SCERS

2018-19

COMPREHENSIVE ANNUAL
FINANCIAL REPORT

For the Fiscal Years Ended June 30, 2019 and 2018

Sacramento, California

Sacramento County Employees' Retirement System

SCERS

COMPREHENSIVE ANNUAL

FINANCIAL REPORT

For the Fiscal Years Ended June 30, 2019 and 2018

Issued By:

Eric Stern
Chief Executive Officer

Debbie Chan, CPA, CGMA
Senior Accounting Manager

SACRAMENTO COUNTY
EMPLOYEES' RETIREMENT SYSTEM

980 9th Street, Suite 1900
Sacramento, CA 95814

www.SCERS.org

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SECTION 1

INTRODUCTORY

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Eric Stern
Chief Executive Officer
Steve Davis
Chief Investment Officer
Stephen Lau
General Counsel
Stephen Hawley
Chief Strategy Officer
Mario Sierras
Chief Benefits Officer

December 6, 2019

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, 2019 and 2018.

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 (PEPRA). 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 (the Board) 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, 2019, the County of Sacramento (and its Elected Officials); Superior Court of California, County of Sacramento; and nine 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.

Accounting System and Reports

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

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

Investments – General Authority and SCERS

Article XVI, Section 17 of the Constitution of the State of California provides that "…notwithstanding any other provisions of law or this Constitution, the Retirement Board 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.

The current strategic asset allocation model was established as a result of an asset allocation study conducted in the 2016-17 fiscal year. SCERS' strategic asset allocation views risk exposures through multiple lenses, including functional and common factor exposures, in order to manage and maintain allocations that are aligned with SCERS' investment philosophy and objectives. This multiple lens approach uses a functional framework to group and classify segments of SCERS' portfolio in order to link segments that are exposed to similar economic environments and risk factors, and which would be expected to have similar roles and outcomes in a portfolio. The functional grouping takes a simplified approach at the asset category level, by breaking the portfolio into four asset categories, with greater complexity reserved at the asset class level. The asset categories include: (1) Growth, (2) Diversifying, (3) Real Return, and (4) Opportunities.

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

For the fiscal year ended June 30, 2019, SCERS' investments provided a 7.2% rate of return (gross of fees), compared to the investment policy benchmark return of 6.3%.

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 member 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 contribution rates.

SCERS engaged an independent actuarial consulting firm, Segal Consulting, to conduct its annual actuarial valuation as of June 30, 2019. Triennially, the System requests that its actuary perform an analysis of the appropriateness of all economic and non-economic assumptions. The last triennial analysis was performed as of June 30, 2016, and as a result of that analysis, the Board approved certain changes to the actuarial assumptions, which were incorporated in the actuarial valuation as of June 30, 2017.

At June 30, 2019, SCERS' funding ratio on a market value of assets basis was 82.6%. On an actuarial basis, the funding ratio was 81.6%, with the actuarial value of assets totaling $9.7 billion and the actuarial accrued liability totaling $11.9 billion. Deferred gains under the smoothing methodology exceeded deferred losses by $118.4 million as of June 30, 2019, decreased from $128.9 million in gains as of June 30, 2018. Deferred investment gains/(losses) are recognized over a rolling seven-year period.

Budget

The Board 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 $7.3 million and $6.6 million for the fiscal years ended June 30, 2019 and June 30, 2018, respectively. SCERS administrative expenses for both years were 0.06% of the System's actuarial accrued liability.

Significant Activities

In 2018-19, SCERS developed a Strategic Management Program that includes an annual planning process for specific actions SCERS staff will take during the fiscal year to accomplish the continuous improvement of the enterprise, with improved processes for measuring and tracking performance. The resulting plan is organized around six key themes. The following are significant activities that occurred during the fiscal year:

CUSTOMER SERVICE AND EXPERIENCE

- Significantly reduced retirement application processing times relative to prior year
- Simplified retirement application package
- Simplified direct deposit form, conducted outreach program, and increased direct deposit participation

STAKEHOLDER COMMUNICATION AND OUTREACH

- Implemented Policy Management program and reviewed/refreshed 14 key Board policies
- Initiated publication of agenda and materials on SCERS' website in advance of Board meetings
- Initiated regular publication of member newsletter
- Conducted employer forum to become annual event and visited all special district employers

FUNDING INTEGRITY AND SUSTAINABILITY

- Implemented funding agreement with Sacramento Metropolitan Fire District
- Analyzed contribution rate volatility and funding sensitivity
- Re-baselined operating budget

INVESTMENT PLANNING AND GROWTH

- Adjusted market exposures of asset categories to align with the strategic asset allocation
- Updated Investment Policy Statements by asset category
- Conducted liquidity analysis and approved 1% cash allocation

ORGANIZATIONAL DEVELOPMENT AND CULTURE

- Hired key positions and reduced vacancies
  - General Counsel
  - Chief Benefits Officer
  - Deputy Chief Investment Officer
  - Senior Accounting Manager
  - Communication/Media Officer II
  - Human Resources Analyst
- Significantly reduced overtime
- Secured Board of Supervisors approval of SCERS executive pay plan

ENTERPRISE CAPABILITY AND TECHNOLOGY

- Developed and implemented Strategic Management Program with integrated Performance Management and Risk Management
- Completed Ariel (Pension Administration System) Fit-Gap Phase with 97% fit, a key milestone in the modernization of our pension administration system
- Restructured Ariel implementation from "big bang" to phased approach and delivered Phase 1 customer service system enabling automated workflows with electronic document imaging and customer contact management
- Delivered modernized SCERS.org website
- Completed Investment Accounting System business case analysis, issued request for proposal, and selected private market services vendor

Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) awarded the Certificate of Achievement for Excellence in Financial Reporting to SCERS for its CAFR for the fiscal years ended June 30, 2018 and 2017. 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 twentieth consecutive year that SCERS has received this prestigious award.

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

SCERS also received the GFOA Award for Outstanding Achievement in Popular Annual Financial Reporting for the fiscal year ended June 30, 2018. This was the tenth consecutive year SCERS has received this award.

Acknowledgements

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

Respectfully submitted,

Eric Stern
Chief Executive Officer

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Sacramento County Employees' Retirement System

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

BOARD OF RETIREMENT

President
Richard B. Fowler II
Appointed by Board of Supervisors
Present term expires June 30, 2022

Vice President
Keith DeVore
Appointed by Board of Supervisors
Present term expires June 30, 2021

Vice President
John B. Kelly
Appointed by Board of Supervisors
Present term expires December 31, 2021

Trustee
Diana Gin
Elected by Miscellaneous Members
Present term expires December 31, 2021

Trustee
James A. Diepenbrock
Appointed by Board of Supervisors
Present term expires June 30, 2021

Ex-Officio
Ben Lamera
Sacramento County Director of Finance
Member mandated by law

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

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

Trustee
Matthew Petersen
Elected by Safety Members
Present term expires December 31, 2021

Alternate Safety Trustee
John Conneally
Elected by Safety Members
Present term expires December 31, 2021

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

ORGANIZATION CHART

BOARD OF RETIREMENT

Eric Stern
Chief Executive Officer

Steve Davis
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

Stephen Lau
General Counsel

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

Vacant
Chief Operations Officer

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

Mario Sierras
Chief Benefits Officer

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

Stephen Hawley
Chief Strategy Officer

- Enterprise risk management
- Continuous Improvement Program
- Maintain enterprise communications plan
- Maintain enterprise performance management program
- Maintain change management register
- Maintain a repository of enterprise knowledge
- IT modernization program

PARTICIPATING EMPLOYERS

Employer	Date Entered System
County of Sacramento	July 1, 1941
County of Sacramento, Elected Officials: • Board of Supervisors • Sheriff • Assessor • District Attorney	July 1, 1941
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 Protection District (Sacramento Metropolitan Fire District)*	July 1, 1974
Mission Oaks Recreation and Park District	February 1, 1976
Sacramento Employment and Training Agency (SETA)	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
Rio Linda Elverta Recreation and Park District	October 1, 2017

* Florin Fire Protection District (FFPD) terminated its membership on December 31, 1996. On December 1, 2000, Sacramento Metropolitan Fire District (SMFD) became successor, and employees of FFPD became employees of SMFD.

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

PROFESSIONAL CONSULTANTS

Actuary

Segal Consulting

Auditor

Brown Armstrong Accountancy Corporation

Custodian

State Street Corporation

Information Technology Consultant

Linea Solutions, Inc.

Investment Consultant

Cliffwater, LLC

The Townsend Group

Verus Advisory, Inc.

Legal Counsel

Foley & Lardner, LLP

Hanson Bridgett, LLP

Nossaman, LLP

Public Pension Consultants

Sacramento County, Office of the County Counsel

Stroock & Stroock & Lavan, LLP

Note: In the Investment Section of this report, investment professionals are listed on pages 102 and 103, and the schedules of manager fees and equity brokerage commissions are located on page 100.

SECTION 2

FINANCIAL

BROWN ARMSTRONG
CERTIFIED PUBLIC ACCOUNTANTS

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1919 GRAND CANAL BLVD
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STOCKTON, CA 95207
TEL 888.565.1040

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BROWN ARMSTRONG
Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

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

Report on the Financial Statements

We have audited the accompanying Statements of Fiduciary Net Position of the Sacramento County Employees' Retirement System (SCERS) as of June 30, 2019 and 2018, the related Statements of Changes in Fiduciary Net Position for the fiscal years then ended, and the related notes to the financial statements, which collectively comprise SCERS' 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 audits. 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 audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of SCERS as of June 30, 2019 and 2018, 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.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information (RSI), 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 management's discussion and analysis and RSI in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

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

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

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 6, 2019, on our consideration of SCERS' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, agreements, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of SCERS' internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering SCERS' internal control over financial reporting and compliance.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
December 6, 2019

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This section presents management's discussion and analysis (MD&A) of the financial activities of the Sacramento County Employees' Retirement System (SCERS, the System, or the Plan) for the fiscal years ended June 30, 2019 and 2018. 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 follow.

FINANCIAL HIGHLIGHTS

As of June 30, 2019, SCERS' fiduciary net position restricted for pension benefits (net position) totaled $9.822 billion. This represented an increase of $569.8 million, or 6.2%, from the $9.252 billion in SCERS' net position as of June 30, 2018, which, in turn, represented an increase of $667.7 million, or 7.8%, over the $8.584 billion in net position as of June 30, 2017.

Additions to net position were $1.083 billion, $1.143 billion, and $1.342 billion for the fiscal years ended June 30, 2019, 2018 and 2017, respectively. The total additions for the fiscal year ended June 30, 2019 decreased by $59.7 million, or 5.2%, over the fiscal year ended June 30, 2018, which in turn, saw a decrease in total additions of $199.4 million, or 14.9%, over the fiscal year ended June 30, 2017. Lower investment performance and the increase in investment fees and expenses were the primary reasons for the decrease in additions for both years.

Deductions from net position were $513.4 million, $475.2 million, and $439.0 million for the fiscal years ended June 30, 2019, 2018 and 2017, respectively. The total deductions for the fiscal year ended June 30, 2019 increased by $38.2 million, or 8.0%, over the fiscal year ended June 30, 2018, which in turn, saw an increase in total deductions of $36.2 million, or 8.2%, over the fiscal year ended June 30, 2017. 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 fiscal year that are above or below the assumed investment return rate (7.0% and 7.5%, which were used to determine the contribution rates for the fiscal years ended June 30, 2019 and 2018, respectively) are recognized over seven years (the asset smoothing period). This smoothed value is referred to as the Actuarial Value of Assets. By using the Actuarial Value of Assets to determine the contribution rates, SCERS is able to lower the year-to- year volatility in contribution rates that would come from using the market value of assets.

As of June 30, 2019, SCERS' total pension liability was $11.896 billion, up from $11.213 billion as of June 30, 2018. The employers' net pension liability was $2.074 billion as of June 30, 2019, increased from $1.961 billion as of June 30, 2018. This increase in employers' net pension liability is mainly due to actuarial losses resulting from the differences between expected and actual experience offset to some degree by favorable investment return. The fiduciary net position as a percentage of the total pension liability increased from 82.5% to 82.6%.

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 fiscal year and show the impact of those activities as additions to or deductions from the Plan. The trend of additions to versus deductions from the Plan will indicate whether SCERS' financial position is improving or deteriorating over time.

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

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

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

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

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

FINANCIAL ANALYSIS

Net Position

SCERS' net position restricted for pension benefits as of June 30, 2019 totaled $9.822 billion, an increase of $569.8 million or 6.2% from the $9.252 billion in net position as of June 30, 2018, which represented an increase of $667.7 million or 7.8% from the $8.584 billion in net position as of June 30, 2017. The increase in net position for the fiscal years ended June 30, 2019 and 2018 was due to strong investment returns offset to some degree by the benefits and expenses paid during the fiscal year exceeding the contributions received.

For the fiscal years ended June 30, 2019, the total fund return, gross of fees, of 7.2% was 0.9% higher than the return of the investment policy benchmark of 6.3%. While the majority of asset classes generated positive returns during fiscal year 2018-19, investments in the equity, real assets and private equity segments outperformed the policy benchmarks.

For the fiscal year ended June 30, 2018, the total fund return, gross of fees, of 10.1% was 1.9% higher than the return of the investment policy benchmark of 8.2%. While the majority of asset classes generated positive returns during fiscal year 2017-18, investments in the equity, absolute return, real estate, real assets, and private equity segments outperformed the policy benchmarks .

The increase in cash and short-term investments as of fiscal years ended June 30, 2019 and 2018 was due to increase in trading activities of short-term investments at year-end. The increase in receivables and investment purchases and other as of June 30, 2019 and 2018 was the result of increase in trading activity at year-end by the external investment managers. The increase in receivables at fiscal year ended 2019 was also due to the System recognized approximately $45.0 million in employer contributions receivable related to unfunded actuarial accrued liability from a withdrawn employer. The decrease in securities lending collateral and securities lending liability as of June 30, 2019 reflected a lower level of activity in the securities lending industry.

FIDUCIARY NET POSITION

AS OF JUNE 30

(Dollar Amounts Expressed in Millions)

	2019	2018	Increase/ (Decrease)	% Change
Assets				
Cash and short-term investments	$441.9	$289.8	$152.1	52.5%
Receivables	348.7	82.2	266.5	324.2
Investments	9,416.3	9,090.0	326.3	3.6
Securities lending collateral	273.0	365.7	(92.7)	(25.3)
Other assets	0.5	0.3	0.2	66.7
Capital assets, net	6.8	2.7	4.1	151.9
Total assets	10,487.2	9,830.7	656.5	6.7
Liabilities				
Other liabilities	11.1	14.8	(3.7)	(25.0)
Investment purchases and other	386.5	198.3	188.2	94.9
Securities lending obligation	267.9	365.7	(97.8)	(26.7)
Total liabilities	665.5	578.8	86.7	15.0
Net position restricted for pension benefits	$9,821.7	$9,251.9	$569.8	6.2%

FIDUCIARY NET POSITION

AS OF JUNE 30

(Dollar Amounts Expressed in Millions)

	2018	2017	Increase/ (Decrease)	% Change
Assets				
Cash and short-term investments	$289.8	$241.8	$48.0	19.9%
Receivables	82.2	61.1	21.1	34.5
Investments	9,090.0	8,445.0	645.0	7.6
Securities lending collateral	365.7	352.2	13.5	3.8
Other assets	0.3	0.4	(0.1)	(25.0)
Capital assets, net	2.7	0.1	2.6	2,600.0
Total assets	9,830.7	9,100.6	730.1	8.0
Liabilities				
Other liabilities	14.8	6.6	8.2	124.2
Investment purchases and other	198.3	157.6	40.7	25.8
Securities lending obligation	365.7	352.2	13.5	3.8
Total liabilities	578.8	516.4	62.4	12.1
Net position restricted for pension benefits	$9,251.9	$8,584.2	$667.7	7.8%

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

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

As of June 30, 2019, the employers' total pension liability was $11.896 billion, and the net pension liability (the total pension liability less the Plan's fiduciary net position) was $2.074 billion. The Plan's fiduciary net position as a percentage of the total pension liability was 82.6%. In general terms, this ratio means that as of June 30, 2019, SCERS had approximately 83 cents available for each dollar of anticipated future liability. As of June 30, 2018, the employers' total pension liability was $11.213 billion, and the net pension liability was $1.961 billion. The Plan's fiduciary net position as a percentage of the total pension liability was 82.5%.

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.

The decrease in SCERS' market stabilization reserve from $128.9 million as of June 30, 2018 to $118.4 million as of June 30, 2019 was mainly due to the recognition of prior years' net deferred gains in 2019.

The following table presents a reserve summary for the fiscal years ended June 30, 2019, 2018, and 2017, respectively:

NET POSITION RESTRICTED FOR PENSION BENEFITS AT JUNE 30

(Dollar Amounts Expressed in Millions)

	2019	2018	2017
Member reserves	$906.9	$843.8	$796.9
Employer reserves	2,908.8	2,826.5	2,800.5
Retiree and death benefit reserves	5,757.8	5,375.2	5,020.9
Contingency reserve	129.8	77.5	46.9
Total allocated reserves and designations	9,703.3	9,123.0	8,665.2
Market stabilization reserve	118.4	128.9	(81.0)
Net position restricted for pension benefits	$9,821.7	$9,251.9	$8,584.2

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, 2019, 2018, and 2017, respectively.

CHANGE IN FIDUCIARY NET POSITION

FOR THE FISCAL YEARS ENDED JUNE 30

(Dollar Amounts Expressed in Millions)

	2019	2018	Increase/ (Decrease)	% Change
Additions				
Member contributions	$121.8	$99.9	$21.9	21.9%
Employer contributions	285.6	198.5	87.1	43.9
Net investment income	802.7	964.5	(161.8)	(16.8)
Net securities lending income	1.5	1.9	(0.4)	(21.1)
Investment fees and expenses	(131.3)	(125.0)	6.3	5.0
Other income	2.9	3.1	(0.2)	(6.5)
Total additions	1,083.2	1,142.9	(59.7)	(5.2)
Deductions				
Benefits paid	502.9	465.3	37.6	8.1
Withdrawal of contributions	2.9	3.0	(0.1)	(3.3)
Administrative expenses	7.6	6.9	0.7	10.1
Total deductions	513.4	475.2	38.2	8.0
Increase in net position	569.8	667.7	(97.9)	(14.7)
Net position restricted for pension benefits, beginning	9,251.9	8,584.2	667.7	7.8
Net position restricted for pension benefits, ending	$9,821.7	$9,251.9	$569.8	6.2%

CHANGE IN FIDUCIARY NET POSITION

FOR THE FISCAL YEARS ENDED JUNE 30

(Dollar Amounts Expressed in Millions)

	2018	2017	Increase/ (Decrease)	% Change
Additions				
Member contributions	$99.9	$89.5	$10.4	11.6%
Employer contributions	198.5	203.9	(5.4)	(2.6)
Net investment income	964.5	1,130.3	(165.8)	(14.7)
Net securities lending income	1.9	2.5	(0.6)	(24.0)
Investment fees and expenses	(125.0)	(83.9)	41.1	49.0
Other Income	3.1	-	3.1	100.0
Total additions	1,142.9	1,342.3	(199.4)	(14.9)
Deductions				
Benefits paid	465.3	429.8	35.5	8.3
Withdrawal of contributions	3.0	2.3	0.7	30.4
Administrative expenses	6.9	6.9	-	-
Total deductions	475.2	439.0	36.2	8.2
Increase in net position	667.7	903.3	(235.6)	(26.1)
Net position restricted for pension benefits, beginning	8,584.2	7,680.9	903.3	11.8
Net position restricted for pension benefits, ending	**$9,251.9**	**$8,584.2**	**$667.7**	**7.8%**

Additions to Net Position

Financing for the benefits SCERS provides to its members comes primarily through the collection of employer and member contributions and from investment earnings. For the fiscal years ended June 30, 2019, 2018, and 2017, total additions were $1.083 billion, $1.143 billion, and $1.342 billion, respectively.

For the fiscal years ended June 30, 2019, 2018, and 2017, combined employer and member contributions were $407.4 million, $298.4 million, and $293.4 million, respectively. The increase in employer and member contributions for the fiscal year ended June 30, 2019 of $109.0 million, or 36.5%, over the fiscal year ended June 30, 2018 was attributed to SCERS recognized approximately $45.0 million in employer contributions related to the estimated unfunded actuarial accrued liability payable from a withdrawn employer. In addition to an overall increase in employer and member contributions. The increase for the fiscal year ended June 30, 2018 of $5.0 million, or 1.7%, over the fiscal year ended June 30, 2017 was mainly as a result of the members in legacy benefit tiers paying more of the normal cost pursuant to collective bargaining or other employment agreements.

Net investment income after investment fees and expenses was $672.9 million, $841.4 million, and $1,048.9 million for the fiscal years ended June 30, 2019, 2018, and 2017, respectively. The net investment gains and losses were driven primarily by investment performance of the portfolio. The Investment Section of this report provides a detailed discussion of the investment markets and investment performance.

Deductions from Net Position

SCERS' net position was primarily used for the payment of benefits to members and their beneficiaries, for the payment of contribution refunds to terminated employees, and for the cost of administering the System. For the fiscal years ended June 30, 2019, 2018, and 2017, total deductions were $513.4 million, $475.2 million, and $439.0 million, respectively.

Deductions increased by $38.2 million, or 8.0%, in the fiscal year ended June 30, 2019 and by $36.2 million, or 8.2%, in the fiscal year ended June 30, 2018. The primary cause of the increase in deductions in both years was due to the increase in monthly benefit payments resulting from an increase in the number of retired members and the annual cost-of-living adjustment paid to retirees and beneficiaries.

