscellaneous Tier 3	7,101	7,548
Miscellaneous Tier 4	88	10
Miscellaneous Tier 5	16	10
Total Miscellaneous	7,327	7,713
Safety Tier 1	166	218
Safety Tier 2	1,280	1,325
Safety Tier 3	64	30
Safety Tier 4	33	10
Total Safety	1,543	1,583
Total Vested	8,870	9,296
Non-Vested		
Miscellaneous Tier 3	105	198
Miscellaneous Tier 4	274	318
Miscellaneous Tier 5	2,871	2,134
Total Miscellaneous	3,250	2,650
Safety Tier 2	5	12
Safety Tier 3	48	72
Safety Tier 4	414	363
Total Safety	467	447
Total Non-Vested	3,717	3,097
Total Current Members	12,587	12,393



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

Retirees and beneficiaries currently receiving benefits:	2017	2016
Miscellaneous - Service	7,456	7,148
Miscellaneous - Beneficiary	1,203	1,176
Miscellaneous - Nonservice-Connected Disability	284	287
Miscellaneous - Service-Connected Disability	182	177
Total Miscellaneous	9,125	8,788
Safety - Service	1,647	1,562
Safety - Beneficiary	373	357
Safety - Nonservice-Connected Disability	17	17
Safety - Service-Connected Disability	234	236
Total Safety	2,271	2,172
Total Retirees and Beneficiaries	11,396	10,960
Terminated employees entitled to benefits but not yet receiving them*:		
Miscellaneous Tier 1	45	48
Miscellaneous Tier 2	154	170
Miscellaneous Tier 3	2,374	2,343
Miscellaneous Tier 4	75	63
Miscellaneous Tier 5	336	221
Total Miscellaneous	2,984	2,845
Safety Tier 1	61	77
Safety Tier 2	347	356
Safety Tier 3	9	6
Safety Tier 4	24	17
Total Safety	441	456
Total Terminated Members	3,425	3,301
<b>Grand Total</b>	<b>27,408</b>	<b>26,654</b>

\*Includes terminated members due a refund of member contributions.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Pension Benefits

The System's benefits are established by the provisions of the County Employees Retirement Law of 1937 and CalPEPRA and provide for retirement, death, and disability benefits. All permanent full-time and part-time employees of the County, Superior Court and Member Districts are eligible to participate in the System. Upon reaching five years of service, participants have earned the right to receive a retirement benefit, subject to certain restrictions if retirement is prior to attaining age 50 or if less than 10 years of service has been achieved for Miscellaneous Tiers 1, 2, 3 and 4 and Safety Tiers 1, 2, and 3, or prior to attaining age 52 or if less than 5 years of service has been achieved for Miscellaneous Tier 5, or prior to attaining age 50 or if less than 5 years of service has been achieved for Safety Tier 4.

Effective June 29, 2003, the County Board of Supervisors adopted new benefit formulas for all SCERS members, including the employees of Member Districts, for service credit prospectively from June 29, 2003, and for County employees, retroactively to service credit which precedes that date. In accordance with applicable retirement law, each SCERS Member District's governing body determined whether or not to apply these formulas retroactively for service credit earned prior to June 29, 2003 by their employees.

Retirement benefits under Safety Tiers 1 and 2 and Miscellaneous Tiers 1, 2 and 3 are as follows:

- Members covered under Safety Tier 1 who retire at age 50, or thereafter, are entitled to a retirement benefit, payable monthly for life, equal to 3 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 4 percent annually. Final-average salary is the member's average salary for the highest twelve consecutive months of credited service.
- Members covered under Safety Tier 2 who retire at age 50, or thereafter, are entitled to a retirement benefit, payable monthly for life, equal to 3 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 2 percent annually. Final-average salary is the member's average salary for the highest thirty-six consecutive months of credited service.
- Members covered under Miscellaneous Tier 1 who retire at age 50 are entitled to a retirement benefit, payable monthly for life, which is equal to 1.48 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 4 percent annually. Final-average salary is the member's average salary for the highest twelve consecutive months of credited service.
- Members covered under Miscellaneous Tier 2 who retire at age 50 are entitled to a retirement benefit, payable monthly for life, equal to 1.48 percent of their final-average salary for each year of credited service. There is no cost-of-living adjustment. Final-average salary is the member's average salary for the highest thirty-six consecutive months of credited service.
- Members covered under Miscellaneous Tier 3 who retire at age 50 are entitled to a retirement benefit, payable monthly for life, equal to 1.48 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 2 percent annually. Final-average salary is the member's average salary for the highest thirty-six consecutive months of credited service.

The retirement benefits of Miscellaneous Tiers 1, 2, and 3 members who retire after age 50 are increased by an age factor for each quarter year of age up to a maximum of 2.61 percent of final-average salary for each year of credited service at age 62.

Members whose employers determined not to retroactively apply the formulas to service credit earned prior to June 29, 2003 will continue to have their retirement benefits for that service calculated pursuant to the formulas in effect at the time the service was earned (i.e., Safety and Miscellaneous members who retire at age 50 earn 2 percent and 1.1 percent, respectively, of their final-average salary for each year of credited service).





## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

Effective January 1, 2012, the County Board of Supervisors adopted new tiers for County employees hired on or after January 1, 2012, but before January 1, 2013. Retirement benefits under these tiers are as follows:

- Members covered under Safety Tier 3 who retire at age 50 are entitled to a retirement benefit, payable monthly for life, equal to 2.29 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 2 percent annually. Final-average salary is the member's average salary for the highest thirty-six consecutive months of credited service.
- Members covered under Miscellaneous Tier 4 who retire at age 50 are entitled to a retirement benefit, payable monthly for life, equal to 1.18 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 2 percent annually. Final-average salary is the member's average salary for the highest thirty-six consecutive months of credited service.

The retirement benefits of Safety Tier 3 members who retire after age 50 are increased by an age factor for each quarter year of age up to a maximum of 3 percent of final-average salary for each year of credited service at age 55. The retirement benefits of Miscellaneous Tier 4 members who retire after age 50 are increased by an age factor for each quarter year of age up to a maximum of 2.43 percent of final-average salary for each year of credited service at age 65.

Effective January 1, 2013, with the implementation of CalPEPRA, the County Board of Supervisors adopted new tiers for employees of the County, Superior Court and Member Districts who are eligible to participate in the System and who were hired on or after January 1, 2013. Retirement benefits under these new tiers are as follows:

- Members covered under Safety Tier 4 who retire at age 50 are entitled to a retirement benefit, payable monthly for life, equal to 2 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 2 percent annually. Final-average salary is the member's average salary for the highest thirty-six consecutive months of credited service.
- Members covered under Miscellaneous Tier 5 who retire at age 52 are entitled to a retirement benefit, payable monthly for life, equal to 1 percent of their final-average salary for each year of credited service. This benefit includes a cost-of-living adjustment of up to 2 percent annually. Final-average salary is the member's average salary for the highest thirty-six consecutive months of credited service.

The retirement benefits of Safety Tier 4 members who retire after age 50 are increased by an age factor for each quarter year of age up to a maximum of 2.7 percent of final-average salary for each year of credited service at age 57. The retirement benefits of Miscellaneous Tier 5 members who retire after age 52 are increased by an age factor for each quarter year of age up to a maximum of 2.5 percent of final-average salary for each year of credited service at age 67.

### Member Termination

Upon separation from employment with a participating employer, members' accumulated contributions are refundable with interest accrued through the prior six-month period ended June 30 or December 31. Interest on member accounts is credited semiannually on June 30 and December 31. Withdrawal of such accumulated contributions results in forfeiture of the related benefits.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Financing

Benefits payable by the System are financed through member contributions, employer contributions, and earnings from investments. Member contributions are required by law. Contribution rates, which are actuarially determined, are based on age at entry into the System (a single rate is used for members entering the System after January 1, 1975). County, Superior Court and Member Districts' contributions are actuarially determined to provide for the balance of contributions needed. All contribution rates are reviewed and revised annually. The authority for both benefit provisions and contribution obligations is derived from the County Employees Retirement Law of 1937 and CalPEPRA.

### NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

SCERS reports fiduciary funds at June 30, 2017 and 2016 which include pension trust and agency funds. The pension trust fund is used to report resources that are required to be held in trust for the members and the beneficiaries of the defined benefit pension plan, and the agency fund accounts for assets held by SCERS in a custodial capacity or as an agent on behalf of the participating employers to fund the Retiree Medical and Dental Insurance Program. See Note 8 for a detailed description of the program. The pension trust fund is accounted for on a flow of economic resources measurement focus and the accrual basis of accounting. The agency fund is custodial in nature and does not measure the results of operations. Assets and liabilities are recorded using the accrual basis of accounting.

### Basis of Accounting

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America and reporting guidelines set forth by the Governmental Accounting Standards Board (GASB). The major pronouncements that prescribe the System's defined benefit pension plan are GASB Statements No. 31, 40, 51, 53, 67, 72, and 82.

### Valuation of Investments

The majority of the investments held at June 30, 2017 and 2016 are in the custody of, or controlled by, State Street Bank, the System's custodian. The System's investment portfolio consists of domestic and international equities, domestic and international fixed income, real assets, absolute return, private equity, and opportunities. The diversity of the System's investment portfolio requires a wide range of techniques to determine fair value. Investments are valued at their fair value in accordance with GASB Statement No. 72, *Fair Value Measurement and Application*, which results in the recognition of fair value gains and losses. The overall valuation processes and information sources by major asset classifications are presented in Note 3.

### Contributions and Benefits

Employee and employer contributions are recognized when due pursuant to statutory requirements. Benefits and refunds are recognized when the benefits are currently due and payable in accordance with the terms of the plan.

### Income and Expenses

Interest income is recognized as it accrues. Dividend income is recognized when the dividends are declared. Realized gains and losses and unrealized gains and losses on investments are combined and reported together as the net appreciation (depreciation) in the fair value of investments. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Investment purchases and sales are recorded on the trade date, not the settlement date.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Securities Lending

Securities lending transactions are short-term collateralized loans of the System's securities for the purpose of generating additional investment income. For each lending transaction, the System receives either cash collateral or non-cash collateral. The underlying securities out on loan are reported on the System's statements of fiduciary net position as if the lending transactions had not occurred. Cash collateral received for the loaned securities is reported as securities lending liability on the statements of fiduciary net position. Cash collateral is reinvested in the lending agent's cash collateral investment pool and is valued at fair value and is reported as securities lending collateral on the statement of fiduciary net position. Non-cash collateral held is not reported on the statements of fiduciary net position nor is there a corresponding liability reported on these financial statements as the System does not have the ability to pledge or sell them without a borrower default. Note 3 - Cash and Investments discloses the amount of securities lending non-cash collateral.

### Other Assets

Other assets consist of other accounts receivable, prepaid expenses, net capital assets, and security deposits.

### Administrative Expenses

Administrative costs are financed through employer and employee contributions and earnings from investments.

### Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results may differ from those estimates.

### Reclassification

Certain reclassifications have been made to June 30, 2016 balances to conform to the presentation as of and for the fiscal year ended June 30, 2017.

## **NOTE 3 - CASH AND INVESTMENTS**

### SECTION 1: INVESTMENT POLICIES

Article XVI, Section 17 of the Constitution of the State of California provides that "...notwithstanding any other provisions of law or this Constitution, the Retirement Board of a public pension or retirement system shall have plenary authority and fiduciary responsibility for investment of monies and administration of the system..." Article XVI, Section 17(a) further provides that "...the Retirement Board of a public pension or retirement system shall have sole and exclusive fiduciary responsibility over the assets..." The investment authority for the System rests primarily through the "prudent person rule," as set forth in Section 31595 of the County Employees Retirement Law of 1937, which establishes a standard for all fiduciaries, including anyone with investment authority on behalf of the System.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Asset Allocation

SCERS maintains an overall investment policy designed to achieve a diversified investment portfolio. An integral part of the investment policy is the strategic asset allocation, which is designed to provide an optimal mix of asset classes with return expectations that correspond to expected liabilities. The strategic asset allocation also emphasizes maximum diversification of the portfolio to protect the System from the possibility that a particular asset class may experience poor investment performance in a given period. The System's adopted asset allocation policy as of June 30, 2017 and 2016 is as follows:

Asset Class	Target Allocation
Domestic equities	22.5%
International equities	22.5
Fixed income	20.0
Real assets	15.0
Absolute return	10.0
Private equity	10.0
Opportunities	0.0
Total	<u>100.0%</u>

### SECTION 2: INVESTMENT SUMMARY

#### Cash Invested with Sacramento County Treasurer

The System invests cash held for benefit payments and general operations in the County Treasurer's pool. The County Treasury Oversight Committee is responsible for regulatory oversight of the pool. The System's share of the County Treasurer's pool is separately accounted for, and interest earned, net of related expenses, is apportioned quarterly based on the proportion of the System's average daily cash balance to the total of the pooled cash and investments.

Cash deposited in the Sacramento County Treasurer's pool is stated at fair value. The value of the System's pool shares is determined on an amortized cost basis, which approximates fair value. The fair value of the System's cash invested with the County Treasurer totaled \$4,065 and \$9,316 at June 30, 2017 and 2016, respectively. The pool was not rated, and the weighted-average maturity of the pool was 277 days and 254 days at June 30, 2017 and 2016, respectively.

Interest earned but not received from the County Treasurer at year end is reported as a component of accrued investment income on the statements of fiduciary net position. Cash and investments included within the County Treasurer's pool are described in the County's Comprehensive Annual Financial Report.

#### Other Cash and Cash Equivalents

At June 30, 2017 and 2016, other cash and cash equivalents constituted balances in bank demand deposit accounts of \$32,268 and \$80,211, respectively.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Short-Term Investments with Fiscal Agents

Short-term investments, which include highly-liquid investments expected to be utilized by the System within 30-90 days, are reported at fair value. These investments may include securities that have a maturity in excess of 90 days but are readily marketable. At June 30, 2017 and 2016, the fair value of the System's short-term investments with fiscal agents was \$207,129 and \$326,914, respectively. These totals consisted of investments in the State Street Short-Term Investment Fund (STIF). The STIF is designed to provide qualified benefit plans with an investment vehicle that may be accessed on a daily basis. The STIF is limited to investing in securities that are rated A-1 by Moody's Investors Services and P-1 by Standard & Poor's Corporation (S&P) at the time of issuance. The STIF is not rated by credit rating agencies. Most investments range in maturity from overnight to 90 days with up to 20% of the STIF's value eligible for investment between 90 days and 13 months. For the fiscal years ended June 30, 2017 and 2016, the weighted-average maturities were 24 days. Investments in the STIF from all participating custodial clients of State Street were \$66.8 billion and \$63.9 billion on June 30, 2017 and 2016, respectively.

### Fair Value of Investments

The System measures and records its investments using fair value measurement guidelines established by U.S. generally accepted accounting principles (GAAP). These guidelines recognize a three-tiered fair value hierarchy, as follows:

- Level 1: Quoted prices for identical investments in active markets;
- Level 2: Observable inputs other than quoted market prices; and,
- Level 3: Unobservable inputs.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

The System had the following recurring fair value measurements at June 30, 2017 and 2016.

June 30, 2017	Fair Value Measurements by Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Equity Securities</b>				
Consumer Discretionary	\$480,657	\$480,657	\$-	\$-
Consumer Staples	266,276	266,276	-	-
Energy	192,668	192,668	-	-
Financials	557,104	557,104	-	-
Health Care	399,789	399,789	-	-
Industrials	428,558	428,558	-	-
Information Technology	500,804	500,804	-	-
Materials	164,585	164,585	-	-
Real Estate	281,548	281,548	-	-
Telecommunication Services	49,253	49,253	-	-
Utilities	103,306	103,306	-	-
Others	2,835	2,835	-	-
<b>Total Equity Securities</b>	<b>3,427,383</b>	<b>3,427,383</b>	<b>-</b>	<b>-</b>
<b>Fixed Income Securities</b>				
<b>Securitized Obligations</b>				
Asset-Backed Securities	134,009	-	134,009	-
Collateralized Mortgage-Backed Securities	22,180	-	22,180	-
<b>Credit Obligations</b>				
Corporate Bonds	360,076	605	348,550	10,921
Municipals	9,866	-	9,866	-
Yankee	40,050	-	40,050	-
<b>U.S. Government &amp; Agency Obligations</b>				
Agency Securities	8,112	-	8,112	-
U.S. Treasury	307,547	-	307,547	-
International Government	5,014	-	5,014	-
Collateralized Mortgage Obligations	104,463	-	104,463	-
<b>Mortgage Pass-Through</b>				
FHLMC	66,061	-	66,061	-
FNMA	99,417	-	99,417	-
GNMA	50,397	-	50,397	-
<b>Total Fixed Income Securities</b>	<b>1,207,192</b>	<b>605</b>	<b>1,195,666</b>	<b>10,921</b>
<b>Real Assets - Direct Holdings</b>	<b>307,294</b>	<b>-</b>	<b>-</b>	<b>307,294</b>
<b>Mortgages Payable</b>	<b>(63,500)</b>	<b>-</b>	<b>-</b>	<b>(63,500)</b>
<b>Total Real Assets - Direct Holdings</b>	<b>243,794</b>	<b>-</b>	<b>-</b>	<b>243,794</b>
<b>Collateral from Securities Lending</b>	<b>352,234</b>	<b>-</b>	<b>352,234</b>	<b>-</b>
<b>Total Investments by Fair Value Level</b>	<b>5,230,603</b>	<b>\$3,427,988</b>	<b>\$1,547,900</b>	<b>\$254,715</b>



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Investments Measured at the Net Asset Value (NAV)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Public Equity Commingled Funds	\$672,397	\$-	Daily, monthly	1 - 60 days
Absolute Return	766,986	2,000	Monthly, quarterly	30 - 90 days
Fixed Income Securities Commingled Funds	393,117	-	Daily, monthly	1 - 60 days
Real Assets	816,594	377,341		
Private Equity	693,885	534,741		
Opportunities	<u>176,176</u>	151,654		
Total Investments Measured at the NAV	<u>3,519,155</u>			
Total Investments*	<u>\$8,749,758</u>			

\* Total investments exclude Rights and Warrants, which are presented in the Investment Derivative Instruments section and are excluded from disclosures.

June 30, 2017

	Total	Fair Value Measurements by Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investment Derivative Instruments</b>				
<b>Assets</b>				
Forwards	\$1,309	\$1,309	\$-	\$-
Options	425	-	425	-
Rights/Warrants	69	69	-	-
Swaps	1,297,608	-	1,297,608	-
<b>Liabilities</b>				
Forwards	(2,736)	(2,476)	(260)	-
Options	(266)	-	(266)	-
Rights/Warrants	-	-	-	-
Swaps	<u>(1,295,958)</u>	<u>-</u>	<u>(1,295,958)</u>	<u>-</u>
Total Investment Derivative Instruments	<u>\$451</u>	<u>(\$1,098)</u>	<u>\$1,549</u>	<u>\$-</u>



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

June 30, 2016

	Total	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Equity Securities</b>				
Consumer Discretionary	\$370,294	\$370,294	\$-	\$-
Consumer Staples	230,298	230,298	-	-
Energy	191,111	191,111	-	-
Financials	727,440	727,440	-	-
Health Care	307,763	307,763	-	-
Industrials	304,061	304,061	-	-
Information Technology	396,359	396,359	-	-
Materials	122,585	122,585	-	-
Private Placement	2,252	2,252	-	-
Telecommunication Services	80,713	80,713	-	-
Utilities	90,647	90,647	-	-
Others	497	497	-	-
<b>Total Equity Securities</b>	<b>2,824,020</b>	<b>2,824,020</b>	<b>-</b>	<b>-</b>
<b>Fixed Income Securities</b>				
<b>Securitized Obligations</b>				
Asset-Backed Securities	150,235	-	150,235	-
Collateralized Mortgage-Backed Securities	72,789	403	72,386	-
<b>Credit Obligations</b>				
Corporate Bonds	379,797	-	370,984	8,813
Municipals	7,860	-	7,860	-
Yankee	28,642	-	28,642	-
<b>U.S. Government &amp; Agency Obligations</b>				
Agency Securities	9,883	-	9,883	-
U.S. Treasury	267,998	-	267,998	-
International Government	8,450	-	8,450	-
Collateralized Mortgage Obligations	55,615	-	55,615	-
<b>Mortgage Pass-Through</b>				
FHLMC	68,262	-	68,262	-
FNMA	104,311	-	104,311	-
GNMA	41,796	-	41,796	-
<b>Total Fixed Income Securities</b>	<b>1,195,638</b>	<b>403</b>	<b>1,186,422</b>	<b>8,813</b>
<b>Real Assets - Direct Holdings</b>	<b>353,180</b>	<b>-</b>	<b>-</b>	<b>353,180</b>
<b>Mortgages payable</b>	<b>(63,500)</b>	<b>-</b>	<b>-</b>	<b>(63,500)</b>
<b>Total Real Assets - Direct Holdings</b>	<b>289,680</b>	<b>-</b>	<b>-</b>	<b>289,680</b>
<b>Collateral from Securities Lending</b>	<b>422,520</b>	<b>-</b>	<b>422,520</b>	<b>-</b>
<b>Total Investments by Fair Value Level</b>	<b>4,731,858</b>	<b>\$2,824,423</b>	<b>\$1,608,942</b>	<b>\$298,493</b>





## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Investments Measured at Net Asset Value (NAV)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Public Equity Commingled Funds	\$591,279	\$-	Daily, monthly	1 - 60 days
Absolute Return	724,682	3,205	Monthly, quarterly	30 - 90 days
Fixed Income Securities Commingled Funds	360,219	-	Daily, monthly	1 - 60 days
Real Assets	619,897	516,593		
Private Equity	537,706	545,155		
Opportunities	165,182	157,199		
Total Investments Measured at NAV	<u>2,998,965</u>			
Total Investments*	<u><u>\$7,730,823</u></u>			

\* Total investments exclude Rights, which are presented in the Investment Derivative Instruments section below and are excluded from disclosures.

### June 30, 2016

	Total	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investment Derivative Instruments</b>				
<b>Assets</b>				
Forwards	\$10,428	\$2,543	\$7,885	\$-
Rights	49	49	-	-
Swaps	680,942	-	680,942	-
<b>Liabilities</b>				
Forwards	(13,268)	(2,944)	(10,324)	-
Swaps	(700,991)	-	(700,991)	-
Total Investment Derivative Instruments	<u><u>(\$22,840)</u></u>	<u><u>(\$352)</u></u>	<u><u>(\$22,488)</u></u>	<u><u>\$-</u></u>



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Equity Securities

The majority of the System's domestic and international equity securities are actively traded on major stock exchanges or over-the-counter. Investments listed or traded on a securities exchange are valued at fair value as of the close of trading on the valuation day. Fair value is determined based on the last reported trade price on the exchange considered to be the primary market for such security. Listed investments that are not traded on a particular day are valued at the last known price which is deemed best to reflect their fair value. Equity securities classified in Level 1 are valued using prices quoted in active markets for those securities.

### Fixed Income Securities

Debt securities consist of investments in customized separate accounts and commingled funds which primarily invest in negotiable obligations of the U.S. Government and U.S. Government-sponsored agencies, U.S. and non-U.S. corporations, securitized offerings backed by residential and commercial mortgages, and non-dollar denominated sovereign states. Debt securities that are not actively traded are valued by pricing vendors, which use modeling techniques that include market observable inputs required to develop a fair value, are classified in Level 2. Typical inputs include recent trades, yields, price quotes, cash flows, maturity, credit ratings and other assumptions based upon the specifics of the asset type.

### Real Assets - Direct Real Estate Holdings

Direct investments in real estate include offices, apartments, retail and industrial properties, which are classified in Level 3. Properties owned directly are subject to annual independent third party appraisals performed in accordance with the Uniform Standards of Professional Appraisal Practice. The fair value for each property is calculated by discounting the future cash flows (including the projected sales proceeds), using an appropriate discount rate. The significant unobservable inputs used in the fair value measurement of the investments in real estate are discount rate, exit capitalization rates, and revenue growth rates. These rates are based on the location, type and nature of each property, and current and anticipated market conditions, which are derived from appraisers, industry publications and from the experience of the advisor's valuations, acquisitions, asset management and capital markets departments. Certain real estate investments are leveraged, and the loan amount is recorded in the statements of fiduciary net position. Refer to Note 9 for disclosures regarding mortgage obligations. As of June 30, 2017 and 2016, total Level 3 real asset investments were \$307,294 and \$353,180 respectively. In the opinion of management, the reported amounts fairly represent the estimated fair value as of June 30, 2017 and 2016. However, the estimated fair value may differ significantly from that which could be realized in the marketplace.

### Investment Derivative Instruments

The fair values of derivative contracts can be affected by changes in interest rates, foreign exchange rates, commodity prices, credit spreads, market volatility, expected return, liquidity and other factors. The majority of the System's derivative instruments are traded in the over-the-counter (OTC) derivative market and are classified within Level 2. OTC derivatives classified within Level 2 are valued using models that utilize actively quoted or observable market input values from external market data providers, third-party pricing vendors and/or recent trading activity. The fair values of OTC derivatives for swaps and forward contracts are determined using discounted cash flow models. The fair values of option contracts and warrants are determined using Black-Scholes option pricing models. These models' key inputs include the contractual terms of the respective contract along with significant observable inputs, including interest rates, currency rates, credit spreads, equity prices, index dividend yield, volatility and other factors. The fair value of rights is calculated using the same parameters used for pricing options, including the rights' subscription price, prevailing interest rates, time to expiration, and the share price of the underlying stock, taking into consideration the level of its volatility. Futures positions are settled in cash on a daily basis and thus have no fair value.



### Investments Measured at the Net Asset Value (NAV)

Investments valued using the net asset value (NAV) per share (or its equivalent) are investments in non-governmental pooled investment vehicles (i.e., limited partner or non-managing member interest (LP/LLC Interest). These alternative investments, unlike more traditional investments, generally do not have readily obtainable market values and are generally valued at the most recent net asset value per unit or based on capital account information available from the general partners of such vehicles. If June 30 valuations are not available, the value is progressed from the most recently available valuation taking into account subsequent calls and distributions.

### Absolute Return

Absolute return investments are made both on a direct basis in limited partnerships, commingled funds, and separate accounts, and through externally managed customized separate accounts (CSA). Each CSA manager's investments consist of portfolio funds and co-investments as well as marketable securities held from time to time as a result of a distribution from a portfolio fund.

As of June 30, 2017, this category of investment includes limited partnerships, commingled funds and customized separate accounts that invest in domestic and international investment strategies including: (1) Market neutral strategies such as equity or fixed income market neutral, fixed income arbitrage, and convertible bond arbitrage; (2) Event driven strategies such as risk arbitrage, merger arbitrage, distressed debt, credit and other event-driven strategies; (3) Equity and credit long/short strategies where there is a combination of long and short positions primarily in exchange traded securities, with a net market exposure less than 100% of that of the overall equity or fixed income market. Strategies may be focused on U.S., non-U.S., and/or specialty mandates; (4) Global Macro strategies such as all market portfolios, opportunistic long-only, managed futures, currency, dedicated short selling strategies or other specialty strategies; and (5) Multi-strategies where absolute return managers invest using a combination of previously described strategies.

