Comprehensive Annual Financial Report

For the Fiscal Years Ended June 30, 2019 and 2018

Stanislaus County Employees' Retirement Association

(Pension Trust Fund of the County of Stanislaus)

Stanislaus, California

Stanislaus County Employees' Retirement Association

(Pension Trust Fund of the County of Stanislaus, California)

Comprehensive Annual Financial Report

For the Years Ended
June 30, 2019 and 2018

Issued By

Rick Santos, CFA, ASA, MAAA
Executive Director

StanCERA
Staff

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StanCERA secures and manages investment funds to provide benefits to its members.

Ensuring tomorrow's benefits through prudent management.

Introduction Section

Stanislaus County Employees' Retirement Association
832 12th Street, Ste. 600, Modesto, CA 95354 • PO Box 3150, Modesto, CA 95353 • www.stancera.org • 209-525-6393 • 209-558-4976 Fax

LETTER OF TRANSMITTAL

November 13, 2019

Stanislaus County Employees' Retirement Association
Modesto, CA 95354

Dear Board Members:

Please find enclosed the Comprehensive Annual Financial Report (CAFR) of the Stanislaus County Employees' Retirement Association (StanCERA or the Plan) for the fiscal years ended June 30, 2019 and 2018. As of June 30, 2019, it is StanCERA's 71th year of operations.

The CAFR is a detailed financial report established by the Government Finance Officers Association (GFOA) for publicly disclosing the viability of a defined benefit public retirement system. The CAFR is intended to provide users with extensive reliable information for making management decisions, determining compliance with legal provisions, and demonstrates the responsible management and stewardship of StanCERA. StanCERA management is responsible for both the accuracy of the data and the completeness and fairness of the presentation of financial information within this CAFR, including all disclosures.

StanCERA is a multiple employer public employees' retirement system, established by Stanislaus County on July 1, 1948. StanCERA is operated and administered by the Board of Retirement (the Board) to provide retirement, disability, death and survivor benefits for its members under the California State Government Code, Section 31450 et seq. known as the County Employees Retirement Law of 1937 (CERL) and the Public Employees' Pension Reform Act (PEPRA).

StanCERA and Its Services

StanCERA was established by Stanislaus County to provide retirement allowances and other benefits to general and safety members employed by Stanislaus County. Currently, Stanislaus County and seven participating agencies are members of StanCERA. The participating agencies are:

City of Ceres
Stanislaus Council of Governments
Stanislaus County Superior Court
East Side Mosquito Abatement District
Hills Ferry Cemetery District
Keyes Community Services District
Salida Sanitary District

StanCERA and Its Services (continued)

StanCERA is governed by the California Constitution; the County Employees Retirement Law of 1937 (CERL); Public Employees' Pension Reform Act; and the bylaws, regulations, policies, and procedures adopted by the Board of Retirement. The Stanislaus County Board of Supervisors may also adopt resolutions, as permitted by the CERL, which may affect benefits to Stanislaus County members.

The Board of Retirement is responsible for the management of StanCERA and is comprised of nine members and two alternate members, one of whom is a safety alternate and the other a retiree alternate. The safety alternate seat is not currently filled. Four members are appointed by the Stanislaus County Board of Supervisors, one member and the alternate safety member are elected by the safety members, two members are elected by the general members, while the retiree and alternate retiree members are elected by the retired members. The Stanislaus County Treasurer serves as an ex-officio member. Members, with the exception of the Stanislaus County Treasurer, serve three-year terms with no term limits.

Financial Information

The accompanying financial statements are prepared using the accrual basis of accounting. Contributions from employers and members are recognized when received or when due pursuant to legal requirements. Benefits are recognized when due and payable in accordance with the terms of the plan. Expenses are recorded when corresponding liabilities are incurred regardless of when payment is due or made. Investments are recorded at the fair value of the asset.

An overview of StanCERA's fiscal operations for the years ended June 30, 2019 and 2018, is presented in the Management's Discussion and Analysis (MD&A) located in the financial section of the CAFR. This transmittal letter, together with the MD&A, provides an expanded view of the activities of StanCERA.

Brown Armstrong Accountancy Corporation, StanCERA's independent auditor, has audited the accompanying financial statements. Management believes an adequate system of internal controls is in place and the accompanying statements, schedules, and tables are fairly presented and free from material misstatement. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely to be derived, and that second, the valuation of the cost and benefits requires estimates and judgments by management.

Internal controls over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal controls over financial reporting are processes that involve human diligence and compliance and are subject to lapses in judgment and breakdowns resulting from human failures. Internal controls over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected within a timely basis by internal controls over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design safeguards into the process to reduce, but not eliminate, this risk.

Net Pension Liability and Actuarial Funding

StanCERA's funding objective is to meet long-term benefit obligations by maintaining a well-funded plan status and obtaining optimum investment returns. Pursuant to the CERL, StanCERA engages an independent actuary to perform an actuarial valuation of the Plan on an annual basis. Economic assumptions are normally reviewed every three years. Additionally, every three years, a triennial experience study is conducted, at which time non-economic assumptions are also updated. The most recent triennial experience study was conducted as of June 30, 2018 by Cheiron, Inc. Cheiron, Inc. conducted the last actuarial valuation as of June 30, 2018, the results of which were rolled forward to StanCERA's fiscal year ended June 30, 2019, and determined the Plan's funding ratio (ratio of fair value of assets to net pension liability) to be 76.7% using the recommended assumptions.

Investments

The Board of Retirement has exclusive control of all StanCERA investments and is responsible for establishing investment objectives, strategies, and policies. The California Constitution and Government Code Sections 31594 and 31595 authorize the Board of Retirement to invest in any investment deemed prudent in the Board's informed opinion.

The Board has adopted an Investment Policy, which provides a framework for the management of StanCERA's investments. This policy establishes StanCERA's investment objectives and defines the duties of the Board of Retirement, investment managers, and custodial bank. The asset allocation is an integral part of the Investment Policy and is designed to provide an optimum mix of asset classes with return expectations to ensure growth of assets to meet future liabilities, minimize employer contributions, and defray reasonable administrative costs. StanCERA engages an Investment Consultant to analyze the investment policy and strategy and to conduct periodic asset allocation and asset/liability studies on behalf of StanCERA. For the fiscal years ended June 30, 2019 and 2018, the Plan's investments provided a 5.1% and 8.1% rate of return, respectively. A summary of the asset allocation can be found in the Investment Section of this report.

Awards

StanCERA is the recipient of several awards. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to StanCERA for its Comprehensive Annual Financial Report (CAFR) for the year ended June 30, 2018. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports. This was the fourteenth consecutive year StanCERA has achieved this prestigious award.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized Comprehensive Annual Financial Report (CAFR), the contents of which meet or exceed program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements.

Awards (continued)

A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to the GFOA for evaluation.

StanCERA received the Award for Outstanding Achievement in Popular Annual Financial Reporting for the fiscal year ended June 30, 2018. This report provides all StanCERA members more concise and condensed information than can be found in the CAFR.

StanCERA also received the Public Pension Coordinating Council's Public Pension Standards 2018 Award, in recognition of meeting professional standards for plan design and administration as set forth in the Public Pension Standards.

The Public Pension Coordinating Council (PPCC) is a coalition of the following associations that represent public pension funds that cover the vast majority of public employees in the U.S.:

- National Association of State Retirement Administrators (NASRA)
- National Council on Teacher Retirement (NCTR)
- National Conference on Public Employee Retirement Systems (NCPERS)

The Public Pension Standards are intended to reflect minimum expectations for public retirement systems management and administration, and serve as a benchmark by which all defined benefit public plans should be measured.

Service Efforts and Accomplishments

Written communication for members continues to be a focus for StanCERA. Non retired members receive statements twice a year. Retirees receive printed advice notices with critical information monthly and to communicate the financial health of the fund, an easy-to-read Popular Annual Financial Report (PAFR) is distributed to all members annually.

StanCERA sponsors a one half day pre-retirement seminar to potential retirees annually, participates in the Stanislaus County new employee orientation workshop and continues to provide group educational programs at the work site for interested employees.

In addition, StanCERA continues to increase its website presence. Audio recordings of education seminars and Board meetings are available. Meeting agendas and minutes are posted timely. Policies, by-laws, member services and forms can be easily identified and downloaded. Members continue to visit the contribution and benefit calculators regularly.

Acknowledgement

The compilation of this report reflects the combined efforts of many people on StanCERA's staff. It is intended to provide reliable information as the basis for making management decisions, as a means for determining compliance with legal provisions, and as a means of determining responsible stewardship of the funds of StanCERA. Both the accuracy of the data presented and the completeness and fairness of the presentation of the CAFR are the responsibility of the management of StanCERA.

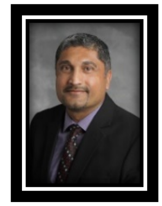
I congratulate the Board, staff and service providers of StanCERA for their commitment and for their diligent work to ensure the continued successful operation of StanCERA.