The Board of Retirement approves SCERS' annual administrative budget. The 1937 Act limits SCERS' annual administrative expenses, excluding the costs of administration for computer software and hardware and computer technology consulting services (IT for both years), to twenty-one hundredths of one percent (0.21%) of the System's actuarial accrued liability. Administrative expenses of $7.3 million and $6.6 million for the fiscal years ended June 30, 2019 and June 30, 2018, excluding IT costs for both years, 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, 2019 AND 2018

(Dollar Amounts Expressed in Thousands)

	2019	2018
Assets		
Cash and short-term investments		
Cash invested with Sacramento County Treasurer	$9,052	$13,142
Other cash and cash equivalents	19,590	2,029
Short-term investments with fiscal agents	413,299	274,620
Total cash and short-term investments	441,941	289,791
Receivables		
Member and employer contributions	50,076	4,101
Accrued investment income	18,343	15,623
Investment sales and other	280,274	62,450
Total receivables	348,693	82,174
Investments		
Equity	3,942,218	4,021,754
Fixed income	1,870,894	1,808,451
Real assets	673,211	599,784
Real estate	878,742	912,375
Real estate - mortgages payable	-	(50,000)
Absolute return	919,252	889,585
Private credit	175,329	113,298
Private equity	956,673	794,856
Total investments	9,416,319	9,090,103
Securities lending collateral	273,036	365,734
Other assets	397	291
Capital assets, net	6,818	2,649
Total assets	10,487,204	9,830,742
Liabilities		
Warrants payable	1,786	2,149
Accounts payable and other accrued liabilities	9,341	12,587
Investment purchases and other	386,462	198,335
Securities lending obligation	267,921	365,734
Total liabilities	665,510	578,805
Net position restricted for pension benefits	$9,821,694	$9,251,937

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, 2019 AND 2018

(Dollar Amounts Expressed in Thousands)

	2019	2018
Additions		
Contributions		
Member	$121,843	$99,906
Employer	285,642	198,513
Total contributions	407,485	298,419
Investment income		
Net appreciation in fair value of investments	581,330	770,691
Other investment income	221,253	193,768
Less investment fees and expenses	(131,337)	(124,964)
Net investment income	671,246	839,495
Securities lending income	8,649	6,609
Securities lending expense		
Borrower rebate expense	(6,841)	(4,241)
Securities lending management fees	(268)	(493)
Net securities lending income	1,540	1,875
Other income	2,940	3,119
Total additions	1,083,211	1,142,908
Deductions		
Benefits paid	502,944	465,354
Withdrawal of contributions	2,909	2,954
Administrative expenses	7,601	6,888
Total deductions	513,454	475,196
Net increase in net position	569,757	667,712
Net position restricted for pension benefits		
Beginning of year	9,251,937	8,584,225
End of year	$9,821,694	$9,251,937

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, 2019 AND 2018

(Dollar Amounts Expressed in Thousands)

	2019	2018
Assets		
Cash	$2,619	$22
Total assets	$2,619	$22
Liabilities		
Accounts payable	$2,619	$22
Total liabilities	$2,619	$22

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

(Dollar Amounts Expressed in Thousands)

NOTE 1 - PLAN DESCRIPTION

The Sacramento County Employees' Retirement System (SCERS, the System, or the Plan) is a cost-sharing multiple- employer defined benefit pension plan, which operates under the County Employees Retirement Law of 1937 (Section 31450 et seq. of the California Government Code) (1937 Act) and the California Public Employees' Pension Reform Act of 2013 (PEPRA). 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, 2019 and 2018, participating local government employers consisted of the County of Sacramento (and its Elected Officials); Superior Court of California, County of Sacramento (Superior Court); and nine special districts.

The System's membership consists of the following categories:

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

(Dollar Amounts Expressed in Thousands)

At June 30, 2019 and 2018, the System's membership consisted of:

	2019	2018
Active Members:		
Vested		
Miscellaneous Tier 1	34	46
Miscellaneous Tier 2	45	52
Miscellaneous Tier 3	6,171	6,634
Miscellaneous Tier 4	239	220
Miscellaneous Tier 5	518	162
Total Miscellaneous	7,007	7,114
Safety Tier 1	96	125
Safety Tier 2	1,148	1,212
Safety Tier 3	92	89
Safety Tier 4	134	59
Total Safety	1,470	1,485
Total Vested	8,477	8,599
Non-Vested		
Miscellaneous Tier 3	58	67
Miscellaneous Tier 4	103	130
Miscellaneous Tier 5	3,416	3,275
Total Miscellaneous	3,577	3,472
Safety Tier 2	3	2
Safety Tier 3	26	29
Safety Tier 4	595	575
Total Safety	624	606
Total Non-Vested	4,201	4,078
Total Active Members	12,678	12,677

(Dollar Amounts Expressed in Thousands)

System's Membership (Continued):

	2019	2018
Retirees and beneficiaries currently receiving benefits:		
Miscellaneous - Service	8,167	7,800
Miscellaneous - Beneficiary	1,247	1,224
Miscellaneous - Non-Service Connected Disability	276	279
Miscellaneous - Service Connected Disability	185	183
Total Miscellaneous	9,875	9,486
Safety - Service	1,834	1,747
Safety - Beneficiary	414	396
Safety - Non-Service Connected Disability	19	18
Safety - Service Connected Disability	239	236
Total Safety	2,506	2,397
Total Retirees and Beneficiaries	12,381	11,883
Terminated members entitled to benefits but not yet receiving them*:		
Miscellaneous Tier 1	27	37
Miscellaneous Tier 2	117	134
Miscellaneous Tier 3	2,274	2,355
Miscellaneous Tier 4	99	87
Miscellaneous Tier 5	673	463
Total Miscellaneous	3,190	3,076
Safety Tier 1	37	53
Safety Tier 2	329	340
Safety Tier 3	11	10
Safety Tier 4	35	30
Total Safety	412	433
Total Terminated Members	3,602	3,509
Grand Total	28,661	28,069

*Includes terminated members due a refund of contributions.

Pension Benefits

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

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

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

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

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

(Dollar Amounts Expressed in Thousands)

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).

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

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

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

Effective January 1, 2013, with the implementation of PEPRA, 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 to fund benefits. All contribution rates are reviewed and revised annually. The authority for both benefit provisions and contribution obligations is derived from the 1937 Act and PEPRA.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

SCERS reports fiduciary funds at June 30, 2019 and 2018, 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).

Valuation of Investments

The majority of the investments held at June 30, 2019 and 2018 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 estate, real assets, absolute return, private credit, and private equity. The diversity of the System's investment portfolio requires a wide range of techniques to determine fair value. Investments are valued at their fair values in accordance with GASB Statement No. 72, *Fair Value Measurement and Application*, which results in the recognition of fair value gains and losses. See Note 3, Section 2 for disclosures related to investment classification and valuation.

Contributions and Benefits

Member 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 based on trade date accounting.

(Dollar Amounts Expressed in Thousands)

Securities Lending

Securities lending transactions are short-term collateralized loans of the System's securities for the purpose of generating additional investment income. For each lending transaction, the System receives either cash collateral or non-cash collateral. The underlying securities out on loan are reported on the System's Statements of Fiduciary Net Position as if the lending transactions had not occurred. Cash collateral received for the loaned securities is reported as securities lending liability on the Statements of Fiduciary Net Position. Cash collateral is reinvested in the lending agent's cash collateral investment pool and is valued at fair value and is reported as securities lending collateral on the Statements 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 the financial statements as the System does not have the ability to pledge or sell them without a borrower default. See Note 3, Section 3 for disclosures related to securities lending transactions.

Capital Assets

Capital assets are defined as assets with an initial individual cost of $5 or more and an estimated useful life in excess of one year. Capital assets consist of furniture, building improvements, and intangible assets, which are recorded at cost on the Statements of Fiduciary Net Position, net of accumulated depreciation/amortization. Depreciation/amortization is charged to operations using the straight-line method on the estimated useful life of the related asset and is included in administrative expenses on the Statements of Changes in Fiduciary Net Position. Estimated useful lives for furniture and building improvements are depreciated over 10 years. Intangible assets for SCERS' IT Modernization Project will be depreciated over 10 years when it is ready for its intended use.

Other Assets

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

Administrative Expenses

Administrative costs are financed through employer and member 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. Actual results could differ from those estimates.

Reclassification

Certain reclassifications have been made to June 30, 2018 balances to conform to the presentation as of and for the fiscal year ended June 30, 2019.

(Dollar Amounts Expressed in Thousands)

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 1937 Act, 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, 2019 and 2018 is as follows:

Asset Class	Target Allocation
Domestic Equity	21.0 %
International Equity	20.0
Fixed Income	20.0
Absolute Return	10.0
Real Estate	7.0
Real Assets	9.0
Private Credit	4.0
Private Equity	9.0
	100.0 %

(Dollar Amounts Expressed in Thousands)

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 pooled 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 for both pension trust and agency funds totaled $11,671 and $13,164 at June 30, 2019 and 2018, respectively. The pool was not rated, and the weighted-average maturity of the pool was 321 days and 309 days at June 30, 2019 and 2018, 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, 2019 and 2018, other cash and cash equivalents constituted balances in bank demand deposit accounts of $19,590 and $2,029, 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, 2019 and 2018, the fair value of the System's short-term investments with fiscal agents was $413,299 and $274,620, respectively. These totals consisted of investments in the State Street Short-Term Investment Fund (STIF). The STIF is designed to provide qualified benefit plans with an investment vehicle that may be accessed on a daily basis. The STIF is limited to investing in securities that are rated A-1 by Moody's Investors Services and P-1 by Standard & Poor's Corporation (S&P) at the time of issuance. As of June 30, 2019 and 2018, the STIF is not rated by credit rating agencies. Most investments range in maturity from overnight to 90 days with 38% of the investment over 90 days. For the fiscal years ended June 30, 2019 and 2018, the weighted-average maturities were 42 days and 30 days, respectively. Investments in the STIF from all participating custodial clients of State Street were $55.2 billion and $53.4 billion on June 30, 2019 and 2018, 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 – Fair value is determined using unadjusted quoted prices in active markets for identical assets or liabilities accessible on the measurement date.
- Level 2 – Fair value is determined using quoted prices in inactive markets or significant observable inputs (including, but not limited to, quoted prices for similar investments, interest rates, foreign exchange rates, volatility and credit spreads), either directly or indirectly. These inputs may be derived principally from, or corroborated by, observable market data through correlation or by other means.
- Level 3 – Fair value is determined using unobservable inputs, including situations where there is little market activity, if any, for the asset or liability.

(Dollar Amounts Expressed in Thousands)

The System had the following recurring fair value measurements at June 30, 2019 and 2018.

June 30, 2019		Fair Value Measurements by Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Equity Securities				
Communication Services	$245,215	$245,215	$-	$-
Consumer Discretionary	389,499	389,499	-	-
Consumer Staples	218,678	218,678	-	-
Energy	127,559	127,559	-	-
Financials	468,294	468,294	-	-
Health Care	405,939	405,939	-	-
Industrials	436,108	436,108	-	-
Information Technology	513,518	513,518	-	-
Materials	143,440	143,440	-	-
Real Estate	95,552	95,552	-	-
Utilities	94,554	94,554	-	-
Total Equity Securities	3,138,356	3,138,356	-	-
Fixed Income Securities				
Securitized Obligations				
Asset-Backed Securities	139,077	-	139,077	-
Credit Obligations				
Corporate Bonds	237,694	397	237,297	-
Municipals	9,625	-	9,625	-
Yankee	60,654	-	60,654	-
U.S. Government & Agency Obligations				
Agency Securities	20,017	-	20,017	-
U.S. Treasury	632,975	-	632,975	-
International Government	11,400	-	11,400	-
Collateralized Mortgage Obligations	130,322	-	130,322	-
Mortgage Pass-Through				
FHLMC	61,052	-	61,052	-
FNMA	68,401	-	68,401	-
GNMA	44,329	-	44,329	-
Total Fixed Income Securities	1,415,546	397	1,415,149	-
Real Estate - Direct Holdings	774	-	-	774
Securities Lending Collateral	273,036	-	273,036	-
Total Investments by Fair Value Level	$4,827,712	$3,138,753	$1,688,185	$774

(Dollar Amounts Expressed in Thousands)

June 30, 2019
Investments Measured at Net Asset Value (NAV)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Equity Commingled Funds	$803,862	$-	Daily, Monthly	1 - 60 days
Fixed Income Commingled Funds	455,348	-	Monthly, Quarterly	30 - 90 days
Real Assets	673,211	476,434	Quarterly	1 - 90 days
Real Estate	877,968	178,368	Daily, Quarterly	1 - 90 days
Absolute Return	919,252	-	Daily, Monthly, Quarterly	1 - 365 days
Private Credit	175,329	141,046		
Private Equity	956,673	665,350		
Total Investments Measured at the NAV	4,861,643			
Total Investments	$9,689,355			

June 30, 2019
Investment Derivative Instruments

		Fair Value Measurements by Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Forwards	$2,354	$2,354	$-	$-
Options	287	27	260	-
Rights/Warrants	130	130	-	-
Swaps	354,861	-	354,861	-
Liabilities				
Forwards	(1,237)	(1,237)	-	-
Options	(13)	(13)	-	-
Swaps	(361,442)	-	(361,442)	-
Total Investment Derivative Instruments	$(5,060)	$1,261	$(6,321)	$-

(Dollar Amounts Expressed in Thousands)

June 30, 2018		Fair Value Measurements by Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Equity Securities				
Consumer Discretionary	$522,430	$522,430	$-	$-
Consumer Staples	226,257	226,257	-	-
Energy	180,765	180,765	-	-
Financials	538,389	538,389	-	-
Health Care	426,791	426,791	-	-
Industrials	459,270	459,270	-	-
Information Technology	622,965	622,965	-	-
Materials	169,076	169,076	-	-
Private Placement	1,561	1,561	-	-
Real Estate	102,528	102,528	-	-
Telecommunication Services	43,343	43,343	-	-
Others	85	85	-	-
Utilities	85,739	85,739	-	-
Total Equity Securities	3,379,199	3,379,199	-	-
Fixed Income Securities				
Securitized Obligations				
Asset-Backed Securities	148,618	-	148,618	-
Credit Obligations				
Corporate Bonds	243,500	2,440	241,060	-
Municipals	10,011	-	10,011	-
Private Placement	11,625	-	11,625	-
Yankee	49,271	-	49,271	-
U.S. Government & Agency Obligations				
Agency Securities	15,307	-	15,307	-
U.S. Treasury	629,589	-	629,589	-
International Government	10,407	-	10,407	-
Collateralized Mortgage Obligations	115,261	-	115,261	-
Mortgage Pass-Through				
FHLMC	53,842	-	53,842	-
FNMA	85,703	-	85,703	-
GNMA	36,043	-	36,043	-
Total Fixed Income Securities	1,409,177	2,440	1,406,737	-
Real Estate - Direct Holdings	338,780	-	-	338,780
Mortgages Payable	(50,000)	-	-	(50,000)
Total Real Estate - Direct Holdings	288,780	-	-	288,780
Securities Lending Collateral	365,734	-	365,734	-
Total Investments by Fair Value Level	$5,442,890	$3,381,639	$1,772,471	$288,780

(Dollar Amounts Expressed in Thousands)

June 30, 2018
Investments Measured at Net Asset Value (NAV)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Equity Commingled Funds	$642,555	$-	Daily, Monthly	1 - 60 days
Fixed Income Commingled Funds	399,274	-	Monthly, Quarterly	30 - 90 days
Real Assets	599,784	381,892	Quarterly	1 - 90 days
Real Estate	573,595	135,647	Daily, Quarterly	1 - 90 days
Absolute Return	889,585	-	Daily, Monthly, Quarterly	1 - 365 days
Private Credit	113,298	131,475		
Private Equity	794,856	439,346		
Total Investments Measured at the NAV	4,012,947			
Total Investments	$9,455,837			

June 30, 2018
Investment Derivative Instruments

		Fair Value Measurements by Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Forwards	$2,218	$2,218	$-	$-
Options	113	-	113	-
Rights/Warrants	134	134	-	-
Swaps	686,802	-	686,802	-
Liabilities				
Forwards	(1,301)	(1,301)	-	-
Options	(70)	-	(70)	-
Swaps	(681,609)	-	(681,609)	-
Total Investment Derivative Instruments	$6,287	$1,051	$5,236	$-

Equity Securities

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

Fixed Income Securities

Debt securities consist of investments in customized separate accounts and commingled funds which primarily invest in negotiable obligations of the U.S. Government and U.S. Government-sponsored agencies, U.S. and non-U.S. corporations, securitized offerings backed by residential and commercial mortgages, and non-dollar denominated sovereign states. Debt securities that are not actively traded are valued by pricing vendors, which use modeling techniques that include market observable inputs required to develop a fair value, and 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 Estate - 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. In the opinion of management, the reported amounts fairly represent the estimated fair value as of June 30, 2019 and 2018. However, the estimated fair value may differ from the actual amount that could be realized in the marketplace.

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 or LP/LLC interest). These alternative investments, unlike more traditional investments, generally do not have readily obtainable fair 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 derived from the most recently available valuation taking into account of subsequent cash flow activities.

Absolute Return

Absolute return investments are made 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.

(Dollar Amounts Expressed in Thousands)

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

Absolute return investments are generally less liquid as compared to equity and fixed income and more liquid as compared to private market investments, such as real assets, real estate, private credit, and private equity. Direct absolute return investments consist of securities traded on national security exchanges, as well as securities that do not have readily determinable fair 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 them by the portfolio funds, adjusted for subsequent distributions from and capital contributions to such portfolio funds, if any.

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

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

(Dollar Amounts Expressed in Thousands)

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

Equity and Fixed Income Commingled Funds

Certain equity and fixed income investments are invested in a commingled fund to provide dedicated exposure to a specific segment of the market and are valued at NAV. 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. The most significant input into the NAV of such an entity is the value of its investment holdings. These holdings are valued by the fund manager on a continuous basis and audited annually. The valuation assumptions are based upon both market and property specific inputs which are not observable and involve a certain degree of expert judgment. 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 Estate and 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. Real asset investments are held in limited partnerships. Limited partner interest 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 and real asset investments are in open-ended and closed-ended commingled funds and closed-ended commingled funds are long-term and illiquid in nature. As a result, investors are subject to redemption restrictions which generally limit distributions and restrict the ability of limited partners to exit a partnership investment. These investments cannot 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 2 to 12 years.

Private Credit and 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, and distressed debt. Private credit investments include limited partnerships, commingled funds, and separate accounts that invest in direct lending, and opportunistic credit strategies. Private equity and private credit investments are made both on a direct basis in limited partnerships, commingled funds, separate accounts, and through externally managed FoF. 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.

These 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 cash flows and the liquidation of the underlying assets of the fund. It is expected that the underlying assets of the fund would be liquidated over 2 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.

(Dollar Amounts Expressed in Thousands)

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 Measurements and Disclosures*). In some circumstances, partnership agreements require reporting financial information and valuations in accordance with accounting standards other than U.S. 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 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, the manager may use their 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.

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

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 fiscal years ended June 30, 2019 and 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 7.2% and 9.8%, respectively.

(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 fiscal years ended June 30, 2019 and 2018, 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, U.S. government, U.S. corporate bonds, U.S. equity, and international equity securities. The System does not have the ability to pledge or sell security collateral absent a borrower defaults. Borrowers are required to deliver collateral for each loan equal to a minimum of 100% of the fair value of the loaned security.

During the fiscal years ended June 30, 2019 and 2018, SCERS did not impose any restrictions on the amount of the loans that State Street made on its behalf. During the fiscal years ended June 30, 2019 and 2018, 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.

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, 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 loaned securities.

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

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

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

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

(Dollar Amounts Expressed in Thousands)

Collateral and related securities on loan at June 30, 2019 and 2018 were as follows:

	June 30, 2019			
Security Description	Fair Value of Reinvested Cash Collateral	Cash Collateral Value	Non-Cash Collateral Value	Fair Value of Securities on Loan
Fixed income	$188,675	$184,807	$23,166	$207,999
Equity	84,361	83,114	23,931	107,378
Total	$273,036	$267,921	$47,097	$315,377

	June 30, 2018			
Security Description	Fair Value of Reinvested Cash Collateral	Cash Collateral Value	Non-Cash Collateral Value	Fair Value of Securities on Loan
Fixed income	$247,764	$242,703	$56,701	$299,415
Equity	117,970	115,092	19,118	134,439
Total	$365,734	$357,795	$75,819	$433,854

Securities Lending Collateral Credit Risk

All of the cash collateral received for securities lending is invested in the State Street Quality D 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, 2019 and 2018, the STIF was not rated.

Securities Lending Collateral Interest Rate Risk

The Quality D Fund's Investment Policy Guidelines provide that the lending agent shall maintain the dollar-weighted average maturity of the Quality D Fund in a manner that the lending agent believes is appropriate to the objective of the Quality D Fund, provided that (i) in no event shall any Eligible Security be acquired with a remaining legal final maturity of greater than 18 months, (ii) the lending agent shall maintain a dollar- weighted average maturity of the Quality D Fund not to exceed 75 calendar days and (iii) the lending agent shall maintain a dollar-weighted average maturity to final of the Quality D Fund not to exceed 180 calendar days. As of June 30, 2019 and 2018, the weighted average maturity was 23 days and 27 days, respectively.

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. The ratings used to determine the quality of the individual securities are the ratings provided by Standard & Poor's (S&P). If there are no ratings provided by S&P, then the ratings provided by Moody's and Fitch Group are used, respectively.