Absolute return investments are generally less liquid as compared to equity and fixed income and more liquid as compared to private equity. Direct absolute return investments consist of securities traded on national security exchanges, as well as securities that do not have readily determinable market values (illiquid securities). The fund manager's evaluation of the fair value of portfolio funds is based on the most recent available valuation information provided to it by the portfolio funds, adjusted for subsequent distributions from and capital contributions to such portfolio funds, if any.

Typically, the fair value of investments is determined by the fund manager in good faith and in compliance with the following guidelines:

- The value of illiquid investments is determined by the fund manager in good faith and in compliance with the definition of fair value under U.S. GAAP (Financial Accounting Standards Board (FASB) Accounting Standards Codification, Topic 820); provided, however, in some circumstances certain illiquid investments may require reporting financial information and valuations in accordance with accounting standards other than U.S. GAAP, such as under International Financial Reporting Standards.
- Securities that are traded on a national securities exchange are valued at their last reported sales prices on the valuation date on the national securities exchange on which such securities are principally traded or on a consolidated tape which includes such exchange, or, if there are no sales on such date on such exchange or consolidated tape, at the mean between the last "bid" and "asked" prices at the close of trading on such date on the largest national securities exchange on which such securities are traded.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

- Securities not traded on a national securities exchange, but traded over the counter, are valued at the last reported sales price as reported by the Nasdaq National Market of the Nasdaq Stock Market, or if such prices are not reported by the Nasdaq Stock Market, as reported by the National Quotation Bureau, Inc.; or if such prices are not reported by the National Quotation Bureau, the valuation of options or notional principal contracts not traded on a national securities exchange may be determined in good faith by a reliable source selected by the fund manager.
- Commodity interests traded on a United States or foreign exchange are valued at their last reported settlement price on the valuation date on the exchange on which such interests were purchased or sold. Commodity interests not traded on a United States or foreign exchange are valued at the mean between their last “bid” and “asked” prices on the date as of which the value is being determined, as reported by a reliable source selected in good faith by the fund manager.
- Short-term money market instruments and bank deposits are valued at cost plus accrued interest to the date of valuation.

These funds generally have monthly or quarterly redemption frequency and require between 30 and 90 days' prior written notice, limiting the System's ability to respond quickly to changes in market conditions.

### Public Equity and Fixed Income Commingled Funds

The majority of assets within separate accounts for public equities and fixed income are custodied with State Street, however, a portion of the assets in a separate account can be invested in a commingled fund to provide dedicated exposure to a specific segment of the market. An example would be a core plus fixed income mandate where SCERS' receives the high yield credit exposure through a commingled fund that is managed by the investment manager, and all other exposures through custodied assets. Withdrawals from such funds may be made after valuation has been determined either daily or monthly and require up to 60 days advance notice.

### Real Assets

Core and core plus real estate is held either directly via a real estate holding entity or as a limited partner in a commingled fund. Limited partner interest in commingled funds is valued using the NAV of the partnership. The most significant input into the NAV of such an entity is the value of its investment holdings. These holdings are valued by the general partners on a continuous basis, audited annually and periodically appraised by an independent third party. The valuation assumptions are based upon both market and property specific inputs which are not observable and involve a certain degree of expert judgment. Real estate investments in a closed-end commingled fund are long-term and illiquid in nature. As a result, investors are subject to redemption restrictions which generally limit distributions and restrict the ability of limited partners to exit a partnership investment. These investments can never be redeemed with the funds unless sold in a secondary market. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 8 to 12 years.

### Private Equity

Private Equity investments include limited partnerships, commingled funds and fund of funds (FoF) that invest in domestic and international private buyouts, venture capital, mezzanine capital, direct lending, and distressed debt. Private equity investments are made both on a direct basis in limited partnerships, commingled funds, and separate accounts, and through externally managed FoF's. Each FoF manager's investments consist of portfolio funds and co-investments as well as marketable securities held from time to time as a result of a distribution from a portfolio fund.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

Private equity investments are long-term and illiquid in nature. As a result, limited partners are limited in their ability to exit a partnership investment prior to its dissolution, other than selling their interest in a private equity secondary market. Distributions are received through the liquidation of the underlying assets of the fund. It is expected that the underlying assets of the fund would be liquidated over 7 to 10 years.

Limited partner interest in commingled funds is valued by using the NAV of the partnership. The most significant input into the NAV of such an entity is the value of its investment holdings. These holdings are valued by the general partners on a continuous basis, audited annually and periodically appraised by an independent third party.

Typically, the fair value of all investments is determined by the fund manager in good faith and in compliance with the definition of fair value under U.S. GAAP (FASB Accounting Standards Codification, Topic 820, *Fair Value Measures and Disclosures*). In some circumstances, partnership agreements require reporting financial information and valuations in accordance with accounting standards other than GAAP, such as under International Financial Reporting Standards. The measure of fair value by the fund manager is typically conducted on a quarterly basis. Marketable securities are valued according to the most recent public market price with appropriate discounts to reflect any contractual or regulatory restriction upon sale.

The fair value of each investment as reported does not necessarily represent the amount that may ultimately be realized, since such amounts depend upon future circumstances that cannot reasonably be determined until the position is actually liquidated. The evaluation of the fair value of portfolio funds is based on the most recent available valuation information provided to it by the portfolio funds, adjusted for subsequent distributions from and capital contributions to such portfolio funds, if any. The evaluation of the fair value of co-investments is based on the most recent information available at the time of valuation ascribed to such investments by the sponsor partnership. If the manager does not agree with this valuation, holds different securities than the sponsor partnership, is unable to obtain the sponsor partnership's valuation, or has information that results in a different valuation, it may use its own internal evaluation of fair value. The assumptions are based upon the nature of the investment and the underlying business. The valuation techniques vary based upon investment type and involve a certain degree of expert judgment.

### Opportunities

Opportunities investments are tactical investments that can be made in any allowable asset class and investment vehicle, including securities traded on national exchanges and investments that do not have a readily determinable fair value. The allocation to tactical investment opportunities is 0% to 5% of the total fund. Once an opportunities investment is made, capital to fund the opportunity is drawn from the asset class with the closest risk and return profile (equity, fixed income, absolute return, private equity or real assets). Accordingly, opportunities investments are valued by the methodology of the underlying asset class as described above. The System's interest in these commingled funds is valued by using the NAV of the partnership similar to investments in real assets or private equity. These investments can never be redeemed with the funds unless sold on a secondary market. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 7 to 10 years.

### Annual Money-Weighted Rate of Return

The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. For the year ended June 30, 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 13.6%. The annual money-weighted rate of return for the year ended June 30, 2016 was (0.97%).



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### SECTION 3: SECURITIES LENDING

State statutes permit the System to participate in securities lending transactions and, pursuant to a Securities Lending Authorization Agreement, the System has authorized State Street Bank and Trust Company (State Street) to act as its agent in lending the System's securities to broker-dealers and banks pursuant to an approved loan agreement.

During the years ended June 30, 2017 and 2016, on behalf of the System, State Street loaned securities held by State Street as custodian, including U.S. government and agency obligations, domestic corporate bonds, and domestic and international equities and received, as collateral, U.S. and foreign currency, securities issued or guaranteed by the U.S. government, sovereign debt of foreign countries, and irrevocable bank letters of credit. The System does not have the ability to pledge or sell collateral securities absent a borrower default. Borrowers are required to deliver collateral for each loan equal to a minimum of 100% of the market value of the loaned security.

In accordance with GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, securities lending collateral reported in the statement of fiduciary net position represents only cash collateral which is invested in the lending agent's cash collateral investment pool. During the fiscal years ended June 30, 2017 and 2016, SCERS did not impose any restrictions on the amount of the loans that State Street made on its behalf. During the fiscal years ended June 30, 2017 and 2016, there were no failures to return loaned securities or pay distributions thereon by any borrowers. Moreover, there were no losses resulting from a default of the borrowers or State Street.

During the fiscal years ended June 30, 2017 and 2016, SCERS and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral. Since the collateral received from the borrowers was greater than the amounts borrowed, on June 30, 2017 and 2016, the System had minimal credit risk exposure to the borrowers. Furthermore, the lending agreement with the custodian requires the custodian to indemnify the System if the borrower fails to return the securities. The total collateral held and the fair value of the securities on loan as of June 30, 2017 were \$380,418 and \$371,148, respectively. The total collateral held and the fair value of the securities on loan as of June 30, 2016 were \$481,087 and \$472,397, respectively.

Additional information regarding the cash collateral investment pool (collateral pool) follows:

Method for Determining Fair Value. The fair value of investments held by the collateral pool is based upon valuations provided by a recognized pricing service.

Policy for Utilizing Amortized Cost Method. Because the collateral pool does not meet the requirements of Rule 2a-7 of the Investment Company Act of 1940, State Street has valued the collateral pool investments at fair value for reporting purposes.

Regulatory Oversight. The collateral pool is not registered with the Securities and Exchange Commission. State Street, and consequently the investment vehicles it sponsors (including the collateral pool), are subject to the oversight of the Federal Reserve Board and the Massachusetts Commissioner of Banks. The fair value of the System's position in the collateral pool is the same as the value of the collateral pool shares.





## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

Collateral and related securities on loan at June 30, 2017 and 2016 were as follows:

Security on Loan Description	2017		
	Cash Collateral Value	Non-Cash Collateral Value	Fair Value of Securities on Loan
U.S. government and agency obligations	\$138,040	\$14,109	\$148,871
Domestic corporate bonds	30,657	-	29,991
Common and preferred stock – domestic	153,952	9,545	160,093
Common and preferred stock – international	29,585	4,530	32,193
<b>Total</b>	<b>\$352,234</b>	<b>\$28,184</b>	<b>\$371,148</b>

Security on Loan Description	2016		
	Cash Collateral Value	Non-Cash Collateral Value	Fair Value of Securities on Loan
U.S. government and agency obligations	\$127,578	\$17,605	\$142,229
Domestic corporate bonds	46,467	-	45,592
Common and preferred stock – domestic	210,522	30,832	238,572
Common and preferred stock – international	37,953	10,130	46,004
<b>Total</b>	<b>\$422,520</b>	<b>\$58,567</b>	<b>\$472,397</b>

### Securities Lending Collateral Credit Risk

All of the cash collateral received for securities lending is invested in the State Street Quality D Short-Term Investment Fund (STIF), which is not rated by credit rating agencies. At the time of purchase, all securities with maturities of 13 months or less must be rated at least A1, P1 or F1 and all securities with maturities in excess of 13 months must be rated A- or A3 by any two of the nationally-recognized statistical rating organizations or, if unrated, be of comparable quality. The fund may invest in other State Street managed vehicles provided they conform to the guidelines. As of June 30, 2017 and 2016, the STIF investments had a rating of at least A or A1/P1, and since the collateral received from borrowers was greater than the amounts borrowed, the System had minimal credit risk exposure to the borrowers.

### Securities Lending Collateral Interest Rate Risk

Quality D's Investment Policy Guidelines provide that the lending agent shall maintain the dollar-weighted average maturity of the Quality D fund in a manner that the lending agent believes is appropriate to the objective of the Quality D Fund; provided that (i) in no event shall any Eligible Security be acquired with a remaining legal final maturity of greater than 18 months, (ii) the lending agent shall maintain a dollar-weighted average maturity of the Quality D Fund not to exceed 75 calendar days and (iii) the lending agent shall maintain a dollar-weighted average maturity to final of the Quality D Fund not to exceed 180 calendar days. As of June 30, 2017 and 2016, the weighted average maturity was 29 days and 43 days, respectively.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### SECTION 4: DEPOSIT AND INVESTMENT RISKS

Pursuant to GASB Statement No. 40, *Deposit and Investment Risk Disclosure*, the following schedules disclose the System's investments subject to certain types of risk.

#### Credit Risk

Credit risk is the risk that an issuer or other counterparty to a debt instrument will not fulfill its obligations. This is measured by the assignment of ratings by nationally-recognized statistical rating organizations.

SCERS utilizes external investment managers to manage its portfolios. SCERS' Investment Policy specifies that fixed income investments will include both active and enhanced index investments in U.S. Treasury and agency securities, corporate bonds, mortgage-backed and asset-backed securities and non-dollar denominated sovereign and corporate debt.

SCERS' portfolio has two actively-managed investment strategies, which have a minimum average credit quality rating of A2 by Moody's Investor Services or A by Standard and Poor's Corporation for strategy 1, and a minimum average credit quality rating of Baa1/BBB+ by a Nationally Recognized Statistical Rating Organization (NRSRO) for strategy 2. Portfolio diversification is constrained by the following parameters in order to minimize overall market and credit risk:

- For strategy 2, securities rated below B-/B3 by an NRSRO are limited to 10% of the portfolio, at the time of purchase, while securities rated below CCC- or Caa3 by an NRSRO are prohibited.
- No more than 10% and 5% of the portfolio will be concentrated in any one issuer except U.S. Government and agency securities for strategies 1 and 2, respectively.
- No more than 20% and 25% of the portfolio will be invested in high yield or below investment grade straight securities for strategies 1 and 2, respectively.
- No more than 15% and 10% of the portfolio will be invested in convertible securities, which include bonds and preferred issues, for strategies 1 and 2, respectively.
- No more than 20% of the portfolio will be invested in non-U.S. dollar bonds for each strategy.
- No more than 15% of the portfolio will be invested in Emerging Markets, at the time of purchase, for strategy 2.
- Net exposure to interest rate derivatives will be limited to 25% of the duration of the portfolio for strategy 2.
- Net exposure to credit derivatives (CDS, CDX) will be limited to 25% of the market value of the portfolio for strategy 2.
- Gross notional exposure to credit derivatives (CDS, CDX) will be limited to 50% of the market value of the portfolio for strategy 2.





## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

The following tables depict the fixed income assets by credit rating as of June 30, 2017 and 2016:

### Fixed Income As of June 30, 2017

S&P Quality Rating	Total	Securitized Obligations	Credit Obligations	Commingled Funds	U.S.		Collateralized Mortgage Obligations	Mortgage Pass-Through		
					Government & Agency Obligations	International Government		FHLMC	FNMA	GNMA
AAA	\$146,028	\$97,282	\$6,381	\$-	\$-	\$-	\$42,365	\$-	\$-	\$-
AA+	207,190	20,633	5,216	-	-	-	15,863	66,061	99,417	-
AA	7,073	3,236	3,066	-	-	-	771	-	-	-
AA-	18,441	-	17,038	-	-	-	1,403	-	-	-
A+	38,811	11,086	18,789	-	-	928	8,008	-	-	-
A	31,921	1,724	30,197	-	-	-	-	-	-	-
A-	32,927	-	32,563	-	-	-	364	-	-	-
BBB+	91,546	-	89,013	-	-	-	2,533	-	-	-
BBB	70,808	2,717	67,630	-	-	232	229	-	-	-
BBB-	62,685	851	55,973	-	-	3,853	2,008	-	-	-
BB+	23,665	8,273	12,133	-	-	-	3,259	-	-	-
BB	8,836	-	8,836	-	-	-	-	-	-	-
BB-	14,141	-	14,141	-	-	-	-	-	-	-
B+	7,495	1,163	6,269	-	-	-	63	-	-	-
B	4,357	-	4,219	-	-	-	138	-	-	-
B-	6,442	-	1,655	-	-	-	4,787	-	-	-
CCC+	2,556	-	2,556	-	-	-	-	-	-	-
CCC	3,104	2,960	-	-	-	-	144	-	-	-
D	2,707	1,188	-	-	-	-	1,519	-	-	-
NA	366,056	-	-	-	-	315,659	-	-	-	50,397
NR	453,520	5,076	-	427,435	-	-	21,009	-	-	-
<b>Total</b>	<b>\$1,600,309</b>	<b>\$156,189</b>	<b>\$375,675</b>	<b>\$427,435</b>	<b>\$315,659</b>	<b>\$5,013</b>	<b>\$104,463</b>	<b>\$66,061</b>	<b>\$99,417</b>	<b>\$50,397</b>

NA represents securities explicitly guaranteed by the U.S. government, which are not subject to the GASB Statement No. 40 credit risk disclosure requirements. NR represents those securities that are not rated.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Fixed Income As of June 30, 2016

S&P Quality Rating	Total	Securitized Obligations	Credit Obligations	Commingled Funds	U.S.		Collateralized Mortgage Obligations	Mortgage Pass-Through		
					Government & Agency Obligations	International Government		FHLMC	FNMA	GNMA
AAA	\$140,346	\$127,489	\$5,015	\$-	\$-	\$-	\$7,842	\$-	\$-	\$-
AA+	223,852	30,960	10,680	-	-	-	9,639	68,262	104,311	-
AA	19,710	13,863	5,679	-	-	-	168	-	-	-
AA-	12,773	755	12,018	-	-	-	-	-	-	-
A+	30,611	13,531	13,698	-	-	-	3,382	-	-	-
A	35,194	4,644	29,170	-	-	1,380	-	-	-	-
A-	33,373	884	32,489	-	-	-	-	-	-	-
BBB+	90,003	828	86,317	-	-	474	2,384	-	-	-
BBB	62,346	1,530	60,288	-	-	237	291	-	-	-
BBB-	64,060	1,557	60,968	-	-	-	1,535	-	-	-
BB+	31,288	8,852	13,567	-	-	5,953	2,916	-	-	-
BB	16,036	1,483	14,277	-	-	-	276	-	-	-
BB-	13,488	2,536	10,952	-	-	-	-	-	-	-
B+	37,289	1,078	36,211	-	-	-	-	-	-	-
B	6,963	214	6,749	-	-	-	-	-	-	-
B-	12,355	943	5,910	-	-	406	5,096	-	-	-
CCC+	1,507	-	1,507	-	-	-	-	-	-	-
CCC	611	-	-	-	-	-	611	-	-	-
D	2,957	1,113	-	-	-	-	1,844	-	-	-
NA	319,677	-	-	-	277,881	-	-	-	-	41,796
NR	401,418	10,764	1,991	369,032	-	-	19,631	-	-	-
<b>Total</b>	<b>\$1,555,857</b>	<b>\$223,024</b>	<b>\$407,486</b>	<b>\$369,032</b>	<b>\$277,881</b>	<b>\$8,450</b>	<b>\$55,615</b>	<b>\$68,262</b>	<b>\$104,311</b>	<b>\$41,796</b>

NA represents securities explicitly guaranteed by the U.S. government, which are not subject to the GASB Statement No. 40 credit risk disclosure requirements. NR represents those securities that are not rated.

### Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. As of June 30, 2017 and 2016, the System had no single issuer that exceeds 5% of total investments per GASB Statement No. 40 disclosure requirements or any one issuer which represents 5% or more of total fiduciary net position in accordance with GASB Statement No. 67. Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investments are exempt from the disclosure requirements.

The System's investment policy does not allow more than 5% of the total portfolio fair value to be invested in any one issuer, and as of June 30, 2017 and 2016, the System had no issuer that exceeds 5% of total portfolio market value. As noted in the previous discussion of credit risk, manager investment guidelines place limitations on the maximum holdings in any one issuer.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Custodial Credit Risk

Custodial credit risk is the risk that in the event a financial institution or counterparty fails, the System would not be able to recover the value of its deposits, investments, or securities. As of June 30, 2017 and 2016, the bank balance of cash and cash equivalents on deposit with SCERS' custodian bank and financial institutions totaled \$18,243 and \$19,128, respectively, of which \$15,523 and \$15,896 were not insured by Federal Depository Insurance Corporation (FDIC) and were exposed to custodial credit risk. The System believes that the risk is not significant because the cash is held with major financial institutions.

As of June 30, 2017 and 2016, deposits held in the System's name for the margin accounts of \$12,372 and \$58,771, respectively, were not insured or not collateralized, and these deposits were exposed to custodial credit risk.

As of June 30, 2017 and 2016, 100% of the System's investments held with the custodian were held in the System's name, and the System is not exposed to custodial credit risk related to these investments. There are no general policies relating to custodial credit risk.

### Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The investment guidelines negotiated with the actively-managed external portfolio managers give the managers the discretion to deviate within +/-20% and +/-30%, for strategies 1 and 2, respectively, from the effective duration of the relevant Barclays Capital Aggregate benchmark based on the portfolio total.

The following tables depict the duration in years of the long-term fixed income portfolio vs. the benchmark.

#### Long-Term Fixed Income Investments Duration

As of June 30, 2017

Type of Securities	Fair Value	Effective Duration	Benchmark Duration	Difference
<b>Securitized Obligations</b>				
Asset-Backed Securities	\$134,009	0.40	2.08	(1.68)
Collateralized Mortgage-Backed Securities	22,180	4.63	4.38	0.25
<b>Credit Obligations</b>				
Corporate Bonds	325,758	6.41	7.35	(0.94)
Municipals	9,867	12.07	11.57	0.50
Yankee	40,050	6.16	5.81	0.35
<b>U.S. Government &amp; Agency Obligations</b>				
Agency Securities	8,112	5.63	3.96	1.67
U.S. Treasury	307,547	7.03	6.15	0.88
International Government	5,013	4.62	7.40	(2.78)
Collateralized Mortgage Obligations	104,463	3.32	5.59	(2.27)
<b>Mortgage Pass-Through</b>				
FHLMC	66,061	4.21	3.72	0.49
FNMA	99,417	4.13	3.83	0.30
GNMA	50,397	4.71	4.28	0.43
<b>No Effective Duration</b>				
Commingled Fund	427,435	NA	NA	NA
<b>Total Fair Value with Weighted Average</b>	<b>\$1,600,309</b>	<b>5.21</b>	<b>5.76</b>	<b>(0.55)</b>

## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Long-Term Fixed Income Investments Duration

As of June 30, 2016

Type of Securities	Fair Value	Effective Duration	Benchmark Duration	Difference
<b>Securitized Obligations</b>				
Asset-Backed Securities	\$150,235	0.60	2.28	(1.68)
Collateralized Mortgage-Backed Securities	72,789	4.41	5.05	(0.64)
<b>Credit Obligations</b>				
Corporate Bonds	344,338	6.53	7.19	(0.66)
Municipals	7,860	14.53	12.55	1.98
Yankee	28,642	7.74	6.15	1.59
<b>U.S. Government &amp; Agency Obligations</b>				
Agency Securities	9,883	3.92	3.59	0.33
U.S. Treasury	267,998	7.09	6.21	0.88
International Government	8,450	6.07	13.48	(7.41)
Collateralized Mortgage Obligations	55,615	1.59	5.86	(4.27)
<b>Mortgage Pass-Through</b>				
FHLMC	68,262	2.71	2.20	0.51
FNMA	104,311	2.77	2.28	0.49
GNMA	41,796	3.31	2.68	0.63
<b>No Effective Duration</b>				
Commingled Funds	395,678	NA	NA	NA
<b>Total Fair Value with Weighted Average</b>	<b>\$1,555,857</b>	<b>4.90</b>	<b>5.35</b>	<b>(0.45)</b>



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### 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 following tables represent cash and investments held in a foreign currency as of June 30, 2017 and 2016:

As of June 30, 2017

Local Currency Name	Cash & Cash Equivalents	Equity	Fixed Income	Private Equity	Opportunities	Real Assets	Total
Australian Dollar	\$245	\$63,827	\$17,851	\$-	\$-	\$-	\$81,923
Brazilian Real	-	2,623	11,745	-	-	-	14,368
British Pound Sterling	2,919	249,449	36,167	-	25,739	-	314,274
Canadian Dollar	465	75,403	7,060	-	-	-	82,928
Czech Koruna	-	980	-	-	-	-	980
Danish Krone	(1)	44,446	-	-	-	-	44,445
Euro Currency	1,463	394,363	11,387	60,935	36,435	32,489	537,072
Hong Kong Dollar	321	73,522	-	-	-	-	73,843
Hungarian Forint	-	916	-	-	-	-	916
Indian Rupee	229	5,678	10,347	-	-	-	16,254
Indonesian Rupiah	-	830	10,258	-	-	-	11,088
Japanese Yen	1,493	328,813	-	-	-	-	330,306
Malaysian Ringgit	-	-	11,856	-	-	-	11,856
Mexican Peso	-	1,553	30,929	-	-	-	32,482
New Israeli Shekel	184	14,870	-	-	-	-	15,054
New Zealand Dollar	-	10,333	-	-	-	-	10,333
Norwegian Krone	(106)	15,102	15,276	-	-	-	30,272
Polish Zloty	-	-	13,388	-	-	-	13,388
Singapore Dollar	600	15,172	-	-	-	-	15,772
South African Rand	-	1,700	10,680	-	-	-	12,380
Swedish Krona	142	34,078	14,454	-	-	-	48,674
Swiss Franc	19	103,907	-	-	-	-	103,926
Thailand Baht	-	709	-	-	-	-	709
Turkish Lira	-	879	644	-	-	-	1,523
<b>Total</b>	<b>\$7,973</b>	<b>\$1,439,153</b>	<b>\$202,042</b>	<b>\$60,935</b>	<b>\$62,174</b>	<b>\$32,489</b>	<b>\$1,804,766</b>



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

As of June 30, 2016

Local Currency Name	Cash & Cash Equivalents	Equity	Fixed Income	Private Equity	Opportunities	Real Assets	Total
Australian Dollar	\$844	\$58,349	\$15,563	\$-	\$-	\$-	\$74,756
Brazilian Real	-	842	12,789	-	-	-	13,631
British Pound Sterling	946	146,806	13,062	-	29,955	-	190,769
Canadian Dollar	156	47,642	-	-	-	-	47,798
Colombian Peso	(113)	-	-	-	-	-	(113)
Chilean Peso	-	-	14,335	-	-	-	14,335
Danish Krone	561	12,332	-	-	-	-	12,893
Euro Currency	2,550	222,819	27,455	40,938	30,645	30,835	355,242
Hong Kong Dollar	331	26,791	-	-	-	-	27,122
Hungarian Forint	-	484	8,512	-	-	-	8,996
Indian Rupee	15	1,942	9,909	-	-	-	11,866
Indonesian Rupiah	-	536	10,058	-	-	-	10,594
Japanese Yen	2,123	192,955	-	-	-	-	195,078
Malaysian Ringgit	-	-	9,422	-	-	-	9,422
Mexican Peso	243	3,813	29,326	-	-	-	33,382
New Israeli Shekel	-	7,662	-	-	-	-	7,662
New Zealand Dollar	9	10,702	7,813	-	-	-	18,524
Norwegian Krone	12	18,613	6,162	-	-	-	24,787
Philippine Peso	-	596	-	-	-	-	596
Polish Zloty	-	-	4,574	-	-	-	4,574
Singapore Dollar	241	12,989	-	-	-	-	13,230
South African Rand	98	1,978	7,030	-	-	-	9,106
South Korean Won	-	651	-	-	-	-	651
Swedish Krona	304	30,509	14,399	-	-	-	45,212
Swiss Franc	12	42,809	-	-	-	-	42,821
Thailand Baht	-	1,014	-	-	-	-	1,014
Turkish Lira	-	1,491	-	-	-	-	1,491
<b>Total</b>	<b>\$8,332</b>	<b>\$844,325</b>	<b>\$190,409</b>	<b>\$40,938</b>	<b>\$60,600</b>	<b>\$30,835</b>	<b>\$1,175,439</b>

Foreign currency is comprised of international investment proceeds and income to be repatriated into U.S. dollars and funds available to purchase international securities. The System does not have a foreign currency risk policy.

