





#### **COMPREHENSIVE ANNUAL FINANCIAL REPORT**

For the Fiscal Years Ended June 30, 2016 and 2015

Issued by:

#### RICHARD STENSRUD

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

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#### LETTER OF TRANSMITTAL



Executive Staff
Richard Stensrud
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

December 2, 2016

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

Dear Board Members:

As 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, 2016 and 2015.

#### 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, 2016, 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. Macias Gini & O'Connell LLP, 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 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)

In 2011, the SCERS Board approved an asset allocation model designed to lower the overall risk of SCERS' portfolio by increasing the allocation to asset classes that produce greater diversification and decreasing the equity risk exposure. During fiscal year 2015-2016, SCERS continued the implementation of the asset allocation model, and in addition, initiated a new asset/liability study.

For the fiscal year ended June 30, 2016, SCERS' investments provided a (0.6%) rate of return (gross of fees), compared to the investment policy benchmark return of 1.5%.

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, 2016. 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, 2013, and as a result of that analysis, the Board of Retirement approved certain changes to the actuarial assumptions, which were incorporated in the subsequent actuarial valuations including the valuation as of June 30, 2016.

At June 30, 2016, SCERS' funding ratio was 87.3%, with the actuarial value of assets totaling \$8.236 billion and the actuarial accrued liability totaling \$9.436 billion. The increase in the funding ratio (up from 86.8% as of June 30, 2015) was mainly due to lower-than-expected active employee salary growth and cost-of-living adjustments. Deferred losses under the smoothing methodology exceeded deferred gains by \$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 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 \$5.5 million and \$5.2 million for the years ended June 30, 2016 and June 30, 2015, 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 needs, including possible modifications
  and enhancements of SCERS' systems to accommodate operational needs, and strategically planning
  information technological needs. Engaged Linea Solutions, Inc. to provide SCERS with consulting
  services related to pension administration and financial systems evaluation, procurement and
  implementation, and initiated the assessment phase of the IT Modernization Program.
- Continued to work with Sacramento County Department of Personnel Services and Department of Technology (DTech) to design and implement the retirement rate redesign for the additional cost-sharing arrangements negotiated between the County and recognized employee organizations.
- Began working with Orangevale Recreation and Park District to move toward a 50/50 normal costsharing arrangement in which the employees begin paying towards 50% of the combined employee and employer normal cost over the next two fiscal years.
- Worked with Sacramento Metropolitan Fire District to determine a terminal withdrawal liability.
- Worked with Sacramento County Voter Registration and Elections to conduct elections for the Board
  of Retirement in September 2015; conducted a concurrent election for the remaining unexpired term of
  the vacant Miscellaneous Board Representative whose term begins January 1, 2016 and an election
  for the Safety and Alternate Safety Board Representatives for the term beginning January 1, 2016.
- Conducted and reported on the final compensation review process mandated by the California Public Employees' Pension Reform Act of 2013 (CalPEPRA).
- Conferred with participating employers regarding retired annuitant practices and reviewed additional post retirement employment restrictions imposed by CalPEPRA.
- Initiated submission of a renewal of qualified plan status with the Internal Revenue Service.
- Initiated a review of the policies and practices used by SCERS participating employers with respect to enrolling eligible employees in SCERS.
- Initiated an asset allocation study for SCERS.
- Conducted and completed an emerging markets all-cap equity search within SCERS' International Equity asset class.
- Initiated a large cap international developed markets search within SCERS' International Equity asset class.
- Identified, performed due diligence and made direct investments in SCERS' Private Equity, Real Assets and Opportunities asset classes.
- Assessed the need for the addition of a strategic partner for segments of the Private Equity and Real Assets asset classes.
- Presented the annual reports and annual investment plans for the Private Equity and Real Assets asset classes.
- Prepared the 2015 Investment Year in Review Report.
- Continued to execute plans for the long-term direction, sub-asset class structure and investment
  manager structure of SCERS' real estate program including: (1) Assessment of core separate
  account properties and open-end commingled funds; and (2) Review of opportunities in value add and
  opportunistic real estate.

#### LETTER OF TRANSMITTAL (CONTINUED)

- Made modifications to SCERS' overlay proxy within the Real Assets asset class to increase diversification across the liquid real assets investable universe.
- Evaluated reduced volatility equity strategies.
- Monitored and assessed the direction of SCERS' securities lending program.
- Researched and assessed the need for additional risk management systems and tools.
- Continued to assess the investment manager lineup across SCERS' fund.
- Assessed risk in global currency exposures.
- Conducted investment education programs on timberland and currency exposures.

#### Certificate of Achievement

The Government Finance Officers Association of the United States and Canada ("GFOA") awarded SCERS the Certificate of Achievement for Excellence in Financial Reporting to SCERS for its comprehensive annual financial report for the fiscal years ended June 30, 2015 and 2014. 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 seventeenth consecutive year that SCERS has achieved 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 for the award.

SCERS also received the GFOA Award for Outstanding Achievement in Popular Annual Financial Reporting ("PAFR") for the fiscal year ended June 30, 2015. This was the seventh consecutive year SCERS has achieved 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,

Richard Stensrud Chief Executive Officer



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, 2015

Jeffry K. Ener

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
Michael DeBord
Elected by Retired
Members
Present term expires
December 31, 2016



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



Trustee
Diana Gin
Elected by Miscellaneous
Members
Present term expires
December 31, 2016



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, 2016

# ORGANIZATION CHART

#### **BOARD OF RETIREMENT**



Richard Stensrud **Chief Executive Officer** 



Steve Davis **Chief Investment Officer** 



Robert L. Gaumer **General Counsel** 



**Chief Benefits Officer** 



Kathryn T. Regalia **Chief Operations Officer** 



Vacant **Deputy Chief Investment Officer** 

Investment policy and objectives

Investment compliance and performance reporting

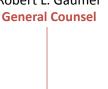
Asset allocation rebalancing

Conduct manager searches

Manager due diligence

Proxy voting and corporate governance

Board education on investment issues



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

contracts, resolutions and opinions

programs

Legal service planning





Suzanne Likarich **Retirement Services Manager** 



**Thuyet Dang Senior Accounting Manager** 

Legislative proposals,

Legal education

and budgeting

Service, disability, deferred, and reciprocal retirements publications and

Pension payroll administration

Seminar presentations and member retirement counseling

Retirement communications

Death benefits and service credit purchases

Community property interest resolution

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

#### Actuary

**Segal Consulting** 

#### Auditor

Macias Gini & O'Connell LLP

#### Custodian

**State Street Corporation** 

#### **Investment Consultant**

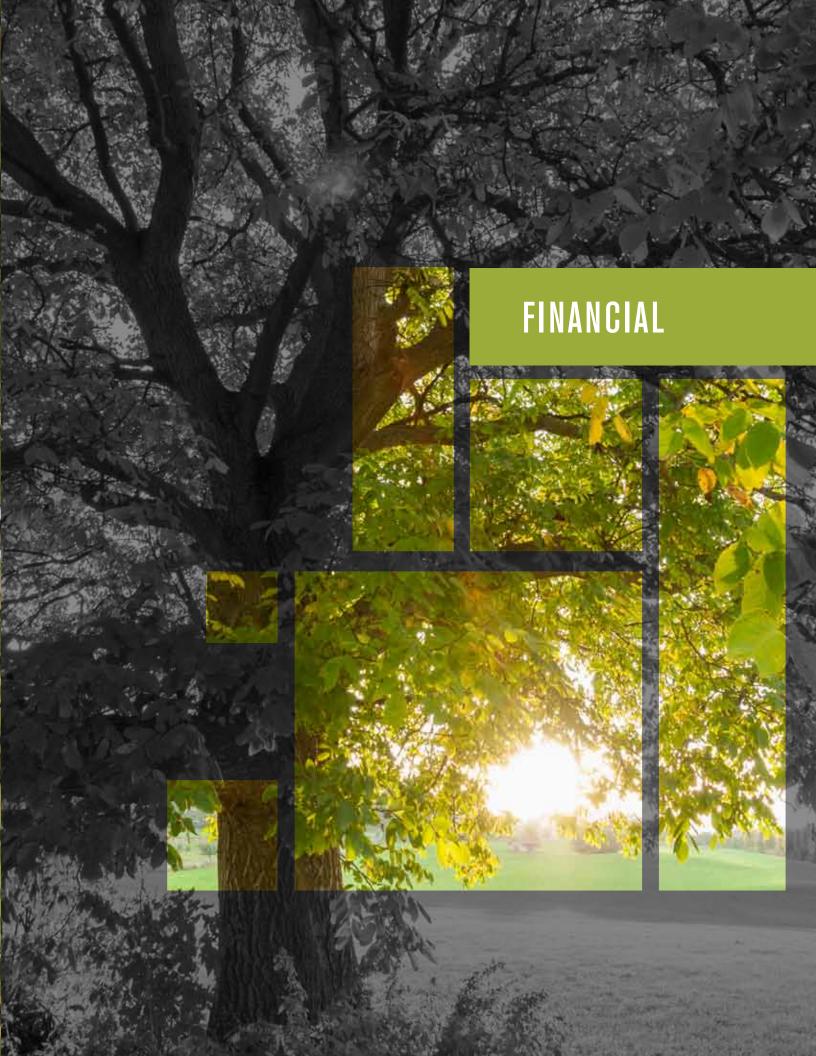
Cliffwater, LLC The Townsend Group Verus Advisory, Inc.

#### **Legal Counsel**

Nossaman, LLP **Public Pension Consultants** Sacramento County Office of the County Counsel

Note: Investment professionals are listed on pages 104 and 105, and a schedule of manager fees is located on pages 100 to 103 of this report in the Investment Section.





#### INDEPENDENT AUDITOR'S REPORT



**Century City** 

Los Angeles

Newport Beach

Oakland

Sacramento

San Diego

San Francisco

Walnut Creek

Woodland Hills

#### **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 financial statements of the Sacramento County Employees' Retirement System (the System) as of and for the fiscal years ended June 30, 2016 and 2015, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

#### 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 audits 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 misstatements of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

#### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Sacramento County Employees' Retirement System as of June 30, 2016 and 2015, and the changes in fiduciary net position for the fiscal years then ended in accordance with accounting principles generally accepted in the United States of America.

#### **Emphasis of Matter**

As discussed in Note 2 to the basic financial statements, the System implemented the provisions of Governmental Accounting Standards Board Statement No. 72, *Fair Value Measurement and Application*, effective for the fiscal years ended June 30, 2016 and 2015.

As discussed in Note 4 to the basic financial statements, the total pension liability based on actuarial valuations as of June 30, 2016 and 2015, exceeded the System's fiduciary net position by \$1.8 billion and \$1.1 billion, respectively. Actuarial valuations are very sensitive to the underlying actuarial assumptions, including a discount rate of 7.50 percent, which represents the long-term expected rate of return.

Our opinion is not modified with respect to these matters.

#### Other Matters

#### Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis, the Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Employer Contributions, and Schedule of Annual Money-Weighted Rate of Return, 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 audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The other supplemental information, introductory, investment, actuarial and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplemental information in the financial section 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 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 taken as a whole.

#### INDEPENDENT AUDITOR'S REPORT (CONTINUED)

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 2, 2016 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on 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 the System's internal control over financial reporting and compliance.

Macias Gini & O'Connell LAP
Sacramento, California
December 2, 2016

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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") for the years ended June 30, 2016 and 2015. 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, 2016, SCERS' fiduciary net position restricted for pension benefits ("net position") totaled \$7.681 billion. This represented a decrease of \$197.9 million or 2.5% from the \$7.879 billion in SCERS' net position as of June 30, 2015, which, in turn, represented an increase of \$68.8 million or 0.9% over the \$7.810 billion in net position as of June 30, 2014.

Additions to net position were \$214.1 million, \$449.3 million, and \$1,375.3 million for the years ended June 30, 2016, 2015 and 2014, respectively. Lower investment performance was the primary reason for the decrease in total additions for the fiscal years ended June 30, 2016 and 2015. Net depreciation in fair value of investments was \$12.6 million for the year ended June 30, 2016. Net appreciation in fair value of investments was \$217.3 million for the year ended June 30, 2015.

Deductions to net position were \$412.0 million and \$380.5 million for the years ended June 30, 2016 and 2015. The total deductions for the year ended June 30, 2016 increased by \$31.5 million or 8.3% over the year ended June 30, 2015, which in turn, saw an increase in total deductions of \$27.2 million or 7.7% over the year ended June 30, 2014. 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 2015-2016 and 2014-2015) are recognized over seven years ("smoothing"). 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 avoid the year-to-year volatility in contribution rates that would come from using the market value of assets.

As of June 30, 2016, SCERS' total pension liability was \$9.436 billion, up from \$9.029 billion as of June 30, 2015. The employers' net pension liability increased from \$1.150 billion as of June 30, 2015 to \$1.755 billion as of June 30, 2016. This increase in employers' net pension liability is mainly due to low investment performance in fiscal year 2016 offset to some degree by lower-than-expected active employee salary growth, lower-than-expected cost-of-living adjustments, and higher-than-expected actual contributions. The fiduciary net position as a percentage of the total pension liability decreased from 87.3% to 81.4%.

#### **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 or deductions to the plan. The trend of additions versus deductions to 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 contribution ("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 management 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.

#### MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)

#### FINANCIAL ANALYSIS

#### Assets and Employers' Net Pension Liability

SCERS' net position restricted for pension benefits as of June 30, 2016 totaled \$7.681 billion, a decrease of \$197.9 million or 2.5% from the \$7.879 billion in net position as of June 30, 2015, which represented an increase of \$68.8 million or 0.9% over the \$7.810 billion in net position as of June 30, 2014. 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. The increase in net position for the year ended June 30, 2015 was due to both investment gains and receipt of employee and employer contributions.

For the fiscal year ended June 30, 2016, the total fund return, gross of fees, of (0.6%) was 2.1% below the return of the policy index benchmark of 1.5%. At the asset class level, fiscal year 2015-2016 investments in the international equity outperformed the policy benchmarks, while domestic equity, fixed income, absolute return, private equity, and real assets segments of the portfolio underperformed the policy benchmarks. Fiscal year 2014-2015 investments in the international equity, fixed income, and opportunistic segments of the portfolio outperformed the policy benchmarks, while investments in domestic equity, 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, 2016 compared to the prior year was the result of funding new investments and fulfilling capital commitments. The increase in receivables and investment trade payables as of June 30, 2016 compared to the prior year was 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.

The increase in cash and short-term investments as of June 30, 2015 compared to the prior year was the result of the termination of an international equity manager and the available funds were placed into a passive interim solution within SCERS' overlay program. The decrease in receivables and investment trades payable as of June 30, 2015 compared to the prior year was the result of a decrease in trading activity at the end of June by the external investment managers.

#### **NET POSITION**

As of June 30 (Dollar Amounts Expressed in Millions)

			Increase/	
Assets	2016	2015	(Decrease)	% Change
Cash and short-term investments	\$416.4	\$659.0	(\$242.6)	(36.8%)
Receivables	168.0	92.4	75.6	81.8
Investments, at fair value, net	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	8,315.7	8,366.2	(50.5)	(0.6)
Liabilities				
Other liabilities	39.5	38.0	1.5	3.9
Investments purchased payable	172.8	128.8	44.0	34.2
Securities lending liability	422.5	320.6	101.9	31.8
Total liabilities	634.8	487.4	147.4	30.2
Net position restricted for pension benefits	\$7,680.9	\$7,878.8	(\$197.9)	(2.5%)

#### **NET POSITION**

# As of June 30 (Dollar Amounts Expressed in Millions)

			Increase/	
Assets	2015	2014	(Decrease)	% Change
Cash and short-term investments	\$659.0	\$430.8	\$228.2	53.0%
Receivables	92.4	112.2	(19.8)	(17.6)
Investments, at fair value, net	7,293.0	7,503.9	(210.9)	(2.8)
Securities lending collateral	320.6	313.5	7.1	2.3
Other assets	1.2	2.7	(1.5)	(55.6)
Total assets	8,366.2	8,363.1	3.1	0.0
Liabilities				
Other liabilities	38.0	40.6	(2.6)	(6.4)
Investments purchased payable	128.8	199.0	(70.2)	(35.3)
Securities lending liability	320.6	313.5	7.1	2.3
Total liabilities	487.4	553.1	(65.7)	(11.9)
Net position restricted for pension benefits	\$7,878.8	\$7,810.0	\$68.8	0.9%

#### Management's Discussion and Analysis (Continued)

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 measure 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 and ADC. An actuarial valuation is similar to an inventory process. On the valuation date, the assets available for the payment of retirement benefits are appraised. These assets are compared with the actuarial liability, which is the actuarial present value of all future benefits expected to be paid with respect to each member. The purpose of the actuarial valuation is to determine the total pension liability in accordance with the parameters set forth in GASB Statement No. 67 and what future contributions will be needed by the members and participating employers, in conjunction with investment earnings, to pay the expected future benefits.

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%. In general terms, this ratio means that as of June 30, 2016, SCERS had approximately 81 cents available for each dollar of anticipated future liability. As of June 30, 2015, the employers' total pension liability was \$9.029 billion, and the net pension liability (the total pension liability less the fiduciary net position) was \$1.150 billion. The plan fiduciary net position as a percentage of the total pension liability was 87.3%.

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.

Lower-than-expected investment performance reduced SCERS' market stabilization reserve from \$40.0 million as of June 30, 2015 to (\$555.5) million as of June 30, 2016.

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

(Dollar Amounts Expressed in Millions)

	2016	2015	2014
Employee Reserves	\$758.4	\$727.0	\$713.6
Employer Reserves	2,722 .1	2,621.6	2,564.8
Retiree Reserves	4,658.7	4,393.3	3,973.8
Retiree Death Benefit Reserves	16.1	15.8	15.2
Contingency Reserve	81.1	81.1	45.6
Total Allocated Reserves and Designations	8,236.4	7,838.8	7,313.0
Market Stabilization Reserve	(555.5)	40.0	497.0
Net position restricted for benefits, at fair value	\$7,680.9	\$7,878.8	\$7,810.0

#### 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, 2016, 2015, and 2014, respectively.

#### **CHANGE IN FIDUCIARY NET POSITION**

For the Fiscal Years Ended June 30 (Dollar Amounts Expressed in Millions)

	Increase/			
	2016	2015	(Decrease)	% Change
Additions				
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)
Total additions	214.1	449.3	(235.2)	(52.3)
Deductions				
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
Total deductions	412.0	380.5	31.5	8.3
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	\$7,680.9	\$7,878.8	(\$197.9)	(2.5%)

#### CHANGE IN FIDUCIARY NET POSITION

For the Fiscal Years Ended June 30 (Dollar Amounts Expressed in Millions)

	Increase/			
	2015	2014	(Decrease)	% Change
Additions				
Employee contributions	\$68.1	\$57.6	\$10.5	18.2%
Employer contributions	223.0	210.5	12.5	5.9
Net gain from investment activities	217.3	1,156.0	(938.7)	(81.2)
Net income from securities lending	1.0	1.3	(0.3)	(23.1)
Other income/(expense)	1.3	(0.9)	2.2	244.4
Investment fees and expenses	(61.4)	(49.2)	12.2	24.8
Total additions	449.3	1,375.3	(926.0)	(67.3)
Deductions				
Withdrawal of contributions	2.3	2.7	(0.4)	(14.8)
Administrative expenses	5.8	5.7	0.1	1.8
Benefits paid	372.4	344.9	27.5	8.0
Total deductions	380.5	353.3	27.2	7.7
Increase in net position	68.8	1,022.0	(953.2)	(93.3)
Net position restricted for pension benefits, beginning	7,810.0	6,788.0	1,022.0	15.1
Net position restricted for pension benefits, ending	\$7,878.8	\$7,810.0	\$68.8	0.9%

#### 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, 2016, 2015, and 2014, total additions were \$214.1 million, \$449.3 million, and \$1.375 billion, respectively.