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

SCERS' portfolio has two actively-managed investment strategies, referenced as strategy 1 and strategy 2. Strategy 2 will have a minimum average credit quality rating of Baa1/BBB+ by a Nationally Recognized Statistical Rating Organization (NRSRO). Portfolio diversification is constrained by the following parameters in order to minimize overall market and credit risk:

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

(Dollar Amounts Expressed in Thousands)

The following tables depict the fixed income assets by credit rating as of June 30, 2019 and 2018:

June 30, 2019

								Mortgage Pass-Through		
Credit Rating	Total	Securitized Obligations	Credit Obligations	Commingled Funds	U.S. Government & Agency Obligations	International Government	Collateralized Mortgage Obligations	FHLMC	FNMA	GNMA
AAA	$167,509	$80,796	$1,664	$-	$5,209	$-	$79,840	$-	$-	$-
AA+	178,472	6,470	156	-	26,931	-	15,462	61,052	68,401	-
AA-1	1,254	944	310	-	-	-	-	-	-	-
AA	5,596	1,992	3,249	-	-	-	355	-	-	-
AA-2	738	738	-	-	-	-	-	-	-	-
AA-	10,205	1,421	8,575	-	-	-	209	-	-	-
AA-3	309	-	309	-	-	-	-	-	-	-
A+	25,240	2,599	21,401	-	202	-	1,038	-	-	-
A-1	2,960	1,538	868	-	-	-	554	-	-	-
A	17,326	4,402	12,924	-	-	-	-	-	-	-
A-	41,335	2,801	38,365	-	-	-	169	-	-	-
BBB+	66,555	2,440	60,459	-	-	237	3,419	-	-	-
BBB	68,373	2,459	60,348	-	-	5,245	321	-	-	-
BAA-2	1,990	-	1,990	-	-	-	-	-	-	-
BBB-	50,663	720	47,217	-	-	1,196	1,530	-	-	-
BAA-3	8,692	1,154	7,538	-	-	-	-	-	-	-
BB+	10,486	3,954	6,425	-	-	-	107	-	-	-
BA-1	370	-	370	-	-	-	-	-	-	-
BB	4,777	-	4,554	-	-	-	223	-	-	-
BB-	11,340	-	11,340	-	-	-	-	-	-	-
BA-3	1,384	-	280	-	-	-	1,104	-	-	-
B+	5,755	1,818	1,004	-	-	2,831	102	-	-	-
B	12,042	1,905	8,246	-	-	1,891	-	-	-	-
B-2	81	-	81	-	-	-	-	-	-	-
B-	5,288	195	3,589	-	542	-	962	-	-	-
B-3	112	-	112	-	-	-	-	-	-	-
CCC+	2,279	-	2,279	-	-	-	-	-	-	-
CCC	8,634	3,584	-	-	-	-	5,050	-	-	-
CAA2	126	-	-	-	-	-	126	-	-	-
CCC-	58	-	58	-	-	-	-	-	-	-
D	777	777	-	-	-	-	-	-	-	-
NA	663,853	-	-	-	619,524	-	-	-	-	44,329
NR	496,315	451,667	4,262	20,051	584	-	19,751	-	-	-
Total	$1,870,894	$574,374	$307,973	$20,051	$652,992	$11,400	$130,322	$61,052	$68,401	$44,329

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

(Dollar Amounts Expressed in Thousands)

June 30, 2018

								Mortgage Pass-Through		
Credit Rating	Total	Securitized Obligations	Credit Obligations	Commingled Funds	U.S. Government & Agency Obligations	International Government	Collateralized Mortgage Obligations	FHLMC	FNMA	GNMA
AAA	$183,861	$93,558	$2,307	$-	$2,429	$-	$68,509	$14,322	$2,736	$-
AA+	162,850	10,790	686	-	12,316	-	16,571	39,520	82,967	-
AA	8,462	3,961	3,503	-	-	-	998	-	-	-
AA-	11,795	3,433	8,165	-	-	-	197	-	-	-
A+	38,324	8,356	27,645	-	-	194	2,129	-	-	-
A	22,254	3,407	17,802	-	-	-	1,045	-	-	-
A-	31,639	414	31,066	-	-	-	159	-	-	-
BBB+	45,739	826	42,900	-	-	-	2,013	-	-	-
BBB	67,176	2,447	63,545	-	-	1,007	177	-	-	-
BBB-	55,277	1,942	47,125	-	-	4,730	1,480	-	-	-
BB+	18,363	3,929	13,565	-	-	-	869	-	-	-
BB	6,426	425	5,913	-	-	-	88	-	-	-
BB-	8,931	-	8,931	-	-	-	-	-	-	-
B+	14,042	2,621	7,739	-	-	3,682	-	-	-	-
B	4,579	-	4,009	-	-	570	-	-	-	-
B-	5,524	299	758	-	-	224	4,243	-	-	-
CCC+	913	-	913	-	-	-	-	-	-	-
CCC	3,139	2,972	135	-	-	-	32	-	-	-
CCC-	419	-	419	-	-	-	-	-	-	-
D	1,015	1,015	-	-	-	-	-	-	-	-
NA	665,632	-	-	-	629,589	-	-	-	-	36,043
NR	452,091	407,496	14,682	12,599	562	-	16,752	-	-	-
Total	$1,808,451	$547,891	$301,808	$12,599	$644,896	$10,407	$115,262	$53,842	$85,703	$36,043

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

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. As of June 30, 2019 and 2018, 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, 2019 and 2018, the System had no issuer that exceeds 5% of total portfolio fair value. As noted in the previous discussion of credit risk, manager investment guidelines place limitations on the maximum holdings in any one issuer.

(Dollar Amounts Expressed in Thousands)

Custodial Credit Risk

Custodial credit risk is the risk that, in the event a financial institution or counterparty fails, the System would not be able to recover the value of its deposits, investments, or securities. As of June 30, 2019 and 2018, the bank balance of cash and cash equivalents on deposit with SCERS' custodian bank and financial institutions totaled $11,250 and $8,404, respectively, of which $9,193 and $6,419 were not insured by the 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, 2019 and 2018, deposits held in the System's name for the margin accounts of $8,828 and $0, respectively, were not insured or not collateralized, and these deposits were exposed to custodial credit risk.

As of June 30, 2019 and 2018, 100% of the System's investments held with the custodian were held in the System's name, and the System is not exposed to custodial credit risk related to these investments. There are no general policies relating to custodial credit risk.

Interest Rate Risk

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

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

June 30, 2019

Type of Securities	Fair Value	Effective Duration	Benchmark Duration	Difference
Securitized Obligations				
Asset-Backed Securities	$574,374	2.99	2.65	0.34
Credit Obligations				
Corporate Bonds	237,694	4.83	8.17	(3.34)
Municipals	9,625	0.39	11.54	(11.15)
Private Placement	-	-	5.67	(5.67)
Yankee	60,654	0.98	6.10	(5.12)
U.S. Government & Agency Obligations				
Agency Securities	20,017	0.30	3.68	(3.38)
U.S. Treasury	632,975	6.89	7.43	(0.54)
International Government	11,400	6.93	5.16	1.77
Collateralized Mortgage Obligations	130,322	3.94	3.83	0.11
Mortgage Pass-Through				
FHLMC	61,052	2.32	2.51	(0.19)
FNMA	68,401	2.84	2.86	(0.02)
GNMA	44,329	1.38	1.77	(0.39)
No Effective Duration				
Commingled Fund	20,051	NA	NA	NA
Total Fair Value with Weighted Average	$1,870,894	4.48	5.66	(1.18)

NA represents securities that have no effective duration.

(Dollar Amounts Expressed in Thousands)

June 30, 2018

Type of Securities	Fair Value	Effective Duration	Benchmark Duration	Difference
Securitized Obligations				
Asset-Backed Securities	$547,891	1.74	2.17	(0.43)
Credit Obligations				
Corporate Bonds	230,901	4.32	7.35	(3.03)
Municipals	10,011	0.36	11.51	(11.15)
Private Placement	11,625	0.16	5.38	(5.22)
Yankee	49,271	0.77	5.72	(4.95)
U.S. Government & Agency Obligations				
Agency Securities	15,307	0.24	4.29	(4.05)
U.S. Treasury	629,589	6.80	6.08	0.72
International Government	10,407	6.76	6.90	(0.14)
Collateralized Mortgage Obligations	115,262	3.80	4.98	(1.18)
Mortgage Pass-Through				
FHLMC	53,842	4.15	3.84	0.31
FNMA	85,703	4.13	4.20	(0.07)
GNMA	36,043	3.58	3.41	0.17
No Effective Duration				
Commingled Fund	12,599	NA	NA	NA
Total Fair Value with Weighted Average	$1,808,451	4.17	5.71	(1.54)

NA represents securities that have no effective duration.

(Dollar Amounts Expressed in Thousands)

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The following tables represent cash and investments held in a foreign currency as of June 30, 2019 and 2018:

June 30, 2019

Local Currency Name	Cash and Cash Equivalents	Equity	Fixed Income	Real Estate	Private Equity	Total
Australian Dollar	$1,423	$41,651	$25,999	$-	$-	$69,073
Brazilian Real	-	1,752	12,418	-	-	14,170
Canadian Dollar	1,424	80,206	-	-	-	81,630
Chilean Peso	-	-	16,313	-	-	16,313
Colombian Peso	-	-	12,468	-	-	12,468
Czech Koruna	-	-	5,008	-	-	5,008
Danish Krone	-	48,922	-	-	-	48,922
Euro Currency	5,848	344,713	27,399	112,718	100,350	591,028
Hong Kong Dollar	503	74,589	-	-	-	75,092
Indian Rupee	-	539	-	-	-	539
Indonesian Rupiah	-	-	11,684	-	-	11,684
Japanese Yen	2,443	260,454	-	-	-	262,897
Malasian Ringgit	-	-	16,110	-	-	16,110
Mexican Peso	-	532	32,954	-	-	33,486
New Israeli Shekel	(2)	8,360	-	-	-	8,358
New Zealand Dollar	4	3,320	10,091	-	-	13,415
Norwegian Krone	(28)	9,370	23,925	-	-	33,267
Philippine Peso	-	300	-	-	-	300
Polish Zloty	-	-	13,961	-	-	13,961
Pound Sterling	3,358	202,969	15,053	8,605	-	229,985
Russian Ruble	-	-	3,288	-	-	3,288
Singapore Dollar	206	14,797	-	-	-	15,003
South African Rand	-	2,178	658	-	-	2,836
South Korean Won	-	-	9,965	-	-	9,965
Swedish Krona	764	36,531	21,118	-	-	58,413
Swiss Franc	(1)	117,822	-	-	-	117,821
Thailand Baht	-	777	-	-	-	777
Total	$15,942	$1,249,782	$258,412	$121,323	$100,350	$1,745,809

(Dollar Amounts Expressed in Thousands)

June 30, 2018

Local Currency Name	Cash and Cash Equivalents	Equity	Fixed Income	Real Estate	Private Equity	Total
Australian Dollar	$375	$48,740	$18,044	$-	$-	$67,159
Brazilian Real	-	988	9,287	-	-	10,275
Canadian Dollar	602	76,231	11,521	-	-	88,354
Colombian Peso	-	-	10,703	-	-	10,703
Danish Krone	-	46,276	-	-	-	46,276
Euro Currency	3,898	347,390	16,763	95,206	85,928	549,185
Hong Kong Dollar	627	61,753	-	-	-	62,380
Indian Rupee	-	3,300	-	-	-	3,300
Indonesian Rupiah	-	-	8,226	-	-	8,226
Japanese Yen	2,699	287,652	15,744	-	-	306,095
Malaysian Ringgit	-	-	14,749	-	-	14,749
Mexican Peso	-	-	29,344	-	-	29,344
New Israeli Shekel	10	10,309	-	-	-	10,319
New Turkish Lira	-	-	6,523	-	-	6,523
New Zealand Dollar	569	6,775	-	-	-	7,344
Norwegian Krone	107	17,186	12,626	-	-	29,919
Polish Zloty	-	-	12,715	-	-	12,715
Pound Sterling	1,205	225,390	25,174	12,718	-	264,487
Singapore Dollar	(16)	7,313	-	-	-	7,297
South African Rand	-	1,873	4,445	-	-	6,318
South Korean Won	-	772	-	-	-	772
Swedish Krona	283	28,950	26,071	-	-	55,304
Swiss Franc	484	90,426	-	-	-	90,910
Thailand Baht	-	713	-	-	-	713
Total	$10,843	$1,262,037	$221,935	$107,924	$85,928	$1,688,667

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.

(Dollar Amounts Expressed in Thousands)

Highly Sensitive Investments

As of June 30, 2019 and 2018, SCERS' investments included Collateralized Mortgage Obligations and Mortgage Pass-Through securities totaling $304,104 and $290,850, 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 part of the real assets class that produce a different pattern of returns compared to other investments. 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 often perform well when stocks and bond prices fall.

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

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

As of June 30, 2019 and 2018, total commodities investments were $44,777 and $51,180, 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.

SECTION 5: DERIVATIVE INSTRUMENTS

The System's investment portfolios contain individual securities as well as investments in external investment pools. The System's investment policy allows investment managers to use derivative instruments for certain purposes and within certain parameters. Such instruments include futures contracts, currency forward contracts, option contracts, swap agreements, rights and warrants. The System permits the use of derivatives to minimize the exposure of certain investments to adverse fluctuations in financial and currency markets, as an alternative to investments in the cash market in which the manager is permitted to invest, and as an additional yield curve and/or duration management strategy. The System does not permit the use of derivatives for speculative use or to create leverage, however, this does not apply to investments in external pools. As of June 30, 2019 and 2018, 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 Statements of Changes in Fiduciary Net Position.

(Dollar Amounts Expressed in Thousands)

The tables below present the related net appreciation/(depreciation) in fair value, the fair value and the notional value of derivative instruments outstanding at June 30, 2019 and 2018:

June 30, 2019

Investment Derivatives Instruments	Net Appreciation/ (Depreciation) in Fair Value of Investments	Financial Statement Classification	Fair Value	Notional
Forwards	$(1,784)	Investment Sales and Other	$1,117	$230,357
Futures (Domestic and Foreign)	46,704	Investment Sales and Other	-	382,306
Options	201	Investment Sales and Other	274	19,415
Rights/Warrants	(71)	Investment Sales and Other	130	833 *
Swaps	(10,958)	Investment Purchases and Other	(6,581)	366,281
Total Derivatives Instruments	$34,092		$(5,060)	

* Present in number of shares.

June 30, 2018

Investment Derivatives Instruments	Net Appreciation/ (Depreciation) in Fair Value of Investments	Financial Statement Classification	Fair Value	Notional
Forwards	$(2,344)	Investment Sales and Other	$917	$201,858
Futures (Domestic and Foreign)	4,829	Investment Sales and Other	-	345,006
Options	(25)	Investment Sales and Other	43	(1,067)
Rights/Warrants	41	Investment Sales and Other	134	833 *
Swaps	4,438	Investment Sales and Other	5,193	691,295
Total Derivatives Instruments	$6,939		$6,287	

* Present in number of shares.

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, 2019 or 2018 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.

(Dollar Amounts Expressed in Thousands)

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, 2019 and 2018.

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, 2019 and 2018:

June 30, 2019

S&P Rating	Forwards	Swaps	Total
AA	$55	$1	$56
A+	1,992	7	1,999
AA-	174	-	174
BBB+	128	255	383
Investments in Asset Position	2,349	263	2,612
Investments in Liability Position	(1,232)	(4,699)	(5,931)
Total Investments in Asset/(Liability) Position	$1,117	$(4,436)	$(3,319)

June 30, 2018

S&P Rating	Forwards	Swaps	Total
AA-	$801	$-	$801
A+	1,007	23	1,030
A	287	-	287
A-	-	1,441	1,441
BBB+	101	3,147	3,248
Investments in Asset Position	2,196	4,611	6,807
Investments in Liability Position	(1,279)	(1,149)	(2,428)
Total Investments in Asset/(Liability) Position	$917	$3,462	$4,379

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, 2019 and 2018 was $2,612 and $6,807, respectively. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted. The System did not have any master netting agreements with its counterparties at June 30, 2019 and 2018, 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.

(Dollar Amounts Expressed in Thousands)

At June 30, 2019 and 2018, the System did not have any significant exposure to counterparty credit risk with any single party.

Interest Rate Risk

At June 30, 2019 and 2018, the System is exposed to interest rate risk on its derivative instruments as presented in the following tables:

June 30, 2019

Investment Type	Total Fair Value	Investment Maturities (in years) Less Than 1	1 - 5	6 - 10	More than 10
Credit Default Swaps Bought	$(14)	$-	$(4)	$6	$(16)
Credit Default Swaps Written	(281)	3	(63)	(226)	5
Fixed Income Options Bought	260	30	230	-	-
Interest Rate Swaps	(6,286)	64	(621)	(5,749)	20
Total	$(6,321)	$97	$(458)	$(5,969)	$9

June 30, 2019
Derivative Instruments Highly Sensitive to Interest Changes

Investment Type	Reference Rate	Fair Value	Notional Value
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.38%	$89	$675
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.36871%	102	915
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.15053%	(118)	6,601
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.18309%	(149)	7,695
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.16655%	(16)	875
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.11464%	(48)	2,915
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.309%	(62)	1,890
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 1.82354%	(65)	5,140
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.06749%	(94)	3,020
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.96451%	(28)	1,190
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.89861%	(58)	3,145
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.8076%	(19)	1,460
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.16833%	(82)	4,105
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.17558%	(217)	10,715
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.17%	(712)	35,570
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.29467%	(25)	785
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 2.114%	(257)	2,665
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.33353%	(398)	13,760
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.65876%	(26)	290
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.35303%	(47)	1,945
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.45395%	(59)	1,180
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.33%	(10)	545
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 3.01949%	(64)	960

(Dollar Amounts Expressed in Thousands)

June 30, 2019

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 2.9984%	(1,077)	15,828
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 3.10458%	(288)	3,800
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 3.109%	(805)	10,594
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.5785%	(587)	7,663
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.8354%	(348)	4,476
Interest Rate Swaps	Receive Variable 0-month EONIA, Pay Fixed 1%	(9)	2,056
Interest Rate Swaps	Receive Variable 0-month EONIA, Pay Fixed 1%	(6)	843
Interest Rate Swaps	Receive Variable 0-month EONIA, Pay Fixed 0.1%	(29)	1,993
Interest Rate Swaps	Receive Variable 0-month EONIA, Pay Fixed 0.05%	(67)	2,915
Interest Rate Swaps	Receive Variable 0-month EONIA, Pay Fixed 0.1%	(20)	774
Interest Rate Swaps	Receive Variable 0-month EONIA, Pay Fixed 0.25%	(47)	1,293
Interest Rate Swaps	Receive Variable 12-month SONIA, Pay Fixed 1.2%	(8)	197
Interest Rate Swaps	Receive Variable 12-month EONIA, Pay Fixed 0.75%	(72)	1,048
Interest Rate Swaps	Receive Variable 12-month EONIA, Pay Fixed 0.95%	(65)	683
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.408%	(199)	16,840
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.2688%	(447)	10,184
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.29%	(99)	2,200
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.23577%	(49)	1,840
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.40571%	(77)	2,079
Interest Rate Swaps	Receive Variable 1-month LIBOR, Pay Fixed 3.45875%	(16)	16,000
Interest Rate Swaps	Receive Variable 1-month LIBOR, Pay Fixed 2.02%	(25)	16,000
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.8755%	(42)	8,891
Interest Rate Swaps	Receive Variable 1-month LIBOR, Pay Fixed 3.1655%	(51)	26,416
Interest Rate Swaps	Receive Variable 1-month LIBOR, Pay Fixed 1.828%	(1)	26,416
Interest Rate Swaps	Pay Variable 0-month EONIA, Receive Fixed 0.365%	-	2,056
Interest Rate Swaps	Pay Variable 0-month EONIA, Receive Fixed 0.365%	-	843
Interest Rate Swaps	Pay Variable 0-month EONIA, Receive Fixed 0.1%	-	1,993
Interest Rate Swaps	Pay Variable 0-month EONIA, Receive Fixed 0.365%	-	2,915
Interest Rate Swaps	Pay Variable 0-month EONIA, Receive Fixed 0.365%	-	774
Interest Rate Swaps	Pay Variable 0-month EONIA, Receive Fixed 0.365%	-	1,293
Interest Rate Swaps	Pay Variable 12-month EONIA, Receive Fixed 0.365%	-	1,048
Interest Rate Swaps	Pay Variable 12-month EONIA, Receive Fixed 0.365%	-	683
Interest Rate Swaps	Pay Variable 3-month EURIB, Receive Fixed 2.085%	258	2,665
Interest Rate Swaps	Pay Variable 12-month LIBOR, Receive Fixed 2.405%	53	14,470
Interest Rate Swaps	Pay Variable 12-month FEDL, Receive Fixed 2.17316%	97	9,694
Interest Rate Swaps	Pay Variable 12-month FEDL, Receive Fixed 2.328%	104	26,000
Interest Rate Swaps	Pay Variable 3-month CNRR007, Receive Fixed 2.901%	(1)	2,038
Total Interest Rate Swaps		$(6,286)	$355,542

(Dollar Amounts Expressed in Thousands)

June 30, 2018

Investment Type	Total Fair Value	Investment Maturities (in years) Less Than 1	1 - 5	6 - 10	More than 10
Credit Default Swaps Bought	$10	$-	$6	$13	$(9)
Credit Default Swaps Written	(174)	-	(187)	-	13
Fixed Income Options Bought	3	3	-	-	-
Fixed Income Options Written	(15)	(15)	-	-	-
Interest Rate Swaps	5,357	457	946	3,931	23
Total	$5,181	$445	$765	$3,944	$27

June 30, 2018

Derivative Instruments Highly Sensitive to Interest Changes

Investment Type	Reference Rate	Fair Value	Notional Value
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.38%	$149	$675
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.36871%	184	915
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 0.7472%	78	13,295
Interest Rate Swaps	Receive Variable 1-month USIOS, Pay Fixed 1.08%	75	20,385
Interest Rate Swaps	Receive Variable 1-month USIOS, Pay Fixed 0.91125%	217	30,650
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.43145%	37	7,094
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.4307%	37	7,090
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.2525%	6	2,320
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.144%	(2)	1,868
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.156%	(2)	864
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.396%	(2)	2,370
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.15053%	253	6,601
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Fixed 0.716%	12	1,017
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.18309%	282	7,695
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.16655%	33	875
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.50811%	399	2,955
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.11464%	117	2,915
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.309%	90	1,890
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.65%	(10)	794
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.75%	(12)	1,325
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.75%	15	2,656
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 1%	5	163
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 1.05%	28	701
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.82354%	279	5,140
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 0.1%	(4)	835
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Fixed 1.35%	3	514
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.06749%	106	3,020
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.50239%	75	11,185