### SECTION 5: HIGHLY SENSITIVE INVESTMENTS

As of June 30, 2017 and 2016, SCERS' investments included Collateralized Mortgage Obligations and Mortgage Pass-Through securities totaling \$320,338 and \$269,984 respectively. These securities are highly sensitive to interest rate fluctuations in that they are subject to early payment in a period of declining interest rates. The resulting reduction in expected total cash flows affects the fair value of these securities.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

The System's investment policy allows investments in commodities and futures. SCERS' investments include a target allocation of 2% of total fund assets in commodities and commodity futures as part of the Real Assets asset class. Commodities are a real asset class that produces a different pattern of returns compared to other asset classes. Unique supply and demand factors and the way commodities are traded are the main reasons for the low correlation between commodities and stocks and bonds. Not only is correlation low with traditional asset classes in general, but importantly, commodities tend to perform well when stocks and bond prices fall.

Spot commodity prices have historically been a poor investment and have declined in real terms. However, investment in collateralized commodity futures can provide higher returns. The futures market is an efficient way for producers to hedge price risk by forward-selling commodities at lower prices relative to spot prices to investors and speculators generating a roll yield (backwardation).

In general, commodities are volatile investments that are prone to large price spikes. By investing in commodity futures, investors get exposure to short-term price movement and risk, as well as long-term price trends. This price volatility and the need for producers to hedge their production provides the fundamental rationale for why investment managers pay the risk premium to speculators and long-only investors in the commodity markets.

As of June 30, 2017 and 2016, total commodities investments were \$113,849 and \$120,795, respectively. The investments consist of commodity futures hedge fund-of-funds, a commodity index fund, a commodity futures strategic fund, and partial exposure through a customized, diversified real assets strategy.

### Derivatives

The System's investment portfolios contain individual securities as well as investments in external investment pools. The System's investment policy allows investment managers to use derivative instruments for certain purposes and within certain parameters. Such instruments include futures contracts, currency forward contracts, option contracts, swap agreements, rights and warrants. The System permits the use of derivatives to minimize the exposure of certain investments to adverse fluctuations in financial and currency markets, as an alternative to investments in the cash market in which the manager is permitted to invest, and as an additional yield curve and/or duration management strategy. The System does not permit the use of derivatives for speculative use or to create leverage, however, this does not apply to investments in external pools. As of June 30, 2017 and 2016, the derivative instruments held by the System are considered investments and not hedges for accounting purposes. The gains and losses arising from this activity are recognized as incurred in the Statement of Changes in Fiduciary Net Position.

The tables below present the related net appreciation/(depreciation) in fair value, the fair value amounts and the notional amounts of derivative instruments outstanding at June 30, 2017 and 2016:

Investment Derivatives Instruments	Net Appreciation/(Depreciation) in Fair Value of Investments through June 30, 2017	Fair Value at June 30, 2017		
		Classification	Amount	Notional
Forwards	\$(4,190)	Accounts Payable and Other Accrued Liabilities	\$(1,427)	\$184,240
Futures (Domestic and Foreign)	30,013		-	255,221
Options	(189)	Accrued Investment	159	(1,884)
Rights	135	Income Receivables	69	151
Swaps	45,795		1,650	1,293,709
<b>Total Derivatives Instruments</b>	<b>\$71,564</b>		<b>\$451</b>	



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

Investment Derivatives Instruments	Net Appreciation/(Depreciation) in Fair Value of Investments through June 30, 2016	Fair Value at June 30, 2016		
		Classification	Amount	Notional
Forwards	\$(425)	Accounts Payable and	\$(2,840)	\$222,804
Swaps	(43,698)	Other Accrued Liabilities	(20,049)	(16,626)
Futures (Domestic and Foreign)	(12,904)	Accrued Investment	-	(95,209)
Options	3	Income Receivables	-	-
Rights	186	Equity Securities	49	151
Warrants	(211)		-	-
<b>Total Derivatives Instruments</b>	<b>\$(57,049)</b>		<b>\$(22,840)</b>	

Futures contracts are financial instruments that derive their value from underlying indices or reference rates and are marked-to-market at the end of each trading day. Daily settlement of gains and losses occur on the following business day. As a result, the instruments themselves have no fair value at June 30, 2017 or 2016 or at the end of any trading day. Daily settlement of gains and losses is a risk control measure to limit counterparty credit risk. Futures variation margin amounts are settled each trading day and recognized in the financial statements under net appreciation/(depreciation) in fair value of investments as they are incurred.

Forward contracts are obligations to buy or sell a currency or other commodity at a specified exchange rate and quantity on a specific future date. The fair value of the foreign currency forwards is the unrealized gain or loss calculated based on the difference between the specified exchange rate and the closing exchange rate at June 30, 2017 and 2016.

### Counterparty Credit Risk

Below is a schedule showing the counterparty credit ratings of the System's non-exchange traded investment derivative instruments outstanding and subject to loss at June 30, 2017 and 2016:

June 30, 2017

S&P Rating	Forwards	Swaps	Total
AA-	\$3	\$-	\$3
A+	1,127	68	1,195
A	13	-	13
A-	-	510	510
BBB+	-	1,328	1,328
Investments in Asset Position	1,143	1,906	3,049
Investments in Liability Position	(2,251)	(810)	(3,061)
<b>Total Investments in Asset/(Liability) Position</b>	<b>\$(1,108)</b>	<b>\$1,096</b>	<b>\$(12)</b>





## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

June 30, 2016

S&P Rating	Forwards	Swaps	Total
AA-	\$32	\$-	\$32
A+	739	-	739
A	1,128	1	1,129
A-	18	1,817	1,835
BBB+	296	507	803
Investments in Asset Position	2,213	2,325	4,538
Investments in Liability Position	(5,053)	(22,374)	(27,427)
<b>Total Investments in Asset/(Liability) Position</b>	<b>\$(2,840)</b>	<b>\$(20,049)</b>	<b>\$(22,889)</b>

The System could be exposed to risk if the counterparties to derivative contracts are unable to meet the terms of the contracts. The System's investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. The System anticipates that the counterparties will be able to satisfy their obligations under the contracts.

The aggregate fair value of investment derivative instruments in an asset position subject to counterparty risk at June 30, 2017 and 2016 were \$3,049 and \$4,538, respectively. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted. The System did not have any master netting agreements with its counterparties at June 30, 2017 and 2016, except that certain investment managers used netting arrangements at their discretion to minimize counterparty risks. The above schedules present exposure for similar instruments with the same counterparty on a net basis.

At June 30, 2017 and 2016, the System did not have any significant exposure to counterparty credit risk with any single party.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Interest Rate Risk

At June 30, 2017 and 2016, the System is exposed to interest rate risk on its derivative instruments as presented in the following tables:

As of June 30, 2017

#### Derivative Instrument Summary

Investment Type	Fair Value	Investment Maturities (in years)			
		Less Than 1	1 - 5	6 - 10	More than 10
Credit Default Swaps Bought	\$(345)	\$-	\$(345)	\$-	\$-
Credit Default Swaps Written	(14)	-	(14)	-	-
Currency Swaps	(28)	(28)	-	-	-
Fixed Income Options Bought	295	295	-	-	-
Fixed Income Options Written	(187)	(187)	-	-	-
Interest Rate Swaps	2,037	977	270	687	103
<b>Total</b>	<b>\$1,758</b>	<b>\$1,057</b>	<b>\$(89)</b>	<b>\$687</b>	<b>\$103</b>

#### Derivative Instruments Highly Sensitive to Interest Changes

Investment Type	Reference Rate	Fair Value	Notional Value
Currency Swaps	USD Receive Variable 3-month LIBOR, EUR Pay Variable 3-month EURIB 1.15844%	\$(58)	\$1,395
Currency Swaps	EUR Receive Variable 3-month EURIB, USD Pay Variable 3-month LIBOR 0.702%	30	1,426
<b>Subtotal - Currency Swaps</b>		<b>\$(28)</b>	<b>\$2,821</b>
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 0.346%	\$(5)	\$342
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.8235%	(54)	17,345
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.324%	24	1,323
Interest Rate Swaps	Receive Variable 0-month SONIA, Pay Fixed 0.639%	0	974
Interest Rate Swaps	Receive Variable 6-month EONIA, Pay Fixed 0.318%	7	844
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.40642%	13	425
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.4089%	125	4,100
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.40495%	61	1,980
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.4116%	33	1,100
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.49515%	42	1,600
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.57819%	102	4,120
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.58372%	33	1,360
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.51277%	100	3,510
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.39371%	126	3,585
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.3948%	126	3,585
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 0.52375%	20	21,110
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 0.53875%	110	86,645
Interest Rate Swaps	Receive Variable 12-month EONIA, Pay Fixed 0.1035%	32	987
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.36871%	146	915



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Derivative Instruments Highly Sensitive to Interest Changes (continued)

Investment Type	Reference Rate	Fair Value	Notional Value
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.38%	120	675
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 0.7472%	94	13,295
Interest Rate Swaps	Receive Variable 9-month USIOS, Pay Fixed 0.59%	39	20,900
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 0.63875%	38	20,660
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 0.675%	78	40,810
Interest Rate Swaps	Receive Variable 1-month USIOS, Pay Fixed 1.08%	63	20,385
Interest Rate Swaps	Receive Variable 1-month USIOS, Pay Fixed 0.91125%	179	30,650
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.7125%	138	83,000
Interest Rate Swaps	Receive Variable 1-month USIOS, Pay Fixed 0.71625%	38	20,335
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.20921%	(123)	13,531
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.4307%	(6)	7,090
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.43145%	(6)	7,094
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.01481%	(3)	565
Interest Rate Swaps	Receive Variable 1-month LIBOR, Pay Fixed 1.568%	510	636,000
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Variable 3-month LIBOR	(1)	5,290
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay 6-month LIBOR	(1)	2,745
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.0925%	4	7,010
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.2525%	2	2,320
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.2775%	1	153,655
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.15053%	(30)	6,601
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.18309%	(50)	7,695
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.16655%	(5)	875
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.50811%	(4)	2,955
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.11464%	(6)	2,915
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.309%	(7)	1,890
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.82354%	58	4,095
Interest Rate Swaps	Receive Fixed 0.05%, Pay Variable 12-month LIBOR	34	1,255
Interest Rate Swaps	Receive Fixed 0.1035%, Pay Variable 12-month EONIA	-	987
Interest Rate Swaps	Receive Fixed 0.356%, Pay Variable 12-month EONIA	-	1,528
Interest Rate Swaps	Receive Fixed 0.335%, Pay Variable 12-month EONIA	-	342
Interest Rate Swaps	Receive Fixed 2.43436%, Pay Variable 3-month LIBOR	5	3,740
Interest Rate Swaps	Receive Fixed 2.33843%, Pay Variable 3-month LIBOR	(163)	6,420
Subtotal - Interest Rate Swaps		\$2,037	\$1,283,158



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

As of June 30, 2016

### Derivative Instrument Summary

Investment Type	Fair Value	Investment Maturities (in years)			
		Less Than 1	1 - 5	6 - 10	More than 10
Credit Default Swaps Bought	\$(592)	\$-	\$(592)	\$-	\$-
Credit Default Swaps Written	(45)	-	(45)	-	-
Currency Swaps	(544)	148	-	(692)	-
Fixed Interest Rate Swaps	(8,475)	-	(320)	(8,137)	(18)
Total Return Swaps Equity	(10,393)	(10,393)	-	-	-
<b>Total</b>	<b>\$(20,049)</b>	<b>\$(10,245)</b>	<b>\$(957)</b>	<b>\$(8,829)</b>	<b>\$(18)</b>

### Derivative Instruments Highly Sensitive to Interest Changes

Investment Type	Reference Rate	Fair Value	Notional Value
Currency Swaps	USD Receive Variable 3-month LIBOR, JPY Pay Variable 3-month LIBOR	\$(255)	\$806
Currency Swaps	JPY Receive Variable 3-month LIBOR, USD Pay Variable 3-month LIBOR	240	926
Currency Swaps	USD Receive Variable 3-month LIBOR, JPY Pay Variable 3-month LIBOR	(1,042)	3,219
Currency Swaps	JPY Receive Variable 3-month LIBOR, USD Pay Variable 3-month LIBOR	972	3,704
Currency Swaps	JPY Receive Variable 3-month LIBOR, USD Pay Fixed 0.23435%	120	926
Currency Swaps	USD Receive Fixed 1.00%, JPY Pay Variable 3-month LIBOR	(120)	806
Currency Swaps	USD Receive Fixed 0.714%, JPY Pay Variable 3-month LIBOR	(485)	3,219
Currency Swaps	JPY Receive Variable 3-month LIBOR, USD Pay Fixed 0.714%	485	3,704
Currency Swaps	USD Receive Variable 3-month LIBOR, EUR Pay Variable 3-month EURIB	(375)	2,528
Currency Swaps	EUR Receive Variable 3-month LIBOR, USD Pay Fixed 0.187%	(84)	2,444
<b>Subtotal - Currency Swaps</b>		<b>\$(544)</b>	<b>\$22,282</b>
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 0.346%	\$(9)	\$333
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.8235%	(601)	17,345
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.85042%	(513)	11,600
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.78695%	(1,702)	41,720
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.23662%	(2,574)	34,790
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.74090%	(769)	19,850
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.01273%	(1,226)	22,000
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.78784%	(339)	8,050
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.9822%	(189)	3,480
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 0.324%	(42)	1,489
Interest Rate Swaps	Receive Variable 0-month SONIA, Pay Fixed 0.639%	(21)	1,003
Interest Rate Swaps	Receive Variable 6-month EONIA, Pay Fixed 0.318%	(5)	822
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.416%	(83)	4,400
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.40642%	(40)	2,200



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Derivative Instruments Highly Sensitive to Interest Changes (continued)

Investment Type	Reference Rate	Fair Value	Notional Value
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Fixed 1.4089%	(75)	4,100
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.40495%	(53)	2,900
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.4116%	(20)	1,100
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.49515%	(38)	1,600
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 1.357%	(91)	1,733
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.57819%	(179)	6,830
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.58372%	(36)	1,360
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.51277%	(77)	3,510
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.39860%	(104)	7,170
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.39371%	(51)	3,585
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.39480%	(51)	3,585
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.79200%	1	444
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Variable 6-month LIBOR	-	822
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Variable 6-month LIBOR	-	444
Interest Rate Swaps	Receive Fixed 6.72000%, Pay Variable 0-month MXIBT	3	271
Interest Rate Swaps	Receive Fixed 6.12000%, Pay Variable 0-month MXIBT	27	1,837
Interest Rate Swaps	Receive Fixed 5.11000%, Pay Variable 0-month MXIBT	(7)	1,873
Interest Rate Swaps	Receive Fixed 8.18000%, Pay Variable 3-month JIBAR	(11)	707
Interest Rate Swaps	Receive Fixed 5.79500%, Pay Variable 0-month MXIBT	(8)	789
Interest Rate Swaps	Receive Fixed 7.43000%, Pay Variable 3-month JIBAR	(5)	102
Interest Rate Swaps	Receive Fixed 7.44000%, Pay Variable 3-month JIBAR	(30)	608
Interest Rate Swaps	Receive Fixed 7.43000%, Pay Variable 3-month JIBAR	(12)	246
Interest Rate Swaps	Receive Fixed 4.63000%, Pay Variable 1-month TIE	(12)	2,266
Interest Rate Swaps	Receive Fixed 7.85500%, Pay Variable 3-month LIBOR	3	1,659
Interest Rate Swaps	Receive Fixed 9.33000%, Pay Variable 3-month JIBAR	21	300
Interest Rate Swaps	Receive Fixed 1.75500%, Pay Variable 3-month LIBOR	333	13,840
Interest Rate Swaps	Receive Fixed 9.33000%, Pay Variable 3-month ZIB	21	294
Interest Rate Swaps	Receive Fixed 1.58700%, Pay Variable 6-month EURIB	80	2,744
Interest Rate Swaps	Receive Fixed 1.47710%, Pay Variable 6-month LIBOR	18	388
Interest Rate Swaps	Receive Fixed 0.05000%, Pay Variable 12-month LIBOR	(8)	1,222
Interest Rate Swaps	Receive Fixed 0.45800%, Pay Variable 12-month LIBOR	(1)	3,033
Interest Rate Swaps	Receive Fixed 0.67800%, Pay Variable 6-month EURIB	-	822
<b>Subtotal - Interest Rate Swaps</b>		<b>\$(8,475)</b>	<b>\$241,266</b>
Total Return Swaps Equity	Receive MSCI World ex-US, Pay Variable 3-month LIBOR	\$(3,621)	\$(113,942)
Total Return Swaps Equity	Receive MSCI World ex-US, Pay Variable 3-month LIBOR	(3,211)	(110,687)
Total Return Swaps Equity	Receive MSCI World ex-US, Pay Variable 3-month LIBOR	(3,561)	(114,431)
<b>Subtotal - Total Return Swaps Equity</b>		<b>\$(10,393)</b>	<b>\$(339,060)</b>



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Foreign Currency Risk

At June 30, 2017 and 2016, the System is exposed to foreign currency risk on its investments in forward contracts and swaps denominated in foreign currencies as presented in the following tables:

As of June 30, 2017 Currency Name	Forward Contracts		Swaps	Total Exposure
	Net Receivables	Net Payables		
Australian Dollar	\$31	\$(141)	\$-	\$(110)
Brazilian Real	3	(20)	-	(17)
British Pound Sterling	-	(71)	-	(71)
Canadian Dollar	44	(224)	-	(180)
Chilean Peso	15	-	-	15
Colombian Peso	14	(2)	-	12
Czech Koruna	134	-	-	134
Danish Krone	-	(18)	-	(18)
Euro Currency	222	(1,159)	122	(815)
Hong Kong Dollar	4	-	-	4
Hungarian Forint	77	(1)	-	76
Indian Rupee	-	(2)	-	(2)
Indonesian Rupiah	-	(3)	-	(3)
Japanese Yen	128	(65)	-	63
Mexican Peso	71	(4)	-	67
New Israeli Shekel	42	(55)	-	(13)
New Taiwan Dollar	10	-	-	10
New Zealand Dollar	115	(126)	-	(11)
Norwegian Krone	23	(36)	-	(13)
Philippine Peso	2	(9)	-	(7)
Polish Zloty	70	(39)	-	31
Russian Ruble	4	(38)	-	(34)
Singapore Dollar	6	(12)	-	(6)
South African Rand	21	(45)	-	(24)
South Korean Won	9	-	-	9
Swedish Krona	68	(113)	-	(45)
Swiss Franc	10	(99)	-	(89)
Thailand Baht	-	(9)	-	(9)
Turkish Lira	13	-	-	13
Yuan Renminbi	7	(19)	-	(12)
<b>Total</b>	<b>\$1,143</b>	<b>\$(2,310)</b>	<b>\$122</b>	<b>\$(1,045)</b>



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

As of June 30, 2016	Forward Contracts		Swaps	Total Exposure
Currency Name	Net Receivables	Net Payables		
Australian Dollar	\$43	\$(51)	\$-	\$(8)
British Pound Sterling	(996)	708	(2)	(290)
Canadian Dollar	(119)	12	-	(107)
Colombian Peso	-	(19)	-	(19)
Czech Koruna	(62)	-	-	(62)
Danish Krone	(4)	-	-	(4)
Euro Currency	(3)	152	(159)	(10)
Hungarian Forint	-	10	-	10
Indian Rupee	(4)	(2)	-	(6)
Japanese Yen	373	(174)	1,817	2,016
Malaysian Ringgit	3	-	-	3
Mexican Peso	(52)	10	2	(40)
New Israeli Shekel	(2)	-	-	(2)
New Taiwan Dollar	(2)	(9)	-	(11)
New Zealand Dollar	243	(210)	-	33
Norwegian Krone	(148)	23	-	(125)
Philippine Peso	-	2	-	2
Polish Zloty	(24)	12	-	(12)
Russian Ruble	30	(24)	-	6
Singapore Dollar	15	(31)	-	(16)
South African Rand	-	(31)	(14)	(45)
Swedish Krona	(177)	49	-	(128)
Swiss Franc	-	28	-	28
Turkish Lira	20	-	-	20
Yuan Renminbi	(3)	13	-	10
<b>Total</b>	<b>\$(869)</b>	<b>\$468</b>	<b>\$1,644</b>	<b>\$1,243</b>

The System has investments in futures contracts. As indicated on the preceding pages, futures variation margin accounts are settled each trading day and recognized as realized gains/(losses) as they are incurred. As a result, the foreign futures contracts have no fair value at June 30, 2017 and 2016.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### NOTE 4 – PENSION LIABILITY AND SIGNIFICANT ASSUMPTIONS

The employers' net pension liabilities (i.e. the total pension liability determined in accordance with GASB Statement No. 67 less the System's fiduciary net position) as of June 30, 2017 and 2016, are shown below:

Year Ending June 30	(1) Total Pension Liability	(2) Fiduciary Net Position	(3) Net Pension Liability (1) - (2)	(4) Fiduciary Net Position as a % of Total Pension Liability (2)/(1)
<b>2017</b>	<b>\$10,680,998</b>	<b>\$8,584,225</b>	<b>\$2,096,773</b>	<b>80.4%</b>
2016	9,436,090	7,680,865	1,755,225	81.4%

The actuarial valuation of the System involves estimates of the amounts reported and assumptions about the probability of occurrence of events far into the future. Some examples include future salary increases and future employee mortality. The net pension liability is subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. Triennially, the System requests that its actuary, Segal Consulting, perform an analysis of the appropriateness of all economic and non-economic assumptions. The most recent triennial analysis was performed as of June 30, 2016, and as a result of that analysis, the Board of Retirement approved certain changes to the actuarial assumptions, which were incorporated in the actuarial valuation as of June 30, 2017. The actuarial assumptions used for June 30, 2016 actuarial valuation were based on the June 30, 2013 triennial analysis.

#### Disclosure of Information about Actuarial Methods and Assumptions

The required Schedule of Changes in Net Pension Liability and Related Ratios immediately following the Notes to the Financial Statements presents multi-year trend information about whether the employers' net pension liability is increasing or decreasing over time.

The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations.





Actuarial Methods and Assumptions:

The following significant actuarial assumptions were used to measure the total pension liabilities as of June 30, 2017:

Discount Rate:	7.00%
Inflation rate:	3.00%
Real across-the-board salary increase:	0.25%
Miscellaneous projected salary increases*:	4.50% to 8.25%
Safety projected salary increases*:	5.25% to 10.75%

Assumed post-retirement benefit increase:	Miscellaneous Tier 1	3.00%
	Miscellaneous Tier 2	0.00%
	Miscellaneous Tier 3	2.00%
	Miscellaneous Tier 4	2.00%
	Miscellaneous Tier 5	2.00%
	Safety Tier 1	3.00%
	Safety Tier 2	2.00%
	Safety Tier 3	2.00%
	Safety Tier 4	2.00%

Post-Retirement Mortality:

a) Service

For Miscellaneous Members and Beneficiaries -  
Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set forward one year for males and no age adjustment for females.

For Safety Members -  
Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set back four years for males and females.

b) Disability

For Miscellaneous Members -  
Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set forward seven years for males and set forward eight years for females.

For Safety Members -  
Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set forward four years for males and females.

c) Employee Contribution Rate

For Miscellaneous Members -  
Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP-2016 set forward one year for males and no age adjustment for females, weighted 40% male and 60% female.

For Safety Members -  
Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set back four years for males and females, weighted 75% male and 25% female.

Pre-Retirement Mortality:

Based upon the June 30, 2016 Actuarial Experience Study

Other Assumptions:

Analysis of actuarial experience study for the period  
July 1, 2013 through June 30, 2016

\*Includes inflation at 3.00% plus real across-the-board salary increase of 0.25% plus merit and longevity increases.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Actuarial Methods and Assumptions:

The following significant actuarial assumptions were used to measure the total pension liabilities as of June 30, 2016:

Discount Rate:	7.50%																		
Inflation rate:	3.25%																		
Real across-the-board salary increase:	0.25%																		
Miscellaneous projected salary increases*:	4.50% to 8.50%																		
Safety projected salary increases*:	5.25% to 11.50%																		
Assumed post-retirement benefit increase:	<table> <tr> <td>Miscellaneous Tier 1</td> <td>3.25%</td> </tr> <tr> <td>Miscellaneous Tier 2</td> <td>0.00%</td> </tr> <tr> <td>Miscellaneous Tier 3</td> <td>2.00%</td> </tr> <tr> <td>Miscellaneous Tier 4</td> <td>2.00%</td> </tr> <tr> <td>Miscellaneous Tier 5</td> <td>2.00%</td> </tr> <tr> <td>Safety Tier 1</td> <td>3.25%</td> </tr> <tr> <td>Safety Tier 2</td> <td>2.00%</td> </tr> <tr> <td>Safety Tier 3</td> <td>2.00%</td> </tr> <tr> <td>Safety Tier 4</td> <td>2.00%</td> </tr> </table>	Miscellaneous Tier 1	3.25%	Miscellaneous Tier 2	0.00%	Miscellaneous Tier 3	2.00%	Miscellaneous Tier 4	2.00%	Miscellaneous Tier 5	2.00%	Safety Tier 1	3.25%	Safety Tier 2	2.00%	Safety Tier 3	2.00%	Safety Tier 4	2.00%
Miscellaneous Tier 1	3.25%																		
Miscellaneous Tier 2	0.00%																		
Miscellaneous Tier 3	2.00%																		
Miscellaneous Tier 4	2.00%																		
Miscellaneous Tier 5	2.00%																		
Safety Tier 1	3.25%																		
Safety Tier 2	2.00%																		
Safety Tier 3	2.00%																		
Safety Tier 4	2.00%																		
Post-Retirement Mortality:																			
a) Service	<p>For Miscellaneous Members and Beneficiaries - RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022</p> <p>For Safety Members - RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 set back one year for males and set forward two years for females</p>																		
b) Disability	<p>For Miscellaneous Members - RP-2000 Disabled Retiree Mortality Table projected with Scale BB to 2022 with no age adjustment for males and set forward three years for females</p> <p>For Safety Members - RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 set forward two years</p>																		
c) Employee Contribution Rate	<p>For Miscellaneous Members - RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 weighted 40% male and 60% female</p> <p>For Safety Members - RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 set back one year for males and set forward two years for females, weighted 70% male and 30% female</p>																		
Pre-Retirement Mortality:	Based upon the June 30, 2013 Actuarial Experience Study																		
Other Assumptions:	Analysis of actuarial experience study for the period July 1, 2010 through June 30, 2013																		

\*Includes inflation at 3.25% plus real across-the-board salary increase of 0.25% plus merit and longevity increases.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Assumed Asset Allocation

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and projected arithmetic real rates of return for each major asset class, used in the derivation of the long-term expected investment rate of return assumption, as of June 30, 2017 and 2016 are summarized in the table below:

As of June 30, 2017			
Asset Class	Target Allocation	Real Rate of Return	Long-Term Expected Portfolio Rate of Return
U.S. large cap equity	17.0%	3.80%	5.61%
U.S. small cap equity	4.0	4.90	6.37
International developed equity	16.0	9.20	6.96
Emerging markets equity	4.0	9.70	9.28
High yield bonds	1.0	3.10	3.65
Bank loans	1.0	3.00	2.96
Growth oriented absolute return	3.0	4.97	4.97
Private equity	9.0	8.70	8.70
Private credit/private debt	4.0	5.10	5.10
Core/core plus bonds	10.0	1.40	1.06
Global bonds	3.0	0.20	0.07
U.S. treasury	5.0	0.60	0.16
Diversifying absolute return	7.0	3.04	3.04
Real estate	7.0	3.00	4.37
Real assets	7.0	7.74	7.74
Commodities	2.0	3.40	3.76
<b>Total portfolio</b>	<b>100.0%</b>	<b>5.11%</b>	<b>5.15%</b>
Inflation			3.00
Investment expense adjustment			(0.65)
Risk adjustment			(0.50)
<b>Total long-term expected rate of return</b>			<b>7.00%</b>

As of June 30, 2016			
Asset Class	Target Allocation	Real Rate of Return	Long-Term Expected Portfolio Rate of Return
Domestic equities	22.5%	6.83%	5.98%
International equities	22.5	8.38	7.23
Fixed income	20.0	1.24	1.25
Absolute return	10.0	3.20	3.20
Private equity	10.0	12.82	12.82
Real assets	15.0	6.17	5.64
Opportunities	0.0	0.00	0.00
<b>Total portfolio</b>	<b>100.0%</b>	<b>6.19%</b>	<b>5.67%</b>
Inflation			3.25
Investment expense adjustment			(0.40)
Risk adjustment			(1.02)
<b>Total long-term expected rate of return</b>			<b>7.50%</b>

## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The discount rates used to measure the total pension liability were 7.00% and 7.50% as of June 30, 2017 and 2016, respectively. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made based on the current contribution rate and that employer contributions will be made at the end of each pay period based on the actuarially determined contribution rates. For this purpose, only the employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service cost for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included.

Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments for 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.

In accordance with GASB Statement No. 67 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the table below presents the employers' net pension liabilities as of June 30, 2017 and 2016, calculated using the discount rate, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1.00% lower or 1.00% higher than the current rate.

	1% Decrease (6.0%)	Current Discount Rate (7.0%)	1% Increase (8.0%)
<b>Net pension liability as of June 30, 2017</b>	<b>\$3,611,235</b>	<b>\$2,096,773</b>	<b>\$860,712</b>
	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Net pension liability as of June 30, 2016	\$2,983,885	\$1,755,225	\$737,575

### NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

Contributions to the plan are made pursuant to Section 31584 of the County Employees Retirement Law of 1937. The System's funding policy provides for periodic contributions at actuarially-determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate adequate assets to pay benefits when due. Members of the System are required to contribute, and such contributions range from 2.30% to 21.86% of annual covered salary for fiscal year 2016-2017 and from 2.30% to 21.78% of annual covered salary for fiscal year 2015-2016 depending on the member's tier, employer, and bargaining unit. Each employer of the System is obligated by state law to make all required contributions to the plan and depending on the participating employer and their employees' tiers, such contribution rates range from 13.18% to 41.93% of covered payroll for fiscal year 2016-2017 and from 14.87% to 43.65% of covered payroll for fiscal year 2015-2016. The required contributions include current service cost and amortization of any unfunded prior service cost as of June 30, 2012 over a period of 23 years from June 30, 2012, amortization of any unfunded service costs resulting in actuarial gains or losses and amortization of any unfunded service costs resulting from changes in actuarial assumptions and methods over a 20-year period, amortization of any unfunded service costs resulting from plan amendments over a 15 year period and amortization of any unfunded service costs resulting from retirement incentive programs over a period of up to 5 years.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

Employer contribution rates are determined using the entry age normal cost method based on a level percentage of payroll. The System also uses this actuarial method to amortize the unfunded liability, if applicable. Contributions for the years ended June 30, 2017 and 2016 totaled \$293,417 and \$286,514, respectively. Included in this total are employer contributions of \$203,928 and \$209,020 in fiscal years 2016-2017 and 2015-2016, respectively, of which \$184,608 and \$190,936 were made by the County of Sacramento. Member contributions were \$89,489 and \$77,494 in fiscal years 2016-2017 and 2015-2016, respectively. All contributions were made in accordance with actuarially-determined contribution requirements based on the actuarial valuations performed as of June 30, 2015 and 2014, respectively.

### **NOTE 6 – RESERVES**

Member and employer contributions are allocated to various legally required reserve accounts based on actuarial determinations. Descriptions of the purpose for the reserve and designated accounts are provided below.

**Employee reserves** represent the balance of member contributions. Additions include member contributions and interest earnings. Deductions include refunds of member contributions and transfers to retiree reserves.

**Employer reserves** represent the balance of employer contributions for future retirement payments to current active members. Additions include contributions from the employer and interest earnings. Deductions include transfers to retiree reserves, lump sum death benefits, and payments under California Government Code Sections 31725.5 and 31725.6 related to alternative employment for members otherwise entitled to disability retirement benefits.

**Retiree reserves** represent the balance of transfers from employee reserves, employer reserves, and interest earnings, less payments to retired members.

**Retiree death benefit reserves** represent the balance of funds for lump sum death benefits for retirees. Additions include interest earnings and, if necessary, employer contributions. Deductions include payments to beneficiaries of retired members who are deceased.

**Contingency reserve** was created to serve as a reserve against deficiencies in future earnings and unexpected expenses.

Investment gains and losses are recognized (smoothed) over a seven-year period. **Total allocated reserves and designations** represents the smoothed actuarial value of assets (the fair value of assets less the unrecognized/deferred gains and losses) and is the sum of the preceding reserves. As of June 30, 2017 and 2016, total allocated reserves were \$8,665,226 and \$8,236,402, respectively.

**Market stabilization reserve** represents the unrecognized/deferred gains and losses and is the difference between the smoothed actuarial value of assets and the net position restricted for pension benefits at fair value.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

A summary of the various reserve accounts, which comprise net position restricted for pension benefits at June 30, 2017 and 2016, is as follows:

### NET POSITION RESTRICTED FOR PENSION BENEFITS AT FAIR VALUE

As of June 30

	2017	2016
Employee reserves	\$796,937	\$758,438
Employer reserves	2,800,542	2,722,084
Retiree reserves	5,004,343	4,658,694
Retiree death benefit reserves	16,552	16,047
Contingency reserve	46,852	81,139
Total allocated reserves and designations	8,665,226	8,236,402
Market stabilization reserve	(81,001)	(555,537)
Net position restricted for pension benefits, at fair value	<u>\$8,584,225</u>	<u>\$7,680,865</u>

### NOTE 7 - PLAN TERMINATION

SCERS is administered in accordance with the provisions of the County Employees Retirement Law (CERL) found in the California Government Code at Section 31450 et seq. Once adopted by the governing body of a county, there are no provisions in the CERL which permit the governing body of the county to terminate the plan. Section 31564 permits the governing body of a district to withdraw its employees if certain prerequisites are met. The governing body of a county or district can adopt optional provisions within the CERL via ordinance or resolution. Once adopted, Section 31483 permits the governing body of a county or district to terminate the applicability of the optional provisions after a future date as specified in a subsequent ordinance or resolution.

### NOTE 8 - RETIREE MEDICAL AND DENTAL INSURANCE PROGRAM

#### Plan Description

The Sacramento County Retiree Medical and Dental Insurance Program (the Program) is a multiple-employer medical and dental plan, which is sponsored and administered by the County of Sacramento and financed by three participating employers. SCERS' role in regard to the Program is limited to maintaining data provided by the administrator, collecting monies from the eleven participating employers and remitting premium payments. The activities of the Program are accounted for in the agency fund. SCERS does not provide any funding for the Program.

Below is the list of employers participating in the Program as of June 30, 2017:

- County of Sacramento
- Sacramento Metropolitan Fire District
- Sacramento Employment and Training Agency

The Program provides medical and/or dental subsidy/offset payments to eligible retirees. The Sacramento County Board of Supervisors, at its own discretion, sets the amount of subsidy/offset payment available to eligible County retirees on a year-to-year basis. The medical subsidy amounts for special districts' retirees are varied and are established by each of the member districts. As of June 30, 2017, there were 273 annuitants receiving medical subsidy and 268 annuitants receiving dental subsidy. As of June 30, 2016, there were 246 annuitants receiving medical subsidy and 237 annuitants receiving dental subsidy.



## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### Eligibility

County annuitants who retired after May 31, 2007 - According to the Program's Administrative Policy, only County annuitants from bargaining units 003, who retired after May 31, 2007, may be eligible for a premium subsidy/offset depending on the annuitant's credited service hours and type of retirement. For calendar years 2017 and 2016, the monthly dental subsidy is \$25, and the monthly medical subsidy amounts range from \$122 to \$244 depending on the annuitant's credited service hours.

Special Districts' annuitants - The medical subsidy amounts for special districts' annuitants are varied and are established by each of the member districts.

There are no vested benefits associated with the Program. The Program does not create any contractual, regulatory, or other vested entitlement to present or future retirees, their spouses, or dependents for medical and/or dental benefits, or subsidy/offset payments at any particular level, or at all. Sacramento County and other participating employers may, in their sole discretion, amend or terminate, in whole or in part, the Program by Resolution of the Board of Supervisors.

### Contributions and Reserves

The System does not have any authority to establish or amend the obligations of the plan members and employers to contribute to the Program. SCERS does not determine the contribution rate or collect the required contributions from employers. SCERS' role in regards to the Program is limited to collecting monies from Sacramento County and paying the premiums when due. Monies received by the System in excess of liabilities to pay premiums are recognized as liabilities payable to the County. There are no net position or legally required reserve accounts for the Program.

In accordance with GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, each participating employer is required to disclose the Program information with regard to funding policy, the employer's annual Other Postemployment Benefits cost and contributions made, the funded status and funding progress, and actuarial methods and assumptions used.

### Request for Information

Requests for additional financial information regarding the Program may be addressed to:

County of Sacramento, Department of Finance  
Auditor-Controller Division  
700 H Street, Room 3650  
Sacramento, CA 95814

## NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

### NOTE 9 – MORTGAGES PAYABLE

The System has real estate investments secured by long-term mortgage obligations which are not recourse loans against the System's assets. Activities related to such mortgages were as follows for the years ended June 30:

	2017	2016
Beginning Balance	\$63,500	\$111,350
Additions	-	-
Deductions	-	(47,850)
Ending Balance	<u>\$63,500</u>	<u>\$63,500</u>

Future debt service requirements for outstanding mortgages are as follows:

Year Ending	Interest	Principal	Total
June 30			
2018	\$2,293	\$-	\$2,293
2019	1,746	13,500	15,246
2020	1,747	-	1,747
2021	930	39,000	39,930
2022	289	11,000	11,289
Total	<u>\$7,005</u>	<u>\$63,500</u>	<u>\$70,505</u>

### NOTE 10 – LEASE OBLIGATIONS

SCERS has commitments under operating lease agreements for office facilities and equipment. Minimum future rental payments as of June 30, 2017 were as follows:

Year Ending June 30:

2018	\$588
2019	596
2020	600
2021	505
Total	<u>\$2,289</u>

Rental costs during the years ended June 30, 2017 and 2016 were \$590 and \$593, respectively.

### NOTE 11 – SUBSEQUENT EVENTS

The potential for subsequent events were evaluated from the year-end report date of June 30, 2017 through December 7, 2017, which is the date the financial statements were available to be issued. Management did not identify any subsequent events that would require disclosure.





**NOTE 12 – FUTURE ACCOUNTING PRONOUNCEMENTS**

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*, which establishes criteria for identifying and reporting fiduciary activities of all state and local governments. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2018.

In June 2017, GASB issued Statement No. 87, *Leases*, which establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. This statement improves accounting and financial reporting for leases by governments by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2019.



# REQUIRED SUPPLEMENTARY INFORMATION

## SCHEDULE 1: SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

For the Fiscal Years Ended June 30  
(Dollar Amounts Expressed In Thousands)

	2017	2016	2015	2014	2013
<b>Total pension liability*</b>					
Service cost	<b>\$193,490</b>	\$186,438	\$185,428	\$192,701	\$187,329
Interest	<b>706,016</b>	675,920	643,427	617,240	589,783
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	<b>(46,244)</b>	(49,245)	(6,447)	(108,155)	(80,788)
Changes of assumptions	<b>823,712</b>	-	-	15,781	-
Benefit payments, including refunds of employee contributions	<b>(432,066)</b>	(405,702)	(374,657)	(347,619)	(323,567)
<b>Net change in total pension liability</b>	<b>1,244,908</b>	407,411	447,751	369,948	372,757
<b>Total pension liability - beginning</b>	<b>9,436,090</b>	9,028,679	8,580,928	8,210,980	7,838,223
<b>Total pension liability - ending (a)</b>	<b>\$10,680,998</b>	\$9,436,090	\$9,028,679	\$8,580,928	\$8,210,980
<b>Plan fiduciary net position</b>					
Contributions - employee	<b>\$89,489</b>	\$77,494	\$68,143	\$57,635	\$68,242
Contributions - employer	<b>201,928</b>	207,884	221,823	209,367	188,529
Contributions - withdrawn employer	<b>2,000</b>	1,136	1,136	1,136	1,135
Net investment income/(loss)	<b>1,048,915</b>	(72,399)	158,222	1,107,152	785,449
Benefit payments	<b>(429,754)</b>	(403,356)	(372,369)	(344,890)	(320,828)
Refunds of contributions	<b>(2,312)</b>	(2,346)	(2,288)	(2,729)	(2,739)
Administrative expenses	<b>(6,906)</b>	(6,362)	(5,854)	(5,665)	(5,719)
<b>Net change in plan fiduciary net position</b>	<b>903,360</b>	(197,949)	68,813	1,022,006	714,069
<b>Plan fiduciary net position - beginning</b>	<b>7,680,865</b>	7,878,814	7,810,001	6,787,995	6,073,926
<b>Plan fiduciary net position - ending (b)</b>	<b>\$8,584,225</b>	\$7,680,865	\$7,878,814	\$7,810,001	\$6,787,995
<b>Net pension liability - ending (a-b)</b>	<b>\$2,096,773</b>	\$1,755,225	\$1,149,865	\$770,927	\$1,422,985
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>80.4%</b>	81.4%	87.3%	91.0%	82.7%
<b>Covered payroll</b>	<b>\$958,934</b>	\$912,421	\$873,328	\$858,343	\$858,551
<b>Net pension liability as a percentage of covered payroll</b>	<b>218.7%</b>	192.4%	131.7%	89.8%	165.7%

\* The pension liability is not available for years prior to June 30, 2013. Information will be presented in future years as it becomes available.



## SCHEDULE 2: SCHEDULE OF EMPLOYER CONTRIBUTIONS

For the Last Ten Fiscal Years Ended June 30

(Dollar Amounts Expressed In Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined contribution (ADC)	<b>\$201,928</b>	\$207,884	\$221,823	\$209,367	\$188,529	\$179,099	\$182,921	\$167,142	\$177,011	\$167,055
Contributions in relation to the ADC	<b>201,928</b>	207,884	221,823	209,367	188,529	179,099	182,921	167,142	177,011	167,055
Contribution deficiency (excess)	<b>\$-</b>	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Covered payroll*	<b>\$958,934</b>	\$912,421	\$873,328	\$858,343	\$858,551	\$835,737	\$818,804	\$872,804	\$923,375	\$851,016
Contributions in relation to the ADC as a percentage of covered payroll	<b>21.1%</b>	22.8%	25.4%	24.4%	22.0%	21.4%	22.3%	19.2%	19.2%	19.6%

\*Payroll for the years ending 2008 through 2012 are calculated by dividing the contribution dollar amount by the aggregated contribution rate.

## SCHEDULE 3: SCHEDULE OF ANNUAL MONEY-WEIGHTED RATE OF RETURN

For the Fiscal Years Ended June 30

	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expenses*	<b>13.60%</b>	(0.97%)	2.01%	16.18%

\* Information prior to June 30, 2014 is not available.



## REQUIRED SUPPLEMENTARY INFORMATION (CONTINUED)

The schedules presented in the Required Supplementary Information provide information to help promote an understanding of the employers' net pension liability over time on a market value of assets basis. The Schedule of Changes in Net Pension Liability and Related Ratios includes historical trend information about the System's total pension liability and the progress made in accumulating sufficient assets to pay benefits when due.

The Schedule of Employer Contributions presents historical trend information about the actuarially determined contribution and the actual contributions made. The Schedule of Annual Money-Weighted Rate of Return presents investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested.

### CHANGE OF ASSUMPTIONS

Triennially, the System requests that its actuary perform an analysis of the appropriateness of all economic and non-economic assumptions. The most recent triennial analysis was performed as of June 30, 2016. As a result of that analysis, the Board of Retirement approved the following changes to the actuarial assumptions, which were first incorporated in the June 30, 2017 valuation:

- The inflation rate was reduced from 3.25% to 3.0% to reflect the gradual decline of average inflation rates over the last several years.
- The investment rate of return was reduced from 7.50% to 7.00% to reflect the projected real rate of return for the next 10-15 years based on SCERS' asset allocation model and risk tolerance.
- The salary increase assumption was adjusted slightly to reflect past experience.
- The retirement rates were adjusted to be more in line with the experience.
- The mortality rates were adjusted and a generational approach was used to reflect a slight mortality improvement.
- Termination rates were adjusted to reflect lower incidence of termination, with a lower proportion electing to receive a deferred vested benefit.
- The disability rates were adjusted to reflect slightly lower incident of disability for Miscellaneous and Safety members.
- An assumption was introduced for new Miscellaneous disabled retirees to anticipate conversions of unused sick leave at retirement.
- The June 30, 2017 actuarial valuation establishes the funding requirements for FY 2018-2019 and analyzes the FY 2016-2017 experience. As a result, while the total pension liability and future funding requirements are measured using these assumption changes, FY 2016-2017 experience (i.e., differences between expected and actuarial experience) were based on assumptions used in the June 30, 2016 valuation.



**METHODS AND ASSUMPTIONS USED TO ESTABLISH ACTUARIALLY DETERMINED CONTRIBUTION RATES**

The following actuarial methods and assumptions were used to determine contribution rates reported in the Schedule of Employer Contributions:

Valuation date:	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported.																		
Actuarial cost method:	Entry Age Cost Method																		
Amortization method:	Level percent of payroll (3.50% payroll growth assumed)																		
Remaining amortization period:	Effective with the June 30, 2013 valuation, the System's remaining outstanding balance of the June 30, 2012 UAAL is being amortized over a declining 23-year period (20 years as of June 30, 2015). The UAAL established as a result of the Early Retirement Incentive Program for LEMA members is amortized over a 10-year period beginning June 30, 2010. The change in UAAL that arises due to actuarial gains or losses or from changes in actuarial assumptions or methods at each valuation is amortized over its own declining 20-year period. Any change in UAAL that arises due to plan amendments will be amortized over its own declining 15-year period and any change in UAAL due to retirement incentive programs will be amortized over its own declining period of up to 5 years.																		
Asset valuation method:	The market value of assets less unrecognized returns in each of the last six years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a rolling seven-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a six-year period starting July 1, 2013.																		
Actuarial assumptions:																			
Investment rate of return:	7.50%, net of pension plan investment expense, including inflation																		
Inflation rate:	3.25%																		
Projected salary increases:	4.50% - 11.50% varying by service, including inflation																		
Assumed post-retirement benefit increase:	<table border="0"> <tr> <td>Miscellaneous Tier 1</td> <td>3.25%</td> </tr> <tr> <td>Miscellaneous Tier 2</td> <td>0.00%</td> </tr> <tr> <td>Miscellaneous Tier 3</td> <td>2.00%</td> </tr> <tr> <td>Miscellaneous Tier 4</td> <td>2.00%</td> </tr> <tr> <td>Miscellaneous Tier 5</td> <td>2.00%</td> </tr> <tr> <td>Safety Tier 1</td> <td>3.25%</td> </tr> <tr> <td>Safety Tier 2</td> <td>2.00%</td> </tr> <tr> <td>Safety Tier 3</td> <td>2.00%</td> </tr> <tr> <td>Safety Tier 4</td> <td>2.00%</td> </tr> </table>	Miscellaneous Tier 1	3.25%	Miscellaneous Tier 2	0.00%	Miscellaneous Tier 3	2.00%	Miscellaneous Tier 4	2.00%	Miscellaneous Tier 5	2.00%	Safety Tier 1	3.25%	Safety Tier 2	2.00%	Safety Tier 3	2.00%	Safety Tier 4	2.00%
Miscellaneous Tier 1	3.25%																		
Miscellaneous Tier 2	0.00%																		
Miscellaneous Tier 3	2.00%																		
Miscellaneous Tier 4	2.00%																		
Miscellaneous Tier 5	2.00%																		
Safety Tier 1	3.25%																		
Safety Tier 2	2.00%																		
Safety Tier 3	2.00%																		
Safety Tier 4	2.00%																		
Other assumptions:	Same as those used in June 30, 2015 funding actuarial valuation.																		
Other information:	All members with membership dates on or after January 1, 2013 enter the new tiers created by the California Public Employees' Pension Reform Act of 2013 (PEPRA).																		

## REQUIRED SUPPLEMENTARY INFORMATION (CONTINUED)

### Changes in Methods and Assumptions Used

Valuation date as  
of June 30:

- |      |   |
|------|---|
| 2006 | <ul style="list-style-type: none"><li>Employee contribution crediting rate is equal to 5-year Treasury rate, assuming sufficient net earnings.</li></ul>  |
| 2007 | <ul style="list-style-type: none"><li>Investment return assumption increased from 7.75% to 7.875%.</li><li>Salary increase assumption increased from 5.45% to 5.65%.</li></ul>  |
| 2010 | <ul style="list-style-type: none"><li>Investment return assumption decreased from 7.875% to 7.75%.</li></ul>  |
| 2011 | <ul style="list-style-type: none"><li>Modification in non-economic assumptions.</li></ul>   |
| 2012 | <ul style="list-style-type: none"><li>Investment return assumption decreased from 7.75% to 7.50%;</li><li>Inflation assumption decreased from 3.50% to 3.25%;</li><li>Salary increase assumption decreased from 5.65% to 5.40%;</li><li>Cost-of-living adjustment increase assumption for Tier 1 decrease from 3.40% to 3.25%.</li></ul>  |
| 2013 | <ul style="list-style-type: none"><li>Actuarial cost method changed from Aggregate Entry Age Normal Cost Method to Individual Entry Age Normal Cost Method.</li><li>Changes to the amortization periods used for various future changes in liability:<ul style="list-style-type: none"><li>UAAL established as a result of Early Retirement Incentive Program for Sacramento County Law Enforcement Managers Association (LEMA) is amortized over a 10-year period beginning June 30, 2010;</li><li>UAAL as a result of actuarial gains or losses as of June 30 will be amortized over a 20-year period;</li><li>UAAL as a result of changes in actuarial assumptions or methods to be amortized over a 20-year period;</li><li>Change in UAAL as a result of plan amendments to be amortized over a 15-year period;</li><li>UAAL as a result from retirement incentive programs will be amortized over a period up to 5 years.</li></ul></li></ul> |
| 2014 | <ul style="list-style-type: none"><li>The retirement rates were adjusted to reflect slightly later retirements.</li><li>The mortality rates were adjusted to reflect a slight mortality improvement.</li><li>Termination rates were adjusted to reflect lower incidence of termination, with a higher proportion electing to receive a deferred vested benefit.</li><li>Years of service instead of age was used in determining and applying the merit and promotional rates of salary increase.</li></ul>  |



# OTHER SUPPLEMENTAL INFORMATION

FOR THE FISCAL YEARS ENDED JUNE 30  
(Dollar Amounts Expressed in Thousands)

## Schedule I - Schedule of Administrative Expenses:

Type of expense:	2017	2016
Salaries and benefits	\$3,984	\$3,506
Professional fees	1,149	1,081
Rent and lease expense	488	501
Depreciation expense	27	34
Equipment purchases and maintenance	61	26
Other administrative expenses	1,197	1,214
Total administrative expenses	<b>\$6,906</b>	<b>\$6,362</b>

## Schedule II - Schedule of Investment Fees and Expenses:

Type of investment expense:	2017	2016
Domestic equity managers	\$5,793	\$6,006
International equity managers	7,465	6,788
Absolute return managers	14,459	9,255
Private equity managers	23,423	10,783
Fixed income managers	3,854	3,613
Real asset managers	19,138	13,819
Opportunity portfolio managers	4,598	4,122
Strategic cash overlay managers	470	596
Custodian fees	485	476
Investment consulting fees	975	972
Other investment expenses and fees	3,249	2,948
Total investment fees and expenses	<b>\$83,909</b>	<b>\$59,378</b>

## Schedule III - Schedule of Payments to Consultants:

Type of service:	2017	2016
Legal services	\$1,338	\$1,543
Medical consulting services	415	500
Actuarial services	193	179
Information technology services	157	152
Audit and consulting services	87	89
Total payments to consultants	<b>\$2,190</b>	<b>\$2,463</b>



# STATEMENTS OF CHANGES IN ASSETS AND LIABILITIES

## AGENCY FUND

FOR THE FISCAL YEARS ENDED JUNE 30, 2017 AND 2016

(Dollar Amounts Expressed in Thousands)

	2017	2016
<b>Assets</b>		
Beginning accounts receivable balance	\$47	\$31
Additions	27,891	26,545
Deductions	(27,910)	(26,529)
Ending accounts receivable balance	<u>\$28</u>	<u>\$47</u>
<b>Liabilities</b>		
Beginning accounts payable balance	\$47	\$31
Additions	27,891	26,545
Deductions	(27,910)	(26,529)
Ending accounts payable balance	<u>\$28</u>	<u>\$47</u>





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**INVESTMENT**

# CHIEF INVESTMENT OFFICER'S REPORT

## Introduction

For the fiscal year ended June 30, 2017, the Sacramento County Employees' Retirement System (SCERS or the System) generated a robust 13.7% gross return, benefitting from strong returns across most market segments. This was a welcome change after near flat performance over the past two fiscal years. Despite valuation concerns across many market segments, asset prices marched higher during the fiscal year, with the strongest returns coming from the public equity asset classes. While there were short-lived spikes in volatility, markets were generally calm for most of the year.