Sincerely,

Rick Santos, CFA, ASA, MAAA
Executive Director

BOARD OF RETIREMENT
JUNE 30, 2019

Seat # 1
Donna Riley
Ex-Officio, Treasurer/Tax Collector



Seat # 2
Mandip Dhillon
Trustee, Elected by Active General Membership

Seat # 3
Jeff Mangar
Trustee, Elected by Active General Membership

Seat # 4
Darin Gharat
Trustee, Appointed by the Board of Supervisors

Seat # 5
Mike Lynch
Trustee, Appointed by the Board of Supervisors

Seat # 6
Jim DeMartini
Chair, Appointed by the Board of Supervisors

Seat # 7
Sam Sharpe
Vice Chair, Elected by Active Safety Membership

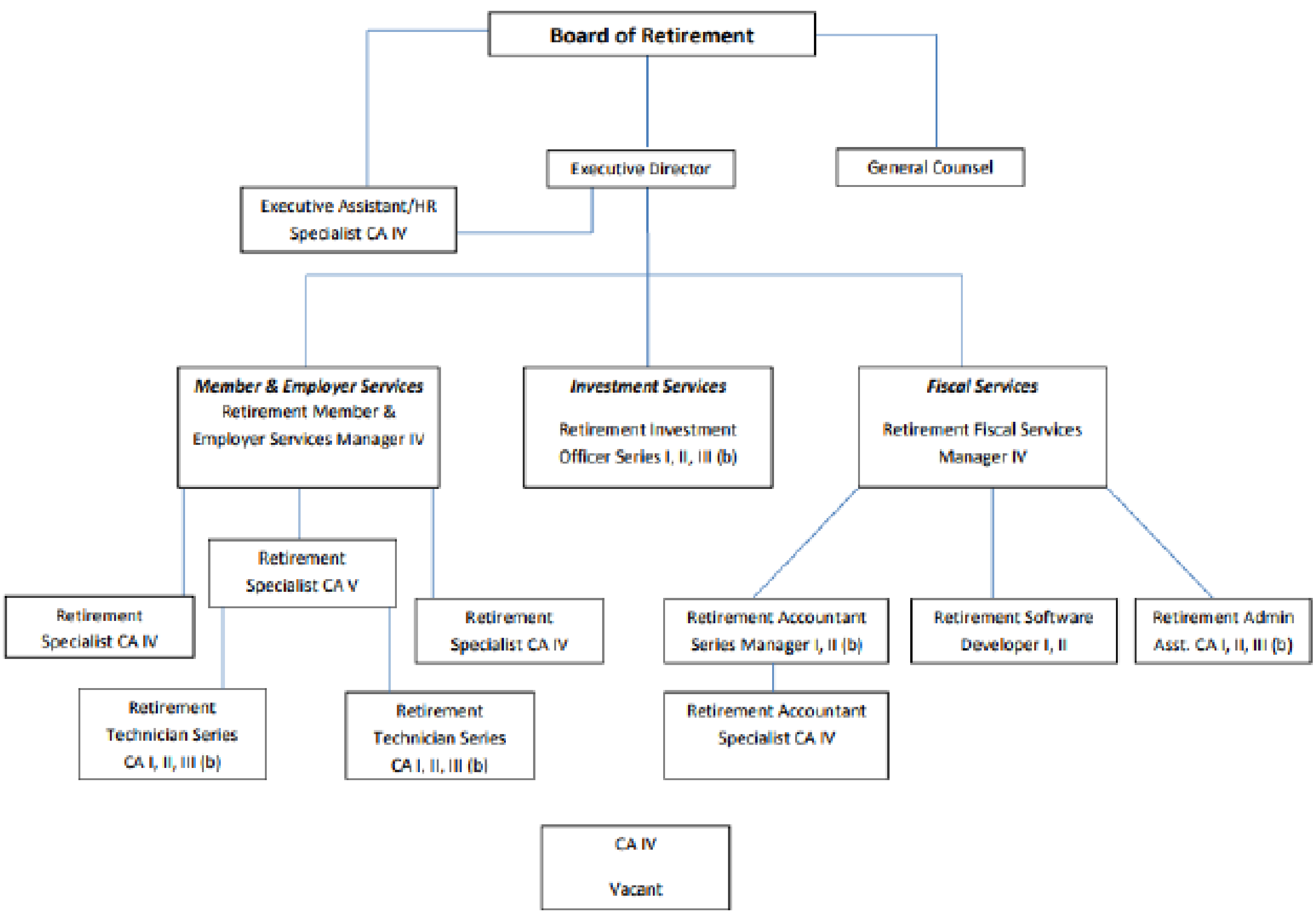
Seat # 7a
Vacant
Alternate Trustee, Elected by Active Safety Membership

Seat # 8
Michael O'Neal
Trustee, Elected by Retired Membership

Seat # 8a
Rhonda Biesemeier
Alternate Trustee, Elected by Retired Membership

Seat # 9
Jeff Grover
Trustee, Appointed by the Board of Supervisors

StanCERA ORGANIZATIONAL CHART
Effective 2016



* Retirement Board utilizes private general legal counsel for administrative legal services.
Private attorneys provide legal assistance for disability retirement applications.

PROFESSIONAL CONSULTANTS
JUNE 30, 2019

Consulting Services

Actuary
Cheiron, Inc.

Auditors
Brown Armstrong Accountancy Corporation

Investment Custodian
Northern Trust

Investment Consultant
Verus, Inc.

Legal Counsel
Damrell Nelson Schrimp Pallios
Pacher & Silva (General Legal Counsel)
Law Office of Ted M Cabral
Hansen Bridgett LLP
Reed Smith LLP

Technical & Data Services
Tyler, Inc.
SBT, County of Stanislaus

Investment Management Services*

Fixed Income
Insight
Dimensional Fund Advisors
Northern Trust Intermediate Bond
Northern Trust Long Term Bond

Large Cap Value Equity
Dodge & Cox
BlackRock R1000 Value

Large Cap Growth Equity
BlackRock R1000 Growth
Northern Trust Russell 1000

Small Cap Value Equity
Capital Prospects

International Equity
LSV Asset Management (Value)
Fidelity Asset Management (Growth)

Real Estate Securities
Black Rock US Real Estate Index

Private Credit
Medley Opportunity
Raven Capital Management, LLC
White Oak Global Advisors, LLC

Private Real Estate
American Realty Advisors
Greenfield Acquisition Partners
Morgan Stanley Prime Property
PGIM Real Estate U.S. Debt

Infrastructure
North Haven Partners II LP

Risk Parity
AQR
PanAgora

*Refer to the Investment Section for the Schedule of Investment Management Fees (Page 59) and Schedule of Commissions Paid (Page 60).

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Stanislaus County

Employees' Retirement Association

California

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

Government Finance Officers Association

Award for Outstanding Achievement in Popular Annual Financial Reporting

Presented to

Stanislaus County

Employees' Retirement Association

California

For its Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2018

Presented to

Stanislaus County Employees' Retirement Association

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle
Program Administrator

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Financial Section

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STOCKTON OFFICE
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STOCKTON, CA 95207
TEL 888.565.1040

WWW.BACPAS.COM

BROWN ARMSTRONG
Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Board of Retirement and Internal Governance Committee of
Stanislaus County Employees' Retirement Association
Modesto, California

Report on the Basic Financial Statements

We have audited the accompanying Statements of Fiduciary Net Position of the Stanislaus County Employees' Retirement Association (StanCERA) 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 StanCERA's basic financial statements as listed in the table of contents.

Management's Responsibility for the Basic Financial Statements

Management is responsible for the preparation and fair presentation of these basic 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 basic 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 basic financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the basic financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the basic financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to StanCERA's preparation and fair presentation of the basic 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 StanCERA's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the basic 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 basic financial statements referred to above present fairly, in all material respects, the fiduciary net position of StanCERA 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 StanCERA's 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 November 13, 2019, on our consideration of StanCERA's 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 to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering StanCERA's internal control over financial reporting and compliance.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
November 13, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS

This discussion and analysis of the Stanislaus County Employees' Retirement Association's (StanCERA or the Plan) financial performance provides an overview of the financial activities and funding conditions for the fiscal years ended June 30, 2019 and 2018. Please review information presented here in conjunction with the Letter of Transmittal and additional information provided.

Financial Highlights

- Fiduciary Net Position increased by $81.3 million (or 3.8%) during fiscal year 2019 as a result of the fiscal year's activities.
- Contributions (employer and member), in total, increased by $12.6 million (or 12.2%) during fiscal year 2019.
- Net investment income (including Net Appreciation in Fair Value of Investments) decreased by $55.7 million (or 36.1%) during fiscal year 2019.
- Benefit payments increased by $8.0 million (or 6.6%) during fiscal year 2019 from the prior fiscal year.

Plan Highlights

- Benefit plans for Tiers 2 and 3 were closed to new hires and Tiers 4 and 5 were adopted effective March 9, 2002 to provide retirement formulas commonly known as 2% at age 55 for active general members, and 3% at age 50 for active safety members. One district did not implement the new benefit plans. Members in the non-contributory Tier 3 were allowed to transfer into a contributory plan. Effective January 1, 2011, Tier 5 was closed and Tier 2 was re-opened for all new hires for Stanislaus County with the reduced benefit formulas of 2% at age 61 for most general members and 2% at 50 for safety members. Tier 2 was closed and Tier 6 was adopted effective January 1, 2013 for all new hires and provides 2% at 62 for general members and 2.7% at age 57 for safety members.
- In April of 2019 and 2018, a 3.0% cost-of-living increase was given to all retired, disabled, and beneficiary members receiving a recurring allowance except those retirees who received pensions for service as a Tier 3 non-contributory member.

Using the Annual Report

The financial statements reflect the activities of the Stanislaus County Employees' Retirement Association and are composed of the Statements of Fiduciary Net Position and the Statements of Changes in Fiduciary Net Position. These statements are presented on an accrual basis of accounting and reflect all trust activities as incurred.

Overview of the Basic Financial Statements

This Management's Discussion and Analysis is intended to serve as an introduction to StanCERA's basic financial statements, which are comprised of the following three components:

1. Statements of Fiduciary Net Position
2. Statements of Changes in Fiduciary Net Position
3. Notes to the Basic Financial Statements

StanCERA's basic financial statements and the note disclosures to the basic financial statements are in compliance with accounting principles generally accepted for governments (GAAP) within the United States as established by the Governmental Accounting Standards Board.

Financial Analysis

Statements of Fiduciary Net Position

The Statements of Fiduciary Net Position show the assets available for future payments to retirees and liabilities as of the fiscal year end. The following condensed comparative summary of Fiduciary Net Position demonstrates that the pension trust is primarily focused on the cash and investments and the restricted net position. This statement is also a good indicator of the financial strength of StanCERA.

Fiduciary Net Position, as of June 30, 2019, 2018, and 2017	2019	2018	2017	$ Change 2019-2018	$ Change 2018-2017
Current Assets	$ 70,667,938	$ 238,347,078	$ 166,714,182	$ (167,679,140)	$ 71,632,896
Investments	2,290,474,786	2,012,777,600	2,062,347,484	277,697,186	(49,569,884)
Capital Assets	6,609,873	5,326,791	3,910,685	1,283,082	1,416,106
Total Assets	2,367,752,597	2,256,451,469	2,232,972,351	111,301,128	23,479,118
Total Liabilities	159,511,165	129,490,724	238,749,040	30,020,441	(109,258,316)
Total Fiduciary Net Position Restricted for Pension Benefits	$ 2,208,241,432	$ 2,126,960,745	$ 1,994,223,311	$ 81,280,687	$ 132,737,434

Financial Analysis (continued)

Statements of Changes in Fiduciary Net Position

The Statements of Changes in Fiduciary Net Position provide an account of the fiscal years' additions to and deductions from Fiduciary Net Position.