(Dollar Amounts Expressed in Thousands)

June 30, 2018
Derivative Instruments Highly Sensitive to Interest Changes (Continued)

Investment Type	Reference Rate	Fair Value	Notional Value
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.4275%	31	3,725
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.52125%	91	5,040
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.96451%	52	1,190
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.89861%	152	3,145
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.8076%	56	1,460
Interest Rate Swaps	Receive Variable 0-month HICP, Pay Fixed 1.415%	17	905
Interest Rate Swaps	Receive Variable 0-month UKRPI, Pay Fixed 3.469%	(7)	178
Interest Rate Swaps	Receive Variable 12-month UKRPI, Pay Fixed 3.3625%	(28)	330
Interest Rate Swaps	Receive Variable 12-month USOIS, Pay Fixed 1.29%	112	10,490
Interest Rate Swaps	Receive Variable 0-month CPTFE, Pay Fixed 1.4375%	13	811
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.5355%	85	1,040
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.16833%	167	4,105
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.17558%	431	10,715
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.17%	1,441	35,570
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.29467%	38	785
Interest Rate Swaps	Receive Variable 0-month UKRPI, Pay Fixed 3.418%	(9)	59
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed 2.114%	(29)	2,732
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 1.70683%	125	19,355
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.33353%	449	13,760
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 1.84029%	340	49,075
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.65876%	16	290
Interest Rate Swaps	Receive Variable 12-month LIBOR, Pay Fixed 1.9503%	95	17,810
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.04038%	36	9,100
Interest Rate Swaps	Receive Variable 3-month FEDL, Pay Fixed 1.7%	1	1,200
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 1.82%	38	35,080
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.9695%	(12)	1,300
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.10673%	65	21,745
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.35303%	10	1,945
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.45395%	4	1,180
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.157%	14	4,035
Interest Rate Swaps	Receive Variable 12-month FEDL, Pay Fixed 2.19%	53	16,665
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.33%	3	545
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.29544%	11	8,225
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.311%	12	11,200
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 3.01949%	(8)	960
Interest Rate Swaps	Receive Variable 0-month FEDL, Pay Fixed 2.36859%	2	14,130
Interest Rate Swaps	Receive Variable 1-month LIBOR, Pay Fixed 3.98825%	(27)	101,700
Interest Rate Swaps	Receive Variable 1-month LIBOR, Pay Fixed 2.8198%	(3)	101,700
Interest Rate Swaps	Receive Fixed 0.144%, Pay Variable 6-month EURIB	-	1,436
Interest Rate Swaps	Receive Fixed 0.156%, Pay Variable 6-month EURIB	-	864
Interest Rate Swaps	Receive Fixed 0.65%, Pay Variable 6-month EURIB	-	794
Interest Rate Swaps	Receive Fixed 0.35257%, Pay Variable 6-month EURIB	-	2,656

(Dollar Amounts Expressed in Thousands)

June 30, 2018
Derivative Instruments Highly Sensitive to Interest Changes (Continued)

Investment Type	Reference Rate	Fair Value	Notional Value
Interest Rate Swaps	Receive Fixed 0.269%, Pay Variable 6-month EURIB	-	514
Interest Rate Swaps	Receive Fixed 0.356%, Pay Variable 12-month EONIA	-	350
Interest Rate Swaps	Receive Fixed 0.269%, Pay Variable 6-month EURIB	-	163
Interest Rate Swaps	Receive Fixed 2.43436%, Pay Variable 3-month LIBOR	(226)	3,740
Interest Rate Swaps	Receive Fixed 2.33843%, Pay Variable 3-month LIBOR	(526)	5,970
Interest Rate Swaps	Receive Fixed 1.24%, Pay Variable 0-month HICP	(22)	1,810
Interest Rate Swaps	Receive Fixed 3.52%, Pay Variable 0-month UKRPI	33	944
Interest Rate Swaps	Receive Fixed 1.26%, Pay Variable 0-month CPTFE	(20)	1,670
Interest Rate Swaps	Receive Fixed 2.527%, Pay Variable 3-month LIBOR	(90)	1,180
Interest Rate Swaps	Receive Fixed 8.87%, Pay Variable 0-month BRCDI	(92)	2,629
Interest Rate Swaps	Receive Fixed 3.535%, Pay Variable 0-month UKRPI	8	99
Interest Rate Swaps	Receive Fixed 2.085%, Pay Variable 3-month EURIB	31	2,732
Interest Rate Swaps	Receive Fixed 2.16%, Pay Variable 0-month LIBOR	(33)	1,390
Interest Rate Swaps	Receive Fixed 2.987%, Pay Variable 3-month LIBOR	9	1,730
Total Interest Rate Swaps		$5,357	$681,758

(Dollar Amounts Expressed in Thousands)

Foreign Currency Risk

At June 30, 2019 and 2018, 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:

June 30, 2019

	Forward Contracts			
Currency Name	Net Receivables	Net Payables	Swaps	Total Exposure
Argentine Peso	$16	$-	$-	$16
Australian Dollar	32	(17)	-	15
Brazilian Real	(1)	(59)	-	(60)
Canadian Dollar	267	(25)	-	242
Chilean Peso	3	(30)	-	(27)
Colombian Peso	19	(33)	-	(14)
Czech Koruna	16	(10)	-	6
Danish Krone	22	-	-	22
Euro Currency	361	(73)	(316)	(28)
Hong Kong Dollar	11	-	-	11
Hungarian Forint	7	(9)	-	(2)
Indian Rupee	16	(1)	-	15
Indonesian Rupiah	54	(23)	-	31
Japanese Yen	563	(31)	-	532
Mexican Peso	22	-	-	22
New Israeli Shekel	3	(5)	-	(2)
New Taiwan Dollar	23	(11)	-	12
New Zealand Dollar	35	(12)	-	23
Norwegian Krone	22	(13)	-	9
Peruvian Sol	19	(8)	-	11
Philippine Peso	1	(9)	-	(8)
Polish Zloty	14	(11)	-	3
Pound Sterling	(461)	109	(8)	(360)
Russian Ruble	45	-	-	45
Singapore Dollar	20	(16)	-	4
South African Rand	30	(32)	-	(2)
South Korean Won	17	(3)	-	14
Swedish Krona	59	(20)	-	39
Swiss Franc	378	(71)	-	307
Thailand Baht	62	(63)	-	(1)
Turkish Lira	22	(112)	-	(90)
Yuan Renminbi	-	9	(1)	8
Grand Total	$1,697	$(579)	$(325)	$793

(Dollar Amounts Expressed in Thousands)

June 30, 2018

	Forward Contracts			
Currency Name	Net Receivables	Net Payables	Swaps	Total Exposure
Australian Dollar	$31	$(26)	$-	$5
Brazilian Real	114	(167)	(92)	(145)
Canadian Dollar	75	(32)	-	43
Chilean Peso	85	(65)	-	20
Colombian Peso	3	(2)	-	1
Czech Koruna	25	(154)	-	(129)
Danish Krone	6	-	-	6
Euro Currency	1,035	(60)	9	984
Hungarian Forint	27	(107)	-	(80)
Indian Rupee	-	(80)	-	(80)
Indonesian Rupiah	-	(72)	-	(72)
Japanese Yen	75	(54)	-	21
Mexican Peso	47	(25)	-	22
New Israeli Shekel	55	-	-	55
New Taiwan Dollar	14	(9)	-	5
New Zealand Dollar	2	(6)	-	(4)
Norwegian Krone	2	(21)	-	(19)
Philippine Peso	14	(4)	-	10
Polish Zloty	24	(151)	-	(127)
Pound Sterling	252	(38)	9	223
Russian Ruble	11	(42)	-	(31)
Singapore Dollar	13	(48)	-	(35)
South African Rand	11	(36)	-	(25)
South Korean Won	29	(33)	-	(4)
Swedish Krona	17	-	-	17
Swiss Franc	148	(6)	-	142
Thailand Baht	55	(40)	-	15
Turkish Lira	26	-	-	26
Yuan Renminbi	1	(1)	-	-
Total	$2,197	$(1,279)	$(74)	$844

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, 2019 and 2018.

(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, 2019 and 2018, are shown below:

	2019	2018
Total Pension Liability	$11,895,520	$11,213,263
Less: Plan Fiduciary Net Position	9,821,694	9,251,937
Net Pension Liability	$2,073,826	$1,961,326
Plan Fiduciary Net Position as a % of Total Pension Liability	82.6%	82.5%

The actuarial valuation of the System involves estimates of the amounts reported and assumptions about the probability of occurrence of events far into the future. Some examples include future salary increases and future employee mortality. The net pension liability is subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. Triennially, the System requests that its actuary, Segal Consulting, perform an analysis of the appropriateness of all economic and non-economic assumptions. The last triennial analysis was performed as of June 30, 2016, and as a result of that analysis, the Board of Retirement approved certain changes to the actuarial assumptions, which were incorporated in the actuarial valuation reports as of June 30, 2019 and 2018.

Disclosure of Information about Actuarial Methods and Assumptions

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

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

Actuarial Methods and Assumptions:

The following significant actuarial assumptions were used to measure the total pension liabilities as of June 30, 2019 and 2018:

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

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

(Dollar Amounts Expressed in Thousands)

Actuarial Methods and Assumptions (Continued):

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

Post-Retirement Mortality:

a) Service

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

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

b) Disability

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

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

c) Member Contribution Rate

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

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

(Dollar Amounts Expressed in Thousands)

Actuarial Methods and Assumptions (Continued):

Pre-Retirement Mortality:	Based upon the June 30, 2016 Actuarial Experience Study
Other Assumptions:	Analysis of actuarial experience study for the period July 1, 2013 through June 30, 2016

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 and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption, as of June 30, 2019 and 2018 are summarized in the table below:

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
U.S. Large Cap Equity	17.0 %	5.6 %
U.S. Small Cap Equity	4.0	6.4
International Developed Equity	16.0	7.0
Emerging Markets Equity	4.0	9.3
High Yield Bonds	1.0	3.7
Bank Loans	1.0	3.0
Growth Oriented Absolute Return	3.0	5.0
Private Equity	9.0	8.7
Private Credit	4.0	5.1
Core/Core Plus Bonds	10.0	1.1
Global Bonds	3.0	0.1
U.S. Treasury	5.0	0.2
Diversifying Absolute Return	7.0	3.0
Real Estate	7.0	4.4
Real Assets	7.0	7.7
Commodities	2.0	3.8
	100.0 %	

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

The discount rate used to measure the total pension liability was 7.00% as of June 30, 2019 and 2018. The projection of cash flows used to determine the discount rate assumed that 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.

(Dollar Amounts Expressed in Thousands)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate (Continued)

Projected employer contributions that are intended to fund the service cost for future Plan members and their beneficiaries, as well as projected contributions from future Plan members, are not included.

Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments for current Plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

In accordance with GASB Statement No. 67 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the table below presents the employers' net pension liabilities as of June 30, 2019 and 2018, calculated using the discount rate, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1.00% lower or 1.00% higher than the current rate.

	1% Decrease 6%	Current Discount Rate 7%	1% Increase 8%
Net pension liability as of June 30, 2019	$3,713,495	$2,073,826	$734,226
Net pension liability as of June 30, 2018	$3,531,085	$1,961,326	$679,078

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

Contributions to the Plan are made pursuant to Section 31584 of the 1937 Act. 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 3.87% to 25.14% of annual covered salary for fiscal year 2018-19 and from 3.54% to 22.13% of annual covered salary for fiscal year 2017-18 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 9.37% to 48.41% of covered payroll for fiscal year 2018-19 and from 7.93% to 41.30% of covered payroll for fiscal year 2017-18. 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. Member and employer contributions for the fiscal years ended June 30, 2019 and 2018 totaled $407,485 and $298,419, respectively. Included in this total are employer contributions of $285,642 and $198,513 in fiscal years 2018-19 and 2017-18, respectively, of which $220,141 and $181,626 were made by the County of Sacramento. Member contributions were $121,843 and $99,906 in fiscal years 2018-19 and 2017-18, respectively. All contributions were made in accordance with actuarially-determined contribution requirements based on the actuarial valuations performed as of June 30, 2017 and 2016, respectively.

(Dollar Amounts Expressed in Thousands)

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.

Member 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 and death benefit reserves represent the balance of transfers from member reserves, employer reserves, and interest earnings, less payments to retirees, and payments to beneficiaries of retired members who are deceased.

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

Investment gains and losses are recognized (smoothed) over a seven-year period. **Total allocated reserves and designations** represent 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.

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, 2019 and 2018, is as follows:

	2019	2018
Member reserve	$906,927	$843,780
Employer reserve	2,908,795	2,826,540
Retiree and death benefit reserve	5,757,776	5,375,173
Contingency reserve	129,815	77,511
Total allocated reserves and designations	9,703,313	9,123,004
Market stabilization reserve	118,381	128,933
Net position restricted for pension benefits	$9,821,694	$9,251,937

(Dollar Amounts Expressed in Thousands)

NOTE 7 - PLAN TERMINATION

SCERS is administered in accordance with the provisions of the 1937 Act 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 1937 Act which permit the governing body of the county to terminate the Plan. Section 31564 permits the governing body of a district to withdraw its employees if certain prerequisites are met. The governing body of a county or district can adopt optional provisions within the 1937 Act 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 participating employers and retirees, and remitting premium payments to health carriers. The activities of the Program are accounted for in the agency fund. SCERS does not provide any funding for the Program.

Below is the list of employers participating in the Program as of June 30, 2019 and 2018:

- 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, 2019, there were 310 annuitants receiving medical subsidy and 333 annuitants receiving dental subsidy. As of June 30, 2018, there were 287 annuitants receiving medical subsidy and 297 annuitants receiving dental subsidy.

Eligibility

(Amounts Expressed in Dollars)

County annuitants who retired after May 31, 2007 - According to the Program's Administrative Policy, only County annuitants from bargaining unit 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 fiscal years ended June 30, 2019 and 2018, the monthly dental subsidy was $25, and the monthly medical subsidy amounts range from $122 to $244 depending on the annuitant's retirement date and years of service.

Special Districts' annuitants - The medical subsidy amounts for special districts' annuitants are varied and are established by each of the member districts. For the fiscal years ended June 30, 2019 and 2018, the monthly medical subsidy amounts range from $72 to $397 and $72 to $361, respectively, depending on the annuitant's retirement date and years of service.

(Dollar Amounts Expressed in Thousands)

Eligibility (Continued)

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. Monies received by the System in excess of liabilities to pay premiums are recognized as liabilities payable to the employers. There are no net position or legally required reserve accounts for the Program.

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

NOTE 9 – CONTINGENCIES

The System is involved in litigation relating to various matters. In the opinion of management, after consultation with legal counsel, the outcome of these matters is not expected to have a material adverse effect on the System's financial statements.

NOTE 10 – FUTURE ACCOUNTING PRONOUNCEMENTS

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities,* which establishes criteria for identifying and reporting fiduciary activities of all state and local governments. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2018. Management is evaluating the requirements of this GASB Statement and its impact to SCERS' financial reporting and will implement it in the financial statements for the fiscal year ending June 30, 2020.

In June 2017, GASB issued Statement No. 87, *Leases*, which establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. This statement improves accounting and financial reporting for leases by governments by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2019. Management is evaluating the requirements of this GASB Statement and its impact to SCERS' financial reporting and will implement it in the financial statements for the fiscal year ending June 30, 2021, if applicable.

(Dollar Amounts Expressed in Thousands)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

FOR THE FISCAL YEARS ENDED JUNE 30

	2019	2018	2017	2016	2015	2014	2013
Total pension liability[1]							
Service cost	$238,685	$234,325	$193,490	$186,438	$185,428	$192,701	$187,329
Interest	783,932	747,682	706,016	675,920	643,427	617,240	589,783
Differences between expected and actual experience	165,493	18,566	(46,244)	(49,245)	(6,447)	(108,155)	(80,788)
Changes of assumptions	-	-	823,712	-	-	15,781	-
Benefit payments, including refunds of member contributions	(505,853)	(468,308)	(432,066)	(405,702)	(374,657)	(347,619)	(323,567)
Net change in total pension liability	682,257	532,265	1,244,908	407,411	447,751	369,948	372,757
Total pension liability - beginning	11,213,263	10,680,998	9,436,090	9,028,679	8,580,928	8,210,980	7,838,223
Total pension liability - ending (a)	$11,895,520	$11,213,263	$10,680,998	$9,436,090	$9,028,679	$8,580,928	$8,210,980
Plan fiduciary net position							
Contributions - member	$121,843	$99,906	$89,489	$77,494	$68,143	$57,635	$68,242
Contributions - employer	240,238	198,331	201,928	207,884	221,823	209,367	188,529
Contributions - withdrawn employer[2,3]	45,404	182	2,000	1,136	1,136	1,136	1,135
Net investment income/(loss)	675,726	844,489	1,048,915	(72,399)	158,222	1,107,152	785,449
Benefit payments	(502,944)	(465,354)	(429,754)	(403,356)	(372,369)	(344,890)	(320,828)
Withdrawal of Contributions	(2,909)	(2,954)	(2,312)	(2,346)	(2,288)	(2,729)	(2,739)
Administrative expenses	(7,601)	(6,888)	(6,906)	(6,362)	(5,854)	(5,665)	(5,719)
Net change in plan fiduciary net position	569,757	667,712	903,360	(197,949)	68,813	1,022,006	714,069
Plan fiduciary net position - beginning	9,251,937	8,584,225	7,680,865	7,878,814	7,810,001	6,787,995	6,073,926
Plan fiduciary net position - ending (b)	$9,821,694	$9,251,937	$8,584,225	$7,680,865	$7,878,814	$7,810,001	$6,787,995
Net pension liability - ending (a-b)	$2,073,826	$1,961,326	$2,096,773	$1,755,225	$1,149,865	$770,927	$1,422,985
Plan fiduciary net position as a percentage of the total pension liability	82.6%	82.5%	80.4%	81.4%	87.3%	91.0%	82.7%
Covered payroll	$1,017,885	$985,375	$958,934	$912,421	$873,328	$858,343	$858,551
Net pension liability as a percentage of covered payroll	203.7%	199.0%	218.7%	192.4%	131.7%	89.8%	165.7%

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

[2] Effective fiscal year ended 2018, the interest portion of withdrawn employer contributions was reported as Other Income on the Statements of Changes in Fiduciary Net Position.

[3] The withdrawn employer contributions in fiscal year ended June 30, 2019 reflected accrual of estimated unfunded actuarial accrued liability for which the withdrawn employer is contractually required to pay the System.

(Dollar Amounts Expressed in Thousands)

SCHEDULE OF EMPLOYER CONTRIBUTIONS

FOR THE LAST TEN FISCAL YEARS ENDED JUNE 30

	2019	2018	2017	2016	2015
Actuarially determined contribution (ADC)	$240,238	$198,331	$201,928	$207,884	$221,823
Contributions in relation to the ADC	240,238	198,331	201,928	207,884	221,823
Contribution deficiency (excess)	$-	$-	$-	$-	$-
Covered payroll*	$1,017,885	$985,375	$958,934	$912,421	$873,328
Contributions in relation to the ADC as a percentage of covered payroll	23.6%	20.1%	21.1%	22.8%	25.4%

	2014	2013	2012	2011	2010
Actuarially determined contribution (ADC)	$209,367	$188,529	$179,099	$182,921	$167,142
Contributions in relation to the ADC	209,367	188,529	179,099	182,921	167,142
Contribution deficiency (excess)	$-	$-	$-	$-	$-
Covered payroll*	$858,343	$858,551	$835,737	$818,804	$872,804
Contributions in relation to the ADC as a percentage of covered payroll	24.4%	22.0%	21.4%	22.3%	19.2%

* Payroll for the fiscal years ending 2010 through 2012 is calculated by dividing the contribution dollar amount by the aggregated contribution rate.

SCHEDULE OF ANNUAL MONEY-WEIGHTED RATE OF RETURN

FOR THE FISCAL YEARS ENDED JUNE 30

	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expenses*	7.2%	9.8%	13.6%	(1.0)%	2.0%	16.2%

* Information prior to June 30, 2014 is not available. Information will be presented in future years as it becomes available.

(Dollar Amounts Expressed in Thousands)

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

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

METHODS AND ASSUMPTIONS USED TO ESTABLISH ACTUARIALLY DETERMINED CONTRIBUTION RATES

The following actuarial methods and assumptions were used to determine the fiscal year 2018-19 contribution rates reported in the Schedule of Employer Contributions:

Valuation date:	Actuarial valuation report as of June 30, 2017
Actuarial cost method:	Entry Age Actuarial Cost Method
Amortization method:	Level percent of payroll (3.50% payroll growth assumed)
Remaining amortization period:	18 years (declining) as of June 30, 2017 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 (LEMA) 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.
Asset valuation method:	The market value of assets less unrecognized returns in each of the last six years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a rolling seven-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a six-year period starting July 1, 2013.

(Dollar Amounts Expressed in Thousands)

Actuarial assumptions:		
Investment rate of return:	7.00%, net of pension plan investment expense, including inflation	
Inflation rate:	3.00%	
Projected salary increases:	4.5% - 10.75% varying by service, including inflation	
Assumed post-retirement benefit increase:	Miscellaneous Tier 1	3.00%
	Miscellaneous Tier 2	0.00%
	Miscellaneous Tier 3	2.00%
	Miscellaneous Tier 4	2.00%
	Miscellaneous Tier 5	2.00%
	Safety Tier 1	3.00%
	Safety Tier 2	2.00%
	Safety Tier 3	2.00%
	Safety Tier 4	2.00%
Other assumptions:	Same as those used in June 30, 2017 funding actuarial valuation.	
Other information:	All members with membership dates on or after January 1, 2013 enter the new tiers created by the California Public Employees' Pension Reform Act of 2013 (PEPRA).	

(Dollar Amounts Expressed in Thousands)

Changes in Methods and Assumptions Used to Determine the ADC

Valuation date as of June 30:

2010
- Investment return assumption decreased from 7.875% to 7.75%.