SCERS' gross return of 13.7% was also impressive on a relative basis, exceeding its policy index return of 11.7%, by 2%. Contributors to the generation of excess returns relative to SCERS' policy index were the Domestic and International Equity, Fixed Income, Absolute Return, Real Assets and Opportunities asset classes. Assets under management ended the current fiscal year at \$8.6 billion, which is a historical peak level for SCERS, and well ahead of the prior fiscal year's assets of \$7.7 billion.

SCERS' general investment consultant, Verus Advisory (Verus), prepared the investment returns cited in this transmittal using information it receives from SCERS' custodian bank and investment managers.

## Market Overview

Global financial markets generated strong returns during the 2016-2017 fiscal year, with global equities leading the way. Credit markets also performed well, while the broader bond markets including Treasuries generated slightly negative returns. The year was marked generally by market tranquility, with implied volatility residing near historical lows throughout; though there were several short-lived surges in volatility mixed in. These surges were mostly sparked by political elections, particularly the 'Brexit' vote early in the fiscal year, the election of President Trump late in calendar year 2016, and the potential for an increasing focus on 'populist politics' going forward. However, the election of Emmanuel Macron in the French presidential election early in 2017 went against this trend, and markets were calm for most of the second half of the fiscal year.

Benchmark returns across SCERS' asset and sub asset classes were as follows: Domestic equity markets (Russell 3000 Index) returned 18.5%; International developed equity markets (MSCI EAFE Index) returned 20.8%; Emerging equity markets (MSCI Emerging Markets Index) returned 23.2%; Fixed income markets (SCERS custom benchmark) returned 0.4%; Real estate markets (NFI-ODCE Index) returned 7.9%; Absolute return markets (HFRI Fund of Funds Composite Index) returned 6.4%; and Commodities markets (Bloomberg Commodity Index) returned (6.5%).

Within equities during the year, there were fewer divergences compared to prior years, with all segments and markets delivering double digit returns. Within the U.S., small capitalization stocks at 24.6% outperformed large capitalization stocks at 18.0%, and growth stocks at 20.4% outperformed value stocks at 15.5%, driven by strong performance within the information technology sector. Value stock returns were driven by the financial sector on news that most major U.S. banks passed Federal Reserve stress tests late in the year. International equity stocks delivered robust returns of 20.3% during the year, benefitting from strong growth and reasonable valuation levels. International stocks are trading at lower valuation multiples than U.S. stocks, so if earnings growth persists, most market participants are forecasting that international stocks will outperform U.S. stocks going forward. The international equity markets also benefited from a weakening U.S. dollar against other major currencies, as unhedged international equities outperformed hedged international equities. Emerging market equities also benefitted from these same international equity themes, delivering very strong returns of 23.7%, especially during the first and second quarters of calendar year 2017. Coming off of lower valuations, emerging market corporate earnings have improved, and forecasted earnings have increased materially, particularly compared to developed markets.

Fixed income markets were generally weak during the fiscal year, with Treasuries generating negative returns of 2.3% due to moderately rising interest rates, while high yield credit generated strong returns at



12.7%. The broad based Bloomberg Barclays Aggregate index, which contains an equal mix of Treasuries, agency mortgages and investment grade credit, was for the most part flat at (0.3%) during the year.

Commodities struggled during the year, returning (6.5%), fueled by range bound but volatile energy prices. The nine years since the global financial crisis (GFC) has been marked by aggressive and coordinated global monetary policy easing measures, which has translated to strong market returns, and positive growth rates across the globe. The U.S. economy is growing at 2.1%, with inflation hovering around 1.6%, and unemployment at 4.4%. Europe and Japan are demonstrating more muted but positive growth trends, while China is growing at 6.9%. Developed market inflation levels sit within a normal range, though slightly below central bank targets. These trends translated to a more hawkish stance from central bank policy makers compared to prior years. Within the U.S., the Federal Reserve (Fed) moderately accelerated interest rate increases during the fiscal year, with several 25 basis point increases, and ended the year within a target range of 1.00% - 1.25%. Going forward, the Fed is forecasting approximately three rate hikes per year over the next few years, normalizing at 3% at the end of 2019, though many market participants expect the Fed to undershoot this target, especially if the U.S. and/or global economy demonstrate signs of weakness. The Fed also announced plans to begin reducing its balance sheet during the upcoming year, by letting its Treasury and mortgage-backed-securities positions run off. The European Central Bank (ECB) increased its level of hawkish comments during the year, and expects to gradually ease monetary policy in 2018. The Bank of Japan raised its economic forecasts during the year, but plans to maintain lower interest rates until inflation gets closer to its 2.0% target.

Looking forward, with the economy growing at a reasonable rate, strong corporate earnings, decreasing unemployment levels and moderate inflation, there doesn't appear to be many specific events up ahead to derail the markets. However, volatility remains near historic lows, and most asset classes are priced to perfection with valuations near or above historic levels. This has made it more challenging to find attractive investment opportunities in many parts of the market, highlighting the importance of maintaining investment discipline, while seeking those opportunities which offer better relative value. In addition, the markets have already priced in the potential for growth friendly initiatives from the Trump administration, which, if they don't materialize, could lead to increasing volatility. This environment continues to call for a portfolio with sufficient levels of diversification, and a balance of portfolio exposures across multiple economic environments and risk factors.

### Asset Allocation

SCERS' investment program is structured around a strategic asset allocation model established by SCERS' Board with the assistance of SCERS' investment staff, general investment consultant Verus, alternative assets consultant Cliffwater LLC (Cliffwater), and real estate consultant Townsend Holdings LLC (Townsend). The objective of the asset allocation model is to ensure the diversification of investments in a manner that generates a desired rate of investment return with an acceptable level of investment risk. To achieve this, the asset allocation is broadly diversified between asset classes and within asset classes to provide consistent long term performance. The asset allocation targets are not tactical, but rather, are long term in nature, consistent with the long term nature of SCERS' benefit obligations. The asset allocation model is typically reviewed every three to five years, but the long term capital market assumptions for the various asset classes and sub-asset classes are reviewed and adjusted as appropriate each year. Research has shown that the asset allocation mix is the largest driver of investment performance.

During the fiscal year, SCERS completed an asset/liability modeling (ALM) study that resulted in the approval of a new strategic asset allocation. During the ALM study, SCERS' Board identified and prioritized several investment-related plan objectives, principles and risks that played a role in the design of the new strategic asset allocation. These included: (1) Reducing portfolio volatility; (2) Improving the funding status of the plan; (3) Protecting against significant drawdowns; (4) Improving the cash flow generation of the portfolio; and (5) Determining a reasonable and realistic expected investment return for the portfolio. During the



## CHIEF INVESTMENT OFFICER'S REPORT (CONTINUED)

ALM study, potential asset allocation mixes were compared for optimal results relative to a variety of risk measures, including:

- Volatility or standard deviation
- Risk factor exposures
- Performance in different economic environments
- Stress tests
- Liquidity and cash flow analysis

A significant component of the new strategic asset allocation was to view risk exposures through multiple lenses, including functional and common factor exposures, in order to manage and maintain allocations that are aligned with SCERS' investment philosophy and objectives. This multiple lens approach used a functional framework to re-group and re-classify segments of SCERS' prior asset allocation in order to link segments of the SCERS portfolio that are exposed to similar economic environments and risk factors, and which would be expected to have similar roles and outcomes in a portfolio. The functional regrouping took a simplified approach at the asset category level, by breaking the portfolio into three asset categories, with greater complexity reserved at the sub-asset class level. These asset categories include: (1) Growth; (2) Diversifying; and (3) Real Return.

The Growth asset category includes those segments of the portfolio that tend to perform best in a high growth and low/moderate inflationary environment, including most equity and credit investments. In contrast, they tend to perform poorly during recessionary periods, when GDP growth is contracting, or during certain periods when unexpected inflation arises. Growth assets tend to comprise the dominant allocation within most institutional investment portfolios, including that of SCERS. The Diversifying asset category includes those segments of the portfolio which are expected to protect capital and perform better than the Growth asset category during dislocated and stressed market environments, including traditional fixed income and diversifying absolute return strategies. The Real Return asset category includes those segments of the portfolio that protect against inflation, generate cash flow and provide further portfolio diversification, including real estate, infrastructure, energy, agriculture and commodities investments.

The changes to SCERS' strategic asset allocation are summarized in the table below:

Asset Category/Asset Class	Prior Target Allocation	New Target Allocation	Change
<b>Growth</b>	<b>63.0%</b>	<b>59.0%</b>	<b>(4.0%)</b>
Domestic Equity	22.5	21.0	(1.5)
International Equity	22.5	20.0	(2.5)
Private Equity	10.0	9.0	(1.0)
Public Credit	2.0	2.0	0.0
Private Credit	0.0	4.0	4.0
Growth Absolute Return	6.0	3.0	(3.0)
<b>Diversifying</b>	<b>22.0</b>	<b>25.0</b>	<b>3.0</b>
Core/Core Plus Fixed Income	15.0	10.0	(5.0)
US Treasury	0.0	5.0	5.0
Global Fixed Income	3.0	3.0	0.0
Diversifying Absolute Return	4.0	7.0	3.0
<b>Real Return</b>	<b>15.0</b>	<b>16.0</b>	<b>1.0</b>
Real Estate	7.0	7.0	0.0
Real Assets	6.0	7.0	1.0
Commodities	2.0	2.0	0.0
<b>Opportunities</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
	<b>100.0%</b>	<b>100.0%</b>	





The key changes between the new strategic asset allocation and the prior are:

- A reduction in Growth assets, including public equities
- An increase in Diversifying assets, including principal protecting fixed income investments (Treasuries) and diversifying Absolute Return strategies
- An increase to cash flowing investments including Private Credit and Real Assets

The new strategic asset allocation is a more risk balanced portfolio than the prior policy portfolio with a similar expected return profile, but with lower expected volatility (standard deviation), and a narrower range of potential outcomes, making it less susceptible to negative returns during down markets. It also increases diversification, especially to investment strategies with low and negative correlations to equity markets, and is expected to generate a greater level of cash flow for SCERS' plan.

The process of transitioning SCERS' portfolio to the new strategic asset allocation targets began during the fiscal year, including making structural modifications to underlying asset classes and adjusting policy benchmarks, but the majority of changes will likely occur over the following fiscal years. As a result, the investment section in the current CAFR report investment information using the prior strategic asset allocation. This will be modified in future years to report investment information consistent with the new strategic asset allocation.

#### Investment Portfolio Implementation

In addition to providing assistance to the Board in establishing the asset allocation model, SCERS' investment staff and consultants assist in developing investment policy statements; conduct searches for and recommend the selection of investment managers; monitor investment manager performance and compliance; advise on developments in the investment markets; and analyze and develop recommendations for possible tactical adjustments and new investment initiatives.

SCERS utilizes external investment managers to invest the System's assets. As of June 30, 2017, SCERS' assets were invested across: (1) Domestic Equity - nine separate account portfolios and one commingled fund; (2) International Equity - five separate account portfolios and five commingled fund partnerships; (3) Fixed Income - four separate account portfolios and one global fixed income fund; (4) Absolute Return – two separate portfolios and ten fund partnerships; (5) Private Equity - four fund-of-funds partnerships and thirty seven fund partnerships; (6) Private Credit – four fund partnerships; (7) Real Estate – two separate account portfolios, seven core real estate funds, nine value-added real estate partnerships and four opportunistic real estate partnerships; (8) Real Assets – two separate account portfolios and twelve fund partnerships; (9) Commodities - two commodity fund partnerships; (10) Opportunities - one opportunistic credit fund partnership; and (11) A portfolio overlay program, including a real assets strategy commingled fund.

Portfolio activity during the fiscal year included the following:

- In Domestic Equity, no significant changes were made during the fiscal year.
- In International Equity, SCERS engaged an investment manager to manage an international developed growth mandate, which represented a replacement search for a manager whose engagement was terminated in fiscal year 2014-2015.
- In Fixed Income, no significant changes were made during the fiscal year.
- In Absolute Return, SCERS continued implementation of the direct absolute return portfolio by making two new fund investments and increasing an investment with an existing fund during the fiscal year. An engagement with an existing absolute return fund was terminated.



## CHIEF INVESTMENT OFFICER'S REPORT (CONTINUED)

- In Private Equity, SCERS continued implementation of the direct private equity investment platform, making five fund commitments during the fiscal year. SCERS also approved the annual report and annual investment plan for the Private Equity asset class for calendar year 2017.
- In Private Credit, SCERS initiated implementation of the direct private credit investment platform, making one fund commitment during the fiscal year. SCERS also approved the initial annual investment plan for the Private Credit asset class for calendar year 2017.
- In Real Estate, SCERS increased investments with two existing core real estate funds during the fiscal year, and approved the annual report and annual investment plan for the Real Estate asset class for calendar year 2017.
- In Real Assets, SCERS continued implementation of the direct real assets investment platform, making two fund commitments and increasing an investment with an existing fund during the fiscal year. SCERS also approved the annual report and annual investment plan for the Real Assets asset class for calendar year 2017.
- In the Opportunities segment, no significant changes were made during the fiscal year.

Due to the longer investment period for private market commitments, the importance of maintaining vintage year diversification, and only investing with top tier managers, it takes several years for target allocation levels to be reached in the Private Equity, Private Credit and Real Assets asset classes.

SCERS' custodial bank is State Street Bank and Trust (State Street). In addition to asset custody services (including performance measurement), State Street provides securities lending services to SCERS and, through State Street Global Advisors and State Street Global Markets, administers a portfolio overlay program and a brokerage commission recapture program, respectively. The portfolio overlay program assures that SCERS' portfolio exposures are consistent with the strategic asset allocation targets through cost-effective rebalancing, using investment proxies to close gaps relative to target allocation levels and to eliminate 'cash drag'. For the fiscal year ended June 30, 2017, SCERS earned a net income of \$2.5 million from securities lending and received commission recapture income of \$0.05 million.

SCERS' primary legal services regarding the investment program are provided by specialized outside legal counsel and fiduciary counsel.

During the fiscal year, investment educational sessions were provided to the Board by SCERS' staff, investment consultants and various investment managers to assist the Board in making decisions regarding new asset classes and possible new investment mandates. The educational sessions included presentations regarding: (1) Energy infrastructure investment strategies; (2) Approaches to the development of asset classes within SCERS' investment portfolio; and (3) Asset class construction and its impact on investment performance, funded ratio and contribution rates.

### SCERS Investment Objectives

SCERS' investment objectives are set forth in the Board's Investment Policy Statement (Investment Policy) and through customized investment policy statements for each asset class. The Investment Policy was recently restated by the SCERS Board.

At the highest level, SCERS' investment objectives are:

#### Over-arching Plan Objectives:

- Provide for current and future benefit payments to plan participants and their beneficiaries, and sustain the plan over its useful life.





- Diversify plan assets as its main defense against large market drawdowns.
- Preserve a degree of liquidity ample to meet benefit payments and capital calls, without incurring substantial transaction costs or “fire sales” of illiquid holdings.
- Incur costs that are reasonable and consistent with industry standards.
- Achieve funding goals, including the maintenance of funded status and manageable, consistent contribution rates.
- Maintain risk exposure required to meet return requirements, while limiting drawdown exposure.

### Investment Performance Objectives:

- Generate returns in excess of policy benchmarks at the total fund and asset class levels over rolling three-year periods.
- Achieve real (after inflation) returns at the total fund level that are at or above the actuarial real return (assumed return less per capita pay growth) over complete market cycles.
- For asset classes and actively managed portfolios, achieve net returns that exceed policy benchmarks, and rank in the top half of a competitive, after-fee universe.

### Proxy Voting Guidelines and Procedures

As a fiduciary, the Board has an obligation to manage SCERS' assets in the best interests of the plan participants. The Board has established a Proxy Voting and Corporate Governance Policy to assist with this goal. This policy provides guidance for voting proxies and acting on corporate actions, such as mergers and acquisitions. For the fiscal year ended June 30, 2017, a majority of proxies were voted through an electronic voting platform provided by Institutional Shareholder Services, with the assistance of research and analysis provided by Institutional Shareholder Services and Glass Lewis & Co.

### Summary of Investment Results

SCERS monitors capital market investment returns through reference to recognized and easily obtainable market indices, which are used as asset class benchmarks. The benchmark index performance by asset class for one, three and five years is shown on the Investment Results schedule. The asset class benchmark returns are weighted by the asset allocation to provide a policy-weighted return based on SCERS' asset allocation. SCERS presents its returns using a time-weighted rate of return methodology based upon market values. SCERS' general investment consultant, Verus, prepared the investment returns cited in this section using information it received from SCERS' custodian bank and investment managers.

SCERS' investment performance for the fiscal year ended June 30, 2017 was strong, with all major asset classes generating positive returns. International Equity, Domestic Equity and Private Equity generated the strongest positive absolute returns.

For the period, SCERS' total fund return was 13.7%, gross of investment management fees, and 13.4%, net of investment management fees. The gross return for the fiscal year was 2.0% above SCERS' policy weighted benchmark return of 11.7%, and was well above the actuarial return objective of 7.5%. Over the trailing three-year period, SCERS' annualized investment return was 5.0% gross and 4.7% net. This three-year annualized return was below the actuarial return objective of 7.5%, and SCERS' policy benchmark return of 5.3%. Over the trailing five-year period, SCERS' annualized investment return was 8.8% gross and 8.5% net. This five-year annualized return was above the actuarial return objective of 7.5% and SCERS' policy benchmark return of 8.4%.



SCERS also assesses its investment performance relative to a peer group of other public funds utilizing a series of universe comparisons provided by Verus. For the fiscal year, the median public fund in the InvestorForce Universe of public funds with assets of greater than one billion dollars was 12.9%. SCERS' return of 13.7% ranked in the 31<sup>st</sup> percentile.

Domestic Equity returned 19.3% for the fiscal year, gross of fees. The return was above the benchmark Russell 3000 Index return of 18.5% by 0.8%. For the three-year period, SCERS' Domestic Equity annualized return was 8.9%, gross of fees, compared to the Russell 3000 Index benchmark return of 9.1%. In the domestic equity segment of the InvestorForce Universe, SCERS ranked in the 37<sup>th</sup> percentile for the fiscal year and in the 43<sup>rd</sup> percentile for the three year period.

The Domestic Equity sub-asset allocation divides investments by stock market capitalization and investment style. The large cap domestic equity investments had a fiscal year 19.6% return, gross of fees, which was 1.6% above the return of the Russell 1000 Index benchmark of 18.0%. The annualized investment return for large cap equity for three years was 9.1%, gross of fees, which was below the benchmark return of 9.3%. The one-year return for small cap equity investments was 27.9%, gross of fees. This return was better than the benchmark Russell 2000 Index return of 24.6%. For the three-year period, the small cap equity annualized return was 7.8%, gross of fees, which was 0.4% above the benchmark return of 7.4%.

International Equity returned 21.1% for the fiscal year, gross of fees. This was 0.1% above the benchmark MSCI ACWI ex-U.S. Index return of 21.0%. Annualized performance for the three-year period of 2.1%, gross of fees, was above the benchmark return of 1.3%. In the international equity segment of the InvestorForce Universe, SCERS ranked in the 49<sup>th</sup> percentile for the fiscal year and in the 56<sup>th</sup> percentile for the three year period.

SCERS' international equity investments are classified into two categories, developed markets and emerging markets, determined by country. For the fiscal year, SCERS' developed market investments returned 21.6%, gross of fees, which was 0.8% above the benchmark MSCI EAFE Index return of 20.8%. Over the trailing three-year period, the developed markets annualized return was 2.8%, gross of fees, compared to the MSCI EAFE Index return of 1.6%. For the fiscal year, the emerging markets gross of fees return of 23.2% was below the return of the benchmark MSCI Emerging Markets Index return of 24.2%. For the three-year period, SCERS' emerging markets annualized return of 0.3%, gross of fees, came in 1.1% below the benchmark return of 1.4%.

SCERS' Fixed Income investments generated a fiscal year 3.4% return, gross of fees, which was 3.0% above the custom benchmark return of 0.4% (comprised of 75% Barclays Aggregate Index / 12% Citigroup WGBI Index / 5% BofA Merrill Lynch US HY Master II Index / 5% Credit Suisse Leveraged Loans Index / 3% JP Morgan GBI EM Diversified Index). For the three-year period, the Fixed Income asset class annualized return was 3.1%, gross of fees, compared to the benchmark return of 2.1%.

SCERS' Absolute Return investments generated a fiscal year 7.6% return, gross of fees. For the three-year period, the Absolute Return asset class annualized return was 1.6%. The performance objective and policy benchmark for the Absolute Return investments is the 91-day T-Bill plus five percent, which returned 5.5% and 5.2% in the fiscal year and three-year periods, respectively. Another comparison measure is the HFRI Fund of Funds Composite Index, which returned 6.4% and 1.5% for the fiscal year and three-year period, respectively.

The Private Equity asset class generated a return of 14.2%, gross of fees for the fiscal year, compared to the 21.1% return of the asset class benchmark, the Russell 3000 Index plus three percent. For the three-year period, SCERS' Private Equity asset class returned 10.3%, compared to the benchmark return of 12.8%. The underperformance for SCERS' investments reflects the J-curve effect on the private equity fund investments, which are earlier in their investment cycle, with committed capital still being called and invested. Another comparison measure is the Thomson Reuters Private Equity Index, which returned



16.7% and 11.7% for the fiscal year and three-year period, respectively. Please note that the returns of the Private Equity asset class and benchmark are lagged one quarter.

The Real Assets asset class (which includes real estate, real assets and commodities allocations under the prior asset allocation) generated a fiscal year 8.5% return, gross of fees, which was 1.9% above the benchmark CPI-U Headline Inflation Index + 5% return of 6.6%. For the three-year period, the Real Assets asset class annualized return was 3.2%, compared to the benchmark return of 5.6%. The Real Assets return includes the SSGA Real Assets Strategy, which is the proxy used within SCERS' Overlay Program to replicate exposure while the asset class is implemented.

The Real Assets sub-asset allocation under the prior asset allocation divides investments into four categories, including: (1) Core and core plus real estate; (2) Private real assets such as infrastructure, energy, timber, agriculture or other natural resources; (3) Commodities; and (4) Treasury Inflation Protected Securities (TIPS). SCERS' core real estate separate accounts produced an 11.8% return, gross of fees, which was 3.9% above the benchmark return of 7.9%. SCERS' core open-ended real estate funds achieved an 8.7% gross return compared to the benchmark return of 7.9%. SCERS' private real assets segment produced a 22.3% return, gross of fees, which was 15.7% above the benchmark return of 6.6%. SCERS' commodities funds returned (6.9%), which was 0.4% below the benchmark return of (6.5%). During the fiscal year, SCERS did not have any allocations to TIPS.

The Opportunities investments are tactical investments across SCERS' investable asset classes and universe. When an Opportunities investment is made, its capital is drawn from the asset class which best fits the risk and return characteristics of the underlying investments. For the fiscal year, SCERS' Opportunities investments collectively achieved a 13.2% gross return, which was 1.5% above SCERS' policy index 11.7% benchmark return.

Additional information regarding SCERS' investment program can be found on the pages immediately following this report.

Respectfully submitted,

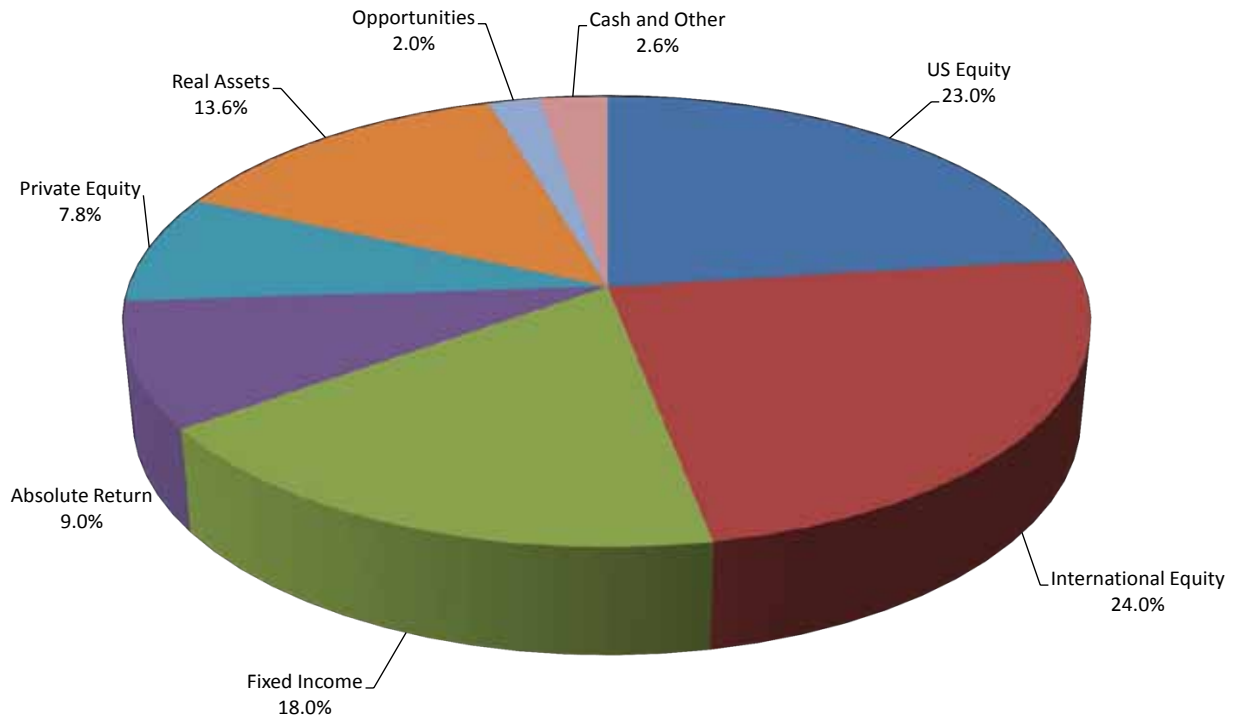


Steve Davis  
Chief Investment Officer

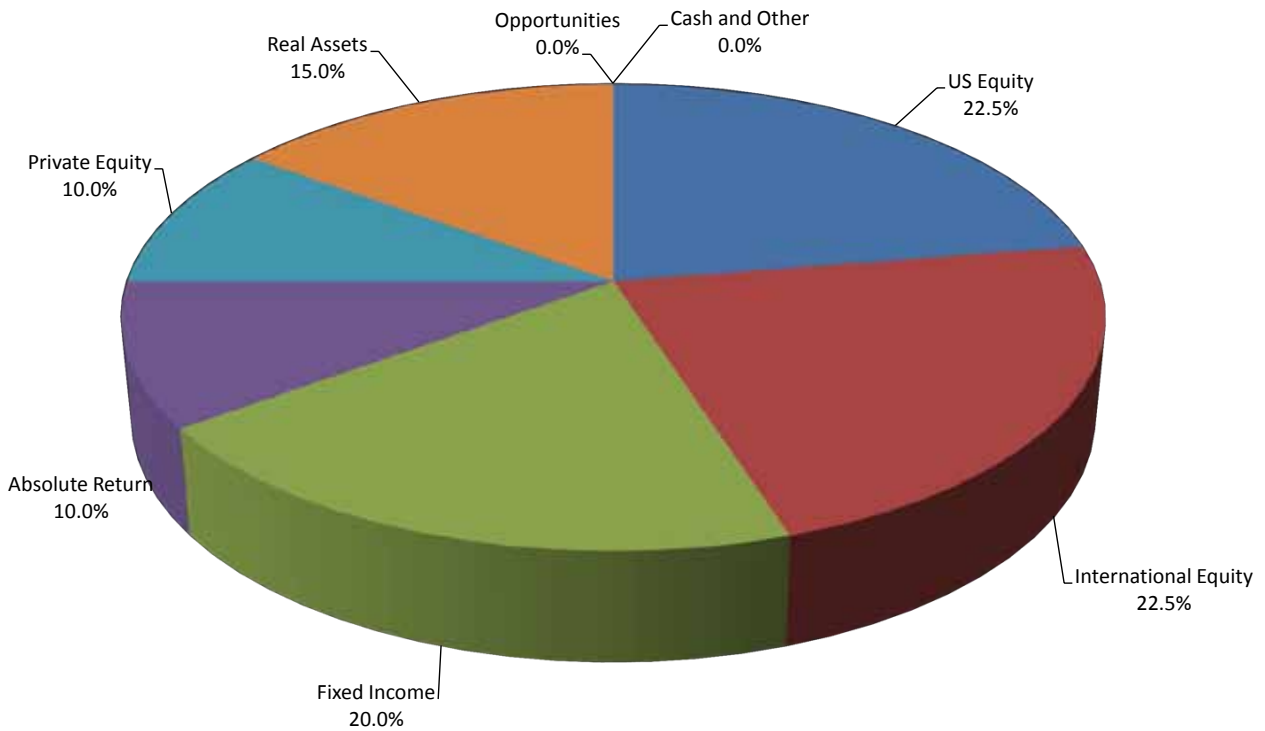


# ASSET ALLOCATION

## Actual Asset Allocation as of June 30, 2017



## Target Asset Allocation



The 2017 Actual Asset Allocation is based upon the Investment Summary net of \$63.5 million in real asset investment leverage.