Additions To Fiduciary Net Position For The Fiscal Years Ended June 30, 2019, 2018, and 2017	2019	2018	2017	$ Change 2019-2018	$ Change 2018-2017
Employer Contributions	$ 88,589,381	$ 76,966,471	$ 63,024,560	$ 11,622,910	$ 13,941,911
Plan Member Contributions	27,742,863	26,746,289	25,463,745	996,574	1,282,544
Net Investment Income (Loss)	99,280,525	154,988,199	252,309,705	(55,707,674)	(97,321,506)
Total Additions	$ 215,612,769	$ 258,700,959	$ 340,798,010	$ (43,088,190)	$ (82,097,051)

Deductions From Fiduciary Net Position For The Fiscal Years Ended June 30, 2019, 2018, and 2017					
Benefit Payments	$ 129,100,668	$ 121,138,269	$ 114,290,758	$ 7,962,399	$ 6,847,511
Member Refunds - Termination	1,826,145	1,905,488	2,297,328	(79,343)	(391,840)
Member Refunds/Payouts - Death	847,878	128,359	255,772	719,519	(127,413)
Administrative Expenses	2,557,391	2,791,409	2,644,554	(234,018)	146,855
Total Deductions	$ 134,332,082	$ 125,963,525	$ 119,488,412	$ 8,368,557	$ 6,475,113
Increase/(Decrease) in Fiduciary Net Position Restricted for Pension Benefits	$ 81,280,687	$ 132,737,434	$ 221,309,598	$ (51,456,747)	$ (88,572,164)
Fiduciary Net Position Restricted for Pension Benefits					
Beginning of Year	2,126,960,745	1,994,223,311	1,772,913,713	132,737,434	221,309,598
End of Year	$2,208,241,432	$2,126,960,745	$1,994,223,311	$ 81,280,687	$ 132,737,434

Additions to Fiduciary Net Position

A review of the Statement of Fiduciary Net Position shows that June 30, 2019 closed with assets exceeding liabilities by $2.208 billion with all of the Fiduciary Net Position restricted for StanCERA's ongoing obligations to plan participants and their beneficiaries. The fiscal year ended June 30, 2018, closed with assets exceeding liabilities by $2.127 billion. The $81.3 million increase and $132.7 million increase, respectively, in Fiduciary Net Position is a direct result of the changes in the financial market over the past two years. StanCERA remains in good financial condition.

Financial Analysis (continued)

Additions to Fiduciary Net Position (continued)

The primary sources to finance the benefits StanCERA provides are accumulated through return on investments and through the collection of member and employer contributions. The total for these income sources for fiscal year 2018-2019 resulted in a decrease of $43.1 million, where fiscal year 2017-2018 resulted in a decrease of $82.1 million. The decrease is primarily a result of the activity in the broad market, as discussed in the Investment Analysis below. Employer and member contributions increased by $12.6 million (or 12.2%) from the contributions made in 2017-2018. Employer contribution increases in 2019 and 2018 are due mainly to a three-year phase in of the impact of changes to the economic and demographic assumptions first adopted for the June 30, 2015 actuarial valuation.

Deductions from Fiduciary Net Position

The primary uses of StanCERA's assets are the payment of benefits to retirees and their beneficiaries, refunds of contributions to terminated employees, and the costs of administering the Plan. These expenses for fiscal year 2018-2019 were $134.3 million, an increase of $8.4 million from prior year. This increase is mainly due to the increase in the number of retirees and the average amount that they are paid as well as acquiring a new pension system. For fiscal year 2017-2018, the expenses were $126.0 million, an increase of $6.5 million from prior year due to the increase in the number of retirees and the average amount they are paid. For fiscal year 2018-2019, administrative expense decreased by 8.4% from fiscal year 2017-2018. Total administrative expense represented 0.0828% of the accrued actuarial liability (funding basis) for fiscal year 2018-2019 and 0.1000% for fiscal year 2017-2018.

Overall Financial Condition

Investment Analysis

StanCERA's investment activity is a function of the underlying marketplace for the period measured and the investment policy's asset allocation.

Domestic equity returns for the fiscal year ended June 30, 2019 outperformed their benchmark by 30 basis points and international equity underperformed the benchmark by 260 basis points. Domestic equity returns for the fiscal year ended June 30, 2018 underperformed their benchmark by 110 basis points and international equity underperformed the benchmark by 160 basis points.

StanCERA's fixed income returns underperformed their benchmark by 140 basis points for the fiscal year ended June 30, 2019. For the fiscal year ended June 30, 2018, the Plan's fixed income returns outperformed their benchmark by 60 basis points.

For the fiscal year ended June 30, 2019, StanCERA's total portfolio underperformed its policy benchmark by 80 basis points with an overall return of 5.1%. For the fiscal year ended June 30, 2018, StanCERA's total portfolio outperformed its policy benchmark by 60 basis points with an overall return of 8.1%. Management believes the Plan remains in a very strong financial position to meet its obligations to the Plan participants and beneficiaries.

Overall Financial Condition (continued)

Net Pension Liability

The primary concern to most pension plan participants is the amount of resources available to pay benefits. Historically, pension plans have been under-funded when the employer fails to make actuarially determined contributions. All StanCERA employers have traditionally contributed the actuarially determined contribution as determined by the Plan's actuary.

An indicator of funding status is the ratio of the Fiduciary Net Position to the Total Pension Liability (TPL). An increase in the percentage over time usually indicates a plan is becoming financially stronger; however, a decrease will not necessarily indicate a plan is in financial decline. Changes in actuarial assumptions can significantly impact the Net Pension Liability (NPL). Performance in the stock and bond markets can have a material impact on the fair value of assets and Fiduciary Net Position.

The Net Pension Liability (NPL) as of June 30, 2018, rolled forward to StanCERA's fiscal year ended June 30, 2019, was $660.2 million using the entry age normal cost method. The Board of Retirement approves the assumptions used by the actuary to perform their calculation. As of the most recent actuarial valuation dated June 30, 2018, rolled forward to June 30, 2019, StanCERA's Fiduciary Net Position was 77.0% of the total pension liability. The next actuarial valuation is scheduled for June 30, 2019 to be rolled forward to fiscal year ended June 30, 2020.

StanCERA's Fiduciary Responsibilities

StanCERA's Board of Retirement and management staff are fiduciaries of the pension trust fund. Under the California Constitution, the Fiduciary Net Position can only be used for the exclusive benefit of plan participants and their beneficiaries.

Requests for Information

This financial report is designed to provide the Board of Retirement, plan participants, taxpayers, investment professionals and creditors with a general overview of StanCERA's financial condition and to demonstrate StanCERA's accountability for the funds under its stewardship.

Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Rick Santos, CFA, ASA, MAAA
Executive Director
Stanislaus County Employees' Retirement Association
832 12th Street, Suite 600
Modesto, CA 95354

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
STATEMENTS OF FIDUCIARY NET POSITION
As of June 30, 2019 and 2018

	June 30, 2019	June 30, 2018
ASSETS		
Cash and Cash Equivalents (Note 4):	$ 56,243,082	$ 195,650,852
Receivables:		
Interest and Dividends	6,791,291	5,372,554
Securities Transactions	877,077	31,398,072
Contributions (Note 3)	6,666,983	5,897,011
Total Receivables	14,335,351	42,667,637
Prepaid Insurance	89,504	28,589
Capital Assets (Note 2):	6,609,873	5,326,791
Investments at Fair Value (Note 4):		
U.S. Government and Agency Obligations	128,247,054	67,691,981
Corporate Bonds	231,402,588	163,597,930
Emerging Market / Non-US Bonds	120,066,422	104,365,150
Domestic Equity	149,746,709	187,088,783
Domestic Equity Index Fund	280,245,220	355,389,874
International Equity	553,218,608	432,304,594
Real Estate Securities	37,095,763	128,978,153
Private Credit	95,094,309	94,881,719
Private Real Estate	197,966,376	79,771,614
Infrastructure	43,388,166	30,177,146
Risk Parity	309,627,036	283,242,444
Securities Lending Collateral	144,376,536	85,288,212
Total Investments	2,290,474,787	2,012,777,600
Total Assets	2,367,752,597	2,256,451,469
LIABILITIES		
Current Liabilities:		
Accounts Payable	12,596,100	12,052,811
Securities Transactions	2,143,529	31,754,701
Securities Lending Obligation (Note 4)	144,376,536	85,288,212
Total Current Liabilities	159,116,165	129,095,724
Long-Term Liabilities:		
Grant Deed Extension Fee	395,000	395,000
Total Liabilities	159,511,165	129,490,724
Fiduciary Net Position Restricted For Pension Benefits (Note 6)	$ 2,208,241,432	$ 2,126,960,745

The accompanying notes are an integral part of these financial statements.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
For the Fiscal Years Ended June 30, 2019 and 2018

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions (Note 5):		
Employer	$ 88,589,381	$ 76,966,471
Plan Members	27,742,863	26,746,289
Total Contributions	116,332,244	103,712,760
Investment Income:		
Net Appreciation in Fair Value of Investments	54,084,769	124,664,847
Interest and Dividends	53,382,923	40,576,311
Total Investment Gain	107,467,692	165,241,158
Net Income from Commission Recapture	22,395	15,091
Less: Investment Expense (Note 4)	(9,008,420)	(11,120,770)
Net Investment Income	98,481,667	154,135,479
Other Investment Income:		
Net Litigation Recovery Income	19,915	11,552
Rental Income	101,941	102,595
Other Investment Income	202,284	189,290
Net Other Investment Income	324,140	303,437
Securities Lending Activities (Note 4):		
Securities Lending Income	677,888	784,420
Less: Securities Lending Expense	(203,170)	(235,137)
Net Securities Lending Income	474,718	549,283
Total Investment Income	99,280,525	154,988,199
Total Additions	215,612,769	258,700,959
DEDUCTIONS		
Benefit Payments and Subsidies	129,100,668	121,138,269
Member Refunds - Termination	1,826,145	1,905,488
Member Refunds - Death	847,878	128,359
Administrative Expenses (Note 2)	2,557,391	2,791,409
Total Deductions	134,332,082	125,963,525
Net Increase	81,280,687	132,737,434
Fiduciary Net Position Restricted for Pension Benefits (Note 6)		
Beginning of Year	2,126,960,745	1,994,223,311
End of Year	$ 2,208,241,432	$ 2,126,960,745

The accompanying notes are an integral part of these financial statements.

NOTES TO BASIC FINANCIAL STATEMENTS

June 30, 2019 and 2018

NOTE 1 - DESCRIPTION OF PLAN

Description of System and Applicable Provisions of the Law

The Stanislaus County Employees' Retirement Association (StanCERA or the Plan) is an integrated public employee retirement system established under and subject to the legislative authority of the State of California as enacted and amended in the County Employees Retirement Law of 1937 (Chapter 677 Statutes of 1937) and the Public Employees' Pension Reform Act. It is a cost-sharing multiple-employer pension plan. StanCERA was established by the County of Stanislaus Board of Supervisors on July 1, 1948, and was integrated with Social Security on January 1, 1956.

Membership

StanCERA consists of employees from the County of Stanislaus, East Side Mosquito Abatement District, Hills Ferry Cemetery District, Keyes Community Service District, City of Ceres, Salida Sanitary District, Stanislaus County Superior Court, and Stanislaus Council of Governments. Each person entering employment full-time or permanent part-time (50% or more of the regular hours) becomes a member on the first day of employment. The structure of the Membership with StanCERA is as follows:

	June 30, 2019			June 30, 2018		
	General	Safety	Total	General	Safety	Total
Active Members:						
Vested & Non-vested	3,691	813	4,504	3,658	794	4,452
Total Active	3,691	813	4,504	3,658	794	4,452
Inactive Members:						
Deferred Members	803	211	1,014	780	207	987
Unclaimed Contributions	403	59	462	393	65	458
Total Inactive	1,206	270	1,476	1,173	272	1,445
Retired Members:						
Service Retirements	3,024	473	3,497	2,908	451	3,359
Disability Retirements	215	167	382	218	164	382
Survivor Payments	45	10	55	45	10	55
Total Retired	3,284	650	3,934	3,171	625	3,796
Total Membership	8,181	1,733	9,914	8,002	1,691	9,693

Active

StanCERA has Tiers 1, 2, 3, 4, 5 and 6 for General Members and Tiers 2, 4, 5 and 6 for Safety Members. All tiers are closed with the exception of Tier 6 for both General and Safety Members. Members of the Plan receive a 100% vested interest in the Plan after 5 years of service, except Tier 3 which requires 10 years of service.