For the fiscal years ended June 30, 2016, 2015, and 2014, combined employer and employee contributions were \$286.5 million, \$291.1 million, and \$268.1 million, respectively. Fiscal years 2015-2016 and 2014-2015 employee contributions increased as a result of the County and the County employees' bargaining units entering into agreements under which County employees pay more of the normal cost and increase in contribution rates for Safety members.

Net investment income/(loss) was (\$72.4) million, \$158.2 million, and \$1.107 billion for the fiscal years ended June 30, 2016, 2015, and 2014, respectively. The net investment loss for the fiscal year ended June 30, 2016 was related to the low investment performance. The net investment gains for the fiscal years ended June 30, 2015 and June 30, 2014 were directly related to strong investment performance. 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, 2016, 2015, and 2014, total deductions were \$412.0 million, \$380.5 million, and \$353.3 million, respectively.

Deductions increased \$31.5 million or 8.3% in the year ended June 30, 2016 and \$27.2 million or 7.7% in the year ended June 30, 2015. 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 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 \$5.5 million for the fiscal year ended June 30, 2016 and \$5.2 million for the fiscal year ended June 30, 2015, 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.

# STATEMENTS OF FIDUCIARY NET POSITION

#### PENSION TRUST FUND

#### AS OF JUNE 30, 2016 AND 2015

(Dollar Amounts Expressed in Thousands)

	2016	2015
Assets		
Cash invested with Sacramento County Treasurer	\$9,316	\$8,436
Other cash and cash equivalents	80,211	56,627
Short-term investments with fiscal agents	326,914	593,908
Cash and short-term investments	416,441	658,971
Receivables		
Employee and employer contributions	8,073	7,892
Accrued investment income	45,917	33,230
Securities sold	113,982	51,263
Total receivables	167,972	92,385
Investments, at fair value		
Common and preferred stock - domestic	2,035,218	1,875,151
Common and preferred stock - international	1,380,130	1,520,609
US government and agency securities	492,250	454,541
Domestic corporate bonds	937,418	682,385
International bonds	126,189	333,871
Real assets	973,077	1,210,739
Real assets - mortgages payable	(63,500)	(111,350)
Absolute return	724,682	773,662
Private equity	537,706	419,275
Opportunities	165,182	134,137
Securities lending collateral	422,520	320,650
Total investments	7,730,872	7,613,670
Other assets	378	1,199
Total assets	8,315,663	8,366,225
Liabilities		
Warrants payable	962	846
Accounts payable and other accrued liabilities	38,485	37,112
Investments purchased payable	172,831	128,803
Securities lending liability	422,520	320,650
Total liabilities	634,798	487,411
Net position restricted for pension benefits	\$7,680,865	\$7,878,814

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, 2016 AND 2015

(Dollar Amounts Expressed in Thousands)

• •	68,143 22,959 91,102
Employee \$77,494 \$	22,959
	22,959
Employer 209.020 2	
	91,102
Total contributions 286,514 2	
Investment income	
From investment activities	
Net appreciation/(depreciation) in investment fair value:	
Securities (179,823)	9,270
Real assets 1,126 (	22,408)
Absolute return (24,123)	26,925
Private equity 26,693	38,684
Opportunities 4,652	10,079
Interest 38,302	34,444
Dividends 77,392	73,437
Real assets 23,708	25,305
Private equity 8,989	18,645
Opportunities 10,525	2,960
Net gain/(loss) from investment activities (12,559) 2	17,341
From securities lending activities	
Securities lending income 1,805	907
Securities lending expense	
Borrower rebate income 539	463
Securities lending management fees (489)	(334)
Net income from securities lending 1,855	1,036
Other income/(expense) (2,317)	1,283
Investment fees and expenses(59,378)(	61,438)
Net investment income/(loss) (72,399) 1	58,222
Total additions 214,115 4	49,324
Deductions	
Withdrawal of contributions 2,346	2,288
Administrative expenses 6,362	5,854
Benefits paid 403,356 3	72,369
·	80,511
Net increase/(decrease) (197,949)	68,813
Net position restricted for pension benefits, beginning 7,878,814 7,8	10,001
Net position restricted for pension benefits, ending \$7,680,865 \$7,8	78,814

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, 2016 AND 2015 (Dollar Amounts Expressed in Thousands)

	2016	2015
Assets		
Accounts receivable	\$47	\$31
Total assets	\$47	\$31
Liabilities		
Accounts payable	\$47	\$31
Total liabilities	\$47	\$31

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, 2016 and 2015, 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 startdate 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 startdate 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 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, 2016 and 2015, the System's membership consisted of:

Current Members:	2016	2015
Vested		
Miscellaneous Tier 1	83	104
Miscellaneous Tier 2	62	68
Miscellaneous Tier 3	7,548	7,922
Miscellaneous Tier 4	10	8
Miscellaneous Tier 5	10	5
Total Miscellaneous	7,713	8,107
Safety Tier 1	218	254
Safety Tier 2	1,325	1,345
Safety Tier 3	30	18
Safety Tier 4	10	10
Total Safety	1,583	1,627
Total Vested	9,296	9,734
Non-Vested		
Miscellaneous Tier 3	198	316
Miscellaneous Tier 4	318	298
Miscellaneous Tier 5	2,134	1,372
Total Miscellaneous	2,650	1,986
Safety Tier 2	12	25
Safety Tier 3	72	79
Safety Tier 4	363	248
Total Safety	447	352
Total Non-Vested	3,097	2,338
Total Current Members	12,393	12,072

Retirees and beneficiaries currently receiving benefits:	2016	2015
Miscellaneous - Service	7,148	6,833
Miscellaneous - Beneficiary	1,176	1,138
Miscellaneous - Nonservice-Connected Disability	287	291
Miscellaneous - Service-Connected Disability	177	186
Total Miscellaneous	8,788	8,448
Safety - Service	1,562	1,500
Safety - Beneficiary	357	341
Safety - Nonservice-Connected Disability	17	19
Safety - Service-Connected Disability	236	233
Total Safety	2,172	2,093
Total Retirees and Beneficiaries	10,960	10,541
Terminated employees entitled to benefits but not yet receiving them		
Miscellaneous Tier 1	48	63
Miscellaneous Tier 2	170	185
Miscellaneous Tier 3	2,343	2,357
Miscellaneous Tier 4	63	51
Miscellaneous Tier 5		129
Total Miscellaneous	2,845	2,785
Safety Tier 1	77	93
Safety Tier 2	356	368
Safety Tier 3	6	5
Safety Tier 4	17	10
Total Safety	456	476
Total Terminated Members	3,301	3,261
Grand Total	26,654	25,874

<sup>\*</sup>Includes terminated members due a refund of member contributions.

(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 Tier 1, 2, 3 and 4 and Safety Tier 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. Finalaverage 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 Tier 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).

(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 new 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.

(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, 2016 and 2015 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 31, 40, 51, 53, 67, and 72.

Effective July 1, 2015, SCERS adopted the provisions of GASB Statement No. 72, *Fair Value Measurement and Application*, which addresses accounting and financial reporting issues related to fair value measurements for periods beginning after June 15, 2015. This Statement:

- Defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date;
- Provides guidance for determining a fair value measurement for financial reporting purposes;
- Provides guidance regarding disclosures about fair value measurements, the level of fair value hierarchy, and valuation techniques and organizing these disclosures by type of asset or liability reported at fair value.

In March 2016, GASB issued Statement No. 82, *Pension Issues - An Amendment of GASB Statements No. 67, No. 68, and No. 73.* This Statement addresses issues regarding the presentation of payroll-related measures in required supplementary information, the selection of assumptions and the treatment of deviations from the guidance in Actuarial Standards of Practice for financial reporting purposes, and the classification of payments made by employers to satisfy employee contribution requirements. The requirements of this Statement are effective for reporting periods beginning after June 15, 2016. The System has early-implemented the applicable requirements of this Statement effective July 1, 2015.

## Valuation of Investments

The majority of the investments held at June 30, 2016 and 2015 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.

## 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.

(Dollar Amounts Expressed in Thousands)

#### Reclassification

Certain reclassifications have been made to June 30, 2015 balances to conform to the presentation as of and for the fiscal year ended June 30, 2016.

#### **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.

### **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, 2016 and 2015 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	100.0%

#### **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 \$9,316 and \$8,436 at June 30, 2016 and 2015, respectively. The pool was not rated, and the weighted-average maturity of the pool was 254 days and 263 days at June 30, 2016 and 2015, 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, 2016 and 2015, other cash and cash equivalents constituted balances in bank demand deposit accounts of \$80,211 and \$56,627, respectively.

#### **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, 2016 and 2015, the fair value of the System's short-term investments with fiscal agents was \$326,914 and \$593,908, 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 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, 2016 and 2015, the weighted-average maturities were 24 days and 32 days. Investments in the STIF from all participating custodial clients of State Street were \$63.9 billion and \$60.9 billion on June 30, 2016 and 2015, 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.

(Dollar Amounts Expressed in Thousands)

The System had the following recurring fair value measurements at June 30, 2016 and 2015.

Page	June 30, 2016	Fair Value Measurements Using				
Equity Securities         Consumer Discretionary         \$370,294         \$370,298         \$570,298         \$						
Total   (Level 1)   (Level 2)   (Level 3)				0		
Sample   S		Total		· ·		
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         2,522         -         -           Telecommunication Services         80,713         80,713         -         -           Others         90,647         90,647         -         -         -           Others         497         497         -         -         -           Total Equity Securities         150,235         -         150,235         -         -           Securities         150,235         -         150,235         -         -           Collateralized	E 9 6 9	lotal	(Level 1)	(Level 2)	(Level 3)	
Consumer Staples   230,298   230,298   -   -   -   -		¢270.204	6270 204	<u>,</u>	<b>*</b>	
Energy	·			\$-	Ş-	
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   -     -     Total Equity Securities   2,824,020   2,824,020   -     -      Fixed Income Securities		•	•	-	-	
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         -         -           Total Equity Securities         2,824,020         2,824,020         -         -           Fixed Income Securities         -         -         -         -           Securitized Obligations         -         -         150,235         -         150,235         -         150,235         -		· ·	,	-	-	
Private Placement         2,252         2,252         -           Telecommunication Services         80,713         80,713         -           Utilities         90,647         90,647         -           Others         497         497         -           Total Equity Securities         2,824,020         2,824,020         -         -           Fixed Income Securities           Securitized Obligations           Asset-Backed Securities         150,235         -         150,235         -           Collateralized Mortgage-Backed Securities         72,789         403         72,386         -           Credit Obligations         344,338         -         344,338         -           Corporate Bonds         344,338         -         344,338         -           Municipals         7,860         -         7,860         -           Yankee         28,642         -         28,642         -           U.S. Government & Agency Obligations         8,883         -         9,883         -           U.S. Treasury         267,998         -         267,998         -           U.S. Government         8,450         -         8,450         -		•	•	-	-	
Telecommunication Services   80,713   80,713     -   -		•		-	-	
Utilities         90,647         90,647         -		•	•	-	-	
Others         497         497         -         -           Total Equity Securities         2,824,020         2,824,020         -         -           Fixed Income Securities           Securitized Obligations           Asset-Backed Securities         150,235         -         150,235         -           Collateralized Mortgage-Backed Securities         72,789         403         72,386         -           Credit Obligations         Corporate Bonds         344,338         -         344,338         -           Corporate Bonds         344,338         -         344,338         -           Municipals         7,860         -         7,860         -           Yankee         28,642         -         28,642         -           U.S. Government & Agency Obligations         9,883         -         9,883         -           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         -		,	,	-	-	
Total Equity Securities   2,824,020   2,824,020   -   -   -				-	-	
Securitized Obligations						
Securitized Obligations	Total Equity Securities	2,824,020	2,824,020			
Asset-Backed Securities 150,235 - 150,235 - Collateralized Mortgage-Backed Securities 72,789 403 72,386 - Credit Obligations  Corporate Bonds 344,338 - 344,338 - 7,860 - 7,80	Fixed Income Securities					
Collateralized Mortgage-Backed Securities         72,789         403         72,386         -           Credit Obligations         344,338         -         344,338         -           Corporate Bonds         344,338         -         7,860         -           Municipals         7,860         -         7,860         -           Yankee         28,642         -         28,642         -           U.S. Government & Agency Obligations         -         9,883         -         9,883         -           Agency Securities         9,883         -         9,883         -         9,883         -           U.S. Treasury         267,998         -         267,998         -         267,998         -           International Government         8,450         -         8,450         -         8,450         -           Collateralized Mortgage Obligations         55,615         -         55,615         -         -         55,615         -           Mortgage Pass-Through         FHLMC         68,262         -         68,262         -         68,262         -         -         41,796         -         -         -         -         -         -         -         - <td>Securitized Obligations</td> <td></td> <td></td> <td></td> <td></td>	Securitized Obligations					
Credit Obligations         344,338         -         344,338         -         344,338         -         344,338         -         344,338         -         7,860         -         7,860         -         7,860         -         -         7,860         -         -         7,860         -         -         -         2,8642         -         -         2,8642         -	Asset-Backed Securities	150,235	-	150,235	-	
Corporate Bonds         344,338         -         344,338         -           Municipals         7,860         -         7,860         -           Yankee         28,642         -         28,642         -           U.S. Government & Agency Obligations         -         9,883         -         9,883         -           Agency Securities         9,883         -         9,883         -         9,883         -           U.S. Treasury         267,998         -         267,998         -         267,998         -           International Government         8,450         -         8,450         -         -         68,450         -         55,615         - <td< td=""><td>Collateralized Mortgage-Backed Securities</td><td>72,789</td><td>403</td><td>72,386</td><td>-</td></td<>	Collateralized Mortgage-Backed Securities	72,789	403	72,386	-	
Municipals       7,860       -       7,860       -         Yankee       28,642       -       28,642       -         U.S. Government & Agency Obligations       -       -       9,883       -       9,883       -         Agency Securities       9,883       -       9,883       -       9,883       -         U.S. Treasury       267,998       -       267,998       -       267,998       -         International Government       8,450       -       8,450       -       8,450       -         Collateralized Mortgage Obligations       55,615       -       55,615       -       -       55,615       -         Mortgage Pass-Through       68,262       -       68,262       -       -       68,262       -         FNMA       104,311       -       104,311       -       104,311       -         GNMA       41,796       -       41,796       -         Total Fixed Income Securities       1,160,179       403       1,159,776       -         Real Assets - Direct Holdings       353,180       -       -       -       353,180         Mortgages payable       (63,500)       -       -       - <t< td=""><td>Credit Obligations</td><td></td><td></td><td></td><td></td></t<>	Credit Obligations					
Yankee       28,642       -       28,642       -         U.S. Government & Agency Obligations       9,883       -       9,883       -         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       -         Mortgage Pass-Through       FHLMC       68,262       -       68,262       -         FNMA       104,311       -       104,311       -         GNMA       41,796       -       41,796       -         Total Fixed Income Securities       1,160,179       403       1,159,776       -         Real Assets - Direct Holdings       353,180       -       -       -       353,180         Mortgages payable       (63,500)       -       -       -       (63,500)	Corporate Bonds	344,338	-	344,338	-	
U.S. Government & Agency Obligations  Agency Securities 9,883 - 9,883 - 267,998 - 267,998 - 267,998 - 267,998 - 3,450 - 8,450 - 8,450 - 55,615 - 55,615 - 55,615 - Mortgage Pass-Through FHLMC 68,262 - 68,262 - 68,262 - 68,262 - 68,262 - 7,000 FNMA 104,311 - 104,311 - 104,311 - GNMA 41,796 - 41,796 - 7 Total Fixed Income Securities 1,160,179 403 1,159,776 - Real Assets - Direct Holdings Mortgages payable (63,500) (63,500)	Municipals	7,860	-	7,860	-	
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       -         Mortgage Pass-Through       -       -       68,262       -       68,262       -         FNMA       104,311       -       104,311       -       104,311       -         GNMA       41,796       -       41,796       -       -         Total Fixed Income Securities       1,160,179       403       1,159,776       -         Real Assets - Direct Holdings       353,180       -       -       353,180         Mortgages payable       (63,500)       -       -       -       (63,500)	Yankee	28,642	-	28,642	-	
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       -         Mortgage Pass-Through       -       -       68,262       -       68,262       -         FNMA       104,311       -       104,311       -       104,311       -         GNMA       41,796       -       41,796       -       -         Total Fixed Income Securities       1,160,179       403       1,159,776       -         Real Assets - Direct Holdings       353,180       -       -       353,180         Mortgages payable       (63,500)       -       -       -       (63,500)	U.S. Government & Agency Obligations					
U.S. Treasury       267,998       -       267,998       -         International Government       8,450       -       8,450       -         Collateralized Mortgage Obligations       55,615       -       55,615       -         Mortgage Pass-Through       -       -       68,262       -       68,262       -         FNMA       104,311       -       104,311       -         GNMA       41,796       -       41,796       -         Total Fixed Income Securities       1,160,179       403       1,159,776       -         Real Assets - Direct Holdings       353,180       -       -       353,180         Mortgages payable       (63,500)       -       -       -       (63,500)		9,883	-	9,883	-	
Collateralized Mortgage Obligations         55,615         -         55,615         -           Mortgage Pass-Through         68,262         -         68,262         -           FNMA         104,311         -         104,311         -           GNMA         41,796         -         41,796         -           Total Fixed Income Securities         1,160,179         403         1,159,776         -           Real Assets - Direct Holdings         353,180         -         -         353,180           Mortgages payable         (63,500)         -         -         (63,500)		267,998	-	267,998	-	
Mortgage Pass-Through         FHLMC       68,262       -       68,262       -         FNMA       104,311       -       104,311       -         GNMA       41,796       -       41,796       -         Total Fixed Income Securities       1,160,179       403       1,159,776       -         Real Assets - Direct Holdings       353,180       -       -       353,180         Mortgages payable       (63,500)       -       -       -       (63,500)	International Government	8,450	-	8,450	-	
FHLMC         68,262         -         68,262         -           FNMA         104,311         -         104,311         -           GNMA         41,796         -         41,796         -           Total Fixed Income Securities         1,160,179         403         1,159,776         -           Real Assets - Direct Holdings         353,180         -         -         -         353,180           Mortgages payable         (63,500)         -         -         -         (63,500)	Collateralized Mortgage Obligations	55,615	-	55,615	-	
FNMA         104,311         -         104,311         -           GNMA         41,796         -         41,796         -           Total Fixed Income Securities         1,160,179         403         1,159,776         -           Real Assets - Direct Holdings         353,180         -         -         353,180           Mortgages payable         (63,500)         -         -         -         (63,500)	Mortgage Pass-Through					
GNMA         41,796         -         41,796         -           Total Fixed Income Securities         1,160,179         403         1,159,776         -           Real Assets - Direct Holdings         353,180         -         -         -         353,180           Mortgages payable         (63,500)         -         -         -         (63,500)	FHLMC	68,262	-	68,262	-	
Total Fixed Income Securities         1,160,179         403         1,159,776         -           Real Assets - Direct Holdings         353,180         -         -         353,180           Mortgages payable         (63,500)         -         -         (63,500)	FNMA	104,311	-	104,311	-	
Real Assets - Direct Holdings       353,180       -       -       353,180         Mortgages payable       (63,500)       -       -       (63,500)	GNMA	41,796	-	41,796	-	
Mortgages payable (63,500) (63,500)	Total Fixed Income Securities	1,160,179	403	1,159,776		
Mortgages payable (63,500) (63,500)	Real Assets - Direct Holdings	353 180	_	_	353 180	
	S S S S S S S S S S S S S S S S S S S	,	_	_	•	
			\$2,824,423	\$1,159,776		

## 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	395,678	-	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	3,034,424			
Total Investments*	\$7,308,303			
June 30, 2016		Fair Valu	ue Measurements Us	ing
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
Investment Derivative Instruments	Total	(Level 1)	(Level 2)	(Level 3)
Assets				
Forwards	\$10,428	\$2,543	\$7,885	\$-
Rights	49	49	-	-
Swaps	680,942	-	680,942	-
Liabilities				
Forwards	(13,268)	(2,944)	(10,324)	-
Swaps	(700,991)		(700,991)	
Total Investment Derivative Instruments	(\$22,840)	(\$352)	(\$22,488)	\$-

<sup>\*</sup> Total investments exclude Rights, which are presented in the Investment Derivative Instruments section below, and securities lending collateral, which are comprised of short-term investments and are excluded from disclosures.