# INVESTMENT RESULTS

For the Period Ended June 30, 2017

	Annualized		
	1 Year	3 Years	5 Years
<b>Domestic Equity</b>	19.3%	8.9%	14.3%
InvestorForce All DB U.S. Eq Gross Median	18.9	8.7	14.5
Benchmark: Russell 3000 Index	18.5	9.1	14.6
<b>International Equity</b>	21.1	2.1	8.5
InvestorForce All DB ex-U.S. Eq Gross Median	20.9	2.3	8.6
Benchmark: MSCI ACWI ex-U.S. Index	21.0	1.3	7.7
<b>Absolute Return</b>	7.6	1.6	5.2
InvestorForce All DB Hedge Funds Gross Median	8.0	1.9	5.1
Benchmark: 91 day Treasury Bill + 5%	5.5	5.2	5.2
HFRI Fund of Funds Composite Index	6.4	1.5	3.9
<b>Private Equity*</b>	14.2	10.3	13.2
InvestorForce All DB Private Eq Net Median	11.6	8.9	10.7
Benchmark: Russell 3000 + 3% 1 Quarter Lag	21.1	12.8	16.2
Thomson Reuters C/A All PE 1 Quarter Lag	16.7	11.7	15.4
<b>Fixed Income</b>	3.4	3.1	3.3
InvestorForce All DB Total Fix Inc Gross Median	2.7	2.8	3.3
Benchmark: Custom**	0.4	2.1	2.0
<b>Real Assets</b>	8.5	3.2	5.3
Benchmark: CPI-U Headline + 5%	6.6	5.6	6.0
<b>Opportunities</b>	13.2	17.1	16.7
Benchmark: Policy Index	11.7	5.3	8.4
<b>Total Fund</b>			
SCERS Total Fund - Gross	13.7	5.0	8.8
SCERS Total Fund - Net	13.4	4.7	8.5
InvestorForce Public DB > \$1B Gross Median	12.9	5.4	9.1
Benchmark: Policy Index***	11.7%	5.3%	8.4%

Notes: Unless noted, returns were prepared by Verus Advisory, Inc., and shown on a gross of fee basis (except for absolute return, private equity, opportunities, and private real assets) and included the overlay effect. Return calculations were prepared using a time-weighted rate of return.

\* Investment return and index return are one quarter in arrears.

\*\*The fixed income benchmark consists of 75% Barclays Aggregate, 12% Citigroup WGBI ex U.S. Unhedged, 5% BofA ML High Yield II, 5% Credit Suisse Leveraged Loans and 3% JPMorgan GBI EM Diversified.

\*\*\*The benchmark consists of 22.5% MSCI ACWI ex U.S., 22.5% Russell 3000, 15% Barclays Aggregate, 15% CPI-U +5% (RA), 10% 91-day UST Bill +5% (HF), 10% Russell 1000 +3% 1QL (PE), 2.4% Citigroup WGBI ex U.S. Unhedged, 1% BofA ML High Yield II, 1% Credit Suisse Leveraged Loans and 0.6% JPM GBI EM Diversified. From 1/1/2012 to 12/31/2013, the Benchmark consisted of 22.5% MSCI ACWI ex U.S., 10% Russell 1000 +3% 1QL (PE), 22.5% Russell 3000, 20% Barclays Aggregate, 15% CPI-U +5% (RA), and 10% 91-day UST Bill +5% (HF).



# SUMMARY OF INVESTMENT ASSETS

As of June 30, 2017

(Dollar Amounts Expressed in Thousands)

	<u>Fair Value</u>	<u>Percentage of Total Cash &amp; Investments</u>
<b>Type of investments</b>		
Domestic equity	\$2,045,526	23.65%
International equity	2,049,228	23.72
Absolute return	766,986	8.88
Private equity	693,885	8.02
Fixed income	1,605,244	18.58
Real assets	1,165,424	13.51
Opportunities	176,176	2.04
Overlay	71,952	0.83
<b>Total investments at fair value</b>	<b><u>8,574,421</u></b>	
<b>Cash</b>		
Cash (Unallocated)	62,500	0.72
Other cash & cash equivalents	4,065	0.05
<b>Total cash</b>	<b><u>66,565</u></b>	<b><u>0.77</u></b>
<b>Total cash &amp; investments</b>	<b><u>8,640,986</u></b>	<b>100.0 %</b>
<b>Other assets</b>		
Receivables	62,564	
Other assets	501	
Securities lending collateral	352,234	
<b>Total other assets</b>	<b><u>415,299</u></b>	
<b>Total assets</b>	<b><u>9,056,285</u></b>	
<b>Liabilities</b>		
Accounts payable	28,026	
Investment trades payable	90,897	
Warrants payable	903	
Securities lending liability	352,234	
<b>Total liabilities</b>	<b><u>472,060</u></b>	
<b>Net position restricted for pension benefits</b>	<b><u>\$8,584,225</u></b>	



## SCHEDULE OF MANAGER FEES

For the Year Ended June 30, 2017  
(Dollar Amounts Expressed in Thousands)

Type of investments	Amount
Domestic equity	\$5,793
International equity	7,465
Absolute return	14,459
Private equity	23,423
Fixed income	3,854
Real assets	19,138
Opportunities	4,598
Overlay	470
<b>Total manager fees</b>	<b>\$72,200</b>

## SCHEDULE OF EQUITY BROKERAGE COMMISSIONS

For the Year Ended June 30, 2017

Broker Name	Commission per Share	Shares/Par Value	Total Commission
State Street Bank and Trust Company	\$0.0095	22,005,191	\$209,062
Capital Institutional Svcs Inc. Equities	0.0339	1,384,810	46,892
Merrill Lynch International	0.0099	4,640,829	45,729
Liquidnet Inc.	0.0273	1,547,340	42,286
Morgan Stanley Co. Incorporated	0.0068	6,063,726	41,495
UBS Securities LLC	0.0131	3,394,977	44,383
Investment Technology Group Inc.	0.0359	1,122,835	40,303
Credit Suisse Securities (USA) LLC	0.0057	5,441,243	30,889
Citigroup Global Markets Inc.	0.0032	7,923,219	25,504
Themis Trading LLC	0.0306	1,037,354	31,707
Societe Generale London Branch	0.0076	2,915,042	22,285
Deutsche Bank Securities Inc.	0.0079	3,054,997	24,211
Macquarie Bank Limited	0.0038	6,773,450	25,879
J.P. Morgan Securities Inc.	0.0357	619,646	22,106
Credit Suisse Securities (Europe) Ltd.	0.0096	1,992,369	19,044
Goldman Sachs & Co.	0.0092	2,174,968	20,071
Ubs Securities Asia Ltd.	0.0036	4,639,559	16,536
Citigroup Global Markets Inc.	0.0245	681,164	16,687
Barclays Capital	0.0042	2,708,574	11,498
All Other Brokerage Firms*	0.0109	46,463,562	508,104
<b>Total Brokerage Commissions</b>	<b>\$0.0098</b>	<b>126,584,855</b>	<b>\$1,244,671</b>
Brokerage Commission Recapture			(55,732)
<b>Net Brokerage Commissions</b>			<b>\$1,188,939</b>

\*All other brokerage firms is comprised of approximately 203 additional firms, each receiving less than 1% of total commissions. A complete listing of brokerage fees is available.



## TEN LARGEST STOCK HOLDINGS (BY FAIR VALUE)

As of June 30, 2017

Rank	Shares	Security Name	Fair Value (in thousands)
1	613,381	Microsoft Corp.	\$42,280
2	36,104	Amazon.Com Inc.	34,949
3	238,376	Apple Inc.	34,331
4	195,503	Berkshire Hathaway Inc. Cl B	33,112
5	33,536	Alphabet Inc. Cl C	30,475
6	288,203	JPMorgan Chase & Co.	26,342
7	388,737	Citigroup Inc.	25,999
8	470,203	Oracle Corp.	23,576
9	915,732	Bank Of America Corp.	22,216
10	160,199	Aon Plc.	21,298
<b>Total of ten largest stock holdings</b>			<b>\$294,578</b>

A complete list of the stock holdings is available.

## TEN LARGEST BOND HOLDINGS (BY FAIR VALUE)

As of June 30, 2017

Rank	Par	Security Name	Interest Rate	Maturity	Fair Value (in thousands)
1	22,945,000	United States Treasury N/B	1.25%	5/31/2019	\$22,889
2	22,930,000	United States Treasury N/B	1.75%	5/31/2022	22,796
3	20,940,000	United States Treasury N/B	1.75%	6/30/2022	20,804
4	15,600,000	United States Treasury N/B	1.25%	4/30/2019	15,562
5	14,915,000	United States Treasury N/B	3.00%	5/15/2047	15,393
6	25,500,000	Strip Principal	0.01%	11/15/2045	11,124
7	9,845,000	FNMA TBA 30 YR	4.00%	5/25/2046	10,349
8	9,710,000	United States Treasury N/B	2.38%	5/15/2027	9,771
9	7,865,000	FNMA TBA 30 YR	4.50%	8/14/2047	8,426
10	7,000,000	United States Treasury N/B	0.75%	4/15/2018	6,971
<b>Total of ten largest bond holdings</b>					<b>\$144,085</b>

A complete list of the bond holdings is available.





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# INVESTMENT PROFESSIONALS

As of June 30, 2017

## Domestic Equity

AllianceBernstein L.P.  
Brown Advisory  
CenterSquare Investment Management, LLC  
Dalton, Greiner, Hartman, Maher & Co. , LLC  
Eagle Capital Management  
Huber Capital Management  
JP Morgan Asset Management  
UBS Global Asset Management  
Weatherbie Capital, LLC  
Wedge Capital Management, LLP

## International Equity

Baillie Gifford & Co.  
CBRE Clarion Securities  
Lazard Asset Management  
LSV Asset Management  
Mondrian Emerging Markets Equity Fund, L.P.  
Mondrian Emerging Markets Small Cap Equity Fund, L.P.  
Mondrian International Small Cap Equity Fund, L.P.  
Walter Scott  
William Blair Emerging Markets Small Cap Growth Fund  
William Blair International Small Cap Growth Portfolio

## Absolute Return

AQR Delta Fund II, L.P.  
Brevan Howard, L.P.  
Claren Road Credit Partners, L.P.  
Elliott International Limited  
Graham Global Investment Fund II SPC LTD  
Grosvenor Capital Management  
Jana Partners Qualified, L.P.  
Lakewood Capital Partners, L.P.  
Laurion Capital Ltd.  
OZ Domestic Partners II, L.P.  
SC Absolute Return Fund, LLC  
SC Absolute Return Fund, LLC- Series B  
Third Point Partners Qualified, L.P.  
Winton Diversified Futures Fund, L.P.

## Private Equity

Abbott Capital Private Equity Fund VI, L.P.  
Accel-KKR Capital Partners IV, L.P.  
Accel-KKR Capital Partners V, L.P.  
Accel-KKR Growth Capital Partners II, L.P.  
Atalaya Special Opportunities Fund VI, L.P.  
Athyrium Opportunities Fund II, L.P.  
Athyrium Opportunities Fund III, L.P.  
Dyal II U.S. Investors, L.P.  
Dyal Capital Partners III, L.P.  
Garrison Opportunity Fund III A LLC  
H.I.G. Bayside Loan Opportunity Fund III (Europe-U.S.\$), L.P.  
H.I.G. Capital Partners V, L.P.  
H.I.G. Europe Capital Partners II, L.P.  
HarbourVest International Private Equity Partners VI-Partnership Fund L.P.  
HarbourVest Partners VIII, L.P.  
Khosla Ventures IV, L.P.  
Khosla Ventures V, L.P.  
Linden Capital Partners III, L.P.  
Marlin Equity IV, L.P.  
Marlin Heritage, L.P.  
New Enterprise Associates 14, L.P.  
New Enterprise Associates 15, L.P.  
New Enterprise Associates 16, L.P.  
Private Equity Partners X, L.P.  
RRJ Capital Master Fund II, L.P.  
RRJ Capital Master Fund III, L.P.  
Spectrum Equity VII, L.P.  
Summit Partners Credit Fund, L.P.  
Summit Partners Credit Fund II, L.P.  
Summit Partners Venture Capital Fund III-A, L.P.  
Summit Partners Venture Capital Fund IV, L.P.  
Thoma Bravo Fund XI, L.P.  
Thoma Bravo Fund XII, L.P.  
TPG Opportunities Partners III, L.P.  
Trinity Ventures XI, L.P.  
Trinity Ventures XII, L.P.  
TSG7 A, L.P.  
TSG7 B, L.P.  
Waterland Private Equity Fund V C.V.  
Waterland Private Equity Fund VI, C.V.  
Waterland Private Equity Fund VI Overflow Fund, C.V.  
Wayzata Opportunities Fund III, L.P.



**Fixed Income**

Brandywine Global Investment Management, LLC  
Metwest Asset Management  
Neuberger Berman Fixed Income, LLC  
Prudential Investment Management  
SC Credit Opportunities Mandate, LLC

**Real Assets**

ACM Fund II, LLC  
ArcLight Energy Partners Fund VI, L.P.  
Atalaya SCERS SMA, LLC  
Barings Real Estate Advisors - Separate Accounts  
BlackRock Realty Advisors - Separate Accounts  
Blackstone Resources Select Offshore Fund  
Brookfield Infrastructure Fund III, L.P.  
Carlyle Power Partners II, L.P.  
EnCap Energy Capital Fund IX, L.P.  
EnCap Energy Capital Fund X, L.P.  
EnCap Flatrock Midstream Fund III, L.P.  
Global Energy & Power Infrastructure Fund II, L.P.  
IFM Global Infrastructure Fund, L.P.  
Jamestown Premier Property Fund, L.P.  
MetLife Core Property Fund, L.P.  
Pantheon SCERS SIRF MM, LLC  
Prime Property Fund, LLC  
Principal U.S. Property Account  
Prologis Targeted Europe Logistics Fund, L.P.  
Prologis Targeted US Logistics Fund, L.P.  
Quantum Energy Partners VI, L.P.  
State Street Global Advisors - Real Asset Strategy  
Strategic Commodities Fund Ltd.  
Townsend Real Estate Fund, L.P.  
Wastewater Opportunity Fund, LLC

**Opportunities**

AEW Value Investors II, L.P.  
Allegis Value Trust  
Atalaya Special Opportunities Fund V, L.P.  
Carlyle China Realty, L.P.  
Carlyle China Rome Logistics, L.P.  
CIM Fund VIII, L.P.  
ECE European Prime Shopping Centre Fund II, SCS-SIF  
European Real Estate Debt Fund II, L.P.  
Hammes Partners II, L.P.  
Hines U.S. Office Value Fund II, L.P.  
KKR Real Estate Partners Americas, L.P.  
NREP Nordic Strategies Fund, FCP-FIS  
NREP Nordic Strategies Fund II, SCSp  
Och-Ziff Real Estate Fund III, L.P.

**Overlay**

State Street Global Advisors

**Investment Consultant**

Cliffwater, LLC  
Verus Advisory, Inc.  
The Townsend Group

**Proxy Advisor**

Glass Lewis & Co.  
Institutional Shareholder Services, Inc.

**Legal Counsel**

Foley & Lardner LLP  
Nossaman LLP  
Public Pension Consultants  
Stroock & Stroock & Lavan LLP







ACTUARIAL



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November 7, 2017

Board of Retirement  
Sacramento County Employees' Retirement System  
980 9<sup>th</sup> Street, Suite 1900  
Sacramento, CA 95814

**Re: Actuarial Valuation for the Sacramento County Employees' Retirement System**

Dear Members of the Board:

Segal Consulting (Segal) prepared the June 30, 2017 annual actuarial valuation of the Sacramento County Employees' Retirement System. We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices and SCERS' funding policy that was last reviewed with the Board in 2013. In particular, it is our understanding that the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice (ASOPs).

As part of the June 30, 2017 actuarial valuation, Segal conducted an examination of all participant data for reasonableness. Summaries of the employee data used in performing the actuarial valuations over the past several years are provided in our valuation report. We did not audit the System's financial statements. For actuarial valuation purposes, Plan assets are valued at Actuarial Value. Under this method, the assets used to determine employer contribution rates take into account market value by recognizing the differences between the total actual investment return at market value and the expected investment return from the prior six years. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized over a six-year period starting July 1, 2013. Investment gains/losses established after July 1, 2013 will be recognized over a seven-year period and the deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets.

One of the general goals of an actuarial valuation is to establish contribution rates which, over time, will remain level as a percentage of payroll unless Plan benefit provisions are changed. Actuarial funding is based on the Entry Age Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize any unfunded actuarial accrued liability (UAAL). The UAAL is amortized over different periods depending on the source.





Board of Retirement  
Sacramento County Employees' Retirement System  
November 7, 2017  
Page 2

The UAAL established as a result of the Early Retirement Incentive Program for members of the Sacramento County Law Enforcement Managers Association (LEMA) is amortized as a level percentage of payroll over a 10-year period beginning June 30, 2010. The System's remaining outstanding balance of the June 30, 2012 UAAL is amortized as a level percentage of payroll over a declining 23-year period (with 18 years remaining as of June 30, 2017). Effective with the June 30, 2013 valuation, the change in UAAL that arises due to actuarial gains or losses or from changes in actuarial assumptions or methods at each valuation is amortized as a level percentage of payroll over its own declining 20-year period. Any change in UAAL that arises due to plan amendments will be amortized as a level percentage of payroll over its own declining 15-year period and any change in UAAL due to retirement incentive programs will be amortized as a level percentage of payroll over its own declining period of up to 5 years. A 5-year period (with 1 year remaining as of June 30, 2017) is used to amortize the increase in UAAL as a result of earlier than expected retirement for members of the Deputy Sheriffs' Association who submitted an application to retire before June 30, 2015. The progress being made towards meeting the funding objective through June 30, 2017 is illustrated in the Schedule of Funding Progress.

Notes number 1, 4 and 5 to the Basic Financial Statements and the Required Supplemental Information (RSI) included in the Financial Section were prepared by the System based on the results of the Governmental Accounting Standards Board Statement 67 (GASBS 67) actuarial valuation as of June 30, 2017 prepared by Segal. For the Financial Section of the Comprehensive Annual Financial Report (CAFR), Segal provided the Schedule of Changes in Net Pension Liability and Schedule of Employer Contributions as shown in the RSI. A listing of the other supporting schedules Segal prepared for inclusion in the Actuarial and Statistical Sections of the System's CAFR is provided below. These schedules were prepared based on the results of the actuarial valuation as of June 30, 2017 for funding purposes. All other schedules in the Actuarial and Statistical Sections of the System's CAFR were prepared by the System.

1. Retirees and beneficiaries added to and removed from retiree payroll;
2. Solvency test; and
3. Schedule of retiree members by type of benefit.

The valuation assumptions included in the Actuarial Section were adopted by the Retirement Board based on the June 30, 2016 Actuarial Experience Study. It is our opinion that the assumptions used in the June 30, 2017 valuation produce results, which, in the aggregate, anticipate the future experience of the Plan. Actuarial valuations are performed on an annual basis. An experience analysis is performed every three years. The next experience analysis is due to be performed as of June 30, 2019 and assumptions approved in that analysis will be applied in the June 30, 2020 valuation.

In the June 30, 2017 valuation, the ratio of the valuation assets to actuarial accrued liabilities decreased from 87.3% to 81.1%. The employer's rate has increased from 20.82% of payroll to 28.41% of payroll before the three-year phase-in of the change in UAAL rate due to changes in



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actuarial assumptions, while the employee's rate has increased from 9.91% of payroll to 11.84% of payroll. The increase in the employer's rate and the increase in the employee's rate is primarily a result of the changes in actuarial assumptions adopted for the June 30, 2017 valuation.

Note that the Board adopted a three-year phase-in of the change in UAAL rate due to changes in actuarial assumptions for the employer contribution rates. After reflecting the three-year phase-in, the employer's rate calculated in this valuation is 24.53% of payroll.

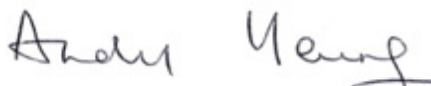
In the June 30, 2017 valuation, the actuarial value of assets excluded \$81.0 million in deferred investment losses, which represented about 1% of the market value of assets. If these deferred investment losses were recognized immediately in the actuarial value of assets, the funded percentage would decrease from 81.1% to 80.4% and the aggregate employer contribution rate (after reflecting the three-year phase-in), expressed as a percent of payroll, would increase from about 24.5% to 25.1%.

The undersigned are Members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,



Paul Angelo, FSA, MAAA, FCA, EA  
Senior Vice President and Actuary



Andy Yeung, ASA, MAAA, FCA, EA  
Vice President and Actuary

MYM/gxk  
Enclosures



## SUMMARY OF ACTUARIAL REVIEW

In 2017, SCERS engaged Cheiron to perform a complete independent replication of SCERS June 30, 2016 actuarial valuation and reviewed the actuarial methods underlying that valuation. Cheiron reviewed the census data provided by SCERS staff, and compared to the information used by SCERS' actuary Segal in their valuation. Cheiron then performed a full parallel valuation, including the calculation of the projected benefits, accrued liability, and normal cost for all SCERS members, and compared the results to those shown in Segal's actuarial valuation report.

Additionally, SCERS engaged Cheiron to perform a review of the assumptions recommended by Segal for the June 30, 2017 valuation, as reflected in the actuarial experience study covering the period from July 1, 2013 through June 30, 2016. This review did not constitute a full replication of the experience study. It was focused on a review of the recommendations and communications from Segal, based on the information provided within the study.

The purpose of the actuarial audit is to provide SCERS confirmation that:

- The results reported by Segal can be relied upon.
- Segal's actuarial valuation report, assumptions, and methods comply with Actuarial Standards of Practice (ASOPs).
- The communication of the actuarial valuation results is complete and reasonable, and
- The SCERS Retirement Board and Segal have considered recommendations and communication that may improve the valuation and experience study.

### **Key Findings and Recommendations**

As presented in Cheiron's Actuarial Review of the June 30, 2016 Actuarial Valuation and Actuarial Experience Study, Cheiron has:

- Confirmed that the liabilities and costs computed by Segal in the SCERS valuation as of June 30, 2016 are reasonably accurate and were computed in accordance with generally accepted actuarial principles.
- Reviewed the economic and demographic assumptions recommended in SCERS' most recent Actuarial Experience Study prepared by Segal and have found them to be reasonable and in accordance with generally accepted actuarial principles; and
- Recommended Segal review Cheiron's recommendations regarding rates of retirement and mortality and determine whether additional analysis is merited.



# SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

GASB Statement No. 67 rules only redefine pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans can still develop and adopt funding policies under current practices. SCERS' Board of Retirement and management staff are responsible for establishing and maintaining the System's funding policy. When measuring the total pension liability, GASB uses the same actuarial cost method (Entry Age Method) and the same type of discount rate (expected return on assets) as SCERS uses for funding. This means that the Normal Cost component of the annual plan cost is determined on the same basis for funding and financial reporting.

The following assumptions and methods were adopted by the Board for the June 30, 2017 valuation on November 7, 2017.

## Assumptions:

Valuation Interest Rate and Rate of Return on Investments:	7.00% net of administration and investment expenses
Inflation Assumption:	3.00%
Cost-of-Living Adjustment:	3.00% for Miscellaneous and Safety Tier 1 Members 0.00% for Miscellaneous Tier 2 Members 2.00% for Miscellaneous Tier 3, Tier 4 and Tier 5 and Safety Tier 2, Tier 3 and Tier 4 Members
Employee Contribution Crediting Rate:	5-year Treasury rate, assuming sufficient net investment earnings
Post-Retirement Mortality:	
a) Service	For Miscellaneous Members and Beneficiaries - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set forward one year for males and no age adjustment for females. For Safety Members - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set back four years for males and females.
b) Disability	For Miscellaneous Members - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set forward seven years for males and set forward eight years for females. For Safety Members - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set forward four years for males and females.
c) Employee Contribution Rate	For Miscellaneous Members - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP-2016 set forward one year for males and no age adjustment for females, weighted 40% male and 60% female. For Safety Members - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set back four years for males and females, weighted 75% male and 25% female.



## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS (CONTINUED)

Pre-Retirement Mortality:	Based upon the June 30, 2016 Actuarial Experience Study
Withdrawal Rates:	Based upon the June 30, 2016 Actuarial Experience Study
Disability Rates:	Based upon the June 30, 2016 Actuarial Experience Study
Service Retirement Rates:	Based upon the June 30, 2016 Actuarial Experience Study
Salary Increases:	Merit and longevity increases are based upon the June 30, 2016 Actuarial Experience Study plus 3.00% inflation and across the board salary increases of 0.25% per year.
Actuarial Value of Assets:	The market value of assets less unrecognized returns in each of the last six years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a seven-year period. The deferred return is further adjusted, if necessary, so that the actuarial value will stay within 30% of the market value of assets. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a six-year period starting July 1, 2013.
Valuation Value of Assets:	Actuarial value of assets reduced by the value of non-valuation reserves and designations.
Actuarial Cost Method:	Entry Age Cost Method. Entry Age is the age at the members' hire date. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation.
Amortization Policy:	<p>The UAAL established as a result of the Early Retirement Incentive Program for LEMA members is amortized over a 10-year period beginning June 30, 2010. The balance of the UAAL as of June 30, 2012 shall be amortized separately from any future changes in UAAL over a period of 23 years as of June 30, 2012.</p> <p>Any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of June 30 will be amortized over a period of 20 years.</p> <p>Any new UAAL as a result of changes in actuarial assumptions or methods will be amortized over a period of 20 years.</p> <p>The change in UAAL as a result of any plan amendments will be amortized over a period of 15 years and the change in UAAL resulting from retirement incentive programs will be amortized over a period of up to 5 years.</p>
Percentage of Members Married at Retirement:	80% for male members and 55% for female members.
Retirement Age for Deferred Vested Members:	Miscellaneous Members - 59 Safety Members - 53
Percentage Eligible for Reciprocal Benefits:	Miscellaneous Members - 35% Safety Members - 45%



# SUMMARY OF PLAN PROVISIONS

Briefly summarized below are the major provisions of the County Employees' Retirement Law of 1937, as amended through June 30, 2017, that are applicable to the Sacramento County Employees' Retirement System.

## Membership

Miscellaneous employees entering before September 27, 1981 are Tier 1 members. Miscellaneous employees entering on or after September 27, 1981 and June 27, 1993 are members of Tier 2 or Tier 3, respectively. County Miscellaneous employees entering on or after January 1, 2012 but prior to January 1, 2013 are members of Tier 4. Miscellaneous employees entering on or after January 1, 2013 are members of Tier 5. Safety members entering before June 25, 1995 are Tier 1 members. Safety members entering on or after June 25, 1995 are Tier 2 members. County Safety employees entering on or after January 1, 2012 but prior to January 1, 2013 are members of Tier 3. Safety members entering on or after January 1, 2013 are members of Tier 4.

## Final Average Salary

Final average salary (FAS) is defined as the highest 12 consecutive months of compensation earnable for Miscellaneous Tier 1 and Safety Tier 1 and highest 36 consecutive months for Miscellaneous Tier 2, Tier 3, Tier 4 and Tier 5 and Safety Tier 2, Tier 3 and Tier 4.

## Return of Contributions

Upon separation from service, a member may elect to leave his or her contributions on deposit. If the member has five or more years of service, he or she may elect to receive a deferred benefit when eligible for retirement. If the member has less than five years of service, he or she may request a return of contributions, plus interest, at any time.

## Service Retirement Benefit

Miscellaneous Tier 1, Tier 2, Tier 3 and Tier 4 and Safety Tier 1, Tier 2 and Tier 3 members with 10 years of service who have attained the age of 50 are eligible to retire. All members with 30 years of service (20 years for Safety), regardless of age, are eligible to retire.

Miscellaneous Tier 5 and Safety Tier 4 members with 5 years of service who have attained the age of 52 (age 50 for Safety) are eligible to retire.

The benefit expressed as a percentage of monthly FAS per year of service, depending on age at retirement, is illustrated below for typical ages. For members whose benefits are integrated with Social Security, the benefit is reduced by one-third of the percentage shown below times the first \$350 of monthly FAS per year of service after January 1, 1956.

Age	Miscellaneous Tier 1, 2 and 3	Miscellaneous Tier 4	Miscellaneous Tier 5	Safety Tier 1 and 2	Safety Tier 3	Safety Tier 4
50	1.48%	1.18%	N/A	3.00%	2.29%	2.00%
52	1.67%	1.30%	1.00%	3.00%	2.54%	2.20%
55	1.95%	1.49%	1.30%	3.00%	3.00%	2.50%
57	2.18%	1.64%	1.50%	3.00%	3.00%	2.70%
60	2.44%	1.92%	1.80%	3.00%	3.00%	2.70%
62	2.61%	2.09%	2.00%	3.00%	3.00%	2.70%
65	2.61%	2.43%	2.30%	3.00%	3.00%	2.70%
67 and over	2.61%	2.43%	2.50%	3.00%	3.00%	2.70%



### Disability Benefit

Members with five years of service, regardless of age, are eligible for nonservice-connected disability.

For Miscellaneous Tier 1 members, the benefit is 1.5% (1.8% for Safety Tier 1 members) of FAS for each year of service. If this benefit does not equal one-third of FAS, the benefit is increased by the same percentage of FAS for the years which would have been credited to age 65 (age 55 for Safety members), but the total benefit in this case cannot be more than one-third of FAS.

For Tier 2, Tier 3, Tier 4 and Tier 5 members, the benefit is 20% of FAS for the first five years of service plus 2% for each additional year for a maximum of 40% of FAS.

If the disability is service connected, the member may retire regardless of length of service, with a benefit of 50% of FAS or 100% Service Retirement benefit, if greater.

### Death Benefit (Before Retirement)

In addition to the return of contributions, a death benefit is payable to the member's beneficiary or estate equal to one month's salary for each completed year of service under the retirement system, based on the final year's average salary, but not to exceed six (6) month's salary.

If a member dies while eligible for service retirement or nonservice-connected disability, the spouse receives 60% of the allowance that the member would have received for retirement.

If a member dies in the performance of duty, the spouse or minor child receives 50% of the member's final average salary or 100% of Service Retirement benefit, if greater.

### Death Benefit (After Retirement)

If a member dies after retirement, a \$4,000 lump sum burial allowance is paid to the beneficiary or estate.

If the retirement was for service-connected disability, 100% of the member's allowance as it was at death is continued to the eligible spouse for life.

If the retirement was for other than service-connected disability and the member elected the unmodified option, 60% of the member's allowance is continued to an eligible spouse for life.

An eligible spouse is a surviving spouse who was married to the member at least one year prior to the date of retirement.

### Maximum Benefit

The maximum benefit payable to a member or beneficiary is 100% of FAS for Miscellaneous Tier 1, Tier 2, Tier 3 and Tier 4 and Safety Tier 1, Tier 2 and Tier 3. There is no maximum benefit for Miscellaneous Tier 5 and Safety Tier 4 members.

### Cost-of-Living

The maximum increase in retirement allowance is 4% per year for Miscellaneous Tier 1 and Safety Tier 1 members and 2% for Safety Tier 2, Tier 3 and Tier 4, and Miscellaneous Tier 3, Tier 4 and Tier 5 members.



## SUMMARY OF PLAN PROVISIONS (CONTINUED)

Miscellaneous Tier 2 members have no cost-of-living benefit. The cost-of-living increases effective in the month of April are based on the average annual change in the Consumer Price Index for the calendar year preceding April.

### Contribution Rates

Basic member contribution rates are based on the age-nearest birthday at entry into the System (single rate for entrants after January 1, 1975). The rates are designed to provide an average annuity at age 55 equal to 1/240 of FAS for Miscellaneous Tier 1, 2 and 3 members, at age 60 equal to 1/120 of FAS for Miscellaneous Tier 4 members and 1/100 of FAS at age 50 for Safety Tier 1, Tier 2 and Tier 3 members. For Miscellaneous Tier 5 and Safety Tier 4 members, the rates are 50% of the Normal Cost rate. For members integrated with Social Security, the above contributions are reduced by one-third of that portion of such contribution payable with respect to the first \$350 of monthly salary. Cost-of-living contribution rates are designed to pay for one-half of the future cost-of-living costs. Member contributions are refundable upon termination from the system.

The employer contribution rates are actuarially determined to provide for the balance of the contributions needed to fund the benefits promised by the System.



## SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Plan Type	Number	Annual Payroll (in thousands)	Annual Average Pay (in thousands)	% Increase/ (Decrease) in Average Pay*
6/30/2017	Miscellaneous	10,577	\$762,440	\$72.1	3.26%
	Safety	2,010	217,919	108.4	2.31
	<b>Total</b>	<b>12,587</b>	<b>\$980,359</b>	<b>\$77.9</b>	<b>2.84%</b>
6/30/2016	Miscellaneous	10,363	\$723,429	\$69.8	1.80%
	Safety	2,030	215,126	106.0	2.20
	<b>Total</b>	<b>12,393</b>	<b>\$938,555</b>	<b>\$75.7</b>	<b>1.88%</b>
6/30/2015	Miscellaneous	10,093	\$692,138	\$68.6	1.84%
	Safety	1,979	205,203	103.7	1.36
	<b>Total</b>	<b>12,072</b>	<b>\$897,341</b>	<b>\$74.3</b>	<b>1.78%</b>
6/30/2014	Miscellaneous	10,085	\$679,079	\$67.3	(0.15)%
	Safety	1,964	200,920	102.3	(0.01)
	<b>Total</b>	<b>12,049</b>	<b>\$879,999</b>	<b>\$73.0</b>	<b>0.00%</b>
6/30/2013	Miscellaneous	10,113	\$681,789	\$67.4	0.30%
	Safety	1,913	195,868	102.4	4.38
	<b>Total</b>	<b>12,026</b>	<b>\$877,657</b>	<b>\$73.0</b>	<b>1.39%</b>
6/30/2012	Miscellaneous	10,256	\$689,438	\$67.2	0.75%
	Safety	1,899	186,234	98.1	4.70
	<b>Total</b>	<b>12,155</b>	<b>\$875,672</b>	<b>\$72.0</b>	<b>1.69%</b>
6/30/2011	Miscellaneous	10,521	\$701,494	\$66.7	3.73%
	Safety	1,913	179,272	93.7	2.52
	<b>Total</b>	<b>12,434</b>	<b>\$880,766</b>	<b>\$70.8</b>	<b>3.51%</b>
6/30/2010	Miscellaneous	11,312	\$727,445	\$64.3	4.38%
	Safety	2,028	185,283	91.4	6.65
	<b>Total</b>	<b>13,340</b>	<b>\$912,728</b>	<b>\$68.4</b>	<b>4.59%</b>
6/30/2009	Miscellaneous	12,454	\$767,501	\$61.6	10.58%
	Safety	2,342	200,629	85.7	8.51
	<b>Total</b>	<b>14,796</b>	<b>\$968,130</b>	<b>\$65.4</b>	<b>10.00%</b>
6/30/2008	Miscellaneous	12,725	\$709,159	\$55.7	4.96%
	Safety	2,455	193,812	78.9	5.96
	<b>Total</b>	<b>15,180</b>	<b>\$902,971</b>	<b>\$59.5</b>	<b>5.15%</b>

Source: Prepared using extracted data from Actuarial Valuations from June 30, 2008 through 2017.

\*Reflects the increase in average salary for members at the beginning of the year versus those at the end of the year. It does not reflect the average salary increases received by members who worked the full year.



## RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM RETIREE PAYROLL

Plan Year End	At Beginning of Year	Added During Year	Removed During Year	At End of Year	Annual Retiree Payroll (in thousands)	Payroll added During Year (in thousands)	Payroll Removed During Year (in thousands)	% Increase In Annual Retiree Payroll	Average Annual Allowance
<b>6/30/2017</b>	<b>10,960</b>	<b>750</b>	<b>314</b>	<b>11,396</b>	<b>\$445,875</b>	<b>\$40,102</b>	<b>\$9,332</b>	<b>7.41%</b>	<b>\$39,126</b>
6/30/2016	10,541	727	308	10,960	415,105	35,144	8,591	6.83	37,875
6/30/2015	10,049	776	284	10,541	388,552	40,636	7,849	9.22	36,861
6/30/2014	9,634	674	259	10,049	355,765	31,335	6,746	7.42	35,403
6/30/2013	9,239	635	240	9,634	331,176	29,416	6,431	7.46	34,376
6/30/2012	8,821	660	242	9,239	308,191	29,693	5,511	8.51	33,358
6/30/2011	8,346	699	224	8,821	284,009	29,805	5,009	9.57	32,197
6/30/2010	7,968	599	221	8,346	259,213	19,276	4,639	5.98	31,058
6/30/2009	7,709	503	244	7,968	244,576	25,347	5,440	8.86	30,695
6/30/2008	7,464	490	245	7,709	224,669	22,527	4,745	8.60	29,144

Source: Prepared by Segal Consulting

Note: Participants are counted once for each benefit received.



## SCHEDULE OF FUNDING PROGRESS (Dollar Amounts Expressed in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets* (a)	Actuarial Accrued Liability (AAL)* (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
<b>6/30/2017</b>	<b>\$8,665,226</b>	<b>\$10,680,998</b>	<b>\$2,015,772</b>	<b>81.1%</b>	<b>\$980,359</b>	<b>205.6%</b>
6/30/2016	8,236,402	9,436,090	1,199,688	87.3	938,555	127.8
6/30/2015	7,838,825	9,028,679	1,189,854	86.8	897,341	132.6
6/30/2014	7,312,993	8,580,928	1,267,935	85.2	879,999	144.1
6/30/2013	6,797,757	8,210,980	1,413,223	82.8	877,657	161.0
6/30/2012	6,529,895	7,838,223	1,308,328	83.3	875,672	149.4
6/30/2011	6,420,824	7,382,897	962,073	87.0	880,766	109.2
6/30/2010**	6,216,994	7,090,497	873,503	87.7	912,644	95.7
6/30/2009	5,730,215	6,661,993	931,778	86.0	968,130	96.2
6/30/2008	5,930,758	6,363,355	432,597	93.2	902,971	47.9

Source: Prepared using extracted data from Actuarial Valuations from June 30, 2008 through 2017.

\*Includes contingency reserve and retiree death benefit reserves.

\*\* The June 30, 2010 results have been revised to reflect the correct actuarial accrued liability which was overstated in the June 30, 2010 valuation.

See Schedule 2: Schedule of Employer Contributions provided as Required Supplementary Information for actuarially determined and actual contributions.



## SOLVENCY TESTS (Dollar Amounts Expressed in Thousands)

Valuation Date	Active Member Contributions	Active Members			Actuarial Value of Assets	Active Member Contributions	Retired/Vested Members	Active Members (Employer Financed Portion)
		Retired/Vested Members	(Employer Financed Portion)	Total				
<b>6/30/2017</b>	<b>\$713,290</b>	<b>\$6,410,447</b>	<b>\$3,557,261</b>	<b>\$10,680,998</b>	<b>\$8,665,226</b>	<b>100%</b>	<b>100%</b>	<b>43%</b>
6/30/2016	677,596	5,635,248	3,123,246	9,436,090	8,236,402	100	100	62
6/30/2015	645,591	5,356,228	3,026,860	9,028,679	7,838,825	100	100	61
6/30/2014	632,969	4,939,239	3,008,720	8,580,928	7,321,993	100	100	58
6/30/2013	619,660	4,566,212	3,025,108	8,210,980	6,797,757	100	100	53
6/30/2012	595,979	4,284,864	2,957,380	7,838,223	6,529,895	100	100	56
6/30/2011	576,633	3,930,252	2,876,012	7,382,897	6,420,824	100	100	67
6/30/2010*	571,866	3,626,664	2,891,967	7,090,497	6,216,994	100	100	70
6/30/2009	561,461	3,399,695	2,700,837	6,661,993	5,730,215	100	100	66
6/30/2008	551,181	3,150,635	2,661,539	6,363,355	5,930,758	100	100	84

Source: Prepared by Segal Consulting

Events affecting year to year comparability:

6/30/10 - Investment return assumption decreased from 7.875% to 7.75%.

6/30/11 - Modification in non-economic assumptions.

6/30/12 - Investment return assumption decreased from 7.75% to 7.50%;

- Inflation assumption decreased from 3.50% to 3.25%;

- Salary increase assumption decreased from 5.65% to 5.40%;

- COLA increase assumption for Tier 1 decrease from 3.40% to 3.25%.

6/30/13 - Actuarial cost method changed from Aggregate Entry Age Normal Cost Method to Individual Entry Age Normal Cost Method.

- Changes to the amortization periods used for various future changes in liability:

- UAAL established as a result of Early Retirement Incentive Program for LEMA is amortized over a 10-year period beginning June 30, 2010;
- UAAL as a result of actuarial gains or losses as of June 30 will be amortized over a 20-year period;
- UAAL as a result of changes in actuarial assumptions or methods to be amortized over a 20-year period;
- Change in UAAL as a result of plan amendments to be amortized over a 15-year period; and
- UAAL as a result from retirement incentive programs will be amortized over a period up to 5 years.

6/30/14 - Changes to post-retirement mortality rates and termination rates before retirement.

- Changes to retirement age and benefit for deferred vested members.

- Changes to annual rates of compensation increase.

6/30/17 - Refer to page 69 for actuarial assumption changes in June 30, 2017 valuation.

\* The June 30, 2010 results have been revised to reflect the correct actuarial accrued liability which was overstated in the June 30, 2010 valuation.

## ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE (Dollar Amounts Expressed in Millions)

	Plan Years Ended June 30									
	2017	2016	2015	2014	2013	2012	2011	2010*	2009	2008
Prior Valuation Unfunded Actuarial Accrued Liability	<b>\$1,200</b>	\$1,190	\$1,268	\$1,413	\$1,308	\$962	\$874	\$932	\$433	\$382
Salary Increase Greater (Less) than Expected	<b>(3)</b>	(39)	(39)	(138)	(113)	(102)	(68)	(110)	42	55
Asset Return Less (Greater) than Expected	<b>3</b>	62	(24)	(38)	152	257	209	3	445	9
Other Experience	<b>(8)</b>	(13)	(15)	15	66	58	(31)	(59)	12	(13)
Economic and Non-Economic Assumption Changes	<b>824</b>	-	-	16	-	133	(22)	108	-	-
<b>Ending Unfunded Actuarial Accrued Liability</b>	<b>\$2,016</b>	<b>\$1,200</b>	<b>\$1,190</b>	<b>\$1,268</b>	<b>\$1,413</b>	<b>\$1,308</b>	<b>\$962</b>	<b>\$874</b>	<b>\$932</b>	<b>\$433</b>

Source: Prepared using extracted data from Actuarial Valuations from June 30, 2008 through 2017.

\* The June 30, 2010 results have been revised to reflect the correct actuarial accrued liability which was overstated in the June 30, 2010 valuation.



## PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT

Rate (%)				
Mortality				
Age	Miscellaneous		Safety	
	Male	Female	Male	Female
25	0.03%	0.01%	0.03%	0.01%
30	0.03	0.01	0.03	0.01
35	0.03	0.02	0.03	0.02
40	0.04	0.02	0.04	0.02
45	0.06	0.04	0.06	0.04
50	0.10	0.06	0.10	0.06
55	0.17	0.10	0.17	0.10
60	0.28	0.15	0.28	0.15
65	0.49	0.22	0.49	0.22

Note: The generational projections are not reflected in the above mortality rates. All Miscellaneous pre-retirement deaths are assumed to be nonservice-connected. For Safety, 50% pre-retirement deaths are assumed to be nonservice-connected and the rest are assumed to be service-connected.

Rate (%)		
Disability		
Age	Miscellaneous	Safety
20	0.00%	0.10%
25	0.01	0.10
30	0.03	0.16
35	0.05	0.32
40	0.08	0.43
45	0.13	0.51
50	0.21	0.76
55	0.34	0.96
60	0.46	1.30

Note: For Miscellaneous, 30% of disabilities are assumed to be service-connected disabilities and the other 70% are assumed to be nonservice-connected disabilities. For Safety, 90% of disabilities are assumed to be service-connected disabilities and the other 10% are assumed to be nonservice-connected disabilities.



**PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT (CONTINUED)**

Rate (%)		
Withdrawal (<5 Years of Service)		
Years of Service	Miscellaneous	Safety
0 - 1	13.00%	6.00%
1 - 2	8.00	5.00
2 - 3	7.00	4.00
3 - 4	6.00	3.00
4 - 5	5.50	3.00

Note: 65% of the Miscellaneous members and 50% of the Safety members are assumed to elect a refund of contributions upon separation, while the remaining 35% and 50% of Miscellaneous and Safety members, respectively, are assumed to elect a deferred retirement benefit. No withdrawal is assumed after a member is eligible to retire.

Withdrawal (5+ Years of Service)		
Age	Miscellaneous	Safety
20	5.50%	2.50%
25	5.50	2.50
30	5.20	2.20
35	4.40	1.70
40	3.40	1.35
45	2.70	1.10
50	2.44	1.00
55	2.34	1.00
60	2.24	1.00
65	1.48	0.00

Note: 40% of the Miscellaneous members and 15% of the Safety members are assumed to elect a refund of contributions upon separation, while the remaining 60% and 85% of Miscellaneous and Safety members, respectively, are assumed to elect a deferred retirement benefit. No withdrawal is assumed after a member is eligible to retire.







STATISTICAL

## SUMMARY OF STATISTICAL DATA

Issued in May 2004, pronouncement GASB Statement No. 44, *Economic Conditioning Reporting: The Statistical Section*, establishes and modifies requirements related to the supplementary information presented in this section of the report.

The pension trust fund is accounted for under the accrual basis of accounting. Information is provided for the last ten years ended June 30, 2017 for the following five objectives: financial trends; revenue capacity; debt capacity; demographic and economic; and operating.

Financial trends are presented on pages 125 to 129. The schedules contain trend information to aid in understanding how the System's financial performance has changed over time.

Revenue capacity is presented on pages 125, 127, and 128. The schedules contain information regarding the contribution amount and rate history for the last ten years.

Demographic and economic information is presented on pages 130 to 134. These schedules offer demographic and economic indicators to enhance understanding of the environment within which the System's financial activities take place. The schedules show the average monthly benefit payments followed by the System membership.

Operating information is presented on pages 135 and 136. These schedules contain pension plan data to assist in understanding how the information in the financial report relates to the pension plan the System administers. This section includes the schedules of principal participating employers and active members.





## SCHEDULE OF ADDITIONS BY SOURCE

(Dollar Amounts Expressed in Thousands)

Year Ended June 30:	Employee Contributions	Employer Contributions	Net Investment Income / (Loss)	Total
<b>2017</b>	<b>\$89,489</b>	<b>\$203,928</b>	<b>\$1,048,915</b>	<b>\$1,342,332</b>
2016	77,494	209,020	(72,399)	214,115
2015	68,143	222,959	158,222	449,324
2014	57,635	210,503	1,107,152	1,375,290
2013	68,242	189,664	785,449	1,043,355
2012	65,690	179,098	(3,414)	241,374
2011	57,151	182,921	1,206,775	1,446,847
2010	52,413	167,142	617,481	837,036
2009	54,623	177,011	(1,318,447)	(1,086,813)
2008	52,142	167,055	(234,086)	(14,889)

Source: Audited Financial Statements from June 30, 2008 through 2017

## SCHEDULE OF DEDUCTIONS BY TYPE

(Dollar Amounts Expressed in Thousands)

Year Ended June 30:	Benefits Paid					Total
	Service*	Survivor Benefits	Retiree Death Benefits	Administrative Expenses	Withdrawals	
<b>2017</b>	<b>\$426,292</b>	<b>\$2,479</b>	<b>\$983</b>	<b>\$6,906</b>	<b>\$2,312</b>	<b>\$438,972</b>
2016	399,690	2,443	1,223	6,362	2,346	412,064
2015	368,788	2,404	1,177	5,854	2,288	380,511
2014	341,756	2,116	1,018	5,665	2,729	353,284
2013	317,308	2,225	1,295	5,719	2,739	329,286
2012	295,598	2,284	882	6,288	3,040	308,092
2011	273,510	2,032	619	6,571	4,433	287,165
2010	250,553	1,993	546	5,908	4,932	263,932
2009	230,005	1,749	622	5,980	3,302	241,658
2008	212,406	1,865	621	5,866	3,177	223,935

\*Amounts reported here include both service and disability retirement benefits and active death benefits.

Source: Audited Financial Statements from June 30, 2008 through 2017 and SCERS Retired Member Pension Payroll Data.