NOTE 1 – DESCRIPTION OF PLAN (continued)

Benefits

StanCERA provides for retirement, disability, death, beneficiary, cost-of-living, and ad-hoc retirement benefits.

Service Retirement Benefit

Members of Tiers 1, 2, 4, and 5 with 10 years of service, who have attained the age of 50, are eligible to retire. Tier 3 members are eligible to retire with 10 years of service at age 55. Tier 6 members are eligible to retire with 5 years of service at age 50 for Safety members, and age 52 for General members. Members of Tiers 1, 2, 4, and 5 with 30 years of service (20 years for safety), regardless of age, are eligible to retire. The benefit is a percentage of monthly final average salary (FAS) per year of service, depending on age at retirement, and is illustrated below for representative ages. Government Code Section 31462 of the County Employees Retirement Law of 1937 defines the FAS as a member's average monthly compensation earned during any consecutive 12 months (applicable to members of Tiers 1, 4, and 5). Government Code Sections 31462.1 and 7522.32 use the member's average monthly compensation earned during any 36 consecutive months (applicable to members of Tiers 2, 3, and 6). For members integrated with Social Security, the benefit is reduced by 1/3 of the percentage shown below times the first $350 of the monthly final average salary per year of service credited after January 1, 1956. Tier 6 is not integrated with Social Security.

Percentage of FAS:

	General						Safety		
Age	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Tiers 1&2	Tiers 4&5	Tier 6
50	1.34	1.18	N/A	1.48	1.48	N/A	2.00	3.00	2.00
55	1.77	1.49	0.68*	1.95	1.95	1.30	2.62	3.00	2.50
60	2.34	1.92	1.14*	2.44	2.44	1.80	2.62	3.00	2.70
65	2.62	2.43	2.00*	2.62	2.62	2.30	N/A	N/A	2.70

* 1% of FAS for each year of service over 35 reduced by 1/35 of Social Security Benefits at age 65 not to exceed 35 years

Retiring members may choose from 4 different beneficiary retirement allowances. Most retirees elect to receive an unmodified allowance, which includes a continuation of 60% of the allowance to the retirees' surviving spouse or registered domestic partner.

Death Benefit-Before Retirement

Employed Less Than 5 Years

In addition to the return of contributions, a death benefit is payable to the member's beneficiary or estate equal to 1 month of salary for each completed year of service under the retirement system, based on the final year's average salary, not to exceed 6 months of salary (except Tier 3 members).

NOTE 1 – DESCRIPTION OF PLAN (continued)

Death Benefit-Before Retirement (continued)

Employed More than 5 Years

If a member dies while eligible for service retirement or non-service connected disability, the spouse or registered domestic partner receives 60% of the allowance that the member would have received for retirement benefits on the day of his or her death (except Tier 3 members).

If a member dies in the performance of duty, the spouse or registered domestic partner receives a monthly benefit of 50% of the member's final average salary (except Tier 3 members).

Death Benefit-After Retirement

If a member dies after retirement, a burial allowance of $5,000 is paid to the beneficiary or estate (except Tier 3 members).

If the retirement benefit is for service-connected disability, 100% of the member's allowance as it was at death is continued to the surviving spouse or registered domestic partner for Tiers 1, 2, 4, 5, and 6. Tier 3 Members have no allowance continued to the surviving spouse or registered domestic partner.

If the retirement benefit is for other than service-connected disability, 60% of the member's allowance is continued to the surviving spouse or registered domestic partner for Tiers 1, 2, 4, 5, and 6, and 60% of the member's allowance is continued to the surviving spouse or registered domestic partner if the unmodified option is chosen at time of retirement.

Disability Benefit

Members with 5 years of service, regardless of age, are eligible for non-service connected disability (except Tier 3 members). The benefit may be up to 1/3 of final average salary. If the disability is service connected, the member may retire regardless of length of service, and the benefit is 50% of final average salary (except Tier 3 members).

Cost-of-Living Benefit

The current maximum increase in retirement allowance is 3% per year (except Tier 3). The increases are based on the change in the Bureau of Labor Statistics Consumer Price Index (CPI) in the San Francisco Bay area from January 1 to December 31, effective the following April 1.

Ad-Hoc Benefits

Ad-hoc benefits are non-vested benefits which are determined by the Board of Retirement subject to funding availability.

NOTE 1 – DESCRIPTION OF PLAN (continued)

Ad-Hoc Benefits (continued)

No ad-hoc benefits are currently being paid (effective since January 1, 2010). Changes in the excess earnings policy, approved by the Board of Retirement (Board) on May 25, 2012, placed additional restrictions on the Board of Retirement's ability to grant these benefits. The greatest restriction currently is the Plan must be 100% funded on a market basis prior to funding any ad-hoc benefit.

Contribution Rates

The County Employees Retirement Law of 1937 establishes the basic obligations for employer and member contributions to the retirement system. The actual employer and member contribution rates in effect each year are based on recommendations made by an independent actuary and adopted by the Board of Retirement.

StanCERA's policy for contributions states that actuarially determined rates expressed as a percentage of annual covered payroll are required to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded liability. Level percentage of payroll employer contribution rates are determined using the entry age actuarial cost method. For funding purposes, StanCERA also uses the level entry age normal cost method with the Unfunded Actuarial Accrued Liability (UAAL) to amortize the unfunded liability. StanCERA's actuarially determined composite employer contribution rates for the years ended June 30, 2019 and June 30, 2018 were 29.01% and 24.99%, respectively, of annual payroll. Employee contribution rates are based on age of entry for Tiers 1, 2, 4 and 5 and range between 3.38% and 18.31% for the fiscal years ended June 30, 2019 and June 30, 2018. Tier 6 employer rates are based on 50% of the total normal cost. Tier 6 employee contribution rates are not based on age of entry and are a flat rate ranging between 8.04% and 15.41% for fiscal years ended June 30, 2019 and June 30, 2018.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

StanCERA is governed by the Board of Retirement and is considered an independent legal entity. StanCERA is a component unit of Stanislaus County (the County) and is being reported as a Pension Trust Fund in the County's Financial Report in accordance with Governmental Accounting Standards Board (GASB) Statement No. 39, *Determining Whether Certain Organizations Are Component Units – an Amendment of GASB Statement No. 14*.

Basis of Accounting

StanCERA follows GASB accounting principles and reporting guidelines. The financial statements are prepared on a full accrual basis of accounting, which recognizes income when earned and expenses when incurred. Contributions from employers and members are recognized when received or when due pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Cash and Cash Equivalents

Cash includes deposits with a financial institution and pooled cash with the Stanislaus County Treasurer. Pooled cash is reported at amortized cost, which approximates fair value. Income on pooled cash is allocated on StanCERA's average daily balance in relation to total pooled assets.

Investments

The Board of Retirement has exclusive control of the investments of StanCERA. Statutes authorize the Board to invest, or to delegate the authority to invest, in any investment allowed by statute and considered prudent in the informed opinion of the Board.

Investments are stated at fair value in accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans – an Amendment of GASB Statement No. 25*. Values for stocks, publicly traded bonds, issues of the U.S. Government and its agencies, and real estate securities are valued according to sale prices of recognized exchanges as of the fiscal year end, with international securities reflecting currency exchange rates in effect at June 30, 2019 and 2018. Both domestic and international investments are denominated in U.S. currency. Private Credit Partnerships, Private Real Estate and Infrastructure investments are valued using their respective Net Asset Value (NAV) and are audited annually. The most significant input into the NAV of such an entity is the fair value of its investment holdings. These holdings are valued by the partnerships on a quarterly basis and 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.

Securities Transactions and Related Investment Income

Securities transactions are accounted for on a trade date basis. Interest income is recognized when earned and dividend income is recognized on the ex-dividend date. Stock dividends or stock splits are recorded as memo items and do not affect the total value of the securities.

Capital Assets

Capital assets, consisting of software development, the purchase of a condominium interest in one floor of an office building, and office equipment are presented at historical cost. StanCERA occupies 60% of the 6th floor of the office building, and 40% has been developed as office space which is currently leased out. Total cost of the capital assets as of June 30, 2019 and June 30, 2018 was \$8,507,983 and \$7,094,384, respectively, with accumulated depreciation of \$1,898,110 and \$1,767,593, respectively. Out of the total amount, \$3,331,295 and \$2,401,150, respectively, were not being depreciated due to the assets not being placed in service as of June 30, 2019 and June 30, 2018. Depreciation expense for the fiscal years ending June 30, 2019 and June 30, 2018 totaled \$130,517 and \$72,965, respectively. Depreciation is calculated using the straight-line method with an estimated life of 10 years for the software development, an estimated life of 99 years for the office space, an estimated life of 10 years for the leasehold improvements, and an estimated life of 5 years for office equipment.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Capital Assets (continued)

	Net Balance at June 30, 2018	Reclassifications & Additions	Reclassifications & Deletions	Less Depreciation	Net Balance at June 30, 2019
Capital Assets, not being depreciated					
Tenant Improvements	$ 390,438	$ -	$ -	$ -	$ 390,438
Pension Administration System	2,010,712	1,121,615	578,442		2,553,885
Board Room Expansion	-	78,335	-		78,335
Board Room Expansion TI	-	245,749	-		245,749
Audio Video System	-	62,888			62,888
Total Capital Assets, not being depreciated	2,401,150	1,508,587	578,442	-	3,331,295
Capital Assets, being depreciated					
Tyler Software	32,342	-	-	32,342	-
Real Estate Occupied	1,650,969	-	1,446	18,977	1,630,546
Real Estate Leased	1,100,864	-	457	12,654	1,087,753
Leasehold Improvements	131,240	-	93,085	5,703	32,452
Office Equipment	2,811	-	-	1,022	1,789
Security & Monitoring Equipment	-	-	-	-	-
Video Conferencing Equipment	2,879	-	-	864	2,015
Imaging System	-	578,442	-	57,844	520,598
Microfiche Scanner	4,536	-	-	1,111	3,425
Total Capital Assets, being depreciated	2,925,641	578,442	94,988	130,517	3,278,578
TOTAL	$ 5,326,791	$ 2,087,029	$ 673,430	$ 130,517	$ 6,609,873