(Dollar Amounts Expressed in Thousands)

June 30, 2015	Fair Value Measurements Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Equity Securities				
Consumer Discretionary	\$370,229	\$370,229	\$-	\$-
Consumer Staples	223,108	223,108	-	-
Energy	167,148	167,148	-	-
Financials	762,392	762,392	-	-
Health Care	332,844	332,844	-	-
Industrials	270,074	270,074	-	-
Information Technology	355,547	355,547	-	-
Materials	140,984	140,984	-	-
Private Placement	22,025	22,025	-	-
Real Estate	3,021	3,021	-	-
Telecommunication Services	75,831	75,831	-	-
Utilities	55,878	55,878		
Total Equity Securities	2,779,081	2,779,081		
Fixed Income Securities				
Securitized Obligations				
Asset-Backed Securities	153,323	-	153,323	-
Collateralized Mortgage-Backed Securities	41,496	-	41,496	-
Credit Obligations				
Corporate Bonds	307,602	-	307,602	-
Municipals	872	-	872	-
Yankee	26,421	-	26,421	-
U.S. Government & Agency Obligations				
Agency Securities	15,908	-	15,908	-
U.S. Treasury	230,471	-	230,471	-
International Government	13,922	-	13,922	-
Collateralized Mortgage Obligations	87,261	-	87,261	-
Mortgage Pass-Through				
FHLMC	45,457	-	45,457	-
FNMA	133,485	-	133,485	-
GNMA	29,220	-	29,220	-
Total Fixed Income Securities	1,085,438		1,085,438	
Real Assets - Direct Holdings	451,800	_	_	451,800
Mortgages Payable	(111,350)	_	_	(111,350)
Total Investments by Fair Value Level	4,204,969	\$2,779,081	\$1,085,438	\$340,450

June 30, 2015 Investments Measured at Net Asset Value (NAV)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Public Equity Commingled Funds	\$616,178	\$-	Daily, monthly	1 - 60 days
Absolute Return	773,662	6,199	Monthly, quarterly	30 - 90 days
Fixed Income Securities Commingled Funds	385,359	-	Daily, monthly	1 - 60 days
Real Assets	758,939	463,670		
Private Equity	419,275	508,023		
Opportunities	134,137	144,416		
Total Investments Measured at NAV	3,087,550			
Total Investments*	\$7,292,519			

June 30, 2015	Fair Value Measurements Using				
		<b>Quoted Prices in</b>		Significant	
		Active Markets for	Significant Other	Unobservable	
		Identical Assets	Observable Inputs	Inputs	
Investment Derivative Instruments	Total	(Level 1)	(Level 2)	(Level 3)	
Assets					
Forwards	\$22,931	\$1,875	\$21,056	\$-	
Options	426	-	426	-	
Rights	91	91		-	
Swaps	2,967	-	2,967	-	
Warrants	410	-	410	-	
Liabilities					
Forwards	(1,740)	(1,740)	-	-	
Options	(263)	-	(263)	-	
Swaps	(16,933)		(16,933)		
Total Investment Derivative Instruments	\$7,889	\$226	\$7,663	\$-	

<sup>\*</sup> Total investments exclude Rights and Warrants, which are presented in the Investment Derivative Instruments section, and securities lending collateral, which are comprised of short-term investments and are excluded from disclosures.

(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 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 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, 2016 and 2015, total Level 3 real asset investments were \$353,180 and \$451,800 respectively. In the opinion of management, the reported amounts fairly represent the estimated fair value as of June 30, 2016 and 2015. 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 divident 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, 2016, this category of investment includes twelve 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 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 US 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 US 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.

(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 guickly 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.

(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, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was (0.97%). The annual money-weighted rate of return for the year ended June 30, 2015 was 2.01%.

(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, 2016 and 2015, 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 fiscal years ended June 30, 2016 and 2015, SCERS did not impose any restrictions on the amount of the loans that State Street made on its behalf. During fiscal years ended June 30, 2016 and 2015, 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, 2016 and 2015, 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, 2016 and 2015, 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, 2016 were \$481,087 and \$472,397, respectively. The total collateral held and the fair value of the securities on loan as of June 30, 2015 were \$360,995 and \$352,243, respectively.

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

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

<u>Policy for Utilizing Amortized Cost Method.</u> 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.

Collateral and related securities on loan at June 30, 2016 and 2015 were as follows:

		2016	
	Cash Collateral	Non-Cash	Fair Value of
Security on Loan Description	Value	Collateral Value	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
Total	\$422,520	\$58,567	\$472,397

		2015	
	Cash Collateral	Non-Cash	Fair Value of
Security on Loan Description	Value	Collateral Value	Securities on Loan
U.S. government and agency obligations	\$117,305	\$3,263	\$118,158
Domestic corporate bonds	6,658	2,165	8,630
Common and preferred stock – domestic	153,505	32,081	182,337
Common and preferred stock – international	43,182	2,836	43,118
Total	\$320,650	\$40,345	\$352,243

#### 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, 2016 and 2015, 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 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, 2016 and 2015, the weighted average maturity was 43 days and 42 days, respectively.

(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.

The actively-managed investments will have a minimum average credit quality rating of A2 by Moody's Investor Services or A by Standard and Poor's Corporation. Portfolio diversification is constrained by the following parameters in order to minimize overall market and credit risk:

- No more than 10% of the portfolio will be concentrated in any one issuer except U.S. Government and agency securities.
- No more than 20% of the portfolio will be invested in high yield or below investment grade straight securities.
- No more than 15% of the portfolio will be invested in convertible securities, which include bonds and preferred issues.
- No more than 20% of the portfolio will be invested in non-U.S. dollar bonds.

The System's policy is that the enhanced index investments will have a credit quality rating similar to the Barclays Capital Aggregate Index. Portfolio diversification is constrained by the following parameters in order to minimize overall market and credit risk:

- The maximum holding in a single issuer, excluding U.S. Government and government-sponsored enterprises, is 5% of the portfolio's total fair value.
- The minimum individual issue credit rating is BBB- by S&P, or an equivalent rating by Moody's, Fitch or Dominion Bond Rating Service.
- The portfolio duration will be within ± 0.25 years of the index duration as measured by the manager.
- All securities must be denominated in U.S. dollars.

(Dollar Amounts Expressed in Thousands)

The following tables depict the fixed income assets by credit rating as of June 30, 2016 and 2015:

Fixed Income As of June 30, 2016

					U.S.					
S&P		C · · · · · · · · · · · · · · · ·	Consists	Commission	Government	laka masaka mal	Collateralized	Mortga	age Pass-T	hrough
Quality Rating	Total	Securitized Obligations	Credit Obligations	Commingled Funds	& Agency Obligations	International Government	Mortgage Obligations	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	-	-	-
Α	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	-	-	-	-	-	-	-
В	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	-	-	-
Total	\$1,555,857	\$223,024	\$407,486	\$369,032	\$277,881	\$8,450	\$55,615	\$68,262	\$104,311	\$41,796

NA represents securities explicitly guaranteed by the U.S. government, which are not subject to the GASB 40 credit risk disclosure requirements. NR represents those securities that are not rated.

(Dollar Amounts Expressed in Thousands)

## Fixed Income As of June 30, 2015

S&P					U.S. Government		Collateralized			
Quality		Securitized	Credit	Commingled	& Agency	International		Mort	gage Pass-T	hrough
Rating	Total	Obligations	Obligations	Funds	Obligations	Government	Obligations	FHLMC	FNMA	GNMA
AAA	\$130,133	\$103,412	\$3,096	\$-	\$-	\$-	\$23,625	\$-	\$-	\$-
AA+	233,914	24,484	7,943	-	-	-	22,631	45,457	133,399	-
AA	24,672	18,262	6,410	-	-	-	-	-	-	-
AA-	11,791	1,704	10,087	-	-	-	-	-	-	-
A+	28,330	12,517	11,078	-	-	-	4,735	-	-	-
Α	33,503	5,432	26,815	-	-	-	1,256	-	-	-
A-	43,270	3,591	38,029	-	-	1,650	-	-	-	-
BBB+	74,832	4,396	67,750	-	-	2,036	650	-	-	-
BBB	50,750	4,114	45,677	-	-	517	442	-	-	-
BBB-	58,176	965	56,951	-	-	-	260	-	-	-
BB+	24,904	7,677	11,214	-	-	5,210	803	-	-	-
BB	17,136	-	16,761	-	-	-	375	-	-	-
BB-	10,718	-	10,402	-	-	316	-	-	-	-
B+	12,681	-	10,340	-	-	247	2,094	-	-	-
В	7,427	332	7,095	-	-	-	-	-	-	-
B-	9,746	1,525	4,843	-	-	-	3,378	-	-	-
CCC+	404	-	404	-	-	-	-	-	-	-
CCC	673	-	-	-	-	-	673	-	-	-
D	3,541	1,197	-	-	-	-	2,344	-	-	-
NA	275,599	-	-	-	246,379	-	-	-	-	29,220
NR	418,597	5,211	-	385,359	-	3,946	23,995	-	86	
Total	\$1,470,797	\$194,819	\$334,895	\$385,359	\$246,379	\$13,922	\$87,261	45,457	\$133,485	\$29,220

NA represents securities explicitly guaranteed by the U.S. government, which are not subject to the GASB 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, 2016 and 2015, 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, 2016 and 2015, 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.

### **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, 2016 and 2015, the bank balance of cash and cash equivalents on deposit with SCERS' custodian bank and financial institutions totaled \$19,128 and \$22,860, respectively, of which \$15,896 and \$18,588 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, 2016 and 2015, deposits held in the System's name for the margin accounts of \$58,771 and \$32,218, respectively, were not insured or not collateralized, and these deposits were exposed to custodial credit risk.

As of June 30, 2016 and 2015, 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% 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, 2016	- · · · ·	Effective	Benchmark	5:11
Type of Securities	Fair Value	Duration	Duration	Difference
Securitized Obligations				
Asset-Backed Securities	\$150,235	0.60	2.28	(1.68)
Collateralized Mortgage-Backed Securities	72,789	4.41	5.05	(0.64)
Credit Obligations				
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
U.S. Government & Agency Obligations				
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)
Mortgage Pass-Through				
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
No Effective Duration				
Commingled Funds	395,678	NA	NA	NA
Total Fair Value with Weighted Average	\$1,555,857	4.90	5.35	(0.45)

(Dollar Amounts Expressed in Thousands)

Long-Term Fix	xed Income	Investments	Duration
---------------	------------	-------------	----------

As of June 30, 2015		Effective	Benchmark	
Type of Securities	Fair Value	Duration	Duration	Difference
Securitized Obligations				
Asset-Backed Securities	\$153,323	1.41	2.52	(1.11)
Collateralized Mortgage-Backed Securities	41,496	4.03	3.83	0.20
Credit Obligations				
Corporate Bonds	307,602	6.57	7.08	(0.51)
Municipals	872	9.83	12.86	(3.03)
Yankee	26,421	8.05	6.15	1.90
U.S. Government & Agency Obligations				
Agency Securities	15,908	3.55	3.62	(0.07)
U.S. Treasury	230,471	6.69	5.61	1.08
International Government	13,922	6.56	12.95	(6.39)
Collateralized Mortgage Obligations	87,261	3.31	5.91	(2.60)
Mortgage Pass-Through				
FHLMC	45,457	3.94	3.69	0.25
FNMA	133,485	3.97	3.81	0.16
GNMA	29,220	5.14	4.21	0.93
No Effective Duration				
Commingled Funds	385,359	NA	NA	NA
Total Fair Value with Weighted Average	\$1,470,797	5.39	5.42	(0.03)

# 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, 2016 and 2015:

# As of June 30, 2016

	Cash & Cash		Fixed	Private			
Local Currency Name	Equivalents	Equity	Income	Equity	<u>Opportunities</u>		Total
Australian Dollar	\$844	\$58,349	\$15,563	\$-	\$-	\$-	\$74,756
Brazilian Real	-	842	12,789	-	-	-	13,631
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 Sheqel	-	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
Pound Sterling	946	146,806	13,062	-	29,955	-	190,769
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
Total	\$8,332	\$844,325	\$190,409	\$40,938	\$60,600	\$30,835	\$1,175,439

(Dollar Amounts Expressed in Thousands)

As of June 30, 2015

	Cash & Cash		Fixed	Private			
Local Currency Name	Equivalents	Equity	Income	Equity	Opportunities	Real Assets	Total
Australian Dollar	\$2,467	\$60,740	\$14,604	\$-	\$-	\$-	\$77,811
Brazilian Real	-	-	9,965	-	-	-	9,965
Canadian Dollar	265	59,239	-	-	-	-	59,504
Danish Krone	-	7,984	-	-	-	-	7,984
Euro Currency	2,442	221,981	22,403	33,771	-	10,047	290,644
Hong Kong Dollar	1,921	30,348	-	-	-	-	32,269
Hungarian Forint	-	-	7,907	-	-	-	7,907
Indian Rupee	-	1,719	-	-	-	-	1,719
Indonesian Rupiah	-	-	9,319	-	-	-	9,319
Japanese Yen	3,487	199,665	-	-	-	-	203,152
Malaysian Ringgit	-	-	5,688	-	-	-	5,688
Mexican Peso	120	2,746	28,240	-	-	-	31,106
New Israeli Sheqel	24	8,801	-	-	-	-	8,825
New Zealand Dollar	-	8,096	6,536	-	-	-	14,632
Norwegian Krone	-	12,532	-	-	-	-	12,532
Philippine Peso	-	187	-	-	-	-	187
Polish Zloty	-	-	4,357	-	-	-	4,357
Pound Sterling	886	187,181	316	-	28,292	-	216,675
Singapore Dollar	40	12,722	-	-	-	-	12,762
South African Rand	9	1,571	8,533	-	-	-	10,113
South Korean Won	-	1,116	8,593	-	-	-	9,709
Swedish Krona	289	34,074	-	-	-	-	34,363
Swiss Franc	23	59,255	-	-	-	-	59,278
Thailand Baht	7	2,269	-	-	-	-	2,276
Turkish Lira		1,095					1,095
Total	\$11,980	\$913,321	\$126,461	\$33,771	\$28,292	\$10,047	\$1,123,872

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, 2016 and 2015, SCERS' investments included Collateralized Mortgage Obligations and Mortgage Pass-Through securities totaling \$269,984 and \$295,423 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.

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 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.

(Dollar Amounts Expressed in Thousands)

Spot commodity prices have historically been a poor investment and have declined in real terms. However, investment in collateralized commodity futures provides similar returns to stocks over the long-term. 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, 2016 and 2015, total commodities investments were \$120,795 and \$203,987, 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 porfolios 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. 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, 2016 and 2015, 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, 2016 and 2015:

Investment Derivatives	Net Appreciation/(Depreciation) in Fair Value of Investments	Fair Value at June 30	0, 2016	
Instruments	through 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	Facility Constitution	49	151 shares
Warrants	(211)	Equity Securities	-	-
Total Derivatives Instruments	\$(57,049)		\$(22,840)	

(Dollar Amounts Expressed in Thousands)

Investment Derivatives	Net Appreciation/(Depreciation) in Fair Value of Investments	Fair Value at June 30,	2015	
Instruments	through June 30, 2015	Classification	Amount	Notional
Futures (Domestic and Foreign)	\$25,495	A	\$-	\$(16,244)
Forwards	5,975	Accrued Investment Income Receivables	21,191	223,880
Options	(841)	medine neceivables	163	67,820
Rights	62	Equity Securities	91	268 shares
Warrants	224	Equity Securities	410	115 shares
		Accounts Payable and		
Swaps	34,218	Other Accrued Liabilities	(13,966)	53,734
<b>Total Derivatives Instruments</b>	\$65,133	_	\$7,889	

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, 2016 or 2015 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, 2016 and 2015.

#### 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, 2016 and 2015:

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)
Total Investments in Asset/(Liability) Position	\$(2,840)	\$(20,049)	\$(22,889)

June 30, 2015

S&P Ratings	Forwards	Swaps	Total
AA-	\$21,309	\$-	\$21,309
A+	493	-	493
A	732	443	1,175
A-	232	1,549	1,781
BBB+	165	975	1,140
Subtotal Investments in Asset Position	22,931	2,967	25,898
Investments in Liability Position	(1,740)	(16,933)	(18,673)
Total Investments in Asset/(Liability) Position	\$21,191	\$(13,966)	\$7,225

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, 2016 and 2015 were \$4,538 and \$25,898. 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, 2016 and 2015, 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, 2016 and 2015, the System did not have any significant exposure to counterparty credit risk with any single party.

(Dollar Amounts Expressed in Thousands)

# Interest Rate Risk

At June 30, 2016 and 2015, the System is exposed to interest rate risk on its derivative instruments as presented in the following tables:

As of June 30, 2016

Derivative Instrument Summary

		Investment Maturities (in years)				
Investment Type	Fair Value	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)	-	-		
Total	\$(20,049)	\$(10,245)	\$(957)	\$(8,829)	\$(18)	

# 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
Subtotal - Currency Swap	S	\$(544)	\$22,282
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

# Derivative Instruments Highly Sensitive to Interest Changes (continued)

Investment Type	Reference Rate	Fair Value	Notional Value
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.40642%	(40)	2,200
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 TIIE	(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
Subtotal - Interest Rate Sw	vaps	\$(8,475)	\$241,266
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)
Subtotal - Total Return Swa	aps Equity	\$(10,393)	\$(339,060)

(Dollar Amounts Expressed in Thousands)

As of June 30, 2015

Derivative Instrument Summary

		Investment Maturities (in years)				
Investment Type	Fair Value	Less Than 1	1 - 5	6 - 10	More than 10	
Credit Default Swaps Bought	\$(1,849)	\$-	\$(1,849)	\$-	\$-	
Currency Swaps	84	-	80	4	-	
Fixed Income Options Bought	388	388	-	-	-	
Fixed Income Options Written	(234)	(234)	-	-	-	
Pay Fixed Interest Rate Swaps	1,165	(9)	(264)	1,438	-	
Receive Fixed Interest Rate Swaps	(109)	4	71	(160)	(24)	
Total Return Swaps Equity	(13,257)	(13,257)		-		
Total	\$(13,812)	\$(13,108)	\$(1,962)	\$1,282	\$(24)	
	7(13)012)	7(20)200)	7(1)302/	71,202	7(21)	

# Derivative Instruments Highly Sensitive to Interest Rate Changes

Invest	ment Type	Reference Rate	Fair Value	Notional Value
Curre	ncy Swaps	EUR Receive Variable 3-month LIBOR, USD Pay Fixed .2685%	\$(77)	\$2,451
Curre	ncy Swaps	JPY Receive Variable 3-month LIBOR, USD Pay Fixed .23435%	(30)	776
Curre	ncy Swaps	JPY Receive Variable 3-month LIBOR, USD Pay Fixed .672313%	(109)	3,106
Curre	ncy Swaps	JPY Receive Variable 3-month LIBOR, USD Pay Variable 3-month LIBOR	(143)	3,882
Curre	ncy Swaps	USD Receive Fixed .32029%, JPY Pay Variable 3-month LIBOR	116	3,219
Curre	ncy Swaps	USD Receive Fixed 1.00%, JPY Pay Variable 3-month LIBOR	29	807
Curre	ncy Swaps	USD Receive Variable 3-month LIBOR, EUR Pay Variable 3-month EURIB	154	2,528
Currer	ncy Swaps	USD Receive Variable 3-month LIBOR, JPY Pay Variable 3-month LIBOR	144	4,025
Subto	tal - Currency Swaps		\$84	\$20,794
Intere	st Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed .346%	\$(24)	\$2,451
Intere	st Rate Swaps	Receive Variable 12-month SONIA, Pay Fixed 1.325%	48	1,101
Intere	st Rate Swaps	Receive Variable 1-month SONIA, Pay Fixed 1.96%	(8)	849
Intere	st Rate Swaps	Receive Variable 1-month USOIS, Pay Fixed .2775%	(5)	45,600
Intere	st Rate Swaps	Receive Variable 1-month USOIS, Pay Fixed .282%	(4)	39,100
Intere	st Rate Swaps	Receive Variable 3-month CDOR, Pay Fixed 1.71%	(79)	3,885
Intere	st Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed .966%	-	11,930
Intere	st Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.78695%	1,332	82,900
Intere	st Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.8235%	(161)	27,640
Intere	st Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.85042%	1	600
Intere	st Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.23662%	65	28,800
Intere	st Rate Swaps	Receive Fixed .18125%, Pay Variable 12-month LIBOR	2	37,400
Intere	st Rate Swaps	Receive Fixed .185%, Pay Variable 12-month LIBOR	2	32,000
Intere	st Rate Swaps	Receive Fixed .895%, Pay Variable 6-month EVENT	(34)	1,393
Intere	st Rate Swaps	Receive Fixed .966%, Pay Variable 3-month LIBOR	50	11,930
Intere	st Rate Swaps	Receive Fixed 1.14875%, Pay Variable 6-month LIBOR	(11)	776
Intere	st Rate Swaps	Receive Fixed 1.193%, Pay Variable 6-month LIBOR	(2)	327
Intere	st Rate Swaps	Receive Fixed 3.91%, Pay Variable 0-month CLICP	(1)	352