2011
- Modification in non-economic assumptions.
- Investment return assumption decreased from 7.75% to 7.50%.

2012
- Inflation assumption decreased from 3.50% to 3.25%.
- Salary increase assumption decreased from 5.65% to 5.40%.
- Cost-of-living adjustment 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 Sacramento 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 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.
- The retirement rates were adjusted to reflect slightly later retirements.

2014
- 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.

2017
- The inflation rate was reduced from 3.25% to 3.0% to reflect the gradual decline of average inflation rates over the last several years .
- The investment rate of return was reduced from 7.50% to 7.00% to reflect the projected real rate of return for the next 10-15 years based on SCERS' asset allocation model and risk tolerance.
- The salary increase assumption was adjusted slightly to reflect past experience.
- The retirement rates were adjusted to be more in line with the experience.
- The mortality rates were adjusted and a generational approach was used to reflect a slight mortality improvement.
- Termination rates were adjusted to reflect lower incidence of termination, with a lower proportion electing to receive a deferred vested benefit.
- The disability rates were adjusted to reflect slightly lower incidence of disability for Miscellaneous and Safety members.
- An assumption was introduced for new Miscellaneous disabled retirees to anticipate conversions of unused sick leave at retirement.

(Dollar Amounts Expressed in Thousands)

Schedule of Administrative Expenses:

Type of expense:	2019	2018
Salaries and benefits	$5,128	$4,078
Professional services	606	879
Rent and lease	582	557
County allocated expenses	488	557
Pension payroll services	185	208
Printing and postage	177	202
Information technology	133	157
Insurance liability	97	89
Other	205	161
Total administrative expenses	$7,601	$6,888

Schedule of Investment Fees and Expenses:

Type of investment expense:	2019	2018
Equity	$16,278	$19,860
Fixed income	4,488	4,436
Real assets	16,448	15,274
Real estate	20,148	12,836
Absolute return	18,861	13,034
Private credit	2,913	1,415
Private equity	47,703	53,455
Custodian fees	624	488
Investment consulting fees	1,239	973
Other investment expenses and fees	2,635	3,193
Total investment fees and expenses	$131,337	$124,964

Schedule of Payments to Consultants:

Type of service:	2019	2018
Legal	$1,015	$1,284
Actuarial	219	311
Medical consulting	203	255
IT consulting	186	171
Audit	74	76
Total payments to consultants	$1,697	$2,097

(Dollar Amounts Expressed in Thousands)

STATEMENTS OF CHANGES IN ASSETS AND LIABILITIES

AGENCY FUND

FOR THE FISCAL YEARS ENDED JUNE 30, 2019 AND 2018

	2019			
	Beginning	Additions	Deductions	Ending
Assets				
Cash	$22	$30,026	$(27,429)	$2,619
Accounts receivable	-	894	(894)	-
Total assets	$22	$30,920	$(28,323)	$2,619
Liabilities				
Accounts payable	$22	$30,921	$(28,324)	$2,619
Total liabilities	$22	$30,921	$(28,324)	$2,619

	2018			
	Beginning	Additions	Deductions	Ending
Assets				
Cash	$18	$28,004	$(28,000)	$22
Accounts receivable	-	822	(822)	-
Total assets	$18	$28,826	$(28,822)	$22
Liabilities				
Accounts payable	$18	$28,826	$(28,822)	$22
Total liabilities	$18	$28,826	$(28,822)	$22

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SECTION 3
INVESTMENT

Introduction

For the fiscal year ended June 30, 2019, the Sacramento County Employees' Retirement System (SCERS) generated a 7.2% gross return. The returns added to the solid 10.1% gross returns generated during the prior fiscal year. While market volatility spiked early in the fiscal year, asset prices were up during the year, with the strongest returns coming from the Private Equity, Real Assets, and Domestic Equity asset classes.

SCERS' gross return of 7.2% was also impressive on a relative basis, exceeding its policy index return of 6.3%, by 0.9%. Key contributors to the generation of excess returns relative to SCERS' policy index were the International Equity, U.S. Fixed Income, Private Equity, and Real Assets asset classes. Assets under management ended the current fiscal year at $9.7 billion, ahead of the prior fiscal year's assets of $9.2 billion.

SCERS' general investment consultant, Verus Advisory (Verus), prepared the investment returns cited in this transmittal using information it receives from SCERS' custodian bank and investment managers which may differ from amounts reported in the financial statements.

Market Overview

At 10 years, the current U.S. economic expansion (2009 – 2019) is slightly longer than the expansion that occurred during the tech expansion in the 1990's, and is the longest since the Civil War in 1857. In the modern era, since the Federal Reserve (the Fed) was established as an independent body, the average length of expansions has been 66 months. The current expansion has almost doubled this.

Global financial market returns were strong overall for the 2018-2019 fiscal year, though the year got off to a rocky start. Calendar year 2018 saw the Fed raise the fed funds rate four times, which was met in the 4th quarter of 2018 by a 20% plummeting of equity prices. By the end of calendar year 2018, amid a spike in market volatility, the Fed quickly took on a more dovish tone and signaled a halting of rate hikes, which was quickly followed by a reversal of course and the cutting of rates later in 2019. While the outlook for the U.S. economy is in good shape, with a healthy labor market and steady consumer trends, the global economic outlook has been weakening, combined with weak manufacturing data, uncertainty around trade policy, and inflation running below central bank targets. The more dovish stance from the Fed has translated to very strong equity and fixed income returns in calendar year 2019.

Major global market returns for the 2018-2019 fiscal year were as follows: Domestic equity markets (Russell 3000 Index) returned 9.0%; International developed equity markets (MSCI World ex-US Index) returned 1.8%; Emerging equity markets (MSCI Emerging Markets Index) returned 1.6%; Fixed income markets (Bloomberg Barclays Aggregate Index) returned 7.9%; Real estate markets (NFI-ODCE Index) returned 6.4%; Absolute return markets (HFRI Fund of Funds Composite Index) returned 1.3%; and Commodities markets (Bloomberg Commodity Index) returned -6.8%.

While equity markets in aggregate were positive for the year, there were divergences. Small capitalization stocks at -3.3% (Russell 2000 Index) significantly underperformed large capitalization stocks at 10.0% (Russell 1000 Index), which was a reversal from last year. Growth stocks at 11.6% (Russell 1000 Growth Index) continued to outperform value stocks at 8.5% (Russel 1000 Value Index). Growth tends to outperform value later in an economic cycle, and continues a multi-year trend since the global financial crisis, and a widening return spread between cheap and expensive stocks. Utilities and other defensive sectors led performance during the fiscal year, less on strong fundamentals and more on perceived safety and investors seeking higher yields. The market has also favored "new economy" stocks of companies that are tied to high growth innovation and development around the technology and the internet.

International equity stocks delivered muted performance, meaningfully lagging domestic equity returns. The market has been more pessimistic on international developed market equities, particularly in the Eurozone, based on slowing economic growth and increasing political risks. Underperforming currencies versus the U.S. dollar impacted unhedged international equities, both in the developed and emerging markets. Emerging market equities traded in-line with international developed market equities, but significantly underperformed U.S. equities. Despite the muted performance, return expectations for emerging market equities remain strong, based on positive emerging market growth trends versus slowing developed market trends, attractive valuations, and a strong earnings environment.

Fixed income markets delivered strong performance during the fiscal year, fueled by both government bonds and corporate credit. Treasuries generated returns of 7.2% (Bloomberg Barclays U.S. Treasury Index), as Treasury yields fell significantly during the year off of messaging and actions by the Fed. As an example the 10-Year Treasury yield fell from 2.86% on June 30, 2018 to 2.01% on June 30, 2019 (they fell as low as 1.47% during the third quarter of 2019). Treasuries also experienced yield curve flattening, where the spread between short-term yields and longer-term yields tightened, and even inverted during 2019, raising recession concerns in the future. While credit spreads spiked during the market sell off in the fourth quarter of 2018, they tightened during the remainder of the fiscal year, ending at similar levels as they were to start the year, and well below long-term historical averages. Overall, corporate credit generated solid results, with the Bloomberg Barclays U.S. Credit Index returning 10.3%, and the Bloomberg Barclays U.S. Corporate High Yield Index returning 7.5%. The broad based Bloomberg Barclays Aggregate index, which contains an equal mix of Treasuries, agency mortgages, and investment grade credit, generated a strong return of 7.9% during the year.

During this expansionary period, there has been an accelerating increase in global debt, at the government, corporate, and consumer levels, which is fueled by low interest rates and cheap financing. At the household level, this has played out in the form of mortgages, auto loans, student loans, and credit cards. Credit growth has increased exponentially, both across the public and private sectors. A lot has been made about the level of government debt that has been added through monetary policy; however, corporate debt has increased by over 50% during the same period. There is the risk that higher levels of debt can add to deflationary pressures, as debt service potentially takes a greater share of income.

Economic activity and data remains solid but is showing signs of weakness in some areas. The last U.S. GDP measure as of June 30, 2019 came in at 2.3% year over year, which is stronger than most other developed economies, but is lower than the 3.2% figure this time last year. The consumer is driving GDP growth, and to a lesser extent government spending, but business investment and trade have been detractors. The consumer has been a strength to the economy, demonstrated by strong sentiment numbers and solid consumer spending trends fueled by low interest rates, though spending on big ticket items such as homes and automobiles has slowed. An area of economic weakness has been manufacturing as demonstrated by the ISM Manufacturing Purchasing Managers' Index, which dropped below 50 in the third quarter of 2019, and currently sits at 47.8. Any figure below 50 signals a contraction in activity. Unemployment in the U.S. remains very low at 3.5% (as of 9/30/19), down from 4.0% to start the fiscal year, though wage growth has been decelerating. Core inflation (which excludes food and energy) has increased to 2.4% (as of September 2019), but falling energy prices have kept headline inflation at 1.7%, below the Fed's baseline level of 2.0%. Since the close of the fiscal year, the Fed has indicated that monetary policy will "act as appropriate to sustain the expansion." Since that time, two interest cuts have been put in place, and going forward it appears that the Fed will be on hold and will use incoming data to assess whether future rate cuts are necessary.

Outside of the U.S., developed market GDP growth has been subdued at around 1.0%, including 1.2% for the Eurozone and 1.0% for Japan. Inflation is tracking below 1% in these nations, which has translated to central banks employing negative short-term interest rates. The European Central Bank recently provided more stimulus including a rate cut to -0.50% and the restarting of asset purchases in the fourth quarter of 2019. China is growing at 6.2%, which is higher compared to developed economies; however, it represents the slowest growth rate in China in 27 years. Continuing negotiations between the U.S. and China will most likely continue to impact trade around the world, and with it more variability around economic growth.

With current economic expansion reaching record levels, recession fears continue to lurk. However, with continued actions by central banks, including the Fed, the risk of a recession remains low, particularly in the U.S. The economy continues to benefit from looser financial conditions, which should maintain positive economic growth. The positive economic growth combined with the accommodative practices of central banks has translated to continued strong performance within the financial markets. However, most asset classes continue to be priced near perfection, with valuations near or above record levels. It is reasonable to expect episodic periods of volatility related to negative economic data, trade negotiations, and political uncertainty, including next year's presidential election in the U.S. As a reminder, SCERS' strategic asset allocation is structured to provide greater levels of diversification across economic environments and risk factors, outside of equities and bonds, which should serve SCERS well in a variety of market outcomes.

Asset Allocation

SCERS' investment program is structured around a strategic asset allocation model established by SCERS' Board with the assistance of SCERS' investment staff, general investment consultant Verus, alternative assets consultant Cliffwater LLC (Cliffwater), and real estate consultant The Townsend Group (Townsend). The objective of the asset allocation model is to ensure the diversification of investments in a manner that generates a desired rate of investment return with an acceptable level of investment risk. To achieve this, the asset allocation is broadly diversified across asset categories, 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' strategic asset allocation views risk exposures through multiple lenses, including functional and common factor exposures, in order to manage and maintain allocations that are aligned with SCERS' investment philosophy and objectives. This multiple lens approach uses a functional framework to group and classify segments of SCERS' portfolio in order to link segments that are exposed to similar economic environments and risk factors, and which would be expected to have similar roles and outcomes in a portfolio. The functional grouping takes a simplified approach at the asset category level, by breaking the portfolio into four asset categories, with greater complexity reserved at the asset class level. The asset categories include: (1) Growth; (2) Diversifying; (3) Real Return; and (4) Opportunities.

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

SCERS' strategic asset allocation is summarized in the table below:

Asset Category/Asset Class	Target Allocation
Growth	**59.0%**
Domestic Equity*	21.0
International Equity	20.0
Private Equity	9.0
Public Credit	2.0
Private Credit	4.0
Growth Absolute Return	3.0
Diversifying	**25.0**
Core Plus Fixed Income	10.0
US Treasury	5.0
Global Fixed Income	3.0
Diversifying Absolute Return	7.0
Real Return	**16.0**
Real Estate	7.0
Real Assets	7.0
Commodities**	2.0
Opportunities	**0.0**
	100.0%

* Subsequent to fiscal year-end, Domestic Equity was reduced from 21% to 20%, and a 1% Dedicated Cash Allocation was created.

** Subsequent to fiscal year-end, Commodities was converted into a Liquid Real Return asset class.

SCERS' strategic asset allocation has an expected return profile in-line with SCERS' actuarial assumed rate of return, with heavy allocations to growth assets that can drive returns. However, it also maintains meaningful diversification, especially to investment strategies with low and negative correlations to equity markets that can reduce portfolio volatility and protect against significant market drawdowns. It is also expected to generate meaningful cash flow for SCERS. The strategic asset allocation contains a meaningful allocation to higher returning, diversifying, and less liquid private market investments, so tracking SCERS' liquidity profile in order to maintain sufficient cash flows in order to meet benefit payment obligations is a key focus of the Board and SCERS' investment staff.

The implementation of the portfolio toward the targets identified in the strategic asset allocation continued during the fiscal year. It is anticipated that it will require a few years to reach the target allocation levels within the alternative asset classes.

The performance summary section of the Chief Investment Officer's Report will highlight the performance of the asset categories, and their underlying asset classes. However, other portions of the Chief Investment Officer's Report and the CAFR will highlight activity and exposures by major asset classes only. As an example, Growth Absolute Return and Diversifying Absolute Return will be referenced within an aggregate Absolute Return portfolio. Likewise, Public Credit, Core Plus Fixed Income, U.S. Treasury, and Global Fixed Income will be referenced within an aggregate Fixed Income portfolio.

Investment Portfolio Implementation

In addition to providing assistance to the Board in establishing the strategic 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, 2019, SCERS' assets were invested across: (1) Domestic Equity - five separate account portfolios and two commingled funds; (2) International Equity - four separate account portfolios and three commingled fund partnerships; (3) Fixed Income - four separate account portfolios and one global fixed income fund; (4) Absolute Return – three fund-of-funds separate account portfolios and eleven fund partnerships; (5) Private Equity - five fund-of-funds partnerships and forty six fund partnerships; (6) Private Credit – one separate account portfolio and seven fund partnerships; (7) Real Estate – eight core real estate fund partnerships, six value-add real estate fund partnerships, and eight opportunistic real estate fund partnerships; (8) Real Assets – two separate account portfolios and nineteen fund partnerships; (9) Commodities - one commodity fund partnership; (10) Opportunities - one opportunistic credit fund partnership; and (11) a portfolio overlay program, including a real return strategy commingled fund.

Significant activity during the fiscal year included the following:

- In Domestic Equity, SCERS engaged two active investment managers as part of the implementation of the prior fiscal year's restructured asset class. One was a systematic multi-factor strategy, and the other an equity extension strategy.
- In Absolute Return, SCERS continued implementation of the Diversifying Absolute Return portfolio by making three new fund investments. Within the Growth Absolute Return portfolio, an engagement with an existing absolute return fund was terminated.
- In Private Equity, SCERS continued implementation of the direct private equity investment platform, making six fund commitments during the fiscal year.
- In Private Credit, SCERS continued implementation of the direct private credit investment platform, making one fund commitment during the fiscal year.
- In Real Estate, SCERS completed the implementation of the transition of SCERS' core separate account real estate properties in exchange for shares in an open-end core real estate commingled fund, and also used proceeds to make an investment in an additional open-end fund. SCERS also made one new closed-end fund commitment during the fiscal year.
- In Real Assets, SCERS continued implementation of the direct real assets investment platform, making five new fund commitments during the fiscal year.

Due to the longer investment period for private market commitments, the importance of maintaining vintage year diversification, and the objective of investing with top tier managers, it takes several years for target allocation levels to be reached in these asset classes. Private Equity reached its target allocation of 9% during the 2018-19 fiscal year; however, Private Credit and Real Assets will require a few more years to reach their targets.

SCERS' custodial bank is State Street Bank and Trust (State Street). In addition to asset custody services (including performance measurement), State Street provides securities lending services to SCERS and, through State Street Global Advisors and State Street Global Markets, administers a portfolio overlay program and a brokerage commission recapture program, respectively. The portfolio overlay program assures that SCERS' portfolio exposures are consistent with the strategic asset allocation targets through cost-effective rebalancing, using investment proxies to close gaps relative to target allocation levels and to eliminate 'cash drag'. For the fiscal year ended June 30, 2019, SCERS earned a net income of $1.5 million from securities lending and received commission recapture income of $37,000.

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

During the fiscal year, investment educational sessions were provided to the Board by SCERS' staff, investment consultants, and various investment managers to assist the Board in making decisions regarding new asset classes and possible new investment mandates. The educational sessions included presentations regarding: (1) private equity small/lower-middle market buyout investing; (2) liquidity analysis of SCERS' plan; (3) consumer branded buyout investing strategy; and (4) future private equity implementation considerations.

SCERS Investment Objectives

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

At the highest level, SCERS' investment objectives are:

OVER-ARCHING PLAN OBJECTIVES:

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

INVESTMENT PERFORMANCE OBJECTIVES:

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

Proxy Voting Guidelines and Procedures

As a fiduciary, the Board has an obligation to manage SCERS' assets in the best interest of the Plan participants. The Board retains third party services to provide guidance for voting proxies and acting on corporate actions, such as mergers and acquisitions. For the fiscal year ended June 30, 2019, 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 performance of the asset categories is also provided; however, since these were implemented in 2017, performance goes back only to that year. The asset class benchmark returns are weighted by the asset allocation to provide a policy-weighted return based on SCERS' total fund. 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. The total fund performance is reported gross of fees; however, several underlying asset classes are net of fees, including Private Equity, Private Credit, Growth and Diversifying Absolute Return, and Real Assets.

SCERS' investment performance for the fiscal year ended June 30, 2019 continued to be strong, with all major asset classes generating positive returns, except for Commodities. Private Equity, Real Assets, and Domestic Equity generated the strongest positive absolute returns.

For the period, SCERS' total fund return was 7.2%, gross of investment management fees, and 6.9%, net of investment management fees. The gross return for the fiscal year was 0.9% above SCERS' policy weighted benchmark return of 6.3%, and was slightly above the actuarial return objective of 7.0%. Over the trailing three-year period, SCERS' annualized investment return was 10.4% gross and 10.1% net. The three-year annualized return was well above the actuarial return objective of 7.0%, and SCERS' policy benchmark return of 8.7%. Over the trailing five-year period, SCERS' annualized investment return was 6.5% gross and 6.2% net. The five-year annualized return was below the actuarial return objective of 7.0%, but above SCERS' policy benchmark return of 6.1%.

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 InvestorMetrics Universe of public funds with assets of greater than $1 billion was 5.4%. SCERS' return of 7.2% ranked in the top 14th percentile.

Growth Asset Category

The Growth asset category is comprised of the following asset classes: Domestic Equity, International Equity, Private Equity, Public Credit, Private Credit, and Growth Absolute Return. The Growth asset category returned 8.1% for the fiscal year, gross of fees. The return was above the policy benchmark return of 6.8%, by 1.3%. The Growth asset category and benchmark return is a weighted average of the underlying asset class and benchmark returns, based on their weights within SCERS' strategic asset allocation.

Domestic Equity returned 8.8% for the fiscal year, gross of fees. The return was below the benchmark Russell 3000 Index return of 9.0%. For the three-year period, SCERS' Domestic Equity annualized return was 14.3%, gross of fees, above the Russell 3000 Index benchmark return of 14.0%. In the domestic equity segment of the InvestorMetrics Universe, SCERS ranked in the top 37th percentile for the fiscal year and in the top 29th percentile for the three-year period.

The Domestic Equity sub-asset allocation divides investments by stock market capitalization. The large cap domestic equity investments had a fiscal year 9.3% return, gross of fees, which was below the 10.0% return of the Russell 1000 Index benchmark. The annualized investment return for large cap equity for three years was 14.6%, gross of fees, which was above the benchmark return of 14.1%. The one-year return for small cap equity investments was 4.5%, gross of fees, well ahead of the -3.3% return of the benchmark Russell 2000 Index. For the three-year period, the small cap equity annualized return was 17.3%, gross of fees, which was well above the benchmark return of 12.3%.

International Equity returned 3.3% for the fiscal year, gross of fees, which was above the benchmark MSCI ACWI ex-U.S. Index return of 1.8%. Annualized performance for the three-year period of 11.0%, gross of fees, was above the benchmark return of 9.9%. In the international equity segment of the InvestorMetrics Universe, SCERS ranked in the top 12th percentile for the fiscal year and in the top 13th 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 2.4%, gross of fees, which was above the benchmark MSCI World ex-US Index return of 1.8%. Over the trailing three-year period, the developed markets annualized return was 11.3%, gross of fees, compared to the MSCI World ex-US Index return of 9.6%. For the fiscal year, the emerging markets gross of fees return of 7.1% was well above the return of the benchmark MSCI Emerging Markets Index return of 1.6%. For the three-year period, SCERS' emerging markets annualized return of 11.6%, gross of fees, came in above the benchmark return of 11.1%.