	Net Balance at June 30, 2017	Reclassifications & Additions	Reclassifications & Deletions	Less Depreciation	Net Balance at June 30, 2018
Capital Assets, not being depreciated					
Tenant Improvements	$ 390,438	$ -	$ -	$ -	$ 390,438
Pension Administration System	541,945	1,468,767	-	-	2,010,712
Total Capital Assets, not being depreciated	932,383	1,468,767	-	-	2,401,150
Capital Assets, being depreciated	64,684	-	-	32,342	32,342
Tyler Software	1,669,946	-	-	18,977	1,650,969
Real Estate Occupied	1,113,518	-	-	12,654	1,100,864
Real Estate Leased	122,193	14,750	-	5,703	131,240
Leasehold Improvements	3,833	-	-	1,022	2,811
Office Equipment	-	-	-	-	-
Audio Recording System	385	-	-	385	-
Security & Monitoring Equipment	3,743	-	-	864	2,879
Video Conferencing Equipment	-	5,554	-	1,018	4,536
Microfiche Scanner	2,978,302	20,304	-	72,965	2,925,641
Total Capital Assets, being depreciated	$ 3,910,685	$ 1,489,071	$ -	$ 72,965	$ 5,326,791
TOTAL					

Administrative Expenses

StanCERA's administrative expense is funded by the investment income and is limited to 0.21% of StanCERA's Actuarial Accrued Liability (AAL) pursuant to Government Code Section 31580.2. The law provides exemption from the limitation for the cost of computer consultation, hardware, and software. Total administrative expenses for the fiscal years ending June 30, 2019 and 2018 were $2,557,391 and $2,791,409, respectively, of which $363,841 and $253,810, respectively, were not subject to the administrative expense limitation. Administrative expenses subject to the limitation amounted to 0.0828% of AAL for the fiscal year ended June 30, 2019 and 0.1000% for the fiscal year ended June 30, 2018.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Income Taxes

StanCERA qualifies as a pension trust under Section 401(a) of the Internal Revenue Code. No provision for income taxes has been made in the accompanying financial statements as the Plan is exempt from Federal and State income taxes under the provisions of the Internal Revenue Code Section 501 and the California Revenue and Taxation Code Section 23701, respectively.

Management's Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, contingent assets and liabilities, revenue, and expenses as of the date of the financial statements. Actual results could differ from those estimates.

Reclassifications

Certain fiscal year 2018 amounts have been reclassified to conform with the fiscal year 2019 presentation.

NOTE 3 – CONTRIBUTIONS RECEIVABLE

Contributions receivable represents withdrawals from employees' salaries and liabilities due by employers for retirement contributions for the month of June that were received in July. Contributions receivable as of June 30, 2019 and 2018 were $6,666,983 and $5,897,011, respectively.

NOTE 4 – CASH AND INVESTMENTS

The California State Constitution and the County Employees Retirement Law of 1937 give the Board the exclusive authority to invest the assets of StanCERA and the Board may, at its discretion, invest or delegate the authority to invest, such assets through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction when deemed prudent in the informed decision of the Board. StanCERA invests the assets according to a written Investment Policy established by the Board and currently employs external investment managers to manage the assets subject to the guidelines in the Investment Policy.

Deposits in Stanislaus County Treasury

Cash needed for StanCERA's daily operational purposes is pooled with other County funds by the County Treasurer for short-term investment purposes. The County is responsible for the control and safekeeping of all instruments of title and for all investments of the pooled funds. Investments in the County Investment Pool are managed according to the Investment Policy established by the County and are subject to regulatory oversight by the County's Treasury Oversight Committee. Participation in the County Investment Pool is not mandatory.

The fair value of StanCERA's shares in the pooled funds is the same as the value of the County Investment Pool. StanCERA's cash invested with the County Treasurer is reported at amortized cost, which approximates fair value totaling $13,742,769 and $10,881,315 at June 30, 2019 and 2018, respectively. Cash and investments included within the County Treasurer's Pool are described in the County's Financial Report.

NOTE 4 – CASH AND INVESTMENTS (continued)

Investments

Investment Policy – StanCERA's policy in regard to the allocation of invested assets is established and may be amended by the Board. The investments of the Plan are trust funds and are held for the exclusive purpose of providing benefits to the participants in the Plan and their beneficiaries and defraying reasonable expenses of administering the Plan. The investments shall be diversified so as to minimize the risk of loss and to maximize the rate of return.

StanCERA's Investment Program employs three functional Sub-portfolios to construct the comprehensive asset allocation: the Liquidity Sub-portfolio, the Growth Sub-portfolio and the Diversifying Sub-portfolio. The Liquidity Sub-portfolio will ensure adequate assets are available to pay benefits over an extended timeframe. The Growth Sub-portfolio will grow the invested assets over the long-term in order to pay future benefits. The Diversifying Sub-portfolio is to offset the investment risk of the Growth Sub-portfolio. The allocations to the Liquidity, Growth and Diversifying Sub-portfolios will vary over time and will be reviewed on an annual basis. The adopted asset allocation for the three Sub-portfolios is:

Asset Class	June 30, 2019 Target Allocation	June 30, 2018 Target Allocation
Domestic Equities	17.00%	24.00%
International Equities	23.00%	24.00%
Fixed Income	22.00%	22.00%
Real Estate Securities	5.00%	7.70%
Alternatives:		
Private Credit	6.00%	5.00%
Private Equity	6.00%	0.00%
Private Real Estate	5.00%	1.70%
Infrastructure	2.00%	0.60%
Risk Parity	13.00%	14.00%
Cash	1.00%	1.00%
	100.00%	100.00%

Rate of Return – For the fiscal years ended June 30, 2019 and June 30, 2018, the annual money-weighted rate of return on StanCERA's investments was 5.1% and 8.1%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NOTE 4 – CASH AND INVESTMENTS (continued)

Fair Value Measurement

Fair value is the price that would be received to sell an investment in an orderly transaction between market participants at the measurement date. GASB Statement No. 72 (GASB 72), *Fair Value Measurement and Application*, was adopted by StanCERA during the fiscal year June 30, 2016 and was issued to address accounting and financial reporting issues related to fair value measurement.

StanCERA classifies the fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The fair value measurements are classified according to the following hierarchy:

- Level 1 – Unadjusted quoted prices for identical investments in active markets.
- Level 2 – Quoted prices for similar investments in active markets; quoted prices for identical or similar investments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable.
- Level 3 – Investments with valuations derived from valuation techniques in which significant inputs or significant value drivers are unobservable.

Inputs used to measure fair value might fall in different levels of the fair value hierarchy; in which case, StanCERA defaults to the lowest level input that is significant to the fair value measurement in its entirety. In determining the appropriate levels, a detailed analysis was performed of the assets and liabilities that are subject to GASB 72.

The following tables present fair value measurements as of June 30, 2019 and June 30, 2018:

Investments Measured at Fair Value

Investments by Fair Value Level	43646	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed Income Securities				
Corporate and Other Credit	$ 231,402,588	$ -	$ 231,402,588	$ -
Emerging Market Non-U.S. Bonds	120,066,422	-	120,066,422	-
U.S. Government Agency	62,959,767	-	62,959,767	-
U.S. Treasury	65,287,287	-	65,287,287	-
Total Fixed Income Securities	479,716,064	-	479,716,064	-
Equity Securities				
Non-U.S. Equity	486,264,078	486,264,078	-	-
U.S. Equity	149,746,709	149,746,709	-	-
Commingled Equity Funds	280,245,220	-	280,245,220	-
Emerging Market Equity	66,954,530	-	66,954,530	-
Commingled Real Estate Funds	37,095,763	-	37,095,763	-
Total Equity Securities	1,020,306,300	636,010,787	384,295,513	-
Collateral from Securities Lending	144,376,536	-	144,376,536	-
Total Investments by Fair Value Level	$ 1,644,398,900	$ 636,010,787	$ 1,008,388,113	$ -
Investments Measured at the Net Asset Value (NAV)				
Private Credit	$ 95,094,309			
Private Real Estate	197,966,376			
Infrastructure	43,388,166			
Risk Parity	309,627,036			
Total Investments Measured at the NAV	646,075,887			
Total Investments	$ 2,290,474,787			

NOTE 4 – CASH AND INVESTMENTS (continued)

Fair Value Measurement (continued)

Investments Measured at Fair Value

Investments by Fair Value Level	6/30/2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed Income Securities				
Corporate and Other Credit	$ 163,597,930	$ -	$ 163,597,930	$ -
Emerging Market Non-U.S. Bonds	104,365,150	-	104,365,150	-
U.S. Government Agency	59,741,009	-	59,741,009	-
U.S. Treasury	7,950,972	-	7,950,972	-
Total Fixed Income Securities	335,655,061	-	335,655,061	-
Equity Securities				
Non-U.S. Equity	386,997,697	386,480,576	-	517,121
U.S. Equity	187,088,783	187,088,783	-	-
Commingled Equity Funds	355,389,874	-	355,389,874	-
Emerging Market Equity	45,306,897	-	45,306,897	-
Commingled Real Estate Funds	128,978,153	-	128,978,153	-
Total Equity Securities	1,103,761,404	573,569,359	529,674,924	517,121
Collateral from Securities Lending	85,288,212	-	85,288,212	-
Total Investments by Fair Value Level	$ 1,524,704,677	$ 573,569,359	$ 950,618,197	$ 517,121
Investments Measured at the Net Asset Value (NAV)				
Private Credit	$ 94,881,719			
Private Real Estate	79,771,614			
Infrastructure	30,177,146			
Risk Parity	283,242,444			
Total Investments Measured at the NAV	488,072,923			
Total Investments	$ 2,012,777,600			

Fixed Income Securities

Asset-Backed Securities, Mortgage-Backed Securities, and Non-U.S. Bonds are valued using a combination of the discounted cash flow income model and the matrix market model. Two proprietary discounted cash flow models are used: non-volatile tranche and volatile tranche. Prepayment speeds are derived from market participant quotes along with terms and conditions of the tranche and both are entered into the model to determine the evaluated price. Matrices are developed based on trade and quote activity of bonds with similar features including issuer, vintage and purpose of the underlying loan, prepayment speeds and credit ratings in order to identify trades and quotes for similar securities.

Corporate Bonds and Municipal Bonds are valued using the matrix market model. Model inputs are derived from the market, brokers, dealer, mutual funds, and vendor client base. Model inputs include, but are not limited to: spread benchmark curves, prepayment speeds, inputs to build curves/spreads, comparable trades, bid price or spread, discount rates, quotes, trade reports, and financial reports. US Government Agency and US Treasury Bills are valued using the consensus evaluation model and the matrix evaluation model. These model inputs come from market sources and integrate relative credit information, observed market movements, and sector news.

NOTE 4 – CASH AND INVESTMENTS (continued)

Fair Value Measurements (continued)

Prices are updated regularly by obtaining dealer quotes and other market information including live trading levels, when available.