(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 Fixed 4.00%, Pay Variable 6-month BBSW	27	576
Interest Rate Swaps	Receive Fixed 4.45%, Pay Variable 0-month MXIBT	6	1,880
Interest Rate Swaps	Receive Fixed 4.63%, Pay Variable 1-month TIIE	14	2,664
Interest Rate Swaps	Receive Fixed 5.05%, Pay Variable 0-month COOVI	-	27
Interest Rate Swaps	Receive Fixed 5.05%, Pay Variable 1-month COOIS	(1)	98
Interest Rate Swaps	Receive Fixed 5.11%, Pay Variable 0-month MXIBT	3	2,202
Interest Rate Swaps	Receive Fixed 5.795%, Pay Variable 0-month MXIBT	(37)	927
Interest Rate Swaps	Receive Fixed 6.02%, Pay Variable 1-month COOIS	(3)	196
Interest Rate Swaps	Receive Fixed 6.12%, Pay Variable 0-month MXIBT	(23)	2,161
Interest Rate Swaps	Receive Fixed 6.72%, Pay Variable 0-month MXIBT	(10)	319
Interest Rate Swaps	Receive Fixed 7.43%, Pay Variable 3-month JIBAR	(23)	420
Interest Rate Swaps	Receive Fixed 7.44%, Pay Variable 3-month JIBAR	(40)	733
Interest Rate Swaps	Receive Fixed 8.18%, Pay Variable 3-month JIBAR	(28)	853
Subtotal - Interest Rate Sw	aps	\$1,056	\$342,090
Total Return Swaps Equity	Pay Variable 3-month LIBOR, Receive MSCI World ex-US	\$(14,232)	\$(376,150)
Total Return Swaps Equity	Pay Variable 3-month LIBOR, Receive Russell 2000 Growth	975	(63,000)
Subtotal - Return Swaps Equity			\$(439,150)

(Dollar Amounts Expressed in Thousands)

# Foreign Currency Risk

At June 30, 2016 and 2015, 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, 2016	Forward Contracts		Swaps	Total Exposure
Currency Name	Net Receivables	Net Payables		
Australian Dollar	\$43	\$(51)	\$-	\$(8)
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 Sheqel	(2)	-	-	(2)
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)
Pound Sterling	(996)	708	(2)	(290)
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
Sub Total	(869)	468	1,644	1,243
US Dollar	<u> </u>	(2,439)	(21,693)	(24,132)
Total	\$(869)	\$(1,971)	\$(20,049)	\$(22,889)

As of June 30, 2015	Forward Contracts		Swaps	Total Exposure
Currency Name	Net Receivables	Net Payables		
Australian Dollar	(\$58)	\$101	\$27	\$70
Brazilian Real	(1)	1	-	-
Canadian Dollar	(34)	128	(79)	15
Chilean Peso	-	-	(1)	(1)
Colombian Peso	-	-	(4)	(4)
Czech Koruna	(13)	(30)	-	(43)
Danish Krone	-	8	-	8
Euro Currency	56	(19)	(134)	(97)
Hungarian Forint	(88)	15	-	(73)
Indian Rupee	-	(10)	-	(10)
Japanese Yen	12	256	(295)	(27)
Mexican Peso	(57)	28	(47)	(76)
New Israeli Sheqel	-	(3)	-	(3)
New Zealand Dollar	(255)	282	-	27
Norwegian Krone	(87)	62	-	(25)
Philippine Peso	(7)	(2)	-	(9)
Polish Zloty	(109)	18	-	(91)
Pound Sterling	215	(258)	40	(3)
Singapore Dollar	(62)	19	-	(43)
South African Rand	-	-	(91)	(91)
Swedish Krona	43	(57)	-	(14)
Swiss Franc	(18)	65	-	47
Turkish Lira	(14)	(1)	-	(15)
Yuan Renminbi	19	(10)	-	9
Sub Total	(458)	593	(584)	(449)
US Dollar	21,056	-	(13,382)	7,674
Total	\$20,598	\$593	\$(13,966)	\$7,225

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, 2016 and 2015.

(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, 2016 and 2015, are shown below:

				(4)
				Fiduciary Net
	(1)		(3)	Position as a %
	Total	(2)	Net Pension	of Total Pension
	Pension	Fiduciary	Liability	Liability
Year Ending June 30	Liability	Net Position	(1) - (2)	(2)/(1)
2016	\$9,436,090	\$7,680,865	\$1,755,225	81.4%
2015	9,028,679	7,878,814	1,149,865	87.3

The actuarial valuation of the System involve 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, 2013, and as a result of that analysis, the Board of Retirement approved certain changes to the actuarial assumptions, which were incorporated in the actuarial valuations as of June 30, 2016 and 2015.

## Disclosure of Information about Actuarial Methods and Assumptions

The required Schedule of Changes in Net Pension Liability 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, 2016 and 2015:

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: 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 For Miscellaneous Members and Beneficiaries -

RP-2000 Combined Healthy Mortality Table projected

with Scale BB to 2022

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

b) Disability 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

For Safety Members - RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 set

forward two years

c) Employee Contribution Rate For Miscellaneous Members - RP-2000 Combined Healthy

Mortality Table projected with Scale BB to 2022 weighted

40% male and 60% female

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

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

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

(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, 2016 and 2015 are summarized in the table below:

	Target	Real Rate of	Long-Term Expected
Asset Class	Allocation	Return	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
Total Portfolio	100.0%	6.19%	5.67%
Inflation			3.25
Investment expense adju	(0.40)		
Risk adjustment			(1.02)
Total Long-Term Expected R	ate of Return		7.50%

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

The discount rate used to measure the total pension liability was 7.50% as of June 30, 2016 and 2015. 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 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, 2016 and 2015, calculated using the discount rate of 7.50%, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.50%) or 1.00% higher (8.50%) than the current rate.

	1% Decrease	Current Discount Rate	1% Increase
	6.50%	7.50%	8.50%
Net pension liability as of June 30, 2016	\$2,983,885	\$1,755,225	\$737,575
Net pension liability as of June 30, 2015	2,338,210	1,149,865	166,968

#### 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 2.36% to 21.12% of annual covered salary for fiscal year 2015-2016 and from 2.55% to 18.17% of annual covered salary for fiscal year 2014-2015 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 14.87% to 43.65% of covered payroll for fiscal year 2015-2016 and from 17.04% to 42.69% of covered payroll for fiscal year 2014-2015. 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.

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, 2016 and 2015 totaled \$286,514 and \$291,102. Included in this total are employer contributions of \$209,020 and \$222,959 in fiscal years 2015-2016 and 2014-2015, respectively, of which \$190,936 and \$203,965 were made by the County of Sacramento. Member contributions were \$77,494 and \$68,143 in fiscal years 2015-2016 and 2014-2015, respectively. All contributions were made in accordance with actuarially-determined contribution requirements based on the actuarial valuations performed as of June 30, 2014 and 2013.

#### **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.

#### NOTES TO THE BASIC FINANCIAL STATEMENTS (CONTINUED)

(Dollar Amounts Expressed in Thousands)

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, 2016 and 2015, total allocated reserves were \$8,236,402 and \$7,838,825, 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.

A summary of the various reserve accounts, which comprise net position restricted for pension benefits at June 30, 2016 and 2015, is as follows:

# NET POSITION RESTRICTED FOR PENSION BENEFITS AT FAIR VALUE As of June 30

_	2016	2015
Employee Reserves	\$758,438	\$726,980
Employer Reserves	2,722,084	2,621,588
Retiree Reserves	4,658,694	4,393,327
Retiree Death Benefit Reserves	16,047	15,791
Contingency Reserve	81,139	81,139
Total allocated reserves and designations	8,236,402	7,838,825
Market Stabilization Reserve	(555,537)	39,989
Net position restricted for pension benefits, at fair value	\$7,680,865	\$7,878,814

#### **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 perquisites 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.

(Dollar Amounts Expressed in Thousands)

Below is the list of employers participating in the Program as of June 30, 2016:

- 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, 2016, there were 246 annuitants receiving medical subsidy and 237 annuitants receiving dental subsidy. As of June 30, 2015, there were 228 annuitants receiving medical subsidy and 219 annuitants receiving dental subsidy.

#### **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 2016 and 2015, 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.

<u>Special Districts' annuitants</u> - 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 OPEB 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:

	2016	2015
Beginning Balance	\$111,350	\$143,432
Additions	-	11,000
Deductions	(47,850)	(43,082)
Ending Balance	\$63,500	\$111,350

Future debt service requirements for outstanding mortgages are as follows:

#### Year Ending

June 30	Interest	Principal	Total
2017	\$2,293	\$-	\$2,293
2018	2,293	-	2,293
2019	1,746	13,500	15,246
2020	1,746	-	1,746
2021	930	39,000	39,930
2022	289	11,000	11,289
Total	\$9,297	\$63,500	\$72,797

#### **NOTE 10 – LEASE OBLIGATIONS**

SCERS has commitments under operating lease agreements for office facilities and equipment. Minimum future rental payments as of June 30, 2016 were as follows:

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2017	\$573
2018	581
2019	589
2020	597
2021	505
Total	\$2,845

Rental costs during the years ended June 30, 2016 and 2015 were \$593 and \$553, respectively.

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# 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)

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

<sup>\*</sup> 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 OF EMPLOYER CONTRIBUTIONS SCHEDULE 2:

For the Last Ten Fiscal Years Ended June 30

(Dollar Amounts Expressed In Thousands)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined contribution (ADC)	\$207,884	\$221,823	\$209,367	\$188,529	\$179,099	\$182,921	\$167,142	\$177,011	\$167,055	\$156,805
Contributions in relation to the ADC Contribution deficiency (excess)	207,884	221,823	209,367	188,529	179,099	182,921	167,142	177,011	167,055	156,805
Covered payroll*	\$912,421	\$873,328	\$858,343	\$858,551	\$835,737	\$818,804		\$923,375	\$851,016	\$798,800
Contributions in relation to the ADC as a percentage of covered payroll	22.8%	25.4%	24.4%	22.0%	21.4%	22.3%	19.2%	19.2%	19.6%	19.6%

<sup>\*</sup>Payroll for the years ending 2007 through 2012 are calculated by dividing the contribution dollar amount by the aggregated contribution rate.

# For the Fiscal Year Ended June 30

SCHEDULE OF ANNUAL MONEY-WEIGHTED RATE OF RETURN

SCHEDULE 3:

2015 2014	2.01% 16.18%
2016	(%26.0)
ı	Annual money-weighted rate of return, net of investment expenses*

<sup>\*</sup> Information prior to June 30, 2014 is not available.

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-Weighed 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, 2013. 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, 2014 valuation:

- The retirement rates were adjusted to reflect slightly later retirements.
- The mortality rates were adjusted to reflect a slight mortality improvement.
- Termination rates were adjusted to reflect lower incidence of termination, with a higher proportion electing to receive a deferred vested benefit.
- Years of service instead of age was used in determining and applying the merit and promotional rates of salary increase.

# 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:

Actuarial cost method:

Valuation date:

Remaining amortization period:

Amortization method:

Asset valuation method:

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.

Entry Age Cost Method

Level percent of payroll (3.50% payroll growth assumed) 22 years (declining) as of June 30, 2013 for the outstanding balance of the June 30, 2012 UAAL. The UAAL established as a result of the Early Retirement Incentive Program for Law Enforcement Managers Association members is amortized over a 10-year period, beginning June 30, 2010. Effective June 30, 2013 any changes in UAAL due to actuarial gains or losses or due to changes in actuarial assumptions or methods will be amortized over a 20-year closed period effective with each valuation. 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 a declining period of up to 5 years. 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 sevenyear period. The deferred return is further adjusted, if neccessary, so that the actuarial value of assets will stay

within 30% of the market value of assets.

Actuarial assumptions:

Investment rate of return: 7.50%, net of pension plan investment expense, including

inflation

Inflation rate: 3.25%

Projected salary increases: 3.50% - 11.30% varying by service, including inflation

Assumed post-retirement benefit increase:

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, 2013 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' Pention Reform Act of 2013

(PEPRA).

#### **Changes in Methods and Assumptions Used**

Valuation date as of June 30:

- 2005 Inflation assumption decreased from 4.00% to 3.50%.
- 2006 Employee contribution crediting rate is equal to 5-year Treasury rate, assuming sufficient net earnings.
- 2007 Investment return assumption increased from 7.75% to 7.875%.
  - Salary increase assumption increased from 5.45% to 5.65%.
- 2010 Investment return assumption decreased from 7.875% to 7.75%.
- 2011 Modification in non-economic assumptions.
- 2012 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%.
- 2013 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 Sacramanto County Law Enforcement Managers Association (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 20year 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;
    - UAAL as a result from retirement incentive programs will be amortized over a period up to 5 years.

# OTHER SUPPLEMENTAL INFORMATION

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

## <u>Schedule I - Schedule of administrative expenses:</u>

Type of expense:	2016	2015
Salaries and benefits	\$3,506	\$3,445
Professional fees	1,081	811
Rent and lease expense	501	456
Depreciation expense	34	36
Equipment purchases and maintenance	26	32
Other administrative expenses	1,214	1,074
Total administrative expenses	\$6,362	\$5,854
Schedule II - Schedule of investment fees and expenses:		
Type of investment expense:	2016	2015
Domestic equity managers	\$6,006	\$6,401
International equity managers	6,788	7,702
Absolute return managers	9,255	10,091
Private equity managers	10,783	11,050
Fixed income managers	3,613	3,691
Real asset managers	13,819	14,711
Opportunity portfolio managers	4,122	2,602
Strategic cash overlay managers	596	648
Custodian fees	476	510
Investment consulting fees	972	950
Other investment expenses and fees	2,948	3,082
Total investment fees and expenses	\$59,378	\$61,438
Schedule III - Schedule of payments to consultants:		
Type of service:	2016	2015
Legal services	\$1,543	\$1,538
Medical consulting services	500	356
Actuarial services	179	163
Information Technology services	152	-
Audit and consulting services	89	71
Total payments to consultants	\$2,463	\$2,128

# STATEMENTS OF CHANGES IN ASSETS AND LIABILITIES

## AGENCY FUND

## FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015

(Dollar Amounts Expressed in Thousands)

Assets	2016	2015
Beginning accounts receivable balance	\$31	\$41
Additions	26,545	26,251
Deductions	(26,529)	(26,261)
Ending accounts receivable balance	\$47	\$31
Liabilities  Beginning accounts payable balance	\$31	\$41
	•	·
Additions	26,545	26,251
Deductions	(26,529)	(26,261)
Ending accounts payable balance	\$47	\$31





## CHIEF INVESTMENT OFFICER'S REPORT

#### Introduction

For the fiscal year ended June 30, 2016, the Sacramento County Employees' Retirement System ("SCERS") achieved a (0.6%) gross return. The muted absolute returns were the result of negative returns within several asset classes, including the International Equity and Absolute Return segments. SCERS' gross return fell short of its policy index return of 1.5% by 2.1%, due to poor relative performance within the Domestic Equity, Absolute Return and Real Assets asset classes compared to their respective benchmarks. While SCERS has experienced a strong recovery in its asset base since the depths of the Global Financial Crisis ("GFC"), over the past few years, this recovery has moderated, demonstrated by the near flat returns over the past fiscal year. Assets under management ended the current fiscal year at \$7.7 billion, which is near its historical peak level, but off of last year's fiscal year ending level of \$7.9 billion.

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

#### **Market Overview**

The global financial markets generated mixed results during the 2015-2016 fiscal year, with bond markets outperforming equities, and with pockets of increased volatility. Within equities, domestic and international equities produced divergent returns, with the former significantly outperforming the latter. Domestic equities generated slightly positive returns in aggregate, while international equity markets, including emerging markets, produced significant negative returns. Similar to the prior year, the global markets have lost further momentum from the accommodative monetary policy driven rally that has fueled markets since the GFC in 2008.

Benchmark returns across SCERS' asset and sub asset classes were as follows: Domestic equity markets (Russell 3000 Index) returned 2.1%; International developed equity markets (MSCI EAFE Index) returned (9.7%); Emerging equity markets (MSCI Emerging Markets Index) returned (12.1%); Fixed income markets (custom benchmark comprised 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) returned 6.0%; Real estate markets (NFI-ODCE Index) returned 11.8%; Absolute return markets (HFRI Fund of Funds Composite Index) returned (5.4%); and Commodities markets (Bloomberg Commodity Index) returned (13.3%).

During the year, quality stocks with high dividend and earnings yields, such as those in the utilities, telecom and consumer staples sectors outperformed, while growth, momentum and deep value stocks lagged. The majority of active investment managers allocate to the types of stocks that performed poorly, in particular within the hedge fund/absolute return universe, which was one of the poorer performing segments of the market. Credit markets experienced volatility in an environment where lower quality issues underperformed for much of the earlier parts of the year. Commodity markets experienced further distress during the earlier stages of the fiscal year, including a widening supply and demand imbalance in the oil markets. Oil prices dropped to a level below \$30 per barrel, but rallied in the first half of calendar year 2016 to close the fiscal year at \$44 per barrel.

Coordinated global monetary policy continued to diverge during the fiscal year. In the U.S., the Federal Reserve ("Fed"), which ended its quantitative easing ("QE") program during the fourth quarter of 2014, introduced an interest rate hike in late 2015, nine years since its last interest rate hike prior to the GFC. However, with an increase in volatility within financial markets in early 2016 and soft economic numbers, the Fed scaled back its expectations for further interest rate hikes until there was demonstrated improvement in the labor market and increasing signs of inflation. The situation in the U.S. contrasted that of other global developed nation monetary policies where in Europe and Japan, the European Central Bank and the Bank of Japan introduced further rounds of monetary easing measures during the year. These included

subsequent purchases of government bonds and reductions in interest rates which moved the latter into negative interest rate territory. China was also active introducing monetary and fiscal policy measures during the year, in order to smooth its pace of economic growth and ease its transition toward a consumption based economy. Some of the biggest news came out of Great Britain at the end of the fiscal year, where on June 23, 2016, the UK surprisingly voted to leave the European Union. The immediate aftermath of the British exit ("Brexit") vote caused global equity markets to temporarily plunge, though they did rebound, and the British Pound Sterling to drop to 30 year lows against the U.S. dollar.