The Private Equity asset class generated a return of 24.0%, net of fees for the fiscal year, compared to the 12.7% return of the asset class benchmark, the Thomson Reuters C/A All Private Equity Index. For the three-year period, SCERS' Private Equity asset class returned 19.8%, compared to the benchmark return of 14.6%. Another longer-term comparison measure is the Russell 3000 Index plus 3%, which returned 11.8% and 16.5% for the fiscal year and three-year period, respectively. In the private equity segment of the InvestorMetrics Universe, SCERS' Private Equity return ranked in the top 2nd percentile for the fiscal year and in the top 7th percentile for the three-year period. Please note that the returns of the Private Equity asset class and benchmark are lagged one quarter.

SCERS' Public Credit portfolio generated a fiscal year 2.4% return, gross of fees, which was well below the custom benchmark return of 5.9% (comprised of 50% BofA Merrill Lynch U.S. HY Master II Index / 50% Credit Suisse Leveraged Loans Index). For the three-year period, the Public Credit portfolio annualized return was 7.1%, gross of fees, compared to the benchmark return of 6.5%.

The Private Credit asset class generated a return of 5.6%, net of fees for the fiscal year, compared to the 6.1% return of the asset class benchmark, the Credit Suisse Leveraged Loan Index plus 2%. For the three-year period, SCERS' Private Credit asset class returned 8.9%, compared to the benchmark return of 7.4%. Please note that the returns of the Private Credit asset class and benchmark are lagged one quarter.

SCERS' Growth Absolute Return investments generated a fiscal year 0% return, net of fees. For the three-year period, the Growth Absolute Return portfolio annualized return was 6.6%. The policy benchmark for the Growth Absolute Return investments is the HFRI FoF Composite Index plus 1%, which returned 2.2% and 4.6% in the fiscal year and three-year periods, respectively.

Diversifying Asset Category

The Diversifying asset category is comprised of the following asset classes: Public Fixed Income (Core Plus Fixed Income, U.S. Treasury, Global Fixed Income) and Diversifying Absolute Return. The Diversifying asset category returned 5.6% for the fiscal year, gross of fees. The return was slightly below the policy benchmark return of 5.9%. The Diversifying asset category and benchmark return is a weighted average of the underlying asset class and benchmark returns, based on their weights within SCERS' strategic asset allocation.

SCERS' Core Plus Fixed Income investments generated a fiscal year 8.6% return, gross of fees, which was above the benchmark Bloomberg Barclays U.S. Aggregate Index return of 7.9%. For the three-year period, the Core Plus Fixed Income portfolio annualized return was 3.5%, gross of fees, compared to the benchmark return of 2.3%.

SCERS' U.S. Treasury segment generated a fiscal year 7.2% return, gross of fees, which was in-line with the benchmark Bloomberg Barclays U.S. Treasury Index return of 7.2%. The U.S. Treasury portfolio was created during the 2017-2018 fiscal year, so there is not a full three years of data to report.

SCERS' Global Fixed Income investments generated a fiscal year 4.9% return, gross of fees, which was below the custom benchmark return (comprised of 80% FTSE WGBI Index / 20% JP Morgan GBI EM Diversified Index) of 6.3%. For the three-year period, the Global Fixed Income portfolio annualized return was 3.3%, gross of fees, compared to the benchmark return of 1.7%.

SCERS' Diversifying Absolute Return investments generated a fiscal year 0.3% return, net of fees. For the three-year period, the Diversifying Absolute Return portfolio annualized return was 1.6%. The policy benchmark for the Diversifying Absolute Return investments is the HFRI FoF Conservative Index, which returned 2.1% and 3.9% in the fiscal year and three-year periods, respectively.

Real Return Asset Category

The Real Return asset category is comprised of the following asset classes: Real Estate, Real Assets, and Commodities. The Real Return asset category returned 5.2% for the fiscal year, gross of fees. The return was above the policy benchmark return of 4.2%. The Real Return asset category and benchmark return is a weighted average of the underlying asset class and benchmark returns, based on their weights within SCERS' strategic asset allocation. The Real Return asset category return includes the SSGA Real Assets Strategy, which is the proxy used within SCERS' Overlay Program to replicate exposure while the asset class is implemented.

The Real Estate asset class generated a return of 2.8%, gross of fees for the fiscal year, compared to the 6.8% return of the custom asset class benchmark (65% NFI-ODCE / 35% NFI-ODCE plus 1%). For the three-year period, SCERS' Real Estate asset class returned 9.6%, compared to the benchmark return of 7.4%. In the real estate segment of the InvestorMetrics Universe, SCERS' Real Estate return ranked in the 96th percentile for the fiscal year period and the top 3rd percentile for three-year period. Please note that the returns of some segments of the Real Estate asset class and benchmark are lagged one quarter.

The Real Assets asset class generated a return of 12.8%, net of fees for the fiscal year, compared to the 4.7% return of the asset class benchmark (comprised of 45% Cambridge Associates Private Infrastructure Index / 35% Cambridge Associates Private Energy Index / 10% NCREIF Farmland index / 10% NCREIF Timber Index). For the three-year period, SCERS' Real Assets asset class returned 16.9%, compared to the benchmark return of 7.2%. Another longer-term comparison measure is CPI-U (headline inflation) plus 5%, which returned 6.6% and 7.0% for the fiscal year and three-year period, respectively. Please note that the returns of the Real Assets asset class and benchmark are lagged one quarter.

SCERS' Commodities investments generated a fiscal year -8.1% return, gross of fees, which was below the benchmark Bloomberg Commodity Index return of -6.8%. For the three-year period, the Commodities portfolio annualized return was -3.9%, gross of fees, compared to the benchmark return of -2.2%.

Opportunities Portfolio

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. The Opportunities portfolio only contains one investment as of June 30, 2019. For the fiscal year, SCERS' Opportunities investment achieved a 5.3% net return, which was below SCERS' policy index 6.3% benchmark return. For the three-year period, SCERS' Opportunities portfolio returned 4.7%, compared to the benchmark return of 8.7%.

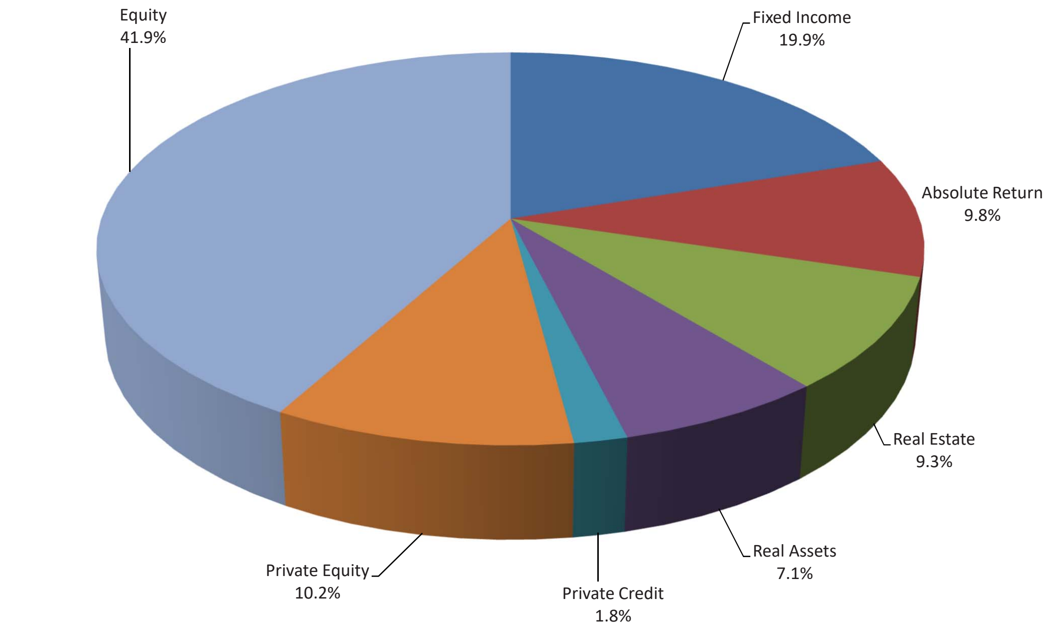
Additional information regarding SCERS' investment program can be found on the pages immediately following this report.

Respectfully submitted,

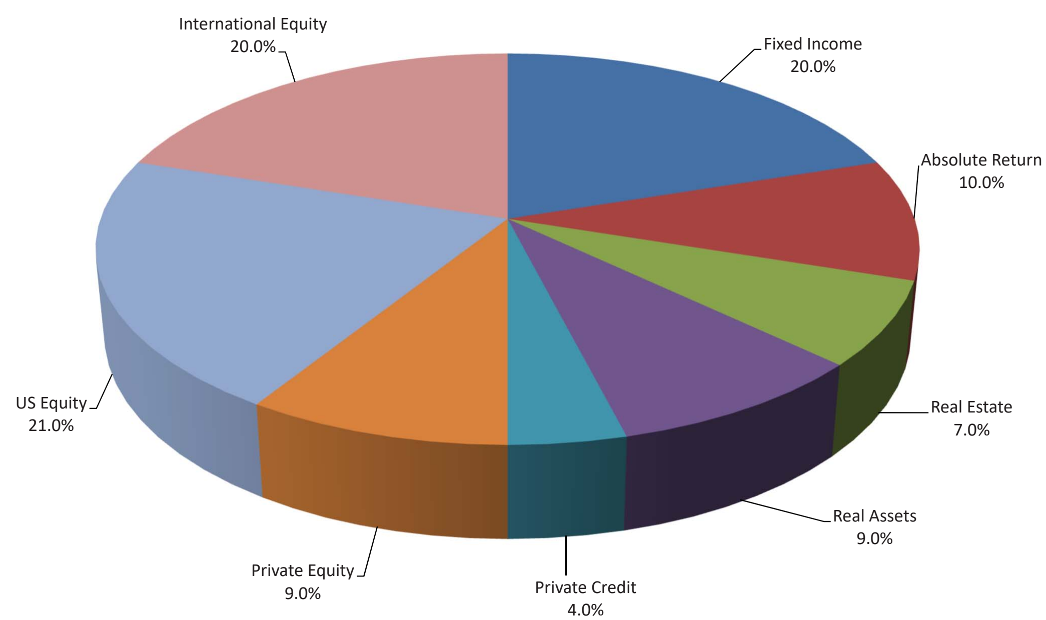
Steve Davis
Chief Investment Officer

ASSET ALLOCATION

Actual Asset Allocation as of June 30, 2019



Target Asset Allocation as of June 30, 2019



INVESTMENT RESULTS

FOR THE PERIOD ENDED JUNE 30, 2019

	Annualized		
	1 Year	3 Years	5 Years
Equity			
US Equity	8.8%	14.3%	10.1%
Benchmark: Russell 3000	9.0	14.0	10.2
International Equity	3.3	11.0	3.8
Benchmark: MSCI ACWI ex US	1.8	9.9	2.6
Fixed Income			
Core/Core Plus Fixed Income	8.6	3.5	3.7
Benchmark: BBgBarc US Aggregate TR	7.9	2.3	2.9
United States Treasury	7.2	N/A	N/A
Benchmark: BBgBarc US Treasury TR	7.2	1.3	2.5
Global Fixed Income	4.9	3.3	2.0
Benchmark: Brandywine Custom[1]	6.3	1.7	0.6
Public Credit	2.4	7.1	3.5
Benchmark: Brigade Custom[2]	5.9	6.5	4.3
Real Assets			
Real Assets	12.8	16.9	21.1
Benchmark: Private Real Assets Custom[3]	4.7	7.2	6.3
SSgA Real Asset Overlay Proxy	5.3	4.3	0.4
Benchmark: SSgA Real Asset[4]	5.1	4.2	0.1
Commodities	(8.1)	(3.9)	(10.0)
Benchmark: Bloomberg Commodity Index TR USD	(6.8)	(2.2)	(9.1)
Real Estate			
Real Estate	2.8	9.6	10.7
Benchmark: Real Estate Custom[5]	6.8	7.4	9.1
Absolute Return			
Absolute Return - Diversifying	0.3	1.6	1.1
Benchmark: HFRI Fund of Funds Conservative Index	2.1	3.9	4.4
Absolute Return - Growth	0.0	6.6	3.0
Benchmark: HFRI Fund of Funds Composite Index + 1%	2.2	4.6	4.8

FOR THE PERIOD ENDED JUNE 30, 2019

	Annualized		
	1 Year	3 Years	5 Years
Private Credit			
Private Credit	5.6%	8.9%	7.3%
Benchmark: Credit Suisse Leveraged Loan + 2%	6.1	7.4	5.9
Private Equity			
Private Equity	24.0	19.8	15.1
Benchmark: Thomson Reuters C|A All PE 1 Qtr Lag[6]	12.7	14.6	12.4
Opportunities	5.3	4.7	6.8
Benchmark: Policy Index[7]	6.3	8.7	6.1
Total Fund			
SCERS Total Fund - Gross	7.2	10.4	6.5
SCERS Total Fund - Net	6.9	10.1	6.2
Benchmark: Policy Index[7]	6.3	8.7	6.1

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

[1] The Brandywine Custom benchmark consists of 80% FTSE WGBI ex US Unhedged and 20% JPM GBI EM Diversified.

[2] The Brigade Custom benchmark consists of 50% ICE BofA ML High Yield II and 50% Credit Suisse Leveraged Loans.

[3] As of 7/1/17, the Private Real Assets Custom benchmark consists of 35% Cambridge Associates Private Energy 1 Qtr Lag, 45% Cambridge Associates Private Infrastructure 1 Qtr Lag, 10% NCREIF Farmland 1 Qtr Lag, and 10% NCREIF Timberland Index Lagged. Prior to that the benchmark consisted of 100% CPI-U Headline +5%.

[4] As of 3/2/18, the SSgA Real Asset Benchmark consists of 30% BBgBarc 1-10 Yr US TIPS, 25% S&P Global Infrastructure, 15% FTSE EPRA/NAREIT Developed Liquid, 10% BBgBarc Roll Select Commodity TR, 10% BBgBarc USD Floating Rate Note <5yr, and 10% S&P Global Large Mid Cap Commodity Resources. From 10/1/15-3/1/18, the SSgA Real Asset Benchmark consisted of 20% BBgBarc Roll Select Commodity TR, 20% MSCI World Natural Resources, 20% S&P Global Infrastructure, 10% BBgBarc US Govt Inflation-Linked 1-10 Yrs, 10% BBgBarc US TIPS, 10% FTSE EPRA/NAREIT Developed Liquid, and 10% S&P MLP.

[5] As of 7/1/17, the Real Estate Custom benchmark consists of 65% NFI-ODCE and 35% NFI-ODCE net+1% 1Q Lag. Prior to that the benchmark consisted of 100% NCREIF.

[6] As of 4/1/17, the Private Equity benchmark consists of 100% Thomson Reuters C|A All PE 1 Qtr Lag. From 1/1/12-3/31/17 the benchmark consisted of 100% Russell 1000 +3% 1QL.

[7] The Policy Index benchmark consists of 10% BBgBarc Aggregate, 5% BBgBarc US Treasury, 1% ICE BofA ML High Yield II, 2% Bloomberg Commodity, 2.5% Cambridge Associates Private Energy 1 Qtr Lag, 3.2% Cambridge Associates Private Infrastructure 1 Qtr Lag, 2.4% FTSE WBGI ex US Unhedged, 1% Credit Suisse Leverage Loans, 4% Credit Suisse Leverage Loans +2%, 0.6% JPM GBI EM Diversified, 3% HFRI FoF Composite Index + 1%, 7% HFRI FoF Conservative Index, 20% MSCI ACWI ex US, 4.6% NFI-ODCE, 2.5% NFI-ODCE net +1% 1Q Lag, 0.7% NCREIF Farmland 1 Qtr Lag, 0.7% Timberland Index Lagged, 21% Russell 3000, and 9% Thomson Reuters C|A All PE 1 Qtr Lag. From 4/1/17-6/30/17, the Policy Index benchmark consists of 10% 91-day UST Bill +5% (AR), 10% BBgBarc Aggregate, 5% BBgBarc US Treasury, 1% ICE BofA ML High Yield II, 2% Bloomberg Commodity, 2.4% FTSE WGBI ex US Unhedged, 7% CPI-U +5% (PRA), 1% Credit Suisse Leverage Loans, 4% Credit Suisse Leverage Loans +2%, 0.6% JPM GBI EM Diversified, 20% MSCI ACWI ex US, 7% NCREIF, 21% Russell 3000, and 9% Thomson Reuters C|A All PE 1 Qtr Lag. From 1/1/14-3/31/17, 22.5% MSCI ACWI ex U.S., 22.5% Russell 3000, 15% BBgBarc Aggregate, 15% CPI-U +5% (PRA), 10% 91-day UST Bill +5% (AR), 10% Russell 1000 +3% 1QL (PE), 2.4% FTSE WGBI ex US Unhedged, 1% ICE BofA ML High Yield II, 1% Credit Suisse Leveraged Loans and 0.6% JPM GBI EM Diversified.

SUMMARY OF INVESTMENT ASSETS

AS OF JUNE 30, 2019

(Dollar Amounts Expressed in Thousands)

	Fair Value*	Percentage of Total Cash, Short-Term Investments, and Investments
Type of investments		
Equity	$3,997,176	40.55%
Fixed income	2,055,293	20.85
Real assets	673,213	6.83
Real estate	882,240	8.95
Absolute return	919,252	9.32
Private credit	175,329	1.78
Private equity	956,673	9.70
Total investments at fair value	**9,659,176**	
Cash and short-term investments		
Cash and short-term investments (unallocated)	190,032	1.93
Cash invested with Sacramento County Treasurer	9,052	0.09
Total cash and short-term investments	**199,084**	
Total cash, short-term investments, and investments	**$9,858,260**	**100.00%**

* Certain investment fair values reported in this schedule include cash held by the external investment managers and short-term investments based on the nature of how the investment portfolios are managed.

SCHEDULE OF MANAGER FEES

FOR THE FISCAL YEAR ENDED JUNE 30, 2019
(Dollar Amounts Expressed in Thousands)

Type of Investment	Assets under Management*	Manager Fees
Equity	$3,997,176	$16,278
Fixed income	2,055,293	4,488
Real assets	673,213	16,448
Real estate	882,240	20,148
Absolute return	919,252	18,861
Private credit	175,329	2,913
Private equity	956,673	47,703
Total	$9,659,176	$126,839

* Certain investment fair values reported in this schedule include cash held by the external investment managers and short-term investments based on the nature of how the investment portfolios are managed.

SCHEDULE OF EQUITY BROKERAGE COMMISSIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 2019

Broker Name	Commission per Share	Shares/Par Value	Total Commission
BofA Securities, Inc.	$0.0020	913,899	$1,818
Capital Institutional Services Inc. Equities	0.0322	1,254,218	40,324
Citigroup Global Markets Inc.	0.0047	19,114,791	90,248
Citigroup Global Markets Inc.	0.0045	778,362	3,496
Cowen And Company, LLC	0.0380	1,050,042	39,879
Credit Suisse Securities (Europe) Ltd.	0.0334	783,356	26,175
Credit Suisse Securities (USA) LLC	0.0086	3,875,036	33,276
Deutsche Bank Securities Inc.	0.0103	1,695,835	17,429
Goldman Sachs + Co LLC	0.0059	2,207,320	13,060
Investment Technology Group Inc.	0.0343	681,310	23,340
J.P. Morgan Securities LLC	0.0048	1,107,069	5,275
J.P. Morgan Securities Plc	0.0208	968,302	20,146
Liquidnet Inc.	0.0330	844,381	27,828
Merrill Lynch International	0.0126	2,544,741	31,975
Morgan Stanley Co Incorporated	0.0070	2,228,254	15,696
Societe Generale London Branch	0.0099	1,645,825	16,331
Themis Trading LLC	0.0349	676,618	23,635
All Other Brokerage Firms*	0.0118	20,566,313	242,667
Total Brokerage Commissions	$0.0107	62,935,672	672,598
Brokerage Commission Recapture			(36,587)
Net Brokerage Commissions			$636,011

*All other brokerage firms is comprised of approximately 150 additional firms, each receiving less than 1% total commissions. A complete listing of brokerage fees is available.

TEN LARGEST STOCK HOLDINGS (BY FAIR VALUE)

AS OF JUNE 30, 2019

Rank	Shares	Security Name	Fair Value (in thousands)
1	568,411	Microsoft Corp.	$76,144
2	29,183	Amazon.Com Inc.	55,262
3	238,746	Apple Inc.	47,253
4	185,567	Berkshire Hathaway Inc. Cl B	39,557
5	33,167	Alphabet Inc. Cl C	35,851
6	171,223	Facebook Inc. Class A	33,046
7	589,304	Comcast Corp. Class A	24,916
8	2,214,600	AIA Group Ltd.	23,882
9	339,571	Citigroup Inc.	23,780
10	80,700	Roche Holding Ag Genusschein	22,733
Total of ten largest stock holdings			$382,424

A complete list of stock holdings is available upon request.

TEN LARGEST BOND HOLDINGS (BY FAIR VALUE)

AS OF JUNE 30, 2019

Rank	Par	Security Name	Interest Rate	Maturity	Fair Value (in thousands)
1	38,960,000	United States Treasury N/B	2.13%	1/31/2021	$39,138
2	32,965,000	United States Treasury N/B	1.75%	5/15/2023	32,983
3	28,867,000	United States Treasury N/B	2.88%	5/15/2049	30,969
4	24,600,000	United States Treasury N/B	1.75%	9/30/2022	24,617
5	24,175,000	United States Treasury N/B	2.13%	9/30/2024	24,585
6	23,975,000	United States Treasury N/B	2.25%	11/15/2027	24,544
7	23,030,000	United States Treasury N/B	2.00%	11/15/2026	23,205
8	23,980,000	United States Treasury N/B	2.25%	8/15/2046	22,656
9	21,765,000	United States Treasury N/B	2.50%	5/15/2024	22,512
10	20,790,000	United States Treasury N/B	1.38%	4/30/2021	20,637
Total of ten largest bond holdings					$265,846

A complete list of bond holdings is available upon request.