Equity Securities

Equity securities are valued using the NASDAQ Official Closing Price which determines the market specific closing price for NASDAQ listed issues. For equity securities listed on exchanges, the last trade price is used. The last trade price is the price at which a specific security was last traded on the primary exchange. If the NASDAQ Official Closing Price or the last trade price is not available, a bid, ask/offer quote, is obtained from a third-party vendor.

Commingled funds are valued using the net asset value (NAV) which is the market value of all securities owned by the fund, minus its total liabilities, divided by the number of shares issued. Funds that are valued using the NAV are usually not reported within the fair value hierarchy. However, StanCERA's commingled funds are supported by audited financial statements which provide observable market data. Commingled funds are legally or contractually required to redeem at the NAV and therefore are classified as Level 2.

Investments Measured at the Net Asset Value (NAV)

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

The following tables present fair value measurements as of June 30, 2019:

Investments measured at NAV	Fair Value	Unfunded Commitment	Redemption Frequency If Curruently Eligible	Remption Notice Period
Private Credit Funds	$ 95,094,309	$ 19,305,108	Not Eligible	Not Applicable
Private Real Estate Funds	197,966,376	38,133,292	Quarterly, Not Eligible	5-90 Days, Not Applicable
Infrastructure Funds	43,388,166	8,251,433	Not Eligible	Not Applicable
Risk Parity Funds	309,627,036	-	Monthly	5-15 Days
Total Investment Measured at NAV	$ 646,075,887	$ 65,689,833		

Private Credit Funds consist of investments in four limited partnerships. The types of partnership strategies included in these funds are venture capital, growth equity, buyouts, special situations, mezzanine, and distressed debt. These funds are not eligible for redemption. Distributions are received as the underlying funds are liquidated, which can occur over the span of three to seven years. Total commitments for these funds are $160.0 million, of which $19.3 million is unfunded.

Private Real Estate Funds consist of investments in five limited partnerships. These funds are mainly invested in US commercial real estate. Shares of three of these funds can be redeemed at the request of the shareholders after a lockout period of up to two years. Distributions from each of these funds will be received as the underlying investments are liquidated. Three of these funds are open-ended and the distributions are reinvested. Liquidation of the underlying investments for one fund can occur over time up to eight years. Total commitments for these funds are $217.0 million, of which $38.1 million is unfunded.

NOTE 4 – CASH AND INVESTMENTS (continued)

Fair Value Measurements (continued)

Infrastructure Funds consist of one investment in a limited partnership. This fund is focused on opportunities in the energy, utilities and transportation sectors, and target investments in infrastructure assets globally within the Organization for Economic Cooperation and Development countries. The funds are not eligible for redemption. Distributions from this fund will be received as the underlying investments are liquidated, which can occur over the span of twelve years. Total commitments for this fund are $50.0 million, of which $8.3 million is unfunded.

Risk Parity Funds are mutual funds that invest in multiple asset classes represented by equity, fixed income, and commodities strategies in order to generate attractive risk-adjusted returns over time. These are open-ended funds and shares can be redeemed at the end of any given month at the request of the shareholder. Distributions for this fund are reinvested into the fund. Total commitments for this fund are $280.0 million, and they are fully funded.

Securities Lending Program

The Board of Retirement permits StanCERA to participate in a securities lending program. StanCERA lends bonds and equities to various brokers for collateral that will be returned for the same securities plus a fee in the future. Transactions are collateralized at 102% of fair value for domestic securities and 105% of fair value for international securities. Collateral received may include cash, letters of credit, or securities. Because the loans were terminable-at-will, their duration did not match the duration of the investments made with cash collateral. Either StanCERA or the borrower can terminate all securities loaned on demand. There are no restrictions on the amount of securities that may be lent.

StanCERA's custodial bank administers its securities lending program. The cash collateral is reported on the financial statements as an asset and as a liability of StanCERA while the non-cash collateral is reported neither as an asset nor a liability in accordance with GASB Statement No. 28. StanCERA does not have the ability to pledge or sell collateral securities delivered absent a borrower default. The contract with the securities lending agent requires them to indemnify StanCERA if the borrower fails to return the securities (or if the collateral is not sufficient to replace the securities lent) or if the borrower fails to pay StanCERA for income distributions while the securities are on loan.

Investments made with cash collateral are classified by risk category. The average maturity of the loans is one week and are rated at least "A1" or "P1" by two nationally recognized statistical rating organizations or, if unrated, be determined by the bank to be of comparable quality. As of June 30, 2019, the fair value of securities on loan was $141.3 million, with collateral received of $144.4 million and non-cash collateral of $29.4 million. As of June 30, 2018, the fair value of the securities on loan was $83.1 million, with collateral received of $85.3 million and non-cash collateral of $13.6 million.

NOTE 4 – CASH AND INVESTMENTS (continued)

As of June 30, 2019 and 2018, StanCERA had no credit risk exposure to borrowers because the amount StanCERA owes the borrower exceeds the amount the borrower owes StanCERA. StanCERA's pro-rata share of net income derived from the securities lending transactions during fiscal years 2019 and 2018 was $474,718 and $549,283, respectively. These are separate investments made on StanCERA's behalf and not StanCERA's share of pooled investments. At June 30, 2019 and 2018, StanCERA had the following securities out on loan:

	June 30, 2019		June 30, 2018	
	Fair Value of Securities on Loan	Collateral Received	Fair Value of Securities on Loan	Collateral Received
U.S. Equities	$ 43,850,944	$ 44,651,808	$ 43,828,737	$ 45,059,247
U.S. Corporate Fixed	39,238,000	40,126,194	24,918,932	25,507,304
U.S. Agencies	-	-	2,743,737	2,800,888
U.S. Government Fixed	50,695,450	51,669,485	4,810,639	4,921,920
Non-U.S. Equities	7,547,775	7,929,049	3,843,821	3,978,228
Non-U.S. Government Fixed	-	-	1,978,688	2,015,000
Non-U.S. Agencies	-	-	986,816	1,005,625
Total Securities	141,332,169	144,376,536	83,111,370	85,288,212
Total Non-Cash Collateral	28,364,054	29,410,706	12,821,766	13,567,259
Total	$ 169,696,223	$ 173,787,242	$ 95,933,136	$ 98,855,471

Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Duration is a measure of the price sensitivity of a fixed income portfolio to changes in market interest rates. Generally, the longer the maturity of an investment the greater the sensitivity of its fair value to changes in market interest rates.

Highly sensitive investments are certain debt investments whose terms may cause their fair value to be highly sensitive to market interest rate changes. Terms include such variables as embedded options, coupon multipliers, benchmark indices and reset dates. StanCERA's fixed income investments have embedded prepayment options that will typically cause prepayments by the obligees of the underlying investments when interest rates fall. Prepayments eliminate the stream of future interest payments and, therefore, diminish the fair value of the fixed income investment.

The following table shows the effective duration of StanCERA's fixed income investments by investment type.

	June 30, 2019		June 30, 2018	
Fixed Income Securities	Fair Value	Effective Duration (in years)	Fair Value	Effective Duration (in years)
Corporate Bonds	$ 231,402,588	2.8	$ 163,597,930	2.9
Emerging Market / Non-U.S. Bonds	120,066,422	2.4	104,365,150	3.0
Government Bonds	65,287,287	6.3	7,950,972	3.5
Government Agencies	62,959,767	0.8	59,741,009	0.1
Total Fixed Income Securities	$ 479,716,064		$ 335,655,062	

NOTE 4 – CASH AND INVESTMENTS (continued)

Credit Risk

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. In cases where credit ratings differ among rating agencies, the manager shall use the lowest of the ratings provided. StanCERA's custodial bank provided ratings for Moody's Investor Service (Moody's) and Standard & Poor's (S&P). Should the rating of a fixed income security fall below investment grade, the manager may continue to hold the security if they believe the security will be upgraded in the future, there is a low risk of default, and buyers will continue to be available throughout the anticipated holding period. The manager has the responsibility of notifying the Board whenever an issue falls below investment grade. Investment grade quality is defined as a Standard & Poor's rating of BBB or higher. The notification should include the manager's assessment of the issue's credit rating and its ongoing role in the portfolio. The Stanislaus County Investment Pool and the short-term investment funds held with fiscal agent are unrated.

The following table shows the quality of StanCERA's investments in fixed income securities.

	June 30, 2019		June 30, 2018	
S&P/Moody's Credit Rating	Percentage of Total Fixed Income	StanCERA's Fixed Income Securities	Percentage of Total Fixed Income	StanCERA's Fixed Income Securities
Aaa / AAA	2.47%	$ 11,830,506	9.99%	$ 33,538,553
Aa1 / AA+	1.22%	5,831,461	3.39%	11,392,391
Aa2 / AA	0.84%	4,022,701	0.44%	1,475,963
Aa3 / AA-	6.41%	30,731,875	7.33%	24,597,113
A1 / A+	8.01%	38,444,477	13.22%	44,382,479
A2 / A	3.96%	19,013,866	5.77%	19,351,750
A3 / A-	8.54%	40,983,675	9.13%	30,658,890
Baa1 / BBB+	16.25%	77,971,974	12.26%	41,140,602
Baa2 / BBB	15.75%	75,572,514	12.43%	41,716,009
Baa3 / BBB-	7.94%	38,099,541	6.38%	21,431,517
N/R	14.99%	71,926,187	17.29%	58,018,822
N/A	13.62%	65,287,287	2.37%	7,950,972
Total	100.00%	$ 479,716,064	100.00%	$ 335,655,061

N/R represents securities that are not rated.
N/A represents securities that are not applicable to the rating disclosure requirements.

NOTE 4 – CASH AND INVESTMENTS (continued)

Concentration of Credit Risk

Concentration of credit risk is the risk of loss due to a large concentration of investments in any one issuer. Investments issued or explicitly guaranteed by the US Government and investments in mutual funds, external investment pools, and other pooled investments are exempt from the disclosure requirements. As of June 30, 2019 and 2018, for separately managed investment accounts, StanCERA did not have investments in any one issuer representing 5% or more of the total portfolio.

Custodial Credit Risk

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. StanCERA does not have a formal policy for custodial credit risk for deposits. Under California Government Code, a financial institution is required to secure deposits in excess of $250,000 made by state or local government units by pledging securities held in the form of an undivided collateral pool. The fair value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure governmental deposits by pledging first deed mortgage notes having a value of 150% of the secure public deposits. Such collateral is held by the pledging financial institution’s trust department or agent in StanCERA’s name. At fiscal year end, StanCERA had no custodial credit risk exposure to any depository financial institution. All deposits are placed with a custodial bank.

Custodial credit risk for investments is the risk that, in the event of the failure of the counter-party (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. StanCERA does not have a formal policy for custodial credit risk for investments. Investment securities are exposed to custodial credit risk if the securities are uninsured, not registered in the governmental entity’s name, and held by the counter-party. StanCERA’s investment securities are not exposed to custodial credit risk because all securities held by StanCERA’s custodial bank are in StanCERA’s name.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates may adversely affect the fair value of an investment. StanCERA’s external investment managers may invest in international securities and must follow StanCERA’s Investment Guidelines pertaining to these types of investments.