With the multi-year post-GFC rise in asset prices across most markets in a monetary policy-fueled low interest rate environment, valuations in many market segments remain high. This has made it more challenging to find attractive opportunities in many parts of the market, highlighting the importance of maintaining investment discipline, while seeking those opportunities which offer better relative value. Looking ahead, with global growth rates expected to continue to be below long-term averages, lower forward capital market assumptions within many segments of the market, global monetary policy measures expected to have diminishing impact, and the introduction of a new U.S. President, there could be higher levels of volatility and a broader range of outcomes within the financial markets. 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 the Board with the assistance of SCERS' investment staff, general investment consultant Verus, alternative assets consultant Cliffwater LLC ("Cliffwater"), and real estate consultant The Townsend Group ("Townsend"). The objective of the asset allocation model is to ensure the diversification of investments in a manner that achieves the 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.

SCERS' current asset allocation model was established pursuant to an asset allocation study, with a focus on reducing risk by increasing diversification for SCERS' portfolio, and in particular, creating an asset allocation structure that performs well across different economic environments and risk factors (such as the equity risk premium, interest rates, credit, inflation and currencies). SCERS' portfolio, similar to most institutional investment portfolios, is weighted toward assets that tend to perform better in a growth oriented environment, given its higher allocation to equity-like assets, and is more susceptible to losing capital during recessionary periods when growth is contracting. Increased diversification is intended to make SCERS' portfolio more of an 'all weather' portfolio that can perform well on a relative basis across a variety of market environments, and lose less capital during market downturns. Another objective in the asset allocation structure is to establish clearly defined roles and objectives for each asset class to avoid duplication in sources of return and risk caused by the overlap between asset classes. While the target allocations to the major asset classes are long-term in nature, the asset allocation was designed to provide flexibility within the structure of the major asset classes to allocate capital to investment opportunities that present better relative value and the most attractive risk adjusted return characteristics.

#### CHIEF INVESTMENT OFFICER'S REPORT (CONTINUED)

SCERS' current asset allocation model is presented in the table below.

Asset Class	Target Allocation
Equities	
Domestic Equities	22.5%
International Equities	22.5%
Equities Total	45.0%
Fixed Income	20.0%
Private Equity	10.0%
Real Assets	
Core Private Real Estate	7.0%
Commodities	2.0%
TIPs, ILBs	0.0%
Private Real Assets	6.0%
Real Assets Total	15.0%
Absolute Return	10.0%
Opportunities	0.0%

SCERS has been actively implementing the current asset allocation over the past several years; however, this is a multi-year process to fully execute, especially within the Private Equity and Real Asset classes, given the unique cash flow characteristics of these segments and the importance of maintaining vintage year diversification. It is anticipated that it will require a few more years to reach the target allocation levels in the aforementioned asset classes. Nevertheless, since it has been five years since SCERS' last asset allocation study, during this past fiscal year, SCERS embarked on a new asset allocation study.

The last asset allocation study introduced significant changes to SCERS' strategic asset allocation at the asset class level, and also in the structuring of individual asset classes, so it is expected that the current asset allocation study will build upon the prior one, especially as it relates to reducing risk by increasing diversification, but with a greater focus on protecting capital during market downturns. This could translate toward viewing SCERS' asset allocation through functional and outcome based risk lenses rather than through conventional lenses, to better identify hidden risks within the portfolio. This approach entails regrouping and re-classifying portions of the portfolio, by linking those segments that are exposed to similar economic environments and risk factors, and by better identifying the roles they are expected to play within SCERS' portfolio.

#### 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, 2016, SCERS' assets were invested across: (1) Domestic Equity - nine separate account portfolios and one commingled fund; (2) International Equity - four separate account portfolios and five commingled fund partnerships; (3) Fixed Income - four separate account portfolios and one global opportunistic fixed income fund; (4)

Absolute Return - nine fund partnerships and two separate account portfolios; (5) Private Equity - four fundof-funds partnerships and thirty five fund partnerships; (6) Real Assets – four separate account portfolios, seven core real estate funds, ten private real assets fund partnerships, two commodity fund partnerships, and a real assets strategy commingled fund; (7) Opportunities - two opportunistic credit fund partnerships, five value-added real estate fund partnerships and five opportunistic real estate fund partnerships; and (8) A portfolio overlay program.

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 two investment managers to manage an all-cap emerging markets equity mandate, which represented a replacement search for a manager whose engagement was terminated in fiscal year 2015-2016.
- In Fixed Income, no significant changes were made during the fiscal year.
- In Absolute Return, an engagement with a direct absolute return fund was terminated. The proceeds
  were placed in an existing diversified separate account, until a replacement search is completed in
  fiscal year 2016-2017.
- In Private Equity, SCERS continued implementation of the direct private equity investment platform, making seven fund commitments during the fiscal year. SCERS also approved the annual report and annual investment plan for the Private Equity asset class during the fiscal year.
- In Real Assets, within the real estate portfolio, SCERS conducted some re-balancing in the core real
  estate sub-asset class by disposing of three assets in the separate account portfolios, and investing in
  one core open-end real estate fund and one international value-added closed-end real estate fund. In
  the private real assets sub-asset class, SCERS continued to build its portfolio by making four private
  real assets fund commitments during the fiscal year. In addition, SCERS approved the annual report
  and annual investment plan for the Real Assets asset class during the fiscal year.
- In the Opportunities asset class, SCERS made one fund commitment, which was referenced in the Real Assets discussion above, with the allocation drawn from the Real Assets asset class.

As previously noted, 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 will take several years for target allocation levels to be reached in the Private Equity and Real Assets asset classes.

SCERS' custodial bank is State Street California, Inc ("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 remains consistent with the asset allocation model 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, 2016, SCERS earned a net income of \$1.9 million from securities lending and received commission recapture income of \$0.06 million.

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

#### CHIEF INVESTMENT OFFICER'S REPORT (CONTINUED)

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) Options and applications for the management of currency exposures; (2) Investing in Timberland; (3) Systematic macro absolute return strategies; and (4) Private equity fund transparency.

#### **SCERS Investment Objectives**

SCERS' investment objectives are set forth in the Board's Investment Policy and Objectives Statement ("Investment Policy") and through customized investment policy statements for each asset class.

At the highest level, SCERS' investment objectives are:

#### Provide for Present and Future Benefit Payments:

The overall investment objective of SCERS is to invest pension assets solely in the interest of providing benefits to the participants and their beneficiaries, while attempting to minimize employer contributions and defray administrative costs. The investment of contributions and other fund assets in accordance with the Investment Policy is intended to accomplish this and maintain adequate funding for SCERS' liabilities over time. The goal of the Board is to design an investment portfolio that will achieve and exceed the annualized actuarial assumed rate of 7.5% over a market cycle. The Board strives to achieve this level of return with a high level of confidence and with an acceptable level of risk.

#### Make Prudent Investments:

In accordance with the fiduciary standards of care, skill, prudence and diligence, the Board strives to produce an investment return based on levels of liquidity and investment risk that are prudent and reasonable under present circumstances, recognizing that those circumstances may change over time.

#### **Diversify the Assets:**

TThe Board diversifies the investments of SCERS to maximize the investment return and maintain an acceptable investment risk.

#### Create Reasonable Pension Investments Relative to Other Pension Funds:

SCERS' investment program must operate in compliance with all applicable State and Federal laws and regulations concerning the investment of pension assets. SCERS assesses its selection of investment vehicles and strategies relative to other private and public pension funds, with special emphasis on comparisons with public funds.

#### Establish Policy and Objective Review Process:

Annually, SCERS conducts a formal review of its Investment Policy and undertakes an updated asset/liability study typically every three to five years.

#### Proxy Voting Guidelines and Procedures

As a fiduciary, the Board has an obligation to manage SCERS' assets in the best interest 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 action issues, such as mergers and acquisitions. For the fiscal year ended June 30, 2016, 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 model. 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.

Relative to recent years, SCERS' investment performance for the fiscal year ended June 30, 2016 was poor, with divergent returns across SCERS' major asset classes. Fixed Income and Private Equity generated the strongest positive absolute returns, while International Equity and Absolute Return generated negative returns. International Equity was impacted by slower growth expectations, both within developed and emerging markets, compared to the United States.

For the period, SCERS' total fund return was (0.6%), gross of investment management fees, and (0.9%), net of investment management fees. The gross return for the fiscal year was 2.1% below SCERS' policy weighted benchmark return of 1.5%, and was well below the actuarial return objective of 7.5%. Over the trailing three-year period, SCERS' annualized investment return was 5.9% gross and 5.6% net. This three-year annualized return was below the actuarial return objective of 7.5% and SCERS' policy benchmark return of 6.6%. Over the trailing five-year period, SCERS' annualized investment return was 6.2% gross and 5.9% net. This five-year annualized return was also below the actuarial return objective of 7.5% and SCERS' policy benchmark return of 6.6%.

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 0.2%. SCERS ranked in the 75th percentile.

Domestic Equity returned 1.1% for the fiscal year, gross of fees. The return was below the benchmark Russell 3000 Index return of 2.1%, by 1.0%. For the three-year period, SCERS' Domestic Equity annualized return was 10.4%, gross of fees, compared to the Russell 3000 Index benchmark return of 11.1%. In the domestic equity segment of the InvestorForce Universe, SCERS ranked in the 42<sup>nd</sup> percentile for the fiscal year and in the 55<sup>th</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 0.9% return, gross of fees, which was 2.0% below the return of the Russell 1000 Index benchmark of 2.9%. The annualized investment return for large cap equity for three years was 10.6%, gross of fees, which was below the benchmark return of 11.5%. The one-year return for small cap equity investments was (6.6%), gross of fees. This return was slightly better than the benchmark Russell 2000 Index return of (6.7%). For the three-year period, the small cap equity annualized return was 6.6%, gross of fees, which was 0.5% below the benchmark return of 7.1%.

International Equity returned (8.0%) for the fiscal year, gross of fees. This was 1.8% above the benchmark MSCI ACWI ex-U.S. Index return of (9.8%). Annualized performance for the three-year period of 2.2%, gross of fees, was above the benchmark return of 1.6%. In the international equity segment of the InvestorForce Universe, SCERS ranked in the 34th percentile for the fiscal year and in the 53rd 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 (7.2%), gross of fees, which was 2.5% above the benchmark MSCI EAFE Index return of (9.7%). Over the trailing three-year period, the developed markets annualized return was 3.2%, gross of fees, compared to the MSCI EAFE Index return of 2.5%. For the fiscal year, the emerging markets gross of fees return of (12.7%) was below the return of the benchmark MSCI Emerging Markets Index return of (11.7%). For the three-year period, SCERS' emerging markets annualized return of (2.1%), gross of fees, came in 0.9% below the benchmark return of (1.2%).

SCERS' Fixed Income investments generated a fiscal year 5.3% return, gross of fees, which was 0.8% below the custom benchmark (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) return of 6.1%. For the three-year period, the Fixed Income asset class annualized return was 4.1%, gross of fees, compared to the benchmark return of 3.5%. In the fixed income segment of the InvestorForce Universe, SCERS' Fixed Income return ranked in the 34th percentile for the fiscal year and in the 36th percentile for the three-year period.

SCERS' Absolute Return investments generated a fiscal year (4.5%) return, gross of fees. For the three-year period, the Absolute Return asset class annualized return was 2.3%. The performance objective and policy benchmark for the Absolute Return investments is the 91-day T-Bill plus five percent, which returned 5.2% and 5.1% in the fiscal year and three-year periods, respectively. Another comparison measure is the HFRI Fund of Funds Composite Index, which returned (5.4%) and 1.9% for the fiscal year and three-year period, respectively. In the absolute return segment of the InvestorForce Universe, SCERS' Absolute Return performance ranked in the 41st percentile for the fiscal year and in the 54th percentile for the three year period.

The Private Equity asset class generated a return of 2.3%, gross of fees for the fiscal year, compared to the 3.5% return of the asset class benchmark, the Russell 1000 Index plus three percent. For the three-year period, SCERS' Private Equity asset class returned 12.7%, compared to the benchmark return of 14.4%. 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 2.9% and 11.4% for the fiscal year and three-year period, respectively. In the private equity segment of the InvestorForce Universe, SCERS' Private Equity return ranked in the 72<sup>nd</sup> percentile for the fiscal year and in the 27<sup>th</sup> percentile for the three year period. Please note that the returns of the private equity asset class and benchmark are delayed one quarter.

The Real Assets asset class generated a fiscal year 3.9% return, gross of fees, which was 2.1% below the benchmark CPI-U Headline Inflation Index + 5% return of 6.0%. For the three-year period, the Real Assets asset class annualized return was 7.9%, compared to the benchmark return of 5.7%. The Real Assets return does not include the SSGA Real Assets Strategy, which is the proxy used within SCERS' Overlay Program to replicate exposure while the asset class is built out, especially within the private real assets segment. Including the SSGA Real Assets Strategy, the returns for Real Assets, gross of fees for the fiscal year and three-year periods were 1.2% and 4.3%, respectively.

The Real Assets sub-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 a 3.9% return, gross of fees, which was 7.9% below the benchmark return of 11.8%. SCERS' core open-ended real estate funds achieved a 10.7% gross return compared to the benchmark return of 11.8%. SCERS' commodities funds returned (14.9%), which was 1.6% below the benchmark return of (13.3%). The poor commodities performance was heavily influenced by the sharp sell-off in energy prices during the first half of the fiscal year. During the fiscal year, SCERS did not have any allocations to TIPS, and the performance of the private real assets segment is not yet meaningful due to SCERS being earlier in the J-curve.

The Opportunities investments are tactical investments across SCERS' investible 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 15.3% gross return, which was 13.8% above SCERS' policy index 1.5% benchmark return.

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

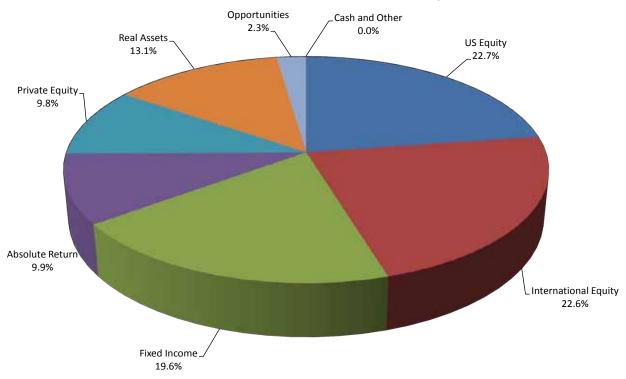
Respectfully submitted,

Steve Davis

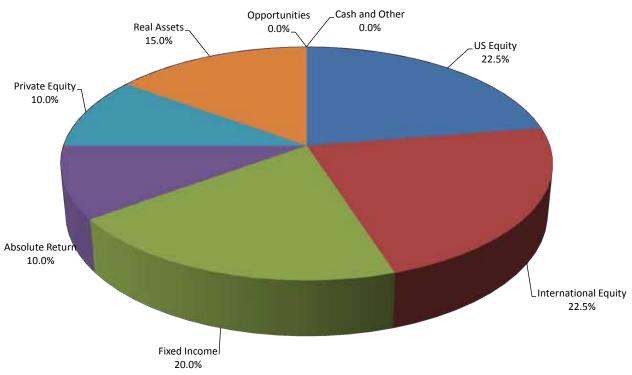
Chief Investment Officer

## ASSET ALLOCATION

## SCERS' Actual Asset Allocation as of June 30, 2016



#### **Target Asset Allocation**



The 2016 Actual Asset Allocation is based upon the Investment Summary net of \$63.5 million in real asset investment leverage.

## INVESTMENT RESULTS

	For the Pe	riod Ended June 30,	2016
		Annualized	
	1 Year	3 Years	5 Years
Domestic Equity			
Total Domestic Equity	1.1 %	10.4%	10.9%
InvestorForce All DB US Eq Gross Median	0.5	10.5	10.9
Benchmark: Russell 3000 Index	2.1	11.1	11.6
International Equity			
Total International Equity	(8.0)	2.2	1.1
InvestorForce All DB ex-US Eq Gross Median	(9.1)	2.2	1.5
Benchmark: MSCI ACWI ex-US Index	(9.8)	1.6	0.6
Absolute Return			
Total Absolute Return	(4.5)	2.3	3.2
InvestorForce All DB Hedge Funds Gross Median	(5.0)	2.5	3.2
Benchmark: 91 day Treasury Bill + 5%	5.2	5.1	5.1
HFRI Fund of Funds Composite Index	(5.4)	1.9	1.6
Private Equity			
Total Private Equity*	2.3	12.7	10.5
InvestorForce All DB Private Eq Net Median	4.5	10.4	9.2
Benchmark: Russell 1000 + 3% 1 Quarter Lag	3.5	14.4	14.3
Thomson Reuters C/A All PE 1 Quarter Lag	2.9	11.4	11.4
Fixed Income			
Total Fixed Income	5.3	4.1	4.2
InvestorForce All DB Total Fix Inc Gross Median	4.6	3.6	4.1
Benchmark: Custom**	6.1	3.5	3.4
Real Assets			
Total Real Assets	1.2	4.3	2.7
Benchmark: CPI-U Headline + 5%	6.0	5.7	N/A
Opportunities			
Total Opportunities	15.3	16.5	15.6
Benchmark: Policy Index	1.5	6.6	8.5
Total Fund			
SCERS Total Fund - Gross	(0.6)	5.9	6.2
SCERS Total Fund - Net	(0.9)	5.6	5.9
InvestorForce Public DB > \$1B Gross Median	0.2	6.6	6.5
Benchmark: Policy Index***	1.5 %	6.6%	6.6%

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.

<sup>\*</sup> Investment return and index return are one quarter in arrears.