INVESTMENT PROFESSIONALS

AS OF JUNE 30, 2019

Equity

AllianceBernstein L.P.
AQR US Enhanced Equity
Baillie Gifford & Co.
D.E. Shaw Broad Market Core Alpha Extension
Dalton, Greiner, Hartman, Maher & Co. LLC
Eagle Capital Management
JP Morgan Asset Management
Lazard Asset Management
LSV Asset Management
Mondrian Emerging Markets Equity Fund, L.P.
Mondrian International Small Cap Equity Fund, L.P.
Walter Scott International EAFE Income Growth
Weatherbie Capital, LLC
William Blair International Small Cap Growth Portfolio

Fixed Income

Brandywine Global Investment Management, LLC
Metwest Asset Management
Neuberger Berman Fixed Income, LLC
Prudential Investment Management
SC Credit Opportunities Mandate, LLC
State Street Global Advisors - SCERS Barclays 1-10 Year TIPS Index

Absolute Return

AQR Delta Fund II, L.P.
Davidson Kempner Institutional Partners, L.P.
Elliott International Limited
Graham Global Investment Fund II SPC Ltd.
Jana Partners Qualified, L.P.
KLS Diversified Fund, L.P.
Lakewood Capital Partners, L.P.
Laurion Capital Ltd.
MW Global Opportunities Fund
OZ Domestic Partners II, L.P.
SC Absolute Return Fund, LLC - Diversifying Series
SC Absolute Return Fund, LLC - Growth Series
SC Absolute Return Fund, LLC - Series B
Third Point Partners Qualified, L.P.
Winton Diversified Futures Fund, L.P.

Real Assets

ACM Fund II, LLC
ArcLight Energy Partners Fund VI, L.P.
Atalaya SCERS SMA, LLC
Brookfield Infrastructure Fund III, L.P.
Brookfield Infrastructure Fund IV, L.P.
Carlyle Power Partners II, L.P.
EnCap Energy Capital Fund IX, L.P.
EnCap Energy Capital Fund X, L.P.
EnCap Flatrock Midstream Fund III, L.P.
EnCap Flatrock Midstream Fund IV, L.P.
EQT Infrastructure Fund IV, SCSp
Global Energy & Power Infrastructure Fund II, L.P.
IFM Global Infrastructure (US) Fund, L.P.
ISQ Global Infrastructure Fund II, L.P.
Meridiam Infrastructure North America III, L.P.
Paine Schwarts Food Chain Fund V, L.P.
Pantheon SCERS SIRF MM, LLC
Quantum Energy Partners VI, L.P.
Quantum Energy Partners VII, L.P.
State Street Global Advisors - Real Asset Strategy
The TAP Fund, Ltd.
Tailwater Energy Fund III, L.P.
Wastewater Opportunity Fund, LLC

Real Estate

Allegis Value Trust
Asana Partners Fund II, L.P.
Barings Real Asset Advisors
Blackrock I
Brookfield Premier Real Estate Partners, L.P.
Carlyle China Realty, L.P.
Carlyle China Rome Logistics, L.P.
CIM Fund VIII, L.P.
Clarion Lion Properties Fund, L.P.
ECE European Prime Shopping Centre Fund II, SCS-SIF
European Real Estate Debt Fund II, L.P.
Hammes Partners II, L.P.
Hammes Partners III, L.P.
Hines US Office Value Fund II, L.P.
Jamestown Premier Property Fund, L.P.
KKR Real Estate Partners Americas, L.P.
MetLife Core Property Fund, L.P.
NREP Nordic Strategies Fund, FCP-FIS

Real Estate (Continued)

NREP Nordic Strategies Fund II, SCSp
NREP Nordic Strategies Fund III, SCSp
Och-Ziff Real Estate Fund III, L.P.
Prime Property Fund, LLC
Principal US Property Account
Prologis Targeted Europe Logistics Fund, L.P.
Prologis Targeted US Logistics Fund, L.P.
Townsend Real Estate Fund, L.P.

Private Credit

Athyrium Opportunities Fund II, L.P.
Athyrium Opportunities Fund III, L.P.
Benefit Street Partners Senior Secured Opportunities Fund, L.P.
OrbiMed Royalty and Credit Opportunities Fund III, L.P.
Summit Partners Credit Fund, L.P.
Summit Partners Credit Fund II, L.P.
Summit Partners Credit Fund III, L.P.
TCP Direct Lending Fund VIII-[S], LLC

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 Capital Partners VI, L.P.
Accel-KKR Growth Capital Partners II, L.P.
Accel-KKR Growth Capital Partners III, L.P.
Atalaya Special Opportunities Fund V, L.P.
Atalaya Special Opportunities Fund VI, L.P.
DavidsonKempner Long-Term Distressed Opportunities Fund IV, L.P.
Dyal II US Investors, L.P.
Dyal Capital Partners III, L.P.
Garrison Opportunity Fund III A LLC
H.I.G. Bayside Loan Opportunity Fund III (Europe-US$), 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.
Khosla Ventures VI, L.P.
Linden Capital Partners III, L.P.
Linden Capital Partners IV, L.P.
Marlin Equity IV, L.P.
Marlin Equity Partners V, L.P.

Private Equity (Continued)

Marlin Heritage, L.P.
Marlin Heritage II, L.P.
Marlin Heritage Europe, L.P.
New Enterprise Associates 14, L.P.
New Enterprise Associates 15, L.P.
New Enterprise Associates 16, L.P.
New Enterprise Associates 17, L.P.
Private Equity Partners X, L.P.
RCP Multi-Fund Feeder (SCERS), L.P.
RRJ Capital Master Fund II, L.P.
RRJ Capital Master Fund III, L.P.
Spectrum Equity VII, L.P.
Spectrum Equity VIII, L.P.
Summit Partners Europe Growth Equity Fund II, SCSp
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.
Thoma Bravo Fund XIII, 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.
TSG8, L.P.
TSSP Opportunities Partners IV, L.P.
Waterland Private Equity Fund V C.V.
Waterland Private Equity Fund VI C.V.
Wayzata Opportunities Fund III, L.P.

Overlay

State Street Global Advisors

Investment Consultant

Cliffwater, LLC
The Townsend Group
Verus Advisory, Inc.

Proxy Advisor

Glass Lewis & Co.
Institutional Shareholder Services, Inc.

Legal Counsel

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

SECTION 4

ACTUARIAL

Segal Consulting

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November 12, 2019

Board of Retirement
Sacramento County Employees' Retirement System
980 9th 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, 2019 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 underwent a substantive review by 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, 2019 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. Investment gains/losses are recognized over a seven-year period and the deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets.

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

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The UAAL established as a result of the Early Retirement Incentive Program for members of the Sacramento County Law Enforcement Managers Association (LEMA) is amortized as a level percentage of payroll over a 10-year period beginning June 30, 2010. The System's remaining outstanding balance of the June 30, 2012 UAAL is amortized as a level percentage of payroll over a declining 23-year period (with 16 years remaining as of June 30, 2019). 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. The progress being made towards meeting the funding objective through June 30, 2019 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, 2019 and the Actuarial Valuation and Review as of June 30, 2019, both prepared by Segal. For the Financial Section of the Comprehensive Annual Financial Report (CAFR), Segal provided the Schedule of Changes in Net Pension Liability and Schedule of Employer Contributions as shown in the RSI. A listing of the other supporting schedules Segal prepared for inclusion in the Actuarial and Statistical Sections of the System's CAFR is provided below. These schedules were prepared based on the results of the actuarial valuation as of June 30, 2019 for funding purposes. All other schedules in the Actuarial and Statistical Sections of the System's CAFR were prepared by the System.

1. Retirees and beneficiaries added to and removed from retiree payroll;

2. Schedule of funded liabilities by type; and

3. Schedule of retired members by type of benefit.

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

In the June 30, 2019 valuation, the ratio of the valuation assets to actuarial accrued liabilities increased from 81.4% to 81.6%. The employer's rate has increased from 28.71% of payroll (<u>before</u> the three-year phase-in of the change in UAAL rate due to changes in actuarial

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assumptions included in the June 30, 2016 Actuarial Experience Study) to 29.44% of payroll, while the employee's rate has decreased from 11.71% of payroll to 11.58% of payroll. The increase in the employer's rate is primarily a result of lower than expected contributions, higher than expected COLA increases and retirement experience on actives while the decrease in the employee's rate is primarily a result of changes in demographics of the active member population.

In the June 30, 2019 valuation, the actuarial value of assets excluded $118.4 million in deferred investment gains, which represented about 1% of the market value of assets. If these deferred investment gains were recognized immediately in the actuarial value of assets, the funded percentage would increase from 81.6% to 82.6% and the aggregate employer contribution rate would decrease from 29.44% of payroll to 28.6% of payroll.

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

Sincerely,

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

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

MYM/bbf
Enclosures

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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 pension 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 based on the June 30, 2016 actuarial experience study, which was adopted by the Board in May 2017. These assumptions and methods were used to complete the June 30, 2019 actuarial valuation report, which was approved by the Board on November 20, 2019.

Assumptions:

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

c) Employee Contribution Rate:	For Miscellaneous Members - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP-2016 set forward one year for males and no age adjustment for females, weighted 40% male and 60% female. For Safety Members - Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected generationally with the two-dimensional scale MP-2016 set back four years for males and females, weighted 75% male and 25% female.
Pre-Retirement Mortality:	Based upon the June 30, 2016 Actuarial Experience Study
Withdrawal Rates:	Based upon the June 30, 2016 Actuarial Experience Study
Disability Rates:	Based upon the June 30, 2016 Actuarial Experience Study
Service Retirement Rates:	Based upon the June 30, 2016 Actuarial Experience Study
Salary Increases:	Merit and longevity increases are based upon the June 30, 2016 Actuarial Experience Study plus 3.00% inflation and across the board salary increases of 0.25% per year.
Actuarial Value of Assets:	The market value of assets less unrecognized returns in each of the last six years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a seven-year period. The deferred return is further adjusted, if necessary, so that the actuarial value will stay within 30% of the market value of assets. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a six-year period starting July 1, 2013.
Valuation Value of Assets:	Actuarial value of assets reduced by the value of non-valuation reserves and designations.
Actuarial Cost Method:	Entry Age Cost Method. Entry Age is the age at the members' hire date. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation.

Amortization Policy:	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 - 35% Safety Members - 45%
Changes in Actuarial Assumptions:	None.

Briefly summarized below are the major provisions of the County Employees' Retirement Law of 1937, as amended through June 30, 2019, that are applicable to the Sacramento County Employees' Retirement System, a cost-sharing multiple-employer defined benefit pension plan.

Membership

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

Final Average Salary

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

Return of Contributions

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

Service Retirement Benefit

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

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

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

Age	Miscellaneous Tier 1, 2 and 3	Miscellaneous Tier 4	Miscellaneous Tier 5	Safety Tier 1 and 2	Safety Tier 3	Safety Tier 4
50	1.48%	1.18%	N/A	3.00%	2.29%	2.00%
55	1.95	1.49	1.30%	3.00	3.00	2.50
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 non-service 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 non-service connected disability, the spouse receives 60% of the allowance that the member would have received for retirement.

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

Death Benefit (After Retirement)

If a member dies after retirement, a $4,000 lump sum burial allowance is paid to the beneficiary or estate. If the retirement was for service connected disability, 100% of the member's allowance as it was at death is continued to the eligible spouse for life.

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

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

Maximum Benefit

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

Cost-of-Living Adjustments

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.

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.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Plan Type	Number	Annual Payroll (in thousands)	Annual Average Pay (in thousands)	% Increase/ (Decrease) in Average Pay*
6/30/19	Miscellaneous	10,584	$802,318	$75.8	2.86%
	Safety	2,094	236,023	112.7	3.52
	Total	12,678	$1,038,341	$81.9	3.02%
6/30/18	Miscellaneous	10,586	$780,148	$73.7	2.24%
	Safety	2,091	227,668	108.9	0.43
	Total	12,677	$1,007,816	$79.5	2.07%
6/30/17	Miscellaneous	10,577	$762,440	$72.1	3.26%
	Safety	2,010	217,919	108.4	2.31
	Total	12,587	$980,359	$77.9	2.84%
6/30/16	Miscellaneous	10,363	$723,429	$69.8	1.80%
	Safety	2,030	215,126	106.0	2.20
	Total	12,393	$938,555	$75.7	1.88%
6/30/15	Miscellaneous	10,093	$692,138	$68.6	1.84%
	Safety	1,979	205,203	103.7	1.36
	Total	12,072	$897,341	$74.3	1.78%
6/30/14	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%
6/30/13	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%
6/30/12	Miscellaneous	10,256	$689,438	$67.2	0.75%
	Safety	1,899	186,234	98.1	4.7
	Total	12,155	$875,672	$72.0	1.69%
6/30/11	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%
6/30/10	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%

Source: Actuarial Valuation reports from June 30, 2010 through 2019.

Note: Refer to the *Participating Employers in the Introductory Section* for a list of participating employers who have joined the System for the last ten years.

*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

Valuation Date	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
6/30/2019	11,883	789	291	12,381	$523,191	$49,436	$8,402	8.51%	$42,252
6/30/2018	11,396	758	271	11,883	482,157	44,173	7,891	8.14	40,572
6/30/2017	10,960	750	314	11,396	445,875	40,102	9,332	7.41	39,126
6/30/2016	10,541	727	308	10,960	415,105	35,144	8,591	6.83	37,875
6/30/2015	10,049	776	284	10,541	388,552	40,636	7,849	9.22	36,861
6/30/2014	9,634	674	259	10,049	355,765	31,335	6,746	7.42	35,403
6/30/2013	9,239	635	240	9,634	331,176	29,416	6,431	7.46	34,376
6/30/2012	8,821	660	242	9,239	308,191	29,693	5,511	8.51	33,358
6/30/2011	8,346	699	224	8,821	284,009	29,805	5,009	9.57	32,197
6/30/2010	7,968	599	221	8,346	259,213	19,276	4,639	5.98	31,058

Source: Prepared by Segal Consulting

Note: Participants are counted once for each benefit received.

SCHEDULE OF FUNDING PROGRESS

(Dollar Amounts Expressed in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets[1] (a)	Actuarial Accrued Liability (AAL)[1] (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2019	$9,703,313	$11,895,520	$2,192,207	81.6%	$1,038,341	211.1%
6/30/2018	9,123,004	11,213,263	2,090,259	81.4	1,007,815	207.4
6/30/2017	8,665,226	10,680,998	2,015,772	81.1	980,359	205.6
6/30/2016	8,236,402	9,436,090	1,199,688	87.3	938,555	127.8
6/30/2015	7,838,825	9,028,679	1,189,854	86.8	897,341	132.6
6/30/2014	7,312,993	8,580,928	1,267,935	85.2	879,999	144.1
6/30/2013	6,797,757	8,210,980	1,413,223	82.8	877,657	161.0
6/30/2012	6,529,895	7,838,223	1,308,328	83.3	875,672	149.4
6/30/2011	6,420,824	7,382,897	962,073	87.0	880,766	109.2
6/30/2010[2]	6,216,994	7,090,497	873,503	87.7	912,644	95.7

Source: Actuarial Valuation reports from June 30, 2010 through 2019.

[1] Includes contingency reserve and retiree death benefit reserves.

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

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

SCHEDULE OF FUNDED LIABILITIES BY TYPE

(Dollar Amounts Expressed in Thousands)

Valuation Date	Active Member Contributions	Retired / Vested Members	Active Members (Employer Financed Portion)	Total	Actuarial Value of Assets	Active Member Contributions	Retired / Vested Members	Active Members (Employer Financed Portion)
6/30/2019	$820,202	$7,354,648	$3,720,670	$11,895,520	$9,703,313	100%	100%	41%
6/30/2018	756,179	6,879,316	3,577,768	11,213,263	9,123,004	100	100	42
6/30/2017	713,290	6,410,447	3,557,261	10,680,998	8,665,226	100	100	43
6/30/2016	677,596	5,635,248	3,123,246	9,436,090	8,236,402	100	100	62
6/30/2015	645,591	5,356,228	3,026,860	9,028,679	7,838,825	100	100	61
6/30/2014	632,969	4,939,239	3,008,720	8,580,928	7,321,993	100	100	58
6/30/2013	619,660	4,566,212	3,025,108	8,210,980	6,797,757	100	100	53
6/30/2012	595,979	4,284,864	2,957,380	7,838,223	6,529,895	100	100	56
6/30/2011	576,633	3,930,252	2,876,012	7,382,897	6,420,824	100	100	67
6/30/2010 *	571,866	3,626,664	2,891,967	7,090,497	6,216,994	100	100	70

Source: Prepared by Segal Consulting

Events affecting year to year comparability:

6/30/2010 - Investment return assumption decreased from 7.875% to 7.75%.
6/30/2011 - Modification of non-economic assumptions.
6/30/2012 - Investment return assumption decreased from 7.75% to 7.50%;
- Inflation assumption decreased from 3.50% to 3.25%;
- Salary increase assumption decreased; and
- COLA increase assumption for Tier 1 decreased from 3.40% to 3.25%.

6/30/2013 - Actuarial cost method changed from Aggregate Entry Age Normal Cost Method to Individual Entry Age Normal Cost Method; and
- Changes to the amortization periods used for various future changes in liability:
  - UAAL established as a result of Early Retirement Incentive Program for LEMA is amortized over a 10-year period beginning June 30, 2010;
  - UAAL as a result of actuarial gains or losses as of June 30 will be amortized over a 20-year period;
  - UAAL as a result of changes in actuarial assumptions or methods to be amortized over a 20-year period;
  - Change in UAAL as a result of Plan amendments to be amortized over a 15-year period; and
  - UAAL as a result from retirement incentive programs will be amortized over a period up to 5 years.

6/30/2014 - Changes to post-retirement mortality rates and termination rates before retirement;
- Changes to retirement age and benefit for deferred vested members; and
- Changes to annual rates of compensation increase.

6/30/2017 - Investment return assumption decreased from 7.50% to 7.00%;
- Inflation assumption decreased from 3.25% to 3.00%;
- Salary increase assumption decreased while merit and promotional component of salary increase assumption increased;
- COLA increase assumption for Tier 1 decreased from 3.25% to 3.00%; and
- Modification of non-economic assumptions.

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

ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE

(Dollar Amounts Expressed in Millions)

	Plan Years Ended June 30									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010*
Prior Valuation Unfunded Actuarial Accrued Liability	$2,090	$2,016	$1,200	$1,190	$1,268	$1,413	$1,308	$962	$874	$932
Salary Increase Greater (Less) than Expected	(24)	(40)	(3)	(39)	(39)	(138)	(113)	(102)	(68)	(110)
Asset Return Less (Greater) than Expected	8	6	3	62	(24)	(38)	152	257	209	3
Other Experience	118	108	(8)	(13)	(15)	15	66	58	(31)	(59)
Economic and Non-Economic Assumption Changes	-	-	824	-	-	16	-	133	(22)	108
Ending Unfunded Actuarial Accrued Liability	**$2,192**	**$2,090**	**$2,016**	**$1,200**	**$1,190**	**$1,268**	**$1,413**	**$1,308**	**$962**	**$874**

Source: Prepared using extracted data from Actuarial Valuations from June 30, 2010 through 2019.

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

Rate (%)

Mortality

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

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

Rate (%)

Disability

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

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

Source: Actuarial Valuation report as of June 30, 2019

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

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

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

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

Source: Actuarial Valuation report as of June 30, 2019.

SECTION 5

STATISTICAL

SUMMARY OF STATISTICAL DATA

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

The pension trust fund is accounted for under the accrual basis of accounting. Information is provided for the last ten years ended June 30, 2019 for the following five objectives: financial trends; revenue capacity; debt capacity; demographic and economic; and operating.

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

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

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

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

SCHEDULE OF ADDITIONS BY SOURCE

(Dollar Amounts Expressed in Thousands)

Fiscal Year Ended June 30:	Member Contributions	Employer Contributions	Net Investment Income / (Loss)	Other Income	Total
2019	$121,843	$285,642	$672,786	$2,940	$1,083,211
2018	99,906	198,513	841,370	3,119	1,142,908
2017	89,489	203,928	1,048,915	-	1,342,332
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

Source: Audited Financial Statements from June 30, 2010 through 2019.

SCHEDULE OF DEDUCTIONS BY TYPE

(Dollar Amounts Expressed in Thousands)

	Benefits Paid					
Fiscal Year Ended June 30:	Service[1]	Survivor Benefits	Retiree Death Benefits	Administrative Expenses	Withdrawals	Total
2019	$498,939	$2,803	$1,202	$7,601	$2,909	$513,454
2018	461,808	2,625	921	6,888	2,954	475,196
2017	426,292	2,479	983	6,906	2,312	438,972
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

[1] Amounts reported here include both service and disability retirement benefits and active death benefits.

Source: Audited Financial Statements from June 30, 2010 through 2019 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	2019 [1]	2018 [1]	2017	2016	2015	2014	2013	2012	2011	2010
Salaries and benefits	$5,128	$4,078	$3,984	$3,506	$3,445	$3,300	$3,284	$3,530	$3,755	$3,215
Professional fees	606	879	1,149	1,081	811	786	857	1,146	1,137	719
Rent and lease	582	557	488	501	456	460	432	458	444	576
County allocated expenses	488	557	-	-	-	-	-	-	-	-
Pension payroll services	185	208	-	-	-	-	-	-	-	-
Printing and postage	177	202	-	-	-	-	-	-	-	-
Information technology	133	157	-	-	-	-	-	-	-	-
Insurance liability	97	89	-	-	-	-	-	-	-	-
Depreciation	-	-	27	34	36	36	36	37	17	5
Equipment purchases and maintenance	-	-	61	26	32	21	24	44	35	29
Other	205	161	1,197	1,214	1,074	1,062	1,086	1,073	1,183	1,364
Total	$7,601	$6,888	$6,906	$6,362	$5,854	$5,665	$5,719	$6,288	$6,571	$5,908

[1] In fiscal year ended June 30, 2019, the System revised the presentation of the administrative expenses as reported in the Other Supplemental Information section. As a result, certain amounts have been revised to present at a detail level for fiscal years 2019 and 2018.