American Depositary Receipts (ADR) are included in the U.S. Dollars. ADR represents underlying securities of non-U.S. companies traded on the US stock exchanges. Although the transactions are denominated in U.S. Dollars and not subject to foreign currency risk, these securities are reflected as part of the non-U.S. equities within International Equity Investments reported in the Statements of Fiduciary Net Position.

NOTE 4 – CASH AND INVESTMENTS (continued)

Foreign Currency Risk (continued)

StanCERA's exposure to foreign currency risk in U.S. dollars is as follows:

Currency	June 30, 2019 Fair Value (in U.S. $)	June 30, 2018 Fair Value (in U.S. $)
Australian Dollar	$ 24,696,796	$ 22,572,293
Brazilian Real	6,605,690	1,129,731
British Pound	57,702,550	57,527,396
Canadian Dollar	38,168,668	27,534,006
Chilean Peso	1,501,431	1,524,385
Danish Krone	1,625,246	4,147,832
Euro Dollars	130,617,045	103,808,118
Hong Kong Dollar	44,237,396	28,646,018
Hungarian Forint	2,141,903	1,004,927
Indonesian Rupiah	2,447,002	1,256,863
Japanese Yen	83,953,251	72,637,597
Malaysian Renggit	1,484,859	1,041,961
New Isreali Shekel	208,126	538,455
New Taiwan Dollar	10,129,517	8,110,790
New Zealand Dollar	935,039	1,010,451
Norwegian Krone	5,142,485	4,896,867
Singapore Dollar	4,758,179	3,067,923
South African Rand	2,329,773	2,317,508
South Korean Won	12,712,983	9,721,857
Swedish Krona	10,618,115	5,372,742
Swiss Franc	32,707,910	20,970,083
Thailand Baht	1,590,847	1,208,436
Turkish Lira	1,875,577	1,652,052
U.S. Dollar	75,028,220	50,606,303
TOTAL	$ 553,218,608	$ 432,304,594

NOTE 4 – CASH AND INVESTMENTS (continued)

Commitments to Private Credit

At June 30, 2019 and June 30, 2018, StanCERA's total capital commitments to private credit partnerships was $160,000,000 for both fiscal years. Of this amount, $19,305,108 and $33,618,205, respectively, remained unfunded and is not recorded on StanCERA's Statements of Fiduciary Net Position.

Commitments to Private Real Estate

At June 30, 2019 and June 30, 2018, StanCERA's total capital commitments to private real estate partnerships was $217,000,000 and $182,000,000, respectively. Of this amount, $38,133,292 and $115,712,327, respectively, was unfunded and is not recorded in StanCERA's Statement of Fiduciary Net Position.

Commitments to Infrastructure

At June 30, 2019 and June 30, 2018, StanCERA's total capital commitments to infrastructure was $50,000,000 for both fiscal years. Of this amount, $8,251,433 and $32,347,520, respectively, was unfunded and is not recorded in StanCERA's Statement of Fiduciary Net Position.

Commitments to Risk Parity

At June 30, 2019 and June 30, 2018, StanCERA's total commitments to risk parity was $280,000,000 for both fiscal years. Risk Parity was 100% funded for both fiscal years.

Investment Expense

Investment expense includes fees paid for investment consulting services, fund evaluation services, and securities custodian services. Fees paid are charged against the StanCERA's investment earnings pursuant to Government Code Sections 31596.1 and 31592.5.

Investment Expense

	June 30, 2019	June 30, 2018
Investment Managers	$ 6,278,921	$ 8,904,759
Investment Consultants	483,103	291,039
Custodial Fees	323,150	243,531
Investment Attorney	21,161	74,163
Other Investment Costs	1,758,022	1,515,476
Total Other Investment Expenses	$ 8,864,357	$ 11,028,968
Actuarial Fees	144,063	91,802
Total Investment Expenses	$ 9,008,420	$ 11,120,770

NOTE 5 - CONTRIBUTIONS

Contribution Rates

The County Employees Retirement Law of 1937 establishes the basic obligations for employer and member contributions to the retirement plan. The actual employer and member contribution rates in effect each year are based on recommendations made by an independent actuary and adopted by the Board.

StanCERA's policy for employer contributions states that actuarially determined rates expressed as a percentage of annual covered payroll are required to accumulate sufficient assets to pay benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age actuarial cost method. StanCERA also uses the level entry age normal cost method with an UAAL to amortize any unfunded liability.

Member basic rates are based on a formula reflecting the age at entry into the Plan. For Tier 5 Safety, the rates are such as to provide an average monthly annuity at age 50 equal to 1/100 of the FAS. Tier 1 General Members pay rates that will provide an average annuity at age 60 of 1/100 of the FAS. Tier 4 General Members pay rates that will provide an average annuity at age 55 of 1/120 of the FAS. County (and former County agency) Safety and General Members in Tiers 1 and 4 pay one half of the aforementioned rates. General Members in Tier 2 pay rates to provide an average annuity of 1/120 of FAS at age 60. General Members in Tier 3 pay no member contributions. General Members in Tier 5 pay rates to provide an average annuity at age 55 of 1/120 of FAS. Both General and Safety Tier 6 Members pay approximately half of the actuarial determined normal cost rate for the benefit.

Member cost-of-living contributions, expressed as a percentage of their basic rates, are designed to pay for one-half of the cost-of-living liabilities for future service. For members integrated with Social Security, the above contributions are reduced by 1/3 of that portion of such contribution payable with respect to the first $350 of monthly salary. Member contributions are refundable upon termination from the retirement system.

Contributions as a percentage of covered payroll for fiscal year ended June 30, 2019, are shown in the following table:

Employer	Employer Contributions	Member Contributions	Employer Contributions as a % of Covered Payroll
Stanislaus County	$ 78,729,628	$ 24,763,793	27.9203%
City of Ceres	5,036,102	1,434,982	1.7860%
Stanislaus Superior Court	3,938,872	1,265,380	1.3969%
Stanislaus Council of Governments	312,482	113,457	0.1108%
East Side Mosquito Abatement District	226,594	70,279	0.0804%
Salida Sanitary District	193,792	52,061	0.0687%
Keyes Commuinity Services District	89,528	24,969	0.0317%
Hills Ferry Cemetery District	62,383	17,942	0.0221%
	$ 88,589,381	$ 27,742,863	31.4169%
Covered Payroll	$ 281,979,654		

NOTE 5 – CONTRIBUTIONS (continued)

Contributions Rates (continued)

Contributions as a percentage of covered payroll for fiscal year ended June 30, 2018, are shown in the following table:

Employer	Employer Contributions	Member Contributions	Employer Contributions as a % of Covered Payroll
Stanislaus County	$ 68,667,117	$ 23,954,827	25.6212%
City of Ceres	4,265,800	1,347,708	1.5917%
Stanislaus Superior Court	3,305,021	1,185,394	1.2332%
Stanislaus Council of Governments	227,154	93,687	0.0848%
East Side Mosquito Abatement District	187,708	89,148	0.0700%
Salida Sanitary District	182,609	32,659	0.0681%
Keyes Commuinity Services District	78,515	25,516	0.0293%
Hills Ferry Cemetery District	52,547	17,350	0.0196%
	$ 76,966,471	$ 26,746,289	28.7179%
Covered Payroll	$ 268,009,042		

NOTE 6 – RESERVES

As required by the County Employees Retirement Law of 1937 or the Board's policies, the following reserves from Fiduciary Net Position Restricted for Pension Benefits must be established and used to account for the members' (employees and retirees) contributions.

Active Members' Reserve

This reserve represents the cumulative contributions made by active members (employees), after deducting refunds to the members, plus the investment earnings credited to the reserve at the assumed rate of return determined by the actuary. For fiscal years ended June 30, 2019 and 2018, the actuarial assumed rate of return was 7.25%. Based on Retirement Board policy when the Plan is below 100% funded on a market basis, the percentage allocated to Active Members' Reserve is capped at the actuarial assumed rate of return and will determine the semi-annual percent of interest to be posted to individual member account balances in the subsequent fiscal year.

Employer Reserves

These reserves represent the cumulative contributions made by the County and other employers. Interest earnings are credited to these reserves based on StanCERA's excess earnings policy.

Upon the retirement of an active member, an actuarially determined amount of the member's vested interest is transferred from the Employer Advance Reserve to the Retired Members' Pension Reserve.

NOTE 6 – RESERVES (continued)

Retired Members’ Pension Reserve

These reserves are established to account for the unpaid retirees’ pension benefits. Upon the retirement of an employee, member contributions plus the interest earnings credited to the member’s account are transferred from the Active Members’ Reserve account to the Retired Members’ Annuity and Cost-of-Living Reserve accounts.

From these reserves, StanCERA pays the retiree benefits in an amount computed in accordance with the County Employees Retirement Law of 1937. Interest earnings are credited to this reserve based on StanCERA’s excess earnings policy.

Retiree Burial Allowance Reserve

The burial allowance reserve is a benefit the Board of Retirement offers which pays the family member of a deceased retiree a lump sum death benefit. This benefit is available for all retirees whose last work in a 1937 Act Retirement System or California Public Employees Retirement System (CalPERS) was with StanCERA. Interest earnings are credited to this reserve based on StanCERA’s excess earnings policy.

Contingency Reserve

This optional reserve represents earnings in excess of the total interest credited to contributions of the employer and employee and is funded at a minimum 1% of total valuation reserves prior to excess earnings distribution (Government Code Section 31592). It is used as a reserve against deficiencies in interest earnings in other years, losses on investments, and other contingencies. The Board set this reserve to 1% in May 2012 and it is reviewed and adjusted annually.

Undistributed Earnings/(Losses)

This “designation” account was established on June 30, 2003. It was used to minimize the impact of actuarial smoothing of assets and contains an accumulation of earnings or losses, which have not been distributed to any other reserve. This reserve has undistributed earnings or losses of $0 and $0 as of June 30, 2019 and 2018.

Other Reserves

These reserves are for Retirees’ Special Cost-of-Living, Tier 3 Disability and Legal Contingencies.

NOTE 6 – RESERVES (continued)

Reserve Account Balances are as follows:

	June 30, 2019	June 30, 2018
Active Members' Reserve	$ 588,122,376	$ 535,714,800
Employer Advance Reserve	292,437,886	279,928,797
Employer Transfer from Non-Valuation Reserve	167,007,137	162,513,672
Retired Members' Pension Reserve	1,132,162,574	1,120,383,999
Retiree Burial Allowance Reserve	5,085,657	6,535,408
Contingency Reserve	21,347,701	19,760,251
Other Reserves		
Legal Contingency Reserve	2,076,541	2,122,258
Tier 3 Disability Reserve	1,560	1,560
Total Reserves	$ 2,208,241,432	$ 2,126,960,745

NOTE 7 – LITIGATION

StanCERA is a defendant in various lawsuits and claims arising in the ordinary course of its operations. StanCERA's management and legal counsel estimate the ultimate outcome of such litigation will not have a material effect on StanCERA's financial statements.