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

<sup>\*\*\*</sup>The benchmark consists of 22.5% MSCI ACWI ex US, 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 US 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 US, 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, 2016 (Dollar Amounts Expressed in Thousands)

		Percentage of Total Cash &
Equity	Fair Value	Investments
Domestic Equity		
AllianceBernstein L.P Large Cap Core Index	\$1,088,944	14.10%
Brown Advisory - Large Cap Growth	113,580	1.47
CenterSquare Investment Management - U.S. REITs	121,371	1.57
Dalton, Greiner, Hartman, Maher & Co. LLC - Small Cap Value	66,114	0.86
Eagle Capital Management - Large Cap Core	247,599	3.21
Huber Capital Management - Large Cap Value	106,571	1.38
JP Morgan Asset Management - Equity Active Extension (130/30)	118,541	1.53
UBS Global Asset Management - US Small Cap Growth	53,585	0.69
Weatherbie Capital, LLC - Small Cap Growth	68,523	0.89
Wedge Capital Management - Small Cap Value	72,933	0.94
Transition Account	187	0.00
Total Domestic Equity	2,057,948	
International Equity		
Baillie Gifford & Co Emerging Market All Cap	121,218	1.57
CBRE Clarion Securities - International REITS	77,342	1.00
Lazard Asset Management - ACWI ex-US	396,226	5.13
LSV Asset Management - International Developed Value	391,666	5.07
Mondrian Emerging Markets Equity Fund, L.P.	124,570	1.61
Mondrian Emerging Markets Small Cap Equity Fund, L.P.	23,761	0.31
Mondrian International Small Cap Equity Fund, L.P.	85,334	1.10
William Blair Emerging Markets Small Cap Growth	25,007	0.32
William Blair International Small Cap Growth Portfolio	100,024	1.30
Total International Equity	1,345,148	
Total Equity	3,404,096	
Absolute Return		
AQR Delta Fund II, L.P.	47,122	0.61
Brevan Howard, L.P.	34,424	0.45
Claren Road Credit Partners, L.P.	8,126	0.11
Elliott International Limited	44,265	0.57
Grosvenor Capital Management	293	0.00
Jana Partners Qualified, L.P.	35,301	0.46
Lakewood Capital Partners, L.P.	37,889	0.49
Laurion Capital Ltd.	40,539	0.52
OZ Domestic Partners II, L.P.	39,291	0.51
SC Absolute Return Fund, LLC	237,523	3.07
SC Absolute Return Fund, LLC- Series B	159,662	2.07
Third Point Partners Qualified, L.P.	40,247	0.52
Total Absolute Return	724,682	

	Fair Value	Percentage of Total Cash & Investments
Private Equity		
Abbott Capital Private Equity Fund VI, L.P.	\$59,372	0.77%
Accel-KKR Capital Partners IV, L.P.	8,559	0.11
Accel-KKR Growth Capital Partners II, L.P.	2,107	0.03
Atalaya Special Opportunities Fund VI, L.P.	11,030	0.14
Athyrium Opportunities Fund II, L.P.	21,580	0.28
Dyal II US Investors, L.P.	9,327	0.12
Garrison Opportunity Fund III A LLC	15,306	0.20
H.I.G. Bayside Loan Opportunity Fund III (Europe-US\$), L.P.	16,150	0.21
H.I.G. Capital Partners V, L.P.	2,646	0.03
H.I.G. Europe Capital Partners II, L.P.	(256)	0.00
HarbourVest International Private Equity Partners VI-Partnership Fund L.P.	30,599	0.40
HarbourVest Partners VIII, L.P.	29,914	0.39
Khosla Ventures IV, L.P.	13,103	0.17
Khosla Ventures V, L.P.	7,596	0.10
Linden Capital Partners III, L.P.	3,570	0.05
Marlin Equity IV, L.P.	8,718	0.11
Marlin Heritage, L.P.	7,226	0.09
New Enterprise Associates 14, L.P.	31,878	0.41
New Enterprise Associates 15, L.P.	13,140	0.17
Private Equity Partners X, L.P.	58,267	0.75
RRJ Capital Master Fund II, L.P.	27,896	0.36
RRJ Capital Master Fund III, L.P.	1,334	0.02
Spectrum Equity VII, L.P.	11,511	0.15
Summit Partners Credit Fund, L.P.	10,918	0.14
Summit Partners Credit Fund II, L.P.	23,098	0.30
Summit Partners Venture Capital Fund III-A, L.P.	21,223	0.27
Summit Partners Venture Capital Fund IV, L.P.	1,540	0.02
Thoma Bravo Fund XI, L.P.	29,694	0.38
Thoma Bravo Fund XII, L.P.	1,463	0.02
TPG Opportunities Partners III, L.P.	16,745	0.22
Trinity Ventures XI, L.P.	18,087	0.23
Trinity Ventures XII, L.P.	2,200	0.03
TSG7 A, L.P.	(8)	0.00
TSG7 B, L.P.	220	0.00
Waterland Private Equity Fund V C.V.	8,394	0.11
Waterland Private Equity Fund VI, C.V.	2,200	0.03
Waterland Private Equity Fund VI Overflow Fund, C.V.	1	0.00
Wayzata Opportunities Fund III, L.P.	11,358	0.15
Total Private Equity	537,706	

# SUMMARY OF INVESTMENT ASSETS (CONTINUED) (Dollar Amounts Expressed in Thousands)

	Fair Value	Percentage of Total Cash & Investments
Fixed Income		
Domestic		
Brandywine Global Investment Management, LLC	\$211,784	2.74%
Metwest Asset Management	402,326	5.21
Neuberger Berman Fixed Income LLC	367,124	4.75
Prudential Investment Management	317,912	4.12
SC Credit Opportunities Mandate, LLC	148,435	1.92
Total Domestic Fixed Income	1,447,581	
International		
Metwest Asset Management	10,528	0.14
Neuberger Berman Fixed Income LLC	15,004	0.19
Prudential Investment Management	100,657	1.30
Total International Fixed Income	126,189	
Total Fixed Income	1,573,770	
Real Assets		
ArcLight Energy Partners Fund VI, L.P.	13,513	0.17
Atalaya SCERS SMA, LLC	11,923	0.15
BlackRock Realty Advisors - Separate Account	237,298	3.07
Blackstone Resources Select Offshore Fund	42,961	0.56
Brookfield Infrastructure Fund III, L.P.	3,644	0.05
Carlyle Power Partners II, L.P.	12,881	0.17
Cornerstone Realty - Separate Account	61,902	0.80
EnCap Energy Capital Fund IX, L.P.	26,094	0.34
EnCap Energy Capital Fund X, L.P.	7,740	0.10
EnCap Flatrock Midstrem Fund III, L.P.	3,111	0.04
First Reserve Energy Infrastructure Fund II, L.P.	5,807	0.08
Jamestown Premier Property Fund, L.P.	19,884	0.26
MetLife Core Property Fund, L.P.	48,949	0.63
Pantheon SCERS SIRF MM, LLC	35,640	0.46
Prime Property Fund, LLC	49,020	0.63
Principal US Property Account	37,482	0.49
Prologis Targeted Europe Logistics Fund, L.P.	30,835	0.40
Prologis Targeted US Logistics Fund, L.P.	31,429	0.41
Quantum Energy Partners VI, L.P.	7,834	0.10
State Street Global Advisors - Real Assets Strategy	263,532	3.41
Strategic Commodities Fund Ltd.	\$25,958	0.34
Townsend Real Estate Fund, L.P.	45,563	0.59
Wastewater Opportunity Fund, LLC	1,184	0.02
Total Real Assets	1,024,184	

	Fair Value	Percentage of Total Cash & Investments
Opportunities		
AEW Value Investors II, L.P.	2,092	0.03%
Allegis Value Trust	21,539	0.28
Atalaya Special Opportunities Fund V, L.P.	18,720	0.24
CIM Fund VIII, L.P.	18,103	0.23
ECE European Prime Shopping Centre Fund II, SCS-SIF	7,921	0.10
European Real Estate Debt Fund II, L.P.	29,955	0.39
Hammes Partners II, L.P.	7,124	0.09
Hines US Office Value Fund II, L.P.	6,927	0.09
KKR Real Estate Partners Americas, L.P.	21,551	0.28
NREP Nordic Strategies Fund, FCP-FIS	18,270	0.24
NREP Nordic Strategies Fund II, SCSp	4,454	0.06
Och-Ziff Real Estate Fund III, L.P.	8,526	0.11
Total Opportunities	165,182	
Overlay		
State Street Global Advisors	146,225	1.89
Total Overlay	146,225	2.03
Total Investments at Fair Value	7,574,845	
Total investments at rail value	7,374,643	
Cash		
Cash (Unallocated)	140,631	1.82
Other Cash & Cash Equivalents	9,317	0.12
Total Cash	149,948	
Total Cash & Investments	7,724,793	100.0%
Other Assets		
Receivables	167,972	
Other Assets	378	
Securities Lending Collateral	422,520	
Total Other Assets	590,870	
Total Assets	8,315,663	
Liabilities		
Accounts Payable	\$38,485	
Investment Trades Payable	172,831	
Warrants Payable	962	
Securities Lending Liability	422,520	
Total Liabilities	634,798	
Net Position Restricted for Pension Benefits	\$7,680,865	

# TEN LARGEST STOCK HOLDINGS (BY FAIR VALUE)

As of June 30, 2016

Rank	Shares	Security Name	Fair Value (in thousands)
1	766,781	Microsoft Corp	\$39,236
2	228,903	Berkshire Hathaway Inc Cl B	33,143
3	45,328	Amazon.Com Inc	32,438
4	292,876	Apple Inc	27,999
5	428,228	JPMorgan Chase & Co	26,610
6	632,303	Oracle Corp	25,880
7	234,689	Aon Plc	25,635
8	35,902	Alphabet Inc Cl C	24,848
9	533,081	Citigroup Inc	22,597
10	221,375	Exxon Mobile Corp	20,752
Total of Ten Largest Stock Holdings		\$279,138	

A complete list of the stock holdings is available.

# TEN LARGEST BOND HOLDINGS (BY FAIR VALUE)

As of June 30, 2016

	_				Fair Value
Rank	Par	Security Name	Interest Rate	Maturity	(in thousands)
1	20,760,000	United States Treasury N/B	1.38%	5/31/2021	\$21,134
2	18,950,000	United States Treasury N/B	1.13%	6/30/2021	19,044
3	15,550,000	United States Treasury N/B	2.50%	5/15/2046	16,204
4	10,885,000	United States Treasury N/B	2.88%	5/15/2043	12,240
5	11,755,000	United States Treasury N/B	0.75%	10/31/2017	11,783
6	8,435,000	GNMA II TBA 30YR	3.50%	7/20/2046	8,953
7	8,000,000	United States Treasury N/B	0.63%	5/31/2017	8,007
8	7,945,000	United States Treasury N/B	0.75%	2/28/2018	7,967
9	6,320,000	United States Treasury N/B	1.00%	12/31/2017	6,360
10	5,275,000	FNMA TBA 30YR	3.50%	7/14/2046	5,566
Total of Ten	Largest Bond	d Holdings		=	\$117,258

A complete list of the bond holdings is available.

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# SCHEDULE OF MANAGER FEES

# For the Year Ended June 30, 2016 (Dollar Amounts Expressed in Thousands)

Same   Same		
Brown Advisory         217           CenterSquare Investment Management         312           Dalton, Greiner, Hartman, Maher & Co. LLC         529           Eagle Capital Management         1,71           Huber Capital Management         771           JP Morgan Asset Management         853           UBS Global Asset Mgmt US Sm Cap Growth Equities         151           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         886           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         26           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         40           AQR Delta Fund II, L.P.         54 <td>Domestic Equity</td> <td>Ć240</td>	Domestic Equity	Ć240
CenterSquare Investment Management         312           Dalton, Greiner, Hartman, Maher & Co. LLC         529           Eagle Capital Management         1,871           Huber Capital Management         771           JP Morgan Asset Management         853           UBS Global Asset Mage US Sm Cap Growth Equities         151           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         83           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Equity Fund, L.P.         590           William Blair International Small Cap Equity Fund, L.P.         590           William Blair International Equity         6,788           Absolute Return         40,788           Absolute Return         40,788           Absolute Return         54           Claren Road Credit Partners, L.P.         583		•
Dalton, Greiner, Hartman, Maher & Co. LLC         529           Eagle Capital Management         1,871           Huber Capital Management         771           JP Morgan Asset Management         853           UBS Global Asset Mgmt US Sm Cap Growth Equities         151           Weatherbie Capital, LLC         392           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         86           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         305           William Blair Emerging Markets Small Cap Equity Fund, L.P.         590           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         40           AQR Delta Fund II, L.P.         954           Brevan Howard, L.P.         704           Claren Road Credit Partners, L.P.         303 <tr< td=""><td>·</td><td></td></tr<>	·	
Eagle Capital Management         1,871           Huber Capital Management         777           JP Morgan Asset Management         853           UBS Global Asset Mgmt US Sm Cap Growth Equities         151           Weatherbie Capital, LLC         392           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         186           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         4           AQR Delta Fund II, L.P.         954           Brevan Howard, L.P.         303           Elliott International Limited         1,157	· · · · · · · · · · · · · · · · · · ·	
Huber Capital Management         771           JP Morgan Asset Management         853           UBS Global Asset Mgmt US Sm Cap Growth Equities         151           Weatherbie Capital, LLC         392           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         8           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         704           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         805           Lakewood Capital Partners, L.P.         805 </td <td></td> <td></td>		
JP Morgan Asset Management         853           UBS Global Asset Mgmt US Sm Cap Growth Equities         151           Weatherbie Capital, LLC         392           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         8           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         315           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         704           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         805           Lakewood Capital Partners, L.P.         805           Lakewood Capital Partners, L.P. <t< td=""><td></td><td>•</td></t<>		•
UBS Global Asset Mgmt US Sm Cap Growth Equities         151           Weatherbie Capital, LLC         392           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         186           Capital International, Inc.         1,182           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Equity Fund, L.P.         590           William Blair International Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         704           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         583           Lakewood Capital Partners, L.P.         805           Lakewood Capital Partners, L.P.         605           Sc Absolute Retur	·	
Weatherbie Capital, LLC         392           Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         8           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Equity Fund, L.P.         590           William Blair International Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         704           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         583           Lakewood Capital Partners, L.P.         805           Lakewood Capital Partners, L.P.         605           Sc Absolute Return Fund, LLC. Series B         976		
Wedge Capital Management, LLP         700           Total Domestic Equity         6,006           International Equity         8           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         954           Also R Delta Fund II, L.P.         954           Brevan Howard, L.P.         704           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         583           Lakewood Capital Partners, L.P.         805           Lakewood Capital Partners, L.P.         605           SC Absolute Return Fund, LLC.         1,843		
Total Domestic Equity         6,006           International Equity         186           Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         954           Also R Delta Fund II, L.P.         954           Brevan Howard, L.P.         704           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         583           Lakewood Capital Partners, L.P.         805           Lakewood Capital Partners, L.P.         805           Ca Domestic Partners II, L.P.         605           SC Absolute Return Fund, LLC         1,843 <td>•</td> <td></td>	•	
International Equity  Baillie Gifford & Co. 186 Capital International, Inc. 1,182 CBRE Clarion Securities 191 Lazard Asset Management 1,208 LSV Asset Management 1,731 Mondrian Emerging Markets Equity Fund, L.P. 221 Mondrian Emerging Markets Small Cap Equity Fund, L.P. 315 Mondrian International Small Cap Equity Fund, L.P. 590 William Blair Emerging Markets Small Cap Growth 266 William Blair International Small Cap Growth Portfolio 898 Total International Equity Fund, L.P. 954 Brevan Howard, L.P. 954 Brevan Howard, L.P. 704 Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC Series B 976	Wedge Capital Management, LLP	
Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         954           AQR Delta Fund II, L.P.         954           Brevan Howard, L.P.         303           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         583           Lakewood Capital Partners, L.P.         805           Laurion Capital Ltd.         788           OZ Domestic Partners II, L.P.         605           SC Absolute Return Fund, LLC- Series B         976	Total Domestic Equity	6,006
Baillie Gifford & Co.         186           Capital International, Inc.         1,182           CBRE Clarion Securities         191           Lazard Asset Management         1,208           LSV Asset Management         1,731           Mondrian Emerging Markets Equity Fund, L.P.         221           Mondrian Emerging Markets Small Cap Equity Fund, L.P.         315           Mondrian International Small Cap Equity Fund, L.P.         590           William Blair Emerging Markets Small Cap Growth         266           William Blair International Small Cap Growth Portfolio         898           Total International Equity         6,788           Absolute Return         954           AQR Delta Fund II, L.P.         954           Brevan Howard, L.P.         303           Claren Road Credit Partners, L.P.         303           Elliott International Limited         1,157           Jana Partners Qualified, L.P.         583           Lakewood Capital Partners, L.P.         805           Laurion Capital Ltd.         788           OZ Domestic Partners II, L.P.         605           SC Absolute Return Fund, LLC- Series B         976		
Capital International, Inc.       1,182         CBRE Clarion Securities       191         Lazard Asset Management       1,208         LSV Asset Management       1,731         Mondrian Emerging Markets Equity Fund, L.P.       221         Mondrian Emerging Markets Small Cap Equity Fund, L.P.       315         Mondrian International Small Cap Equity Fund, L.P.       590         William Blair Emerging Markets Small Cap Growth       266         William Blair International Small Cap Growth Portfolio       898         Total International Equity       6,788         ABsolute Return       954         AQR Delta Fund II, L.P.       954         Brevan Howard, L.P.       704         Claren Road Credit Partners, L.P.       303         Elliott International Limited       1,157         Jana Partners Qualified, L.P.       583         Lakewood Capital Partners, L.P.       805         Laurion Capital Ltd.       788         OZ Domestic Partners II, L.P.       605         SC Absolute Return Fund, LLC       1,843         SC Absolute Return Fund, LLC- Series B       976		
CBRE Clarion Securities191Lazard Asset Management1,208LSV Asset Management1,731Mondrian Emerging Markets Equity Fund, L.P.221Mondrian Emerging Markets Small Cap Equity Fund, L.P.315Mondrian International Small Cap Equity Fund, L.P.590William Blair Emerging Markets Small Cap Growth266William Blair International Small Cap Growth Portfolio898Total International Equity6,788Absolute Return704AQR Delta Fund II, L.P.954Brevan Howard, L.P.704Claren Road Credit Partners, L.P.303Elliott International Limited1,157Jana Partners Qualified, L.P.583Lakewood Capital Partners, L.P.805Laurion Capital Ltd.788OZ Domestic Partners II, L.P.605SC Absolute Return Fund, LLC1,843SC Absolute Return Fund, LLC- Series B976		
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Mondrian Emerging Markets Small Cap Equity Fund, L.P.315Mondrian International Small Cap Equity Fund, L.P.590William Blair Emerging Markets Small Cap Growth266William Blair International Small Cap Growth Portfolio898Total International Equity6,788Absolute Return954AQR Delta Fund II, L.P.954Brevan Howard, L.P.704Claren Road Credit Partners, L.P.303Elliott International Limited1,157Jana Partners Qualified, L.P.583Lakewood Capital Partners, L.P.805Laurion Capital Ltd.788OZ Domestic Partners II, L.P.605SC Absolute Return Fund, LLC1,843SC Absolute Return Fund, LLC- Series B976	LSV Asset Management	1,731
Mondrian International Small Cap Equity Fund, L.P. 590 William Blair Emerging Markets Small Cap Growth 266 William Blair International Small Cap Growth Portfolio 898 Total International Equity 6,788  Absolute Return AQR Delta Fund II, L.P. 954 Brevan Howard, L.P. 704 Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC- Series B 976	Mondrian Emerging Markets Equity Fund, L.P.	221
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William Blair International Small Cap Growth Portfolio898Total International Equity6,788Absolute Return4AQR Delta Fund II, L.P.954Brevan Howard, L.P.704Claren Road Credit Partners, L.P.303Elliott International Limited1,157Jana Partners Qualified, L.P.583Lakewood Capital Partners, L.P.805Laurion Capital Ltd.788OZ Domestic Partners II, L.P.605SC Absolute Return Fund, LLC1,843SC Absolute Return Fund, LLC- Series B976	Mondrian International Small Cap Equity Fund, L.P.	590
Absolute Return  AQR Delta Fund II, L.P. 954 Brevan Howard, L.P. 704 Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC- Series B 976	William Blair Emerging Markets Small Cap Growth	266
Absolute Return  AQR Delta Fund II, L.P. 954 Brevan Howard, L.P. 704 Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC 1,843 SC Absolute Return Fund, LLC- Series B	William Blair International Small Cap Growth Portfolio	898
AQR Delta Fund II, L.P. 954 Brevan Howard, L.P. 704 Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC- Series B 976	Total International Equity	6,788
AQR Delta Fund II, L.P. 954 Brevan Howard, L.P. 704 Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC- Series B 976		
Brevan Howard, L.P. 704 Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC 1,843 SC Absolute Return Fund, LLC- Series B	Absolute Return	
Claren Road Credit Partners, L.P. 303 Elliott International Limited 1,157 Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC 1,843 SC Absolute Return Fund, LLC- Series B	AQR Delta Fund II, L.P.	
Elliott International Limited 1,157  Jana Partners Qualified, L.P. 583  Lakewood Capital Partners, L.P. 805  Laurion Capital Ltd. 788  OZ Domestic Partners II, L.P. 605  SC Absolute Return Fund, LLC 1,843  SC Absolute Return Fund, LLC- Series B	· · · · · · · · · · · · · · · · · · ·	
Jana Partners Qualified, L.P. 583 Lakewood Capital Partners, L.P. 805 Laurion Capital Ltd. 788 OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC 1,843 SC Absolute Return Fund, LLC- Series B		
Lakewood Capital Partners, L.P.805Laurion Capital Ltd.788OZ Domestic Partners II, L.P.605SC Absolute Return Fund, LLC1,843SC Absolute Return Fund, LLC- Series B976		1,157
Laurion Capital Ltd.788OZ Domestic Partners II, L.P.605SC Absolute Return Fund, LLC1,843SC Absolute Return Fund, LLC- Series B976	Jana Partners Qualified, L.P.	583
OZ Domestic Partners II, L.P. 605 SC Absolute Return Fund, LLC 1,843 SC Absolute Return Fund, LLC- Series B 976	Lakewood Capital Partners, L.P.	805
SC Absolute Return Fund, LLC 1,843 SC Absolute Return Fund, LLC- Series B 976	Laurion Capital Ltd.	788
SC Absolute Return Fund, LLC- Series B 976	OZ Domestic Partners II, L.P.	605
,	SC Absolute Return Fund, LLC	1,843
Third Point Partners Qualified, L.P. 537	SC Absolute Return Fund, LLC- Series B	976
	Third Point Partners Qualified, L.P.	537