Source: Audited Financial Statements from June 30, 2010 through 2019.

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

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

	2019	2018	2017	2016	2015
Member contributions	$121,843	$99,906	$89,489	$77,494	$68,143
Employer contributions	285,642	198,513	203,928	209,020	222,959
Net investment income / (loss)	672,786	841,370	1,048,915	(72,399)	158,222
Other income	2,940	3,119	-	-	-
Total additions	1,083,211	1,142,908	1,342,332	214,115	449,324
Benefits paid	502,944	465,354	429,754	403,356	372,369
Withdrawal of contributions	2,909	2,954	2,312	2,346	2,288
Administrative expenses	7,601	6,888	6,906	6,362	5,854
Total deductions	513,454	475,196	438,972	412,064	380,511
Change in net position	569,757	667,712	903,360	(197,949)	68,813
Net position, beginning	**9,251,937**	**8,584,225**	**7,680,865**	**7,878,814**	**7,810,001**
Net position, ending	**$9,821,694**	**$9,251,937**	**$8,584,225**	**$7,680,865**	**$7,878,814**

	2014	2013	2012	2011	2010
Member contributions	$57,635	$68,242	$65,690	$57,151	$52,413
Employer contributions	210,503	189,664	179,098	182,921	167,142
Net investment income / (loss)	1,107,152	785,449	(3,414)	1,206,775	617,481
Total additions	1,375,290	1,043,355	241,374	1,446,847	837,036
Benefits paid	344,890	320,828	298,764	276,161	253,092
Withdrawal of contributions	2,729	2,739	3,040	4,433	4,932
Administrative expenses	5,665	5,719	6,288	6,571	5,908
Total deductions	353,284	329,286	308,092	287,165	263,932
Change in net position	1,022,006	714,069	(66,718)	1,159,682	573,104
Net position, beginning	**6,787,995**	**6,073,926**	**6,140,644**	**4,980,962**	**4,407,858**
Net position, ending	**$7,810,001**	**$6,787,995**	**$6,073,926**	**$6,140,644**	**$4,980,962**

Source: Audited Financial Statements from June 30, 2010 through 2019.

SCHEDULE OF EMPLOYER CONTRIBUTION RATES

Actuarial Valuation Year Ended	COUNTY[1] Miscellaneous Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Safety Tier 1	Tier 2	Tier 3	Tier 4
6/30/2019	22.03%	19.17%	22.20%	21.91%	20.96%	61.78%	53.75%	53.11%	49.35%
6/30/2018	20.19	17.74	20.43	19.92	18.98	54.68	48.31	47.40	43.85
6/30/2017	18.43	15.85	18.62	17.96	16.96	48.41	44.28	43.33	39.72
6/30/2016	15.83	13.85	15.89	15.01	14.11	41.30	37.44	36.51	34.11
6/30/2015	16.26	15.01	17.41	15.25	14.13	42.11	39.42	37.73	34.40
6/30/2014	17.58	16.55	19.24	15.96	14.87	42.59	41.56	39.92	35.13
6/30/2013 [2]	22.91	20.71	23.29	17.91	17.14	43.59	41.92	41.06	35.61
6/30/2012 [3]	20.83	18.28	21.18	16.33	15.01	41.85	37.00	35.55	29.28
6/30/2011 [4]	19.09	16.55	19.36	14.19	N/A	37.19	32.38	29.50	N/A
6/30/2010 [5]	18.11	15.63	18.49	N/A	N/A	35.03	30.60	N/A	N/A

Actuarial Valuation Year Ended	COURT Miscellaneous Tier 1	Tier 2	Tier 3	Tier 5	SPECIAL DISTRICTS Miscellaneous Tier 1	Tier 3	Tier 5	Safety Tier 1
6/30/2019	24.97%	22.91%	27.01%	20.92%	33.26%	35.19%	29.21%	N/A
6/30/2018	23.40	22.05	25.41	18.95	31.42	33.33	26.97	N/A
6/30/2017	21.59	20.11	23.56	16.93	30.00	31.86	25.34	N/A
6/30/2016	18.16	16.87	19.84	14.08	26.27	27.85	22.19	N/A
6/30/2015	17.99	16.66	19.83	14.09	25.92	27.76	22.02	N/A
6/30/2014	18.55	17.54	20.65	14.87	26.16	28.26	22.48	N/A
6/30/2013 [2]	22.91	20.71	23.29	17.14	30.00	30.50	24.19	N/A
6/30/2012 [3]	20.83	18.28	21.18	15.01	27.77	28.25	22.03	N/A
6/30/2011 [4]	19.09	16.55	19.36	N/A	25.59	25.90	N/A	57.40
6/30/2010 [5]	18.11	15.63	18.49	N/A	24.45	24.94	N/A	54.42

Source: Actuarial Valuation reports from June 30, 2010 through 2019.

Note: Actuarial Valuations are prepared subsequent to fiscal year-end and determine rates which pertain to the following fiscal year. For example, the Actuarial Valuation as of June 30, 2019 is used to determine rates for the fiscal year 2020-21.

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

[2] Effective July 1, 2014, subsequent to the completion of the actuarial valuation for the fiscal years ended June 30, 2013, the County and several bargaining groups entered into an agreement for members to pick up an additional portion of the total normal cost in fiscal year 2014-15. The County employer contribution rates shown have not been adjusted to reflect the members agreeing to pick up an additional portion of the normal cost.

[3] Miscellaneous Tier 5 and Safety Tier 4 plans were established effective January 1, 2013.

[4] Miscellaneous Tier 4 and Safety Tier 3 plans were established effective January 1, 2012.

[5] 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)

	2019	2018	2017	2016	2015
Type of Benefit					
Service Retirement Benefits	$498,939	$461,808	$426,292	$399,690	$368,788
Survivor Benefits	2,803	2,625	2,479	2,443	2,404
Death Benefits-Before Retirement	326	248	218	352	411
Death Benefits-After Retirement	876	673	765	871	766
Total Benefit Paid	**$502,944**	**$465,354**	**$429,754**	**$403,356**	**$372,369**
Type of Withdrawal					
Death	$826	$704	$298	$522	$320
Separation	2,022	2,173	1,974	1,786	1,815
Miscellaneous	61	77	40	38	153
Total Withdrawals	**$2,909**	**$2,954**	**$2,312**	**$2,346**	**$2,288**

	2014	2013	2012	2011	2010
Type of Benefit					
Service Retirement Benefits	$341,756	$317,308	$295,598	$273,062	$250,192
Survivor Benefits	2,116	2,225	2,284	2,032	1,993
Death Benefits-Before Retirement	312	542	189	448	361
Death Benefits-After Retirement	706	753	693	619	546
Total Benefit Paid	**$344,890**	**$320,828**	**$298,764**	**$276,161**	**$253,092**
Type of Withdrawal					
Death	$445	$547	$365	$463	$526
Separation	2,211	2,153	2,663	3,898	4,303
Miscellaneous	73	39	12	72	103
Total Withdrawals	**$2,729**	**$2,739**	**$3,040**	**$4,433**	**$4,932**

Source: Audited Financial Statements from June 30, 2010 through 2019 and SCERS Retired Member Pension Payroll Data.

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

AS OF JUNE 30, 2019

Amount of Monthly Benefit	Total Number of Retired Members	Type of Retirement * 1	2	3	4	5	6	7	8	9	10
$1 - $499	826	589	18	5	5	7	89	20	8	2	20
$500 - $999	1,316	928	31	9	-	-	145	63	54	3	22
$1,000 - $1,499	1,411	1,064	64	12	5	3	119	44	45	3	8
$1,500 - $1,999	1,272	947	49	17	23	6	117	32	23	1	8
$2,000 - $2,499	1,103	859	41	11	42	13	89	7	6	8	10
$2,500 - $2,999	957	774	9	3	38	9	69	7	5	9	11
$3,000 - $3,499	807	644	7	4	36	15	78	2	1	5	2
$3,500 - $3,999	667	535	2	1	32	23	45	1	-	11	4
$4,000 - $4,499	601	493	1	-	33	23	28	-	-	15	-
$4,500 - $4,999	511	426	1	1	21	17	27	1	-	7	2
$5,000 and Over	2,910	2,742	2	-	53	20	58	4	1	19	4
Total	**12,381**	**10,001**	**225**	**63**	**288**	**136**	**864**	**181**	**143**	**83**	**91**

Amount of Monthly Benefit	11	12	13	15	16	17	Option Selected ** Unmodified	1	2	3	4
$1 - $499	-	46	-	-	3	14	598	63	146	4	15
$500 - $999	1	56	-	-	-	4	1,000	105	176	13	22
$1,000 - $1,499	3	39	2	-	-	-	1,150	93	143	16	9
$1,500 - $1,999	1	46	2	-	-	-	1,050	62	144	12	4
$2,000 - $2,499	-	17	-	-	-	-	916	56	118	8	5
$2,500 - $2,999	2	18	3	-	-	-	826	37	85	3	6
$3,000 - $3,499	-	7	6	-	-	-	682	37	74	8	6
$3,500 - $3,999	-	9	2	-	1	1	576	22	58	4	7
$4,000 - $4,499	-	1	7	-	-	-	510	26	57	3	5
$4,500 - $4,999	-	3	5	-	-	-	453	18	30	4	6
$5,000 and Over	-	3	3	1	-	-	2,622	63	201	12	12
Total	**7**	**245**	**30**	**1**	**4**	**19**	**10,383**	**582**	**1,232**	**87**	**97**

*** Type of Retirement:**

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

**** Option Selected:**

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

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

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

Source: SCERS Retired Member Pension Payroll Data

SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT

AS OF JUNE 30, 2019

	Monthly Allowances				
	Count	Basic	COLA	Total	Average Benefit
Miscellaneous Members					
Service Retirement					
Unmodified	6,786	$17,351,997	$4,388,286	$21,740,283	$3,204
Option 1	451	803,605	203,729	1,007,334	2,234
Option 2, 3, & 4	931	1,987,650	397,349	2,384,999	2,562
Total	8,168	20,143,252	4,989,364	25,132,616	3,077
Non-Service Disability					
Unmodified	237	268,550	118,232	386,782	1,632
Option 1	22	18,952	10,632	29,584	1,345
Option 2, 3, & 4	16	17,437	3,855	21,292	1,331
Total	275	304,939	132,719	437,658	1,591
Service Disability					
Unmodified	176	327,823	154,631	482,454	2,741
Option 1	5	8,298	2,550	10,848	2,170
Option 2, 3, & 4	4	4,434	3,085	7,519	1,880
Total	185	340,555	160,266	500,821	2,707
Beneficiary	1,247	1,244,330	813,231	2,057,561	1,650
Total Miscellaneous	**9,875**	**22,033,076**	**6,095,580**	**28,128,656**	**2,848**
Safety Members					
Service Retirement					
Unmodified	1,603	8,883,022	2,793,040	11,676,062	7,284
Option 1	49	214,940	62,935	277,875	5,671
Option 2, 3, & 4	182	861,445	176,056	1,037,501	5,701
Total	1,834	9,959,407	3,032,031	12,991,438	7,084
Non-Service Disability					
Unmodified	14	22,615	11,736	34,351	2,454
Option 1	1	850	197	1,047	1,047
Option 2, 3, & 4	4	8,078	1,173	9,251	2,313
Total	19	31,543	13,106	44,649	2,350
Service Disability					
Unmodified	220	704,680	369,289	1,073,969	4,882
Option 1	13	33,737	20,985	54,722	4,209
Option 2, 3, & 4	6	14,079	6,700	20,779	3,463
Total	239	752,496	396,974	1,149,470	4,809
Beneficiary	414	758,694	526,310	1,285,004	3,104
Total Safety	**2,506**	**11,502,140**	**3,968,421**	**15,470,561**	**6,173**
Total Miscellaneous and Safety	**12,381**	**$33,535,216**	**$10,064,001**	**$43,599,217**	**$3,521**

Source: Prepared by Segal Consulting

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

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR THE LAST TEN FISCAL YEARS

	Years of Credited Service						
Retirement Effective Date	0-5	5-10	10-15	15-20	20-25	25-30	30+
7/1/18 - 6/30/19							
Average monthly benefit	$779	$1,298	$1,901	$2,796	$4,733	$6,594	$6,747
Average monthly final average salary	$9,039	$6,946	$5,802	$6,371	$7,603	$9,081	$8,160
Number of retired members	32	55	84	127	105	84	107
7/1/17 - 6/30/18							
Average monthly benefit	$431	$1,152	$1,881	$3,028	$5,149	$6,273	$6,686
Average monthly final average salary	$8,199	$6,531	$6,288	$6,862	$8,435	$8,778	$8,134
Number of retired members	37	74	81	123	71	113	90
7/1/16 - 6/30/17							
Average monthly benefit	$628	$1,275	$1,698	$2,681	$4,249	$6,279	$6,902
Average monthly final average salary	$8,186	$6,730	$5,728	$5,993	$7,463	$8,503	$8,475
Number of retired members	35	58	108	115	88	108	73
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	$7,757	$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

Source: SCERS Retired Member Pension Payroll Data

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR THE LAST TEN FISCAL YEARS

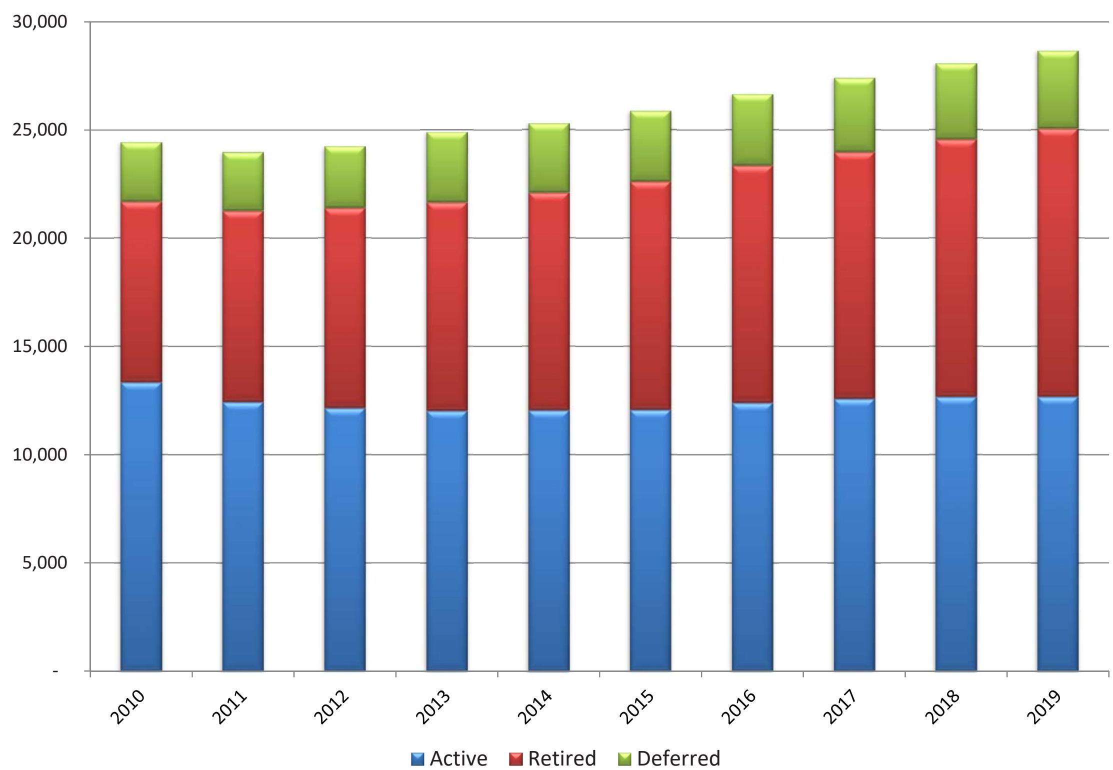
	Years Since Retirement						
As of	0-5	5-10	10-15	15-20	20-25	25-30	30+
6/30/2019:							
Average monthly benefit	$3,766	$3,616	$3,891	$3,687	$2,877	$2,893	$2,204
Number of retired members	3,242	2,817	2,161	1,621	1,068	728	744
6/30/2018:							
Average monthly benefit	$3,645	$3,615	$3,868	$2,923	$2,716	$2,725	$2,074
Number of retired members	3,140	2,652	2,421	1,262	984	715	709
6/30/17:							
Average monthly benefit	$3,472	$3,592	$3,783	$2,666	$2,720	$2,359	$1,983
Number of retired members	3,027	2,475	2,365	1,214	1,006	646	663
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

Source: SCERS Retired Member Pension Payroll Data

CHANGES IN SYSTEM MEMBERSHIP

Fiscal Year Ended June 30:	Active Members	Retired Members	Deferred Members	Total
2019	12,678	12,381	3,602	28,661
2018	12,677	11,883	3,509	28,069
2017	12,587	11,396	3,425	27,408
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

SYSTEM MEMBERSHIP AT A GLANCE



Source: Actuarial Valuations from June 30, 2010 through 2019.

SCHEDULE OF PARTICIPATING EMPLOYERS AND ACTIVE MEMBERS - SUMMARY

CURRENT FISCAL YEAR AND NINE FISCAL YEARS AGO

	2019			2010		
Participating Employer	Covered Employees	Rank	Percent of Total System	Covered Employees	Rank	Percent of Total System
Sacramento County	11,345	1	89.49%	11,889	1	89.12%
Superior Court	648	2	5.11	765	2	5.73
Sacramento Employment and Training Agency (SETA)	533	3	4.20	584	3	4.38
Sunrise Recreation and Park District	68	4	0.54	26	4	0.19
Mission Oaks Recreation and Park District	23	5	0.18	14	6	0.10
Carmichael Recreation and Park District	22	6	0.17	26	4	0.19
Orangevale Recreation and Park District	12	7	0.09	16	5	0.12
Rio Linda Elverta Recreation & Park District	8	8	0.06	N/A [1]	N/A [1]	N/A [1]
Elected Officials [2]	8	8	0.06	8	7	0.06
Elk Grove Cosumnes Cemetery District	6	9	0.05	3	9	0.02
Fair Oaks Cemetery District	4	10	0.03	4	8	0.03
Galt-Arno Cemetery District	1	11	0.01	1	10	0.01
Sacramento Metropolitan Fire District	-	12	0.00	3	9	0.02
U.C. Davis Medical Center	-	12	0.00	1	10	0.01
Total	**12,678**		**100.00%**	**13,340**		**100.00%**

[1] Rio Linda Elverta Recreation & Park District became a participating employer on October 1, 2017.

[2] Elected Officials consist of Board of Supervisors (5), Assessor (1), District Attorney (1), and Sheriff (1).

Source: SCERS Active Member Data

SCHEDULE OF PARTICIPATING EMPLOYERS AND ACTIVE MEMBERS - DETAIL

FOR THE LAST TEN FISCAL YEARS ENDED JUNE 30

SCERS Member Agency	Plan	2019	2018	2017	2016	2015
Carmichael Recreation and Park District	Misc.	22	23	19	20	19
Elk Grove Cosumnes Cemetery District	Misc.	6	7	5	6	4
Fair Oaks Cemetery District	Misc.	4	4	5	4	4
Galt-Arno Cemetery District	Misc.	1	2	2	1	1
Mission Oaks Recreation and Park District	Misc.	23	22	23	11	12
Orangevale Recreation and Park District	Misc.	12	13	14	13	13
Rio Linda Elverta Recreation & Park District	Misc.	8	9	-	-	-
Sacramento Metropolitan Fire District	Safety	-	-	-	-	-
SETA	Misc.	533	536	516	548	544
Sunrise Recreation and Park District	Misc.	68	69	55	19	22
U.C. Davis Medical Center	Misc.	-	-	-	-	-
Elected Officials [1]	Misc.	7	7	7	7	7
Elected Officials [1]	Safety	1	1	1	1	1
Total Special District Members	Misc.	684	692	646	629	626
	Safety	1	1	1	1	1
Superior Court Members	Misc.	648	640	658	651	631
Sacramento County Members	Misc.	9,252	9,254	9,273	9,083	8,836
	Safety	2,093	2,090	2,009	2,029	1,978
Total Members	Misc.	10,584	10,586	10,577	10,363	10,093
	Safety	2,094	2,091	2,010	2,030	1,979
	Total	12,678	12,677	12,587	12,393	12,072

SCERS Member Agency	Plan	2014	2013	2012	2011	2010
Carmichael Recreation and Park District	Misc.	21	21	20	22	26
Elk Grove Cosumnes Cemetery District	Misc.	6	5	5	2	3
Fair Oaks Cemetery District	Misc.	4	4	4	3	4
Galt-Arno Cemetery District	Misc.	1	1	1	1	1
Mission Oaks Recreation and Park District	Misc.	12	12	12	13	14
Orangevale Recreation and Park District	Misc.	13	15	15	15	16
Rio Linda Elverta Recreation & Park District	Misc.	-	-	-	-	-
Sacramento Metropolitan Fire District	Safety	-	-	-	3	3
S.E.T.A.	Misc.	547	565	566	568	584
Sunrise Recreation and Park District	Misc.	22	21	21	23	26
U.C. Davis Medical Center	Misc.	-	-	1	1	1
Elected Officials [1]	Misc.	7	7	7	7	7
Elected Officials [1]	Safety	1	1	1	1	1
Total Special District Members	Misc.	633	651	652	655	682
	Safety	1	1	1	4	4
Superior Court Members	Misc.	625	632	698	745	765
Sacramento County Members	Misc.	8,827	8,830	8,906	9,121	9,865
	Safety	1,963	1,912	1,898	1,909	2,024
Total Members	Misc.	10,085	10,113	10,256	10,521	11,312
	Safety	1,964	1,913	1,899	1,913	2,028
	Total	12,049	12,026	12,155	12,434	13,340

[1] Elected Officials consist of 5 Board of Supervisors, 1 Assessor, and 1 District Attorney who are miscellaneous members, and 1 sheriff who is a safety member.

Source: SCERS Active Member Data

SCERS

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