## SCHEDULE OF ADMINISTRATIVE EXPENSES

For the Last Ten Fiscal Years Ended June 30

(Dollar Amounts Expressed in Thousands)

Type of Expenses	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Salaries and Benefits	<b>\$3,984</b>	\$3,506	\$3,445	\$3,300	\$3,284	\$3,530	\$3,755	\$3,215	\$3,184	\$3,130
Professional Fees	<b>1,149</b>	1,081	811	786	857	1,146	1,137	719	842	942
Rent and Lease Expense	<b>488</b>	501	456	460	432	458	444	576	603	571
Depreciation Expense	<b>27</b>	34	36	36	36	37	17	5	5	5
Equipment Purchases and Maintenance	<b>61</b>	26	32	21	24	44	35	29	62	41
Other Administrative Expenses	<b>1,197</b>	1,214	1,074	1,062	1,086	1,073	1,183	1,364	1,284	1,177
<b>Total</b>	<b>\$6,906</b>	<b>\$6,362</b>	<b>\$5,854</b>	<b>\$5,665</b>	<b>\$5,719</b>	<b>\$6,288</b>	<b>\$6,571</b>	<b>\$5,908</b>	<b>\$5,980</b>	<b>\$5,866</b>

Source: SCERS Annual Budget from June 30, 2008 through 2017

## SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

For the Last Ten Fiscal Years Ended June 30

(Dollar Amounts Expressed In Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Employee contributions	<b>\$89,489</b>	\$77,494	\$68,143	\$57,635	\$68,242	\$65,690	\$57,151	\$52,413	\$54,623	\$52,142
Employer contributions	<b>203,928</b>	209,020	222,959	210,503	189,664	179,098	182,921	167,142	177,011	167,054
Net investment income/(loss)	<b>1,048,915</b>	(72,399)	158,222	1,107,152	785,449	(3,414)	1,206,775	617,481	(1,318,447)	(234,086)
<b>Total additions</b>	<b>1,342,332</b>	214,115	449,324	1,375,290	1,043,355	241,374	1,446,847	837,036	(1,086,813)	(14,890)
Benefits paid	<b>429,754</b>	403,356	372,369	344,890	320,828	298,764	276,161	253,092	232,376	214,891
Withdrawals	<b>2,312</b>	2,346	2,288	2,729	2,739	3,040	4,433	4,932	3,302	3,177
Administrative expenses	<b>6,906</b>	6,362	5,854	5,665	5,719	6,288	6,571	5,908	5,980	6,575
<b>Total deductions</b>	<b>438,972</b>	412,064	380,511	353,284	329,286	308,092	287,165	263,932	241,658	224,643
<b>Change in net position</b>	<b>903,360</b>	(197,949)	68,813	1,022,006	714,069	(66,718)	1,159,682	573,104	(1,328,471)	(239,533)
<b>Net position, beginning</b>	<b>7,680,865</b>	7,878,814	7,810,001	6,787,995	6,073,926	6,140,644	4,980,962	4,407,858	5,736,329	5,975,862
<b>Net position, ending</b>	<b>\$8,584,225</b>	<u>\$7,680,865</u>	<u>\$7,878,814</u>	<u>\$7,810,001</u>	<u>\$6,787,995</u>	<u>\$6,073,926</u>	<u>\$6,140,644</u>	<u>\$4,980,962</u>	<u>\$4,407,858</u>	<u>\$5,736,329</u>

Source: Audited Financial Statements from June 30, 2008 through 2017



## SCHEDULE OF EMPLOYER CONTRIBUTION RATES

Actuarial Valuation Year Ended	COUNTY*										COURT				SPECIAL DISTRICTS			
	Miscellaneous					Safety					Miscellaneous				Miscellaneous		Safety	
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 5	Tier 1	Tier 3	Tier 5	Tier 3	
<b>6/30/2017</b>	<b>18.43%</b>	<b>15.85%</b>	<b>18.62%</b>	<b>17.96%</b>	<b>16.96%</b>	<b>48.41%</b>	<b>44.28%</b>	<b>43.33%</b>	<b>39.72%</b>	<b>21.59%</b>	<b>20.11%</b>	<b>23.56%</b>	<b>16.93%</b>	<b>30.00%</b>	<b>31.86%</b>	<b>25.34%</b>	<b>N/A</b>	
6/30/2016	15.83	13.85	15.89	15.01	14.11	41.30	37.44	36.51	34.11	18.16	16.87	19.84	14.08	26.27	27.85	22.19	N/A	
6/30/2015	16.26	15.01	17.41	15.25	14.13	42.11	39.42	37.73	34.40	17.99	16.66	19.83	14.09	25.92	27.76	22.02	N/A	
6/30/2014	17.58	16.55	19.24	15.96	14.87	42.59	41.56	39.92	35.13	18.55	17.54	20.65	14.87	26.16	28.26	22.48	N/A	
6/30/2013**	22.91	20.71	23.29	17.91	17.14	43.59	41.92	41.06	35.61	22.91	20.71	23.29	17.14	30.00	30.50	24.19	N/A	
6/30/2012***	20.83	18.28	21.18	16.33	15.01	41.85	37.00	35.55	29.28	20.83	18.28	21.18	15.01	27.77	28.25	22.03	N/A	
6/30/2011****	19.09	16.55	19.36	14.19	N/A	37.19	32.38	29.50	N/A	19.09	16.55	19.36	N/A	25.59	25.90	N/A	57.40	
6/30/2010*****	18.11	15.63	18.49	N/A	N/A	35.03	30.60	N/A	N/A	18.11	15.63	18.49	N/A	24.45	24.94	N/A	54.42	
6/30/2009	18.15	15.75	18.60	N/A	N/A	38.95	34.66	N/A	N/A	18.15	15.75	18.60	N/A	24.58	25.26	N/A	49.86	
6/30/2008	15.46	13.07	15.88	N/A	N/A	33.65	29.53	N/A	N/A	15.46	13.07	15.88	N/A	22.08	22.57	N/A	39.25	

Source: Actuarial Valuations from June 30, 2008 though 2017

Note: Actuarial Valuations are prepared subsequent to a fiscal year-end and determine rates which pertain to the following fiscal year. For example, the Actuarial Valuation as of June 30, 2016 is used to determine rates for the fiscal year 2017-2018.

\* Effective for the June 30, 2012 Actuarial Valuation, County includes County elected officials (Board of Supervisors, Sheriff, District Attorney and Assessor).

\*\* Effective July 1, 2014, subsequent to the completion of the actuarial valuation for the year ended June 30, 2013, the County and several bargaining groups entered into an agreement for members to pick up an additional portion of the total normal cost in fiscal year 2014-2015. The County employer contribution rates shown have not been adjusted to reflect the members agreeing to pick up an additional portion of the total normal cost.

\*\*\* Miscellaneous Tier 5 and Safety Tier 4 plans were established effective January 1, 2013.

\*\*\*\* Miscellaneous Tier 4 and Safety Tier 3 plans were established effective January 1, 2012.

\*\*\*\*\* Contribution rates for Safety members were revised to adjust for the overstatement of the unfunded actuarial accrued liability (UAAL) contribution rate in the June 30, 2010 valuation.

## SCHEDULE OF BENEFITS PAID AND WITHDRAWALS BY TYPE

For the Last Ten Fiscal Years Ended June 30

(Dollar Amounts Expressed in Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Type of Benefit</b>										
Service Retirement Benefits	<b>\$426,292</b>	\$399,690	\$368,788	\$341,756	\$317,308	\$295,598	\$273,062	\$250,192	\$229,659	\$212,061
Survivor Benefits	<b>2,479</b>	2,443	2,404	2,116	2,225	2,284	2,032	1,993	1,749	1,865
Death Benefits-Before Retirement	<b>218</b>	352	411	312	542	189	448	361	346	345
Death Benefits-After Retirement	<b>765</b>	871	766	706	753	693	619	546	622	621
<b>Total Benefits Paid</b>	<b><u>\$429,754</u></b>	<u>\$403,356</u>	<u>\$372,369</u>	<u>\$344,890</u>	<u>\$320,828</u>	<u>\$298,764</u>	<u>\$276,161</u>	<u>\$253,092</u>	<u>\$232,376</u>	<u>\$214,892</u>
<b>Type of Withdrawal</b>										
Death	<b>\$298</b>	\$522	\$320	\$445	\$547	\$365	\$463	\$526	\$601	\$111
Separation	<b>1,974</b>	1,786	1,815	2,211	2,153	2,663	3,898	4,303	2,550	2,940
Miscellaneous	<b>40</b>	38	153	73	39	12	72	103	151	126
<b>Total Withdrawals</b>	<b><u>\$2,312</u></b>	<u>\$2,346</u>	<u>\$2,288</u>	<u>\$2,729</u>	<u>\$2,739</u>	<u>\$3,040</u>	<u>\$4,433</u>	<u>\$4,932</u>	<u>\$3,302</u>	<u>\$3,177</u>

Source: SCERS Retired Member Pension Payroll Data.





## SCHEDULE OF DISTRIBUTION OF RETIRED MEMBERS AND BENEFICIARIES BY TYPE AND BY MONTHLY AMOUNT

As of June 30, 2017

Amount of Monthly Benefit	Total Number of Retired Members	Type of Retirement*															Option Selected**				
		1	2	3	4	5	6	7	8	9	10	11	12	13	16	17	Unmodified	1	2	3	4
\$1 - \$499	817	580	20	6	5	6	89	25	9	2	22	-	39	-	3	11	594	69	134	8	12
500 - 999	1,337	929	35	9	-	-	151	77	58	4	19	1	50	-	-	4	1,040	103	161	11	22
1,000 - 1,499	1,410	1,053	66	20	4	4	122	41	44	2	12	2	37	3	-	-	1,165	84	135	15	11
1,500 - 1,999	1,211	892	53	16	26	10	117	26	19	2	9	-	39	2	-	-	1,010	53	131	13	4
2,000 - 2,499	1,053	806	34	12	47	13	84	7	8	11	13	1	16	1	-	-	892	50	104	2	5
2,500 - 2,999	908	747	6	4	35	11	66	6	5	11	5	1	9	2	-	-	788	30	74	7	9
3,000 - 3,499	721	569	7	3	34	24	58	2	-	6	2	-	9	6	1	-	611	33	65	6	6
3,500 - 3,999	622	490	1	-	37	32	37	-	-	14	4	-	4	2	-	1	545	22	48	3	4
4,000 - 4,499	555	449	2	-	29	19	29	1	-	13	2	-	2	9	-	-	495	15	37	1	7
4,500 - 4,999	440	393	-	-	12	8	19	1	-	3	-	-	2	2	-	-	398	13	25	2	2
5,000 & over	2,322	2,195	2	-	44	16	38	2	1	15	4	-	2	3	-	-	2,109	44	142	15	12
<b>Total</b>	<b>11,396</b>	<b>9,103</b>	<b>226</b>	<b>70</b>	<b>273</b>	<b>143</b>	<b>810</b>	<b>188</b>	<b>144</b>	<b>83</b>	<b>92</b>	<b>5</b>	<b>209</b>	<b>30</b>	<b>4</b>	<b>16</b>	<b>9,647</b>	<b>516</b>	<b>1,056</b>	<b>83</b>	<b>94</b>

\* Type of Retirement:

- 1 Service Retirement
- 2 Nonservice-Connected Disability, age 55 and older
- 3 Nonservice-Connected Disability, under age 55
- 4 Service-Connected Disability (SCD), age 55 and older
- 5 Service-Connected Disability, under age 55
- 6 Beneficiary of Service Retiree
- 7 Survivor Death Benefits (SDB)
- 8 Beneficiary of Nonservice-Connected Disability Retiree
- 9 Beneficiary of Service-Connected Disability Retiree
- 10 Divorce-Receiving Benefits
- 11 Interim Nonservice-Connected Disability Retirement
- 12 Non-Member Receiving Benefits
- 13 Survivor Death Benefits-SCD
- 16 Beneficiary of Non-Member
- 17 Beneficiary of Divorce-Receiving Benefits

\*\* Option Selected:

Unmodified: Qualified service retirement or nonservice-connected disability retirement beneficiary receives 60 percent continuance. Qualified service-connected disability retirement beneficiary receives 100 percent continuance.

The following options reduce the retired member's monthly benefit:

- Option 1 - Beneficiary receives lump sum or member's unused contributions.
- Option 2 - Beneficiary having an insurable interest in member's life receives 100 percent of member's reduced monthly benefit.
- Option 3 - Beneficiary having an insurable interest in member's life receives 50 percent of member's reduced monthly benefit.
- Option 4 - Benefits paid to person having an insurable interest in member's life as nominated by member's written designation.

Source: SCERS Retired Member Pension Payroll Data

# SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT

As of June 30, 2017

## Miscellaneous Members

	Monthly Allowances				Average Benefit
	Count	Basic	COL	Total	
<b>Service Retirement</b>					
Unmodified	6,256	\$15,002,453	\$3,593,126	\$18,595,579	\$2,972
Option 1	394	624,660	169,315	793,975	2,015
Options 2, 3, & 4	806	1,610,713	301,615	1,912,328	2,373
<b>Total</b>	<b>7,456</b>	<b>\$17,237,826</b>	<b>\$4,064,056</b>	<b>\$21,301,882</b>	<b>\$2,857</b>
<b>Non-Service Disability</b>					
Unmodified	247	\$270,413	\$113,481	\$383,894	\$1,554
Option 1	22	18,807	8,829	27,636	1,256
Options 2, 3, & 4	15	15,830	2,888	18,718	1,248
<b>Total</b>	<b>284</b>	<b>\$305,050</b>	<b>\$125,198</b>	<b>\$430,248</b>	<b>\$1,515</b>
<b>Service Disability</b>					
Unmodified	170	\$299,999	\$146,259	\$446,258	\$2,625
Option 1	8	12,003	5,731	17,734	2,217
Options 2, 3, & 4	4	4,434	2,685	7,119	1,780
<b>Total</b>	<b>182</b>	<b>\$316,436</b>	<b>\$154,675</b>	<b>\$471,111</b>	<b>\$2,589</b>
<b>Beneficiary</b>	<b>1,203</b>	<b>\$1,125,408</b>	<b>\$717,659</b>	<b>\$1,843,067</b>	<b>\$1,532</b>
<b>Total Miscellaneous</b>	<b>9,125</b>	<b>\$18,984,720</b>	<b>\$5,061,588</b>	<b>\$24,046,308</b>	<b>\$2,635</b>

## Safety Members

	Monthly Allowances				Average Benefit
	Count	Basic	COL	Total	
<b>Service Retirement</b>					
Unmodified	1,466	\$7,795,527	\$2,163,629	\$9,959,156	\$6,793
Option 1	39	149,715	47,019	196,734	5,044
Options 2, 3, & 4	142	664,087	119,794	783,881	5,520
<b>Total</b>	<b>1,647</b>	<b>\$8,609,329</b>	<b>\$2,330,442</b>	<b>\$10,939,771</b>	<b>\$6,642</b>
<b>Non-Service Disability</b>					
Unmodified	13	\$18,272	\$9,552	\$27,824	\$2,140
Option 1	1	850	156	1,006	1,006
Options 2, 3, & 4	3	6,009	814	6,823	2,274
<b>Total</b>	<b>17</b>	<b>\$25,131</b>	<b>\$10,522</b>	<b>\$35,653</b>	<b>\$2,097</b>
<b>Service Disability</b>					
Unmodified	216	\$657,369	\$325,422	\$982,791	\$4,550
Option 1	13	33,737	17,801	51,538	3,964
Options 2, 3, & 4	5	9,840	5,223	15,063	3,013
<b>Total</b>	<b>234</b>	<b>\$700,946</b>	<b>\$348,446</b>	<b>\$1,049,392</b>	<b>\$4,485</b>
<b>Beneficiary</b>	<b>373</b>	<b>\$663,581</b>	<b>\$421,566</b>	<b>\$1,085,147</b>	<b>\$2,909</b>
<b>Total Safety</b>	<b>2,271</b>	<b>\$9,998,987</b>	<b>\$3,110,976</b>	<b>\$13,109,963</b>	<b>\$5,773</b>
<b>Total Miscellaneous and Safety</b>	<b>11,396</b>	<b>\$28,983,707</b>	<b>\$8,172,564</b>	<b>\$37,156,271</b>	<b>\$3,260</b>

Source: Prepared by Segal Consulting

Note: Refer to page 130 for the description of retirement options.

# SCHEDULE OF AVERAGE BENEFIT PAYMENTS

For the Last Ten Fiscal Years

Retirement Effective Date	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
<b>7/1/16 - 6/30/17</b>							
Average monthly benefit	\$628	\$1,275	\$1,698	\$2,681	\$4,249	\$6,279	\$6,902
Average monthly final average salary	\$8,186	\$6,730	\$5,728	\$5,993	\$7,463	\$8,503	\$8,475
Number of retired members	35	58	108	115	88	108	73
<b>7/1/15 - 6/30/16</b>							
Average monthly benefit	\$581	\$1,110	\$1,768	\$2,378	\$4,268	\$5,083	\$6,630
Average monthly final average salary	\$8,700	\$6,355	\$5,856	\$5,568	\$7,428	\$7,410	\$7,934
Number of retired members	23	87	118	69	88	94	69
<b>7/1/14 - 6/30/15</b>							
Average monthly benefit	\$569	\$1,052	\$1,845	\$2,524	\$4,305	\$6,378	\$6,557
Average monthly final average salary	\$8,340	\$6,184	\$5,967	\$6,047	\$7,236	\$8,574	\$7,768
Number of retired members	33	74	109	98	89	112	89
<b>7/1/13 - 6/30/14</b>							
Average monthly benefit	\$488	\$1,216	\$1,558	\$2,583	\$4,490	\$5,190	\$7,239
Average monthly final average salary	\$7,757	\$6,710	\$5,223	\$6,071	\$7,727	\$7,345	\$8,539
Number of retired members	17	62	128	85	75	77	72
<b>7/1/12 - 6/30/13</b>							
Average monthly benefit	\$494	\$994	\$1,652	\$2,832	\$3,936	\$5,519	\$6,151
Average monthly final average salary	\$7,477	\$5,415	\$5,608	\$6,613	\$6,831	\$7,730	\$7,524
Number of retired members	28	63	128	69	77	73	55
<b>7/1/11 - 6/30/12</b>							
Average monthly benefit	\$504	\$1,093	\$1,631	\$2,703	\$3,986	\$5,740	\$6,064
Average monthly final average salary	\$7,652	\$6,041	\$5,545	\$6,279	\$7,059	\$8,120	\$7,246
Number of retired members	35	77	118	58	102	66	75
<b>7/1/10 - 6/30/11</b>							
Average monthly benefit	\$461	\$1,017	\$1,500	\$2,580	\$3,620	\$6,026	\$5,920
Average monthly final average salary	\$6,797	\$5,576	\$5,245	\$6,104	\$6,559	\$8,466	\$7,394
Number of retired members	21	82	118	69	112	94	80
<b>7/1/09 - 6/30/10</b>							
Average monthly benefit	\$422	\$992	\$1,623	\$2,501	\$3,239	\$4,789	\$5,714
Average monthly final average salary	\$6,582	\$5,306	\$5,549	\$6,071	\$6,022	\$7,278	\$6,930
Number of retired members	30	69	87	78	75	65	75
<b>7/1/08 - 6/30/09</b>							
Average monthly benefit	\$462	\$900	\$1,727	\$2,232	\$4,074	\$6,298	\$7,227
Average monthly final average salary	\$6,968	\$5,425	\$5,697	\$5,397	\$6,893	\$8,437	\$8,369
Number of retired members	14	52	68	60	58	58	66
<b>7/1/07 - 6/30/08</b>							
Average monthly benefit	\$359	\$977	\$1,626	\$2,202	\$3,151	\$5,729	\$6,171
Average monthly final average salary	\$5,974	\$5,428	\$5,467	\$5,874	\$5,729	\$7,992	\$7,685
Number of retired members	25	35	75	56	53	44	52

Source: SCERS Retired Member Pension Payroll Data





# SCHEDULE OF AVERAGE BENEFIT PAYMENTS

For the Last Ten Fiscal Years

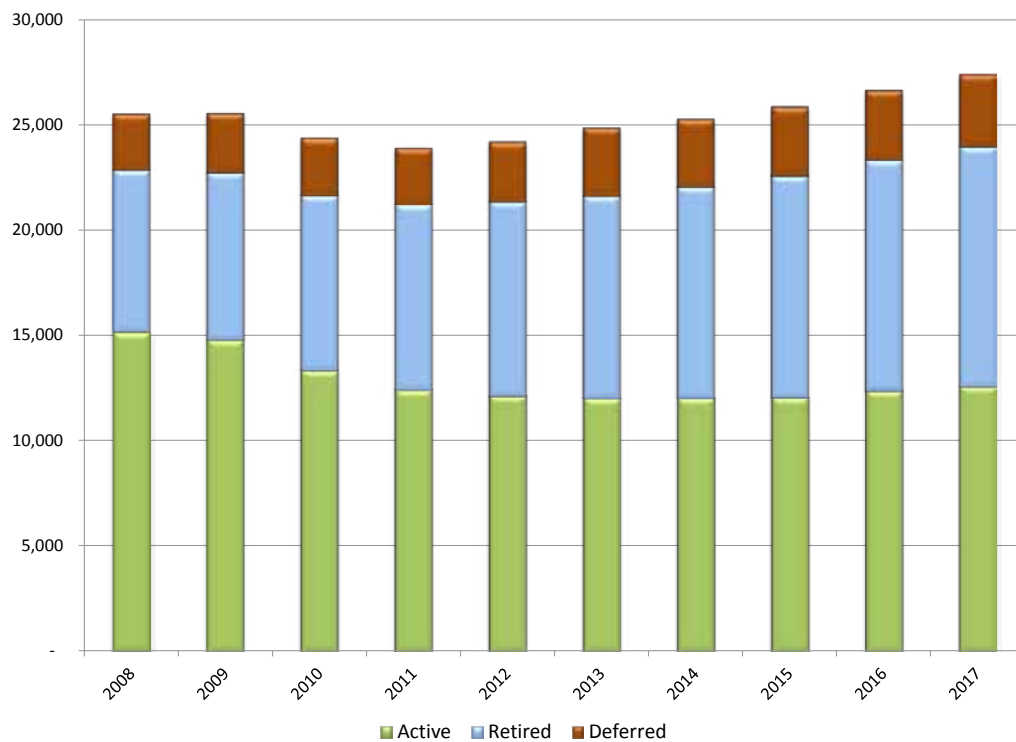
As Of	Years Since Retirement						
	0-5	5-10	10-15	15-20	20-25	25-30	30 +
<b>6/30/17:</b>							
Average monthly benefit	\$3,472	\$3,592	\$3,783	\$2,666	\$2,720	\$2,359	\$1,983
Number of retired members	3,027	2,475	2,365	1,214	1,006	646	663
<b>6/30/16:</b>							
Average monthly benefit	\$3,398	\$3,550	\$3,560	\$2,626	\$2,623	\$2,175	\$1,963
Number of retired members	2,946	2,418	2,152	1,181	966	642	625
<b>6/30/15:</b>							
Average monthly benefit	\$3,409	\$3,456	\$3,371	\$2,616	\$2,532	\$2,098	\$1,818
Number of retired members	2,933	2,241	1,958	1,250	942	601	616
<b>6/30/14:</b>							
Average monthly benefit	\$3,240	\$3,392	\$3,177	\$2,503	\$2,493	\$2,026	\$1,709
Number of retired members	2,809	2,254	1,726	1,199	901	586	574
<b>6/30/13:</b>							
Average monthly benefit	\$3,272	\$3,412	\$2,603	\$2,400	\$2,438	\$1,902	\$1,676
Number of retired members	2,635	2,512	1,368	1,123	882	590	524
<b>6/30/12:</b>							
Average monthly benefit	\$3,237	\$3,355	\$2,352	\$2,449	\$2,142	\$1,805	\$1,643
Number of retired members	2,468	2,467	1,314	1,140	813	562	475
<b>6/30/11:</b>							
Average monthly benefit	\$3,209	\$3,173	\$2,336	\$2,400	\$1,936	\$1,728	\$1,594
Number of retired members	2,417	2,216	1,298	1,110	792	563	425
<b>6/30/10:</b>							
Average monthly benefit	\$3,150	\$3,022	\$2,343	\$2,318	\$1,911	\$1,704	\$1,351
Number of retired members	2,206	2,019	1,360	1,058	744	547	412
<b>6/30/09:</b>							
Average monthly benefit	\$3,133	\$2,886	\$2,309	\$2,322	\$1,884	\$1,590	\$1,276
Number of retired members	2,247	1,787	1,299	1,012	726	527	370
<b>6/30/08:</b>							
Average monthly benefit	\$3,197	\$2,199	\$2,214	\$2,250	\$1,751	\$1,501	\$1,226
Number of retired members	2,582	1,373	1,207	997	730	509	311

Source: SCERS Retired Member Pension Payroll Data

## CHANGES IN SYSTEM MEMBERSHIP

Year Ended June 30:	Active Members	Retired Members	Deferred Members	Total
<b>2017</b>	<b>12,587</b>	<b>11,396</b>	<b>3,425</b>	<b>27,408</b>
2016	12,393	10,960	3,301	26,654
2015	12,072	10,541	3,261	25,874
2014	12,049	10,049	3,201	25,299
2013	12,026	9,634	3,249	24,909
2012	12,155	9,239	2,851	24,245
2011	12,434	8,821	2,710	23,965
2010	13,340	8,346	2,740	24,426
2009	14,796	7,968	2,818	25,582
2008	15,180	7,709	2,661	25,550

## SYSTEM MEMBERSHIP AT A GLANCE



Source: Actuarial Valuations from June 30, 2008 through 2017



## SCHEDULE OF PARTICIPATING EMPLOYERS AND ACTIVE MEMBERS - SUMMARY

Current Fiscal Year and Nine Fiscal Years Ago

Participating Employer	2017			2008		
	Covered Employees	Rank	Percent of Total System	Covered Employees	Rank	Percent of Total System
County of Sacramento	11,282	1	89.63%	13,638	1	89.84%
Superior Court	658	2	5.23	843	2	5.55
S.E.T.A.	516	3	4.10	597	3	3.93
Sunrise Recreation and Park District	55	4	0.44	28	4	0.18
Mission Oaks Recreation and Park District	23	5	0.18	13	7	0.09
Carmichael Recreation and Park District	19	6	0.15	24	5	0.16
Orangevale Recreation and Park District	14	7	0.11	12	6	0.08
Elected Officials*	8	8	0.06	8	8	0.05
Elk Grove Cosumnes Cemetery District	5	9	0.04	3	11	0.02
Fair Oaks Cemetery District	5	9	0.04	4	10	0.03
Galt-Arno Cemetery District	2	10	0.02	3	11	0.02
Sacramento Metropolitan Fire District	-	11	0.00	6	9	0.04
U.C. Davis Medical Center	-	11	0.00	1	12	0.01
<b>Total</b>	<b>12,587</b>		<b>100.00%</b>	<b>15,180</b>		<b>100.00%</b>

\*Elected Officials consisted of Board of Supervisors (5), Assessor (1), District Attorney (1), and Sheriff (1).

Source: SCERS Active Member Data



## SCHEDULE OF PARTICIPATING EMPLOYERS AND ACTIVE MEMBERS - DETAIL

For the Last Ten Fiscal Years Ended June 30

SCERS Member Agency	Plan	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Carmichael Recreation and Park District	Misc.	19	20	19	21	21	20	22	26	29	24
Elk Grove Cosumnes Cemetery District	Misc.	5	6	4	6	5	5	2	3	4	3
Fair Oaks Cemetery District	Misc.	5	4	4	4	4	4	3	4	4	4
Galt-Arno Cemetery District	Misc.	2	1	1	1	1	1	1	1	3	3
Mission Oaks Recreation and Park District	Misc.	23	11	12	12	12	12	13	14	13	13
Orangevale Recreation and Park District	Misc.	14	13	13	13	15	15	15	16	17	12
Sacramento Metropolitan Fire District	Safety	-	-	-	-	-	-	3	3	4	6
S.E.T.A.	Misc.	516	548	544	547	565	566	568	584	604	597
Sunrise Recreation and Park District	Misc.	55	19	22	22	21	21	23	26	28	28
U.C. Davis Medical Center	Misc.	-	-	-	-	-	1	1	1	1	1
Elected Officials*	Misc.	7	7	7	7	7	7	7	7	7	7
Elected Officials*	Safety	1	1	1	1	1	1	1	1	1	1
<b>Total Special District Members</b>	Misc.	<b>646</b>	629	626	633	651	652	655	682	710	692
	Safety	<b>1</b>	1	1	1	1	1	4	4	5	7
<b>Superior Court Members</b>	Misc.	<b>658</b>	651	631	625	632	698	745	765	807	843
<b>Sacramento County Members</b>	Misc.	<b>9,273</b>	9,083	8,836	8,827	8,830	8,906	9,121	9,865	10,937	11,190
	Safety	<b>2,009</b>	2,029	1,978	1,963	1,912	1,898	1,909	2,024	2,337	2,448
<b>Total Members</b>	Misc.	<b>10,577</b>	10,363	10,093	10,085	10,113	10,256	10,521	11,312	12,454	12,725
	Safety	<b>2,010</b>	2,030	1,979	1,964	1,913	1,899	1,913	2,028	2,342	2,455
	<b>Total</b>	<b>12,587</b>	<b>12,393</b>	<b>12,072</b>	<b>12,049</b>	<b>12,026</b>	<b>12,155</b>	<b>12,434</b>	<b>13,340</b>	<b>14,796</b>	<b>15,180</b>

\*Elected Officials consisted of Board of Supervisors (5), Assessor (1), District Attorney (1), who were miscellaneous members, and one Sheriff who was a safety member.

Source: SCERS Active Member Data





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