9,255

Total Absolute Return

## SCHEDULE OF MANAGER FEES (CONTINUED)

(Dollar Amounts Expressed in Thousands)

#### Private Equity

Abbott Capital Private Equity Fund VI, L.P.	\$596
Accel-KKR Capital Partners IV, L.P.	167
Accel-KKR Growth Capital Partners II, L.P.	200
Atalaya Special Opportunities Fund VI, L.P.	101
Athyrium Opportunities Fund II, L.P.	385
Dyal II US Investors, L.P.	539
Garrison Opportunity Fund III A, LLC	350
H.I.G. Bayside Loan Opportunity Fund III (Europe-US\$), L.P.	906
H.I.G. Capital Partners V, L.P.	948
H.I.G. Europe Capital Partners II, L.P.	62
HarbourVest International Private Equity Partners VI-Partnership Fund L.P.	358
HarbourVest Partners VIII, L.P.	463
Khosla Ventures IV, L.P.	(399)*
Khosla Ventures V, L.P.	324
Linden Capital Partners III, L.P.	291
Marlin Equity IV, L.P.	206
Marlin Heritage, L.P.	481
New Enterprise Associates 14, L.P.	185
New Enterprise Associates 15, L.P.	334
Private Equity Partners X, L.P.	687
RRJ Capital Master Fund II, L.P.	(1,042)*
RRJ Capital Master Fund III, L.P.	523
Spectrum Equity VII, L.P.	394
Summit Partners Credit Fund, L.P.	122
Summit Partners Credit Fund II, L.P.	263
Thoma Bravo Fund XI, L.P.	546
Thoma Bravo Fund XII, L.P.	147
TPG Opportunities Partners III, L.P.	697
Trinity Ventures XI, L.P.	500
Trinity Ventures XII, L.P.	140
TSG7 A, L.P.	80
TSG7 B, L.P.	14
Waterland Private Equity Fund V C.V.	89
Waterland Private Equity Fund VI, C.V.	676
Wayzata Opportunities Fund III, L.P.	450
Total Private Equity	10,783

## SCHEDULE OF MANAGER FEES (CONTINUED)

(Dollar Amounts Expressed in Thousands)

	Fixed	Income
--	-------	--------

Brandywine Global Investment Management, LLC	\$780
Metwest Asset Management	778
Neuberger Berman Fixed Income, LLC	214
Prudential Investment Management	733
SC Credit Opportunities Mandate, LLC	1,108
Total Fixed Income	3,613
Real Assets	
ArcLight Energy Partners Fund VI, L.P.	918
Atalaya SCERS SMA, LLC	280
BlackRock Realty Advisors - Separate Account	2,733
Blackstone Resources Select Offshore Fund	416
Brookfield Infrastructure Fund III, L.P.	112
Carlyle Power Partners II, L.P.	1,199
Cornerstone Patriot Fund	102
Cornerstone Realty - Separate Account	732
EnCap Energy Capital Fund IX, L.P.	1,534
EnCap Energy Capital Fund X, L.P.	600
EnCap Flatrock Midstrem Fund III, L.P.	313
First Reserve Energy Infrastructure Fund II, L.P.	243
Jamestown Premier Property Fund, L.P.	368
MetLife Core Property Fund, L.P.	224
Pantheon SCERS SIRF MM, LLC	385
Prime Property Fund, LLC	550
Principal US Property Account	258
Prologis Targeted Europe Logistics Fund, L.P.	243
Prologis Targeted US Logistics Fund, L.P.	171
Quantum Energy Partners VI, L.P.	759
State Street Global Advisors - Real Assets Strategy	874
Strategic Commodities Fund Ltd.	171
Townsend Real Estate Fund, L.P.	14
Wastewater Opportunity Fund, LLC	620
Total Real Assets	13,819

#### Opportunities

AEW Value Investors II, L.P.	\$35
Allegis Value Trust	123
Atalaya Special Opportunities Fund V, L.P.	439
CIM Fund VIII, L.P.	438
ECE European Prime Shopping Centre Fund II, SCS-SIF	108
European Real Estate Debt Fund II, L.P.	448
Hammes Partners II, L.P.	875
Hines US Office Value Fund II, L.P.	170
KKR Real Estate Partners Americas, L.P.	361
NREP Nordic Strategies Fund, FCP-FIS	296
NREP Nordic Strategies Fund II, SCSp	304
Och-Ziff Real Estate Fund III, L.P.	525
Total Opportunities	4,122
Overlay	
State Street Global Advisors	596
Total Overlay	596
Total Manager Fees	\$54,982

<sup>\*</sup> Negative amounts due to decrease in unrealized carried interest allocation.

## INVESTMENT PROFESSIONALS

#### As of June 30, 2016

**Domestic Equity** 

AllianceBernstein L.P.

**Brown Advisory** 

CenterSquare Investment Management

Dalton, Greiner, Hartman, Maher & Co. LLC

Eagle Capital Management

**Huber Capital Management** 

JP Morgan Asset Management

**UBS Global Asset Mgmt** 

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.

William Blair Emerging Markets Small Cap Growth

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** 

**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.

**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.

Private Equity (continued)

Athyrium Opportunities Fund II, L.P.

Dyal II US Investors, L.P.

Garrison Opportunity Fund III A LLC

H.I.G. Bayside Loan Opportunity Fund III (Europe), 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.

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

#### INVESTMENT PROFESSIONALS (CONTINUED)

#### **Real Assets**

ArcLight Energy Partners Fund VI, L.P.

Atalaya SCERS SMA, LLC

BlackRock Realty Advisors - Separate Account

Blackstone Resources Select Offshore Fund

Brookfield Infrastructure Fund III, L.P.

Carlyle Power Partners II, L.P.

Cornerstone Realty - Separate Account

EnCap Energy Capital Fund IX, L.P.

EnCap Energy Capital Fund X, L.P.

EnCap Flatrock Midstrem Fund III, L.P.

First Reserve Energy Infrastructure Fund II, L.P.

IFM Global Infrastructure Fund

Jamestown Premier Property Fund, L.P.

MetLife Core Property Fund, L.P.

Pantheon SCERS SIRF MM, LLC

Prime Property Fund, LLC

Principal US 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.

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 US 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

**K&L Gates LLP** 

Nossaman LLP

**Public Pension Consultants** 

Stroock & Stroock & Lavan LLP

# SCHEDULE OF EQUITY BROKERAGE COMMISSIONS

For the Year Ended June 30, 2016

Broker Name	Commission per Share	Shares/Par Value	Total Commission	Total of Commission
Capital Institutional Svcs Inc. Equities	\$0.0357	2,064,154	\$73,590	5.58%
State Street Bank And Trust Company	0.0110	6,153,868	67,944	5.15
Merrill Lynch International	0.0064	9,870,406	63,083	4.78
Citigroup Global Markets Inc.	0.0044	10,567,761	46,249	3.50
State Street Bank And Trust Co.	0.0035	12,624,085	44,168	3.35
Credit Suisse Securities (USA) LLC	0.0036	12,159,994	43,198	3.28
Liquidnet Inc.	0.0296	1,421,158	42,010	3.19
Morgan Stanley Co. Incorporated	0.0059	6,759,957	39,901	3.03
Goldman Sachs & Co.	0.0023	17,234,184	39,083	2.96
Investment Technology Group Inc.	0.0374	1,039,731	38,896	2.95
JP Morgan Securities Inc.	0.0208	1,693,372	35,283	2.68
UBS Limited	0.0076	4,543,477	34,382	2.61
Themis Trading LLC	0.0400	810,455	32,418	2.46
Deutsche Bank Securities Inc.	0.0059	5,484,465	32,348	2.45
State Street Global Markets	0.0150	2,127,685	31,871	2.42
Credit Suisse Securities (Europe) Ltd.	0.0115	2,499,592	28,722	2.18
JP Morgan Clearing Corp.	0.0061	3,913,505	23,995	1.82
Macquariebank Limited	0.0031	6,915,521	21,559	1.63
Jefferies & Company Inc.	0.0379	557,670	21,161	1.60
ConvergEx Execution Solutions LLC	0.0475	428,979	20,376	1.54
UBS Securities LLC	0.0168	1,190,624	19,968	1.51
Wells Fargo Securities, LLC	0.0301	642,925	19,343	1.47
UBS Securities Asia Ltd.	0.0029	6,554,588	18,803	1.43
JP Morgan Securities Plc.	0.0160	1,137,579	18,238	1.38
JP Morgan Securities (Asia Pacific) Ltd.	0.0044	3,419,400	15,193	1.15
SMBC Securities Inc.	0.0534	281,598	15,047	1.14
Citigroup Global Markets Limited	0.0112	1,224,332	13,740	1.04
All Other Brokerage Firms*	0.0098	42,656,574	418,287	31.72
Total Brokerage Commissions	\$0.0079	165,977,639	\$1,318,856	100.00%
Brokerage Commission Recapture			(61,167)	
Net Brokerage Commissions			\$1,257,689	

<sup>\*</sup>All other brokerage firms is comprised of approximately 198 additional firms, each receiving less than 1% of total commissions. A complete listing of brokerage fees is available.

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### ACTUARIAL CERTIFICATION LETTER



100 Montgomery Street Suite 500 San Francisco, CA 94104-4308 T 415.263.8200 www.segalco.com

November 14, 2016

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, 2016 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, 2016 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

Benefits, Compensation and HR Consulting. Member of The Segal Group. Offices throughout the United States and Canada

It is our understanding that there are additional members who have not been reported to the Retirement System by their employers but who are entitled to accrue pension benefits. We have been informed by the System that these member records are currently being reviewed and that, in order to deliver our valuation report in a timely manner, we should not wait for these additional member records. These members have not been included in the June 30, 2016 valuation report.

Board of Retirement Sacramento County Employees' Retirement System November 14, 2016 Page 2

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.

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 (19 years as of June 30, 2016). 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 (2 years as of June 30, 2016) 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, 2016 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, 2016 prepared by Segal. For the Financial Section of the Comprehensive Annual Financial Report, 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, 2016 for funding purposes.

- 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, 2013 Experience Analysis and the June 30, 2014 Review of Economic Assumptions. It is our opinion that the assumptions used in the June 30, 2016 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, 2016 and assumptions approved in that analysis will be applied in the June 30, 2017 valuation.

### **ACTUARIAL CERTIFICATION LETTER (CONTINUED)**

Board of Retirement Sacramento County Employees' Retirement System November 14, 2016 Page 3

In the June 30, 2016 valuation, the ratio of the valuation assets to actuarial accrued liabilities increased from 86.8% to 87.3%. The employer's rate has decreased from 22.29% of payroll to 21.13% of payroll, while the employee's rate has increased from 8.88% of payroll to 10.06% of payroll. The decrease in the employer's rate and the increase in the employee's rate is primarily a result of certain employees in the legacy tiers agreeing to pick up some of the employer's normal cost rate.

In the June 30, 2016 valuation, the actuarial value of assets included \$555.5 million in deferred investment losses, which represented about 7% 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 87.3% to 81.4% and the aggregate employer contribution rate, expressed as a percent of payroll, would increase from about 21.1% to 25.4%.

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

Vice President and Actuary

Andy Yeung, ASA, MAAA, FCA, EA

MYM/bqb Enclosures This page intentionally left blank.

### 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, 2016 valuation on November 7, 2016.

### Assumptions:

Valuation Interest Rate and

Rate of Return on Investments: 7.50% net of administration and investment expenses

Inflation Assumption: 3.25%

Cost-of-Living Adjustment: 3.25% 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 -

RP-2000 Combined Healthy Mortality Table projected

with Scale BB to 2022

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

b) Disability 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

For Safety Members - RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 set

forward two years

c) Employee Contribution Rate For Miscellaneous Members - RP-2000 Combined

Healthy Mortality Table projected with Scale BB to

2022 weighted 40% male and 60% female

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

Pre-Retirement Mortality: Based upon the June 30, 2013 Actuarial Experience Study

Withdrawal Rates: Based upon the June 30, 2013 Actuarial Experience Study

Disability Rates: Based upon the June 30, 2013 Actuarial Experience Study

Service Retirement Rates: Based upon the June 30, 2013 Actuarial Experience Study

### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS (CONTINUED)

Salary Increases: Merit and longevity increases are based upon the June 30, 2013

Actuarial Experience Study plus 3.25% 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, as if the current benefit formulas

have always been in effect.

Amortization Policy: 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.

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.

Any new UAAL as a result of changes in actuarial assumptions or

methods will be amortized over a period of 20 years.

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.

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 - 40%

Safety Members - 50%

### SUMMARY OF PLAN PROVISIONS

Briefly summarized below are the major provisions of the County Employees' Retirement Law of 1937, as amended through June 30, 2016, 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, 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 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. 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.

### SUMMARY OF PLAN PROVISIONS (CONTINUED)

### **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			Annual Payroll	Annual Average Pay	% Increase/ (decrease) in
Date	Plan Type	Number	(in thousands)	(in thousands)	Average Pay*
6/30/2016	Miscellaneous	10,363	\$723,429	\$69.8	1.80%
	Safety	2,030	215,126	106.0	2.20
	Total	12,393	\$938,555	<u>\$75.7</u>	1.88%
6/30/2015	Miscellaneous	10,093	\$692,138	\$68.6	1.84%
	Safety	1,979	205,203	103.7	1.36
	Total	12,072	\$897,341	<u>\$74.3</u>	1.78%
6/30/2014	Miscellaneous	10,085	\$679,079	\$67.3	(0.15)%
	Safety	1,964	200,920	102.3	(0.01)
	Total	12,049	\$879,999	\$73.0	0.00%
6/30/2013	Miscellaneous	10,113	\$681,789	\$67.4	0.30%
	Safety	1,913	195,868	102.4	4.38
	Total	12,026	\$877,657	\$73.0	1.39%
6/30/2012	Miscellaneous	10,256	\$689,438	\$67.2	0.75%
	Safety	1,899	186,234	98.1	4.70
	Total	12,155	\$875,672	\$72.0	1.69%
6/30/2011	Miscellaneous	10,521	\$701,494	\$66.7	3.73%
	Safety	1,913	179,272	93.7	2.52
	Total	12,434	\$880,766	\$70.8	3.51%
6/30/2010	Miscellaneous	11,312	\$727,445	\$64.3	4.38%
	Safety	2,028	185,283	91.4	6.65
	Total	13,340	\$912,728	\$68.4	4.59%
6/30/2009	Miscellaneous	12,454	\$767,501	\$61.6	10.58%
	Safety	2,342	200,629	85.7	8.51
	Total	14,796	\$968,130	\$65.4	10.00%
6/30/2008	Miscellaneous	12,725	\$709,159	\$55.7	4.96%
	Safety	2,455	193,812	78.9	5.96
	Total	15,180	\$902,971	\$59.5	5.15%
6/30/2007	Miscellaneous	12,327	\$654,497	\$53.1	4.16%
	Safety	2,389	177,987	74.5	4.53
	Total	14,716	\$832,484	\$56.6	4.18%

Source: Actuarial Valuations from June 30, 2007 through 2016

<sup>\*</sup>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
6/30/2016	10,541	727	308	10,960	\$415,105	\$35,144	\$8,591	6.83%	\$37,875
6/30/2015	10,049	176	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	099	242	9,239	308,191	29,693	5,511	8.51	33,358
6/30/2011	8,346	669	224	8,821	284,009	29,805	5,009	9.57	32,197
6/30/2010	2,968	299	221	8,346	259,213	19,276	4,639	5.98	31,058
6/30/2009	7,709	503	244	2,968	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
6/30/2007	7,108	263	207	7,464	206,887	23,837	3,881	10.68	27,718

Note: Participants are counted once for each benefit received.

SCHEDULE OF FUNDING PROGRESS (Dollar Amounts Expressed in Thousands)

UAAL as a Percentage of Covered Payroll ((b - a) / c)	5 127.8%	132.6	) 144.1	7 161.0	2 149.4	5 109.2	1 95.7	96.2	1 47.9	1 45.9
Covered Payroll (c)	\$938,555	897,341	879,999	877,657	875,672	880,766	912,644	968,130	902,971	832,484
Funded Ratio (a / b)	87.3%	86.8	85.2	82.8	83.3	87.0	87.7	86.0	93.2	93.4
Unfunded AAL (UAAL) (b-a)	\$1,199,688	1,189,854	1,267,935	1,413,223	1,308,328	962,073	873,503	931,778	432,597	381,875
Actuarial Accrued of Liability (AAL)* (b)	\$9,436,090	9,028,679	8,580,928	8,210,980	7,838,223	7,382,897	7,090,497	6,661,993	6,363,355	5,788,336
Actuarial Value of Assets* (a)	\$8,236,402	7,838,825	7,312,993	6,797,757	6,529,895	6,420,824	6,216,994	5,730,215	5,930,758	5,406,461
Actuarial Valuation Date	6/30/2016	6/30/2015	6/30/2014	6/30/2013	6/30/2012	6/30/2011	6/30/2010**	6/30/2009	6/30/2008	6/30/2007

Source: Actuarial Valuations from June 30, 2007 through 2016

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

<sup>\*</sup>Includes contingency reserve and retiree death benefit reserves.

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

### ${f SOLVENCY\ TESTS}$ (Dollar Amounts Expressed in Thousands)

Active Members (Employer Financed Portion)	62%	61	58	53	26	29	70	99	84	84
Retired/ Vested Members	100%	100	100	100	100	100	100	100	100	100
Active Member Contributions	100%	100	100	100	100	100	100	100	100	100
Actuarial Value of Assets	\$8,236,402	7,838,825	7,321,993	6,797,757	6,529,895	6,420,824	6,216,994	5,730,215	5,930,758	5,406,461
Total	\$9,436,090	9,028,679	8,580,928	8,210,980	7,838,223	7,382,897	7,090,497	6,661,993	6,363,355	5,788,336
Active Members (Employer Financed Portion)	\$3,123,246	3,026,860	3,008,720	3,025,108	2,957,380	2,876,012	2,891,967	2,700,837	2,661,539	2,347,408
Retired/ Vested Members	\$5,635,248	5,356,228	4,939,239	4,566,212	4,284,864	3,930,252	3,626,664	3,399,695	3,150,635	2,920,508
Active Member Contributions	\$677,596	645,591	632,969	619,660	595,979	576,633	571,866	561,461	551,181	520,420
Valuation Date	6/30/2016	6/30/2015	6/30/2014	6/30/2013	6/30/2012	6/30/2011	6/30/2010*	6/30/2009	6/30/2008	6/30/2007

Events affecting year to year comparability:

6/30/07 - Investment return assumption increased from 7.75% to 7.875%.

Salary increase assumption increased from 5.45% to 5.65%.

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%.

UAAL established as a result of Early Retirement Incentive Program for LEMA is amortized over a 10-year period beginning June 30, 2010; - Changes to the amortization periods used for various future changes in liability:

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

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;

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.

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

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

				Plar	Plan Years Ended June 30	ded June	30			
	2016	2015	2014	2013	2012	2011	2010*	2009	2008	2007
Prior Valuation Unfunded Actuarial Liability	\$1,190	\$1,268	\$1,413	\$1,308	\$965	\$874	\$932	\$433	\$382	\$366
Salary Increase Greater (Less) than Expected	(38)	(38)	(138)	(113)	(102)	(89)	(110)	42	22	89
Asset Return Less (Greater) than Expected	62	(24)	(38)	152	257	209	n	445	6	(63)
Other Experience	(13)	(15)	15	99	28	(31)	(28)	12	(13)	(15)
Economic and Non-Economic Assumption Changes	1	1	16	ı	133	(22)	108	ı	1	26
Ending Unfunded Actuarial Accrued Liability	\$1,200		\$1,190 \$1,268	\$1,413 \$1,308	\$1,308	\$965	\$874	\$932	\$433	\$382

Source: Actuarial Valuations from June 30, 2007 through 2016

\* 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		
	Miscel	laneous	Saf	ety
Age	Male	Female	Male	Female
25	0.04%	0.02%	0.04%	0.02%
30	0.04	0.02	0.04	0.03
35	0.07	0.04	0.07	0.05
40	0.10	0.07	0.10	0.08
45	0.14	0.11	0.13	0.12
50	0.20	0.16	0.19	0.19
55	0.34	0.24	0.30	0.30
60	0.58	0.41	0.52	0.51
65	0.98	0.74	0.88	0.93

Note: 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 (%)

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Age	Miscellaneous (1)	Safety (2)
20	0.00%	0.10%
25	0.01	0.10
30	0.03	0.16
35	0.05	0.26
40	0.08	0.45
45	0.16	0.61
50	0.26	0.80
55	0.36	1.26
60	0.52	2.10

Note: For Miscellaneous, 25% of disabilities are assumed to be service-connected disabilities and the other 75% 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	13.00%	8.00%
1	8.00	6.00
2	7.00	5.00
3	6.00	4.00
4	5.50	3.00

Note: 75% of the Miscellaneous members and 50% of the Safety members are assumed to elect a withdrawal of contributions upon separation, while the remaining 25% 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	5.00%	2.50%
25	5.00	2.50
30	4.70	2.50
35	4.20	2.20
40	3.40	1.85
45	2.70	1.60
50	2.20	1.50
55	1.85	1.50
60	1.30	1.50
65	1.00	0.00

Note: 50% of the Miscellaneous members and 20% of the Safety members are assumed to elect a withdrawal of contributions upon separation, while the remaining 50% and 80% 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.





### 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, 2016 for the following five objectives: financial trends; revenue capacity; debt capacity; demographic and economic; and operating.

Financial trends are presented on pages 129 to 133. 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 129, 131, and 132. The schedules contain information regarding the contribution amount and rate history for the last ten years.

Demographic and economic information is presented on pages 134 to 138. 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 139 and 140. 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	Employee	Employer	Net Investment	
June 30:	Contributions	Contributions	Income / (Loss)	Total
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)
2007	42,871	156,805	891,506	1,091,182

Source: Audited Financial Statements from June 30, 2007 through 2016

### SCHEDULE OF DEDUCTIONS BY TYPE

(Dollar Amounts Expressed in Thousands)

_		Benefits	Paid				
.,				Health			
Year			Retiree	and			
Ended		Survivor	Death	Dental	Administrative		
June 30:	Service*	Benefits	Benefits	Benefits	Expenses	Withdrawals	Total
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
2007	193,823	1,681	492	1	5,818	4,434	206,249

<sup>\*</sup>Amounts reported here include both service retirement benefits and active death benefits.

Source: Audited Financial Statements from June 30, 2007 through 2016 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	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Salaries and Benefits	\$3,506	\$3,445	\$3,300		\$3,284 \$3,530	\$3,755	\$3,215 \$3,184	\$3,184	\$3,130	\$3,352
Professional Fees	1,081	811	786	857	1,146	1,137	719	842	942	629
Rent and Lease Expense	501	456	5 460	432		458 444	276	603	571	648
Depreciation Expense	34	36	36	36	37	17	2	Ω	2	5
Equipment Purchases and Maintenance	26	32	21	24	44	35	29	62	41	85
Other Administrative Expenses	1,214	1,074	1,062	1,086	1,086 1,073 1,183	1,183	1,364 1,284 1,177	1,284	1,177	1,099
Total	\$6,362	\$5,854	\$5,665	\$5,719	\$6,288	\$6,571	1 \$5,908 =	\$5,980	\$5,866	\$5,818

Source: SCERS Annual Budget from June 30, 2007 through 2016

## SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

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

	2016	2015	2014	2013	2012	2011	2010	5009	2008	2007
Employee contributions Employer contributions Net investment income/(loss)	\$77,494 209,020 (72,399)	\$68,143 222,959 158,222	\$57,635 210,503 1,107,152	\$68,242 189,664 785,449	\$65,690 179,098 (3,414)	\$57,151 182,921 1,206,775	\$52,413 167,142 617,481	\$54,623 177,011 (1,318,447)	\$52,142 167,054 (234,086)	\$42,871 156,805 891,506
Total additions	214,115	449,324	1,375,290	1,043,355	241,374	1,446,847	837,036	837,036 (1,086,813)	(14,890)	1,091,182
Benefits paid Withdrawals Administrative expenses	403,356 2,346 6,362	372,369 2,288 5,854	344,890 2,729 5,665	320,828 2,739 5,719	298,764 3,040 6,288	276,161 4,433 6,571	253,092 4,932 5,908	232,376 3,302 5,980	214,891 3,177 6,575	195,997 4,434 5,818
Total deductions	412,064	380,511	353,284	329,286	308,092	287,165	263,932	241,658	224,643	206,249
Change in net position	(197,949)	68,813	1,022,006	714,069	(66,718)	(66,718) 1,159,682	573,104	573,104 (1,328,471)	(239,533)	884,933
Net position, beginning	7,878,814	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	5,090,929
Net position, ending	\$7,680,865	\$7,680,865 \$7,878,814 \$7,810,001	\$7,810,001	\$6,787,995 \$6,073,926 \$6,140,644 \$4,980,962	\$6,073,926	\$6,140,644	\$4,980,962	4,407,858	4,407,858 \$5,736,329	\$5,975,862

Source: Audited Financial Statements from June 30, 2007 through 2016

## SCHEDULE OF EMPLOYER CONTRIBUTION RATES

LS	Safety	Tier 3	N/A	N/A	N/A	N/A	N/A	57.40	54.42	49.86	39.25	41.15
SPECIAL DISTRICTS	sno	Tier 5	27.85% 22.19%	22.02	22.48	24.19	22.03	N/A	N/A	N/A	N/A	N/A
SPECIAL	Miscellaneous	Tier 3	, 27.85%	27.76	28.26	30.50	28.25	25.90	24.94	25.26	22.57	22.41
	Ξ	Tier 1	26.27%	25.92	26.16	30.00	27.77	25.59	24.45	24.58	22.08	21.98
		Tier 5	14.08%	14.09	14.87	17.14	15.01	N/A	N/A	N/A	N/A	N/A
COURT	Miscellaneous	Tier 1 Tier 2 Tier 3 Tier 5	18.16% 16.87% 19.84%	19.83	20.65	23.29	21.18	19.36	18.49	18.60	15.88	15.43
CO	Miscel	Tier 2	16.87%	16.66	17.54	20.71	18.28	16.55	15.63	15.75	13.07	12.58
		Tier 1	18.16%	17.99	18.55	22.91	20.83	19.09	18.11	18.15	15.46	15.04
		Tier 4	34.11%	34.40	35.13	35.61	29.28	N/A	N/A	N/A	N/A	N/A
	Safety	Tier 2 Tier 3	37.44% 36.51% 34.11%	37.73	39.92	41.06	35.55	29.50	N/A	N/A	N/A	N/A
	Sa			39.42	41.56	41.92	37.00	32.38	30.60	34.66	29.53	30.61
*		Tier 1	41.30%	42.11	42.59	43.59	41.85	37.19	35.03	38.95	33.65	34.71
COUNTY*		Tier 5	14.11%	14.13	14.87	17.14	15.01	N/A	N/A	N/A	N/A	N/A
	snoa	Tier 1 Tier 2 Tier 3 Tier 4 Tier 5	15.83% 13.85% 15.89% 15.01% 14.1	16.26 15.01 17.41 15.25 14.13	15.96	17.91	16.33	14.19	N/A	N/A	N/A	N/A
	Miscellaneous	Tier 3	15.89%	17.41	19.24	23.29	21.18	19.36	18.49	18.60	15.88	15.43
	Μ	Tier 2	3.85%	15.01	16.55	22.91 20.71 23.29	18.28	16.55	15.63	15.75	13.07	12.58
		Tier 1	15.83%	16.26	17.58	22.91	20.83	19.09	18.11	18.15	15.46	15.04
	Actuarial	Valuation Year Ended	6/30/2016	6/30/2015	6/30/2014	6/30/2013**	6/30/2012***	6/30/2011***	6/30/2010**** 18.11	6/30/2009	6/30/2008	6/30/2007

Source: Actuarial Valuations from June 30, 2007 though 2016

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.

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

<sup>\*\*</sup> 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 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.

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

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

<sup>\*\*\*\*</sup> 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)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Type of Benefit										
Service Retirement Benefits	\$399,690	\$368,788	368,788 \$341,756	\$317,308	\$295,598	\$273,062	\$250,192	\$229,629	\$212,061	\$193,376
Survivor Benefits	2,443	2,404	2,116	2,225	2,284	2,032	1,993	1,749	1,865	1,681
Death Benefits-Before Retirement	352	411	312	542	189	448	361	346	345	447
Death Benefits-After Retirement	871	299	200	753	693	619	546	622	621	492
Retiree Health and Dental Insurance		1	1	1	'	1	1	1	1	1
Total Benefits Paid	\$403,356	\$372,369	\$344,890	\$320,828	\$298,764	\$276,161	\$253,092	\$232,376	\$214,892	\$195,997
Type of Withdrawal										
Death	\$522	\$320	\$445	\$547	\$365	\$463	\$526	\$601	\$111	\$725
Separation	1,786	1,815	2,211	2,153	2,663	3,898	4,303	2,550	2,940	3,492
Miscellaneous	38	153	73	39	12	72	103	151	126	217
Total Withdrawals	\$2,346	\$2,288	\$2,729	\$2,739	\$3,040	\$4,433	\$4,932	\$3,302	\$3,177	\$4,434

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, 2016

### 10 9 93 8 Option Selected\*\* 980 136 152 132 67 58 123 30 31 491 1,148 .,050 759 1,917 9,315 Unmodified 983 864 615 525 407 447 17 12 16 29 185 4 93 81 Type of Retirement\* 147 187 52 792 9 148 30 Ŋ 265 71 229 1,014 932 856 480 403 399 1,988 8,710 1,335 1,383 1,173 872 714 603 826 1,011 501 2,101 **Retired Members** 441 10,960 Total Number of Amount of Monthly 666 1,999 2,499 2,999 3,499 3,999 4,499 4,999 \$499 1,499 over Benefit Total 5,000 & **\$1** -4,000 4,500 200 3,000 3,500 1,000 1,500 2,000 2,500

### \* 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
- 17 Beneficiary of Divorce-Receiving Benefits

Source: SCERS Retired Member Pension Payroll Data

### \*\* 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.

### SCHEDULE OF RETIREE MEMBERS BY TYPE OF BENEFIT

### As of June 30, 2016

### **Miscellaneous Members**

		Mo	nthly Allowance	S	
	Count	Basic	COL	Total	Average Benefit
Service Retirement					
Unmodified	6,014	\$14,051,039	\$3,293,394	\$17,344,433	\$2,884
Option 1	376	570,380	157,370	727,750	1,936
Option 2, 3, & 4	758	1,476,374	265,524	1,741,898	2,298
Total	7,148	\$16,097,793	\$3,716,288	\$19,814,081	\$2,772
Non-Service Disability					
Unmodified	251	\$269,329	\$114,626	\$383,955	\$1,530
Option 1	20	16,672	8,751	25,423	1,271
Option 2, 3, & 4	16	15,838	3,631	19,469	1,217
Total	287	\$301,839	\$127,008	\$428,847	\$1,494
Service Disability					
Unmodified	165	\$280,674	\$140,482	\$421,156	\$2,552
Option 1	8	12,003	5,293	17,296	2,162
Option 2, 3, & 4	4	4,434	2,511	6,945	1,736
Total	177	\$297,111	\$148,286	\$445,397	\$2,516
Beneficiary	1,176	\$1,067,139	\$687,475	\$1,754,614	\$1,492
Total Miscellaneous	8,788	\$17,763,882	\$4,679,057	\$22,442,939	\$2,554

### **Safety Members**

-		M	onthly Allowanc	es	
	Count	Basic	COL	Total	Average Benefit
Service Retirement					
Unmodified	1,402	\$7,286,923	\$1,947,852	\$9,234,775	\$6,587
Option 1	37	133,994	45,539	179,533	4,852
Option 2, 3, & 4	123	555,055	102,592	657,647	5,347
Total	1,562	\$7,975,972	\$2,095,983	\$10,071,955	\$6,448
Non-Service Disability					
Unmodified	13	\$17,583	\$9,704	\$27,287	\$2,099
Option 1	1	850	136	986	986
Option 2, 3, & 4	3	6,009	680	6,689	2,230
Total	17	\$24,442	\$10,520	\$34,962	\$2,057
Service Disability					
Unmodified	218	\$650,019	\$307,162	\$957,181	\$4,391
Option 1	13	33,737	16,450	50,187	3,861
Option 2, 3, & 4	5	9,840	4,800	14,640	2,928
Total	236	\$693,596	\$328,412	\$1,022,008	\$4,331
Beneficiary	357	\$627,598	\$392,649	\$1,020,247	\$2,858
Total Safety	2,172	\$9,321,608	\$2,827,564	\$12,149,172	\$5,594
Total Miscellaneous and Safety	10,960	\$27,085,490	\$7,506,621	\$34,592,111	\$3,156

Source: Actuarial Valuation Report as of June 30, 2016

Note: Refer to page 134 for the description of retirement options.



### SCHEDULE OF AVERAGE BENEFIT PAYMENTS

For the Last Ten Fiscal Years

			Years of	Credited Se	rvice		
Retirement Effective Date	0-5	5-10	10-15	15-20	20-25	25-30	30+
7/1/15 - 6/30/16							
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
7/1/14 - 6/30/15							
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
7/1/13 - 6/30/14							
Average monthly benefit	\$488	\$1,216	\$1,558	\$2,583	\$4,490	\$5,190	\$7,239
Average monthly final average salary	\$7 <i>,</i> 757	\$6,710	\$5,223	\$6,071	\$7,727	\$7,345	\$8,539
Number of retired members	17	62	128	85	75	77	72
7/1/12 - 6/30/13							
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
7/1/11 - 6/30/12							
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
7/1/10 - 6/30/11							
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
7/1/09 - 6/30/10							
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
7/1/08 - 6/30/09							
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
7/1/07 - 6/30/08							
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
7/1/06 - 6/30/07							
Average monthly benefit	\$512	\$874	\$1,536	\$2,341	\$3,228	\$4,756	\$5,652
Average monthly final average salary	\$6,856	\$4,747	\$5,220	\$5,331	\$5,884	\$6,508	\$6,868
Number of retired members	27	55	83	73,331	74	69	86
Hamber of redica members	21	55	03	, 1	, 4	0,5	00

Source: SCERS Retired Member Pension Payroll Data

### SCHEDULE OF AVERAGE BENEFIT PAYMENTS

For the Last Ten Fiscal Years

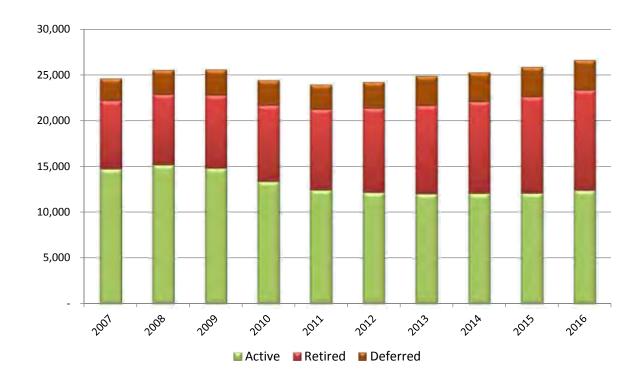
			Years Sir	nce Retirem	ent		
As Of	0-5	5-10	10-15	15-20	20-25	25-30	30 +
6/30/16:							
Average monthly benefit	\$3,398	\$3,550	\$3,560	\$2,626	\$2,623	\$2,175	\$1,963
Number of retired members	2,946	2,418	2,152	1,181	966	642	625
6/30/15:							
Average monthly benefit	\$3,409	\$3,456	\$3,371	\$2,616	\$2,532	\$2,098	\$1,818
Number of retired members	2,933	2,241	1,958	1,250	942	601	616
6/30/14:							
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
6/30/13:							
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
6/30/12:							
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
6/30/11:							
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
6/30/10:							
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
6/30/09:							
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
6/30/08:							
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
6/30/07:							
Average monthly benefit	\$3,041	\$2,133	\$2,237	\$1,948	\$1,636	\$1,449	\$1,120
Number of retired members	2,458	1,383	1,226	930	709	495	263

Source: SCERS Retired Member Pension Payroll Data

### CHANGES IN SYSTEM MEMBERSHIP

Year Ended June	Active	Retired	Deferred	
30:	Members	Members	Members	Total
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
2007	14,716	7,464	2,437	24,617

### System Membership at a Glance



Source: Actuarial Valuations from June 30, 2007 through 2016

# SCHEDULE OF PRINCIPAL PARTICIPATING EMPLOYERS AND ACTIVE MEMBERS - SUMMARY

Current Fiscal Year and Nine Fiscal Years Ago

		2016			2007	
Dorticination Employee	Covered	<u>,</u>	Percent of	Covered	720	Percent of Total
ratucipating Employer	cilipioyees	Yallik I	iotal system	cinpioyees	Yalla	) Asrelli
County of Sacramento	11,112	1	89.68	13,199	1	89.68
Superior Court	651	2	5.25	814	2	5.53
S.E.T.A	548	33	4.42	598	3	4.07
Carmichael Recreation and Park District	20	4	0.17	27	4	0.18
Sunrise Recreation and Park District	19	5	0.15	24	5	0.16
Orangevale Recreation and Park District	13	9	0.10	15	9	0.10
Mission Oaks Recreation and Park District	11	7	0.09	12	7	0.08
Elected Officials*	8	∞	0.07	∞	8	90.0
Elk Grove Cosumnes Cemetery District	9	6	0.05	4	11	0.03
Fair Oaks Cemetery District	4	10	0.03	5	10	0.03
Galt-Arno Cemetery District	1	11	0.01	3	12	0.02
Sacramento Metropolitan Fire District	ı	12	0.00	9	6	0.04
U.C. Davis Medical Center		12	0.00	1	13	0.01
Total	12,393		100.00%	14,716		100.00%

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

Source: SCERS Active Member Data

				Fo	r the Last 1	For the Last Ten Fiscal Years Ended June 30	ears Ende	d June 30			
SCERS Member Agency	Plan	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Carmichael Recreation and Park District	Misc.	20	19	21	21	20	22	26	29	24	27
Elk Grove Cosumnes Cemetery District	Misc.	9	4	9	5	Ŋ	2	33	4	33	4
Fair Oaks Cemetery District	Misc.	4	4	4	4	4	33	4	4	4	5
Galt-Arno Cemetery District	Misc.	Т	1	1	1	1	1	1	33	33	c
Mission Oaks Recreation and Park District	Misc.	11	12	12	12	12	13	14	13	13	12
Orangevale Recreation and Park District	Misc.	13	13	13	15	15	15	16	17	12	15
Sacramento Metropolitan Fire District	Safety	1	ı	ı	ı	ı	33	33	4	9	9
S.E.T.A.	Misc.	548	544	547	292	266	268	584	604	265	298
Sunrise Recreation and Park District	Misc.	19	22	22	21	21	23	26	28	28	24
U.C. Davis Medical Center	Misc.	1	1	1	1	1	1	1	1	7	1
Elected Officials*	Misc.	7	7	7	7	7	7	7	7	7	7

969

692

710

682

655

652

651

633

626

629

Misc.

Total Special District Members

Elected Officials\*

Safety

Safety

814

843

807

765

745

869

632

625

631

651

Misc.

10,817 2,382

11,190

10,937 2,337

9,865 2,024

9,121

906′8 1,898

8,830

8,827 1,963

8,836 1,978

9,083

Misc.

Sacramento County Members

Total Members

Superior Court Members

2,029

Safety

1,912

2,448

1,909

2,389 14,716

2,455 15,180

2,342

2,028

1,913 12,434

1,899 12,155

1,913 12,026

1,964

12,049

12,393

Total

14,796

13,340

12,327

12,725

12,454

11,312

10,521

10,256

10,113

10,085

10,093 1,979 12,072

10,363 2,030

Misc.

Safety

\*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