NOTE 8 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

Actuarial Assumptions

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period July 1, 2015 through June 30, 2018. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2019, and the Total Pension Liability as of the valuation date, June 30, 2018, using update procedures to roll forward to StanCERA's fiscal year end of June 30, 2019. There were no significant events between the valuation date and the measurement date, so the roll forward procedures only included the addition of service cost offset by actual benefit payments.

The components of the Net Pension Liability of StanCERA at June 30, 2019 and June 30, 2018 were as follows:

	June 30, 2019	June 30, 2018
Total Pension Liability	$ 2,868,469,377	$ 2,772,667,458
Plan Fiduciary Net Position	$ (2,208,241,432)	$ (2,126,960,745)
Net Pension Liability	$ 660,227,945	$ 645,706,713
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.0%	76.7%

Actuarial Assumptions (continued)

The Total Pension Liability was determined based on the June 30, 2018 and June 30, 2017 actuarial valuations rolled forward to June 30, 2019 and June 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement:

ACTUARIAL VALUATION ASSUMPTIONS

Measurement Date	June 30, 2019	June 30, 2018
Investment Rate of Return	7.00%, net of investment expenses	7.25%, net of investment expenses
Projected Salary Increases	3.00%, per year plus merit component based on employee classification and years of service	3.25%, per year plus merit component based on employee classification and years of service
Attributed to Inflation	2.75%	3.00%
Cost-of-Living Adjustments	100% of Consumer Price Index (CPI) up to 3.0% annually with banking, 2.6% annual increases assumed	100% of Consumer Price Index (CPI) up to 3.0% annually with banking, 2.7% annual increases assumed

Post-retirement mortality rates for active Members are specified by the California Public Employees Retirement System (CalPERS) Pre-Retirement Non-Industrial Mortality table adjusted by 97.2% for males and 101.6% for females with generational mortality improvements projected from 2009 using Scale MP-2018. Duty related mortality rates are only applicable for Safety Active Members and are based on the CalPERS Pre-Retirement Industrial Death table without adjustment or projection.

Rates of mortality for retired Members and their beneficiaries are specified by the CalPERS Healthy Annuitant table adjusted by 104.5% for females and no adjustment for males with generational mortality improvements projected from 2009 using Scale MP-2018.

The long-term defined benefit pension plan return expectations were determined using a building-block approach. An inflation forecast is the baseline and various real return premiums (e.g., bonds, equities, etc.) are added to create nominal return expectations for each asset class. These expectations are combined to produce the long-term expected rate of return by weighting the expected nominal rates of return by the target asset allocation percentages and including an expected return from rebalancing uncorrelated asset classes.

NOTE 8 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (continued)

Actuarial Assumptions (continued)

Best estimates of geometric real rates of return for each major asset class included in the target asset allocation as of June 30, 2019 and June 30, 2018 are summarized in the following table:

Asset Class	2019 Long-Term Expected Real Rate of Return	2018 Long-Term Expected Real Rate of Return
Domestic Equities		
U.S. Large Cap	5.80%	4.50%
U.S. Small Cap	5.40%	4.40%
International Equities		
Int'l Development	7.70%	8.60%
Emerging Market Equity	8.60%	7.30%
U.S. Fixed Income		
Core fixed income	3.30%	0.00%
U.S. Treasury	2.70%	2.40%
Short-term Gov/Credit	2.80%	2.50%
Real Estate		
Core	6.10%	6.00%
Value-add	8.10%	8.00%
Risk Parity	7.10%	7.20%
Private Equity	8.80%	6.40%
Private Credit	7.70%	6.90%
Infrastructure	7.90%	7.10%
Cash	2.10%	2.20%

Discount Rate

The discount rate used to measure the total pension liability for the years ended June 30, 2019 and June 30, 2018 were 7.00% and 7.25%, respectively. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from the employers will be made at contractually required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

NOTE 8 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (continued)

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

The following presents the net pension liability of StanCERA calculated using the discount rate of 7.00% and 7.25%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.00% and 6.25%) or one percentage point higher (8.00% and 8.25%) than the current rate for fiscal years ending June 30, 2019 and 2018:

Sensitivity of Net Pension Liability to Changes in Discount Rate

		1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
June 30, 2019	Net Pension Liability	$ 1,062,692,654	$ 660,227,945	$ 331,678,933
	Fiduciary Net Postion as a Percentage of Total Pension Liability	67.5%	77.0%	86.9%
		1% Decrease 6.25%	Prior Discount Rate 7.25%	1% Increase 8.25%
June 30, 2018	Net Pension Liability	$ 1,036,523,014	$ 645,706,713	$ 327,139,828
	Fiduciary Net Postion as a Percentage of Total Pension Liability	67.2%	76.7%	86.7%

NOTE 9 – SUBSEQUENT EVENTS

StanCERA has evaluated events through November 13, 2019, which is the date the financial statements were issued. No subsequent events took place after June 30, 2019.

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios

	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Total Pension Liability						
Service cost	$ 59,957,490	$ 58,007,036	$ 57,465,280	$ 55,351,509	$ 48,242,363	$ 46,209,346
Interest (includes interest on service cost)	198,460,567	190,493,637	179,875,553	171,938,615	154,850,353	147,384,248
Changes of benefit terms	-	-	-	-	-	-
Differences between expected and actual experience	15,206,475	(12,172,006)	28,801,984	(6,424,597)	2,148,638	-
Changes of assumptions (3)	(46,047,924)	-	-	269,752,272	-	-
Benefit payments, including refunds of member contributions	(131,774,689)	(123,172,116)	(116,843,858)	(108,165,810)	(101,858,156)	(94,782,471)
Net change in total pension liability	95,801,919	113,156,551	149,298,959	382,451,989	103,383,198	98,811,123
Total pension liability - beginning	2,772,667,458	2,659,510,907	2,510,211,948	2,127,759,959	2,024,376,761	1,925,565,638
Total pension liability - ending	$ 2,868,469,377	$ 2,772,667,458	$ 2,659,510,907	$ 2,510,211,948	$ 2,127,759,959	$ 2,024,376,761
Fiduciary Net Position						
Contributions - employer	$ 88,589,381	$ 76,966,471	$ 63,024,560	$ 58,196,310	$ 53,849,031	$ 46,763,996
Contributions - member (1)	27,742,863	26,746,289	25,463,745	23,916,508	22,960,235	21,867,911
Total investment income (loss)	99,280,525	154,988,199	252,309,705	(31,322,276)	68,722,781	274,896,108
Benefit payments, including refunds of member contributions	(131,774,691)	(123,172,116)	(116,843,858)	(108,165,810)	(101,858,156)	(94,782,471)
Administrative expense	(2,557,391)	(2,791,409)	(2,644,554)	(2,315,223)	(2,378,966)	(2,249,260)
Net change in fiduciary net position	81,280,687	132,737,434	221,309,598	(59,690,491)	41,294,925	246,496,284
Fiduciary net position - beginning	2,126,960,745	1,994,223,311	1,772,913,713	1,832,604,204	1,791,309,279	1,544,812,995
Fiduciary net position - ending	$ 2,208,241,432	$ 2,126,960,745	$ 1,994,223,311	$ 1,772,913,713	$ 1,832,604,204	$ 1,791,309,279
Net pension liability - ending	$ 660,227,945	$ 645,706,713	$ 665,287,596	$ 737,298,235	$ 295,155,755	$ 233,067,482
Fiduciary net position as a percentage of the total pension liability	77.0%	76.7%	75.0%	70.6%	86.1%	88.5%
Covered payroll (2)	$ 281,979,654	$ 268,009,042	$ 255,646,515	$ 245,751,576	$ 237,263,160	$ 221,863,110
Net pension liability as a percentage of covered payroll	234.1%	240.9%	260.2%	300.0%	124.4%	105.1%

Note: Trend Information: Schedule will ultimately show information for ten years. Additional years will be displayed as they become available.

(1) In accordance with GASB Statement No. 82, employer-paid member contributions are classified as Member Contributions.

(2) In accordance with GASB Statement No. 82, Covered Payroll is the payroll on which contributions are based.

(3) In 2016, amounts reported as changes of assumptions resulted primarily from changes to the assumed earnings rate from 7.75% to 7.25% and from adjustments to assumed life expectancies as a result of adopting mortality tables with generational improvements. In 2019, amounts reported as changes of assumptions resulted primarily from changes to the assumed earnings rate from 7.25% to 7.00% and from adjustments to mortality rates, disability rates, and retirement rates.

Schedule of Employer Contributions
Last 10 Fiscal Years for Fiscal Years Ending June 30
(Dollar amounts in thousands)

	2019	2018	2017	2016	2015
Actuarially Determined Contributions	$ 88,589	$ 76,966	$ 63,025	$ 58,196	$ 53,849
Contributions in Relation to the Actuarially Determined Contributions	88,589	76,966	63,025	58,196	53,849
Contribution Deficiency/(Excess)	$ -	$ -	$ -	$ -	$ -
Covered Payroll (1)	$ 281,980	$ 268,009	$ 255,647	$ 245,752	$ 237,263
Contributions as a Percentage of Covered Payroll	31.42%	28.72%	24.65%	23.68%	22.70%

	2014	2013	2012	2011	2010
Actuarially Determined Contributions	$ 46,764	$ 39,077	$ 41,614	$ 47,657	$ 31,814
Contributions in Relation to the Actuarially Determined Contributions	46,764	39,077	41,614	47,657	31,814
Contribution Deficiency/(Excess)	$ -	$ -	$ -	$ -	$ -
Covered Payroll (1)	$ 221,863	$ 217,491	$ 215,057	$ 221,541	$ 231,538
Contributions as a Percentage of Covered Payroll	21.08%	17.97%	19.35%	21.51%	13.74%

(1) In accordance with GASB Statement No. 82, Covered Payroll is the payroll on which contributions are based.

Schedule of Investment Returns
Last 10 Fiscal Years for Fiscal Years ending June 30

	2019	2018	2017	2016	2015
Annual money-weighted rate of return, net of investment expense	5.10%	8.10%	14.40%	-1.70%	4.20%

	2014	2013	2012	2011	2010
Annual money-weighted rate of return, net of investment expense	18.20%	14.50%	0.70%	22.90%	15.90%

Changes of benefit terms

There were no changes of benefit terms for fiscal year ended June 30, 2019.

Changes of assumptions

The amounts reported as changes in assumptions for fiscal year ending June 30, 2019 resulted primarily from changes to the assumed earnings rate from 7.25% to 7.00% and from adjustments to mortality rates, disability rates, and retirement rates. Mortality rates were adjusted to the CalPERS base table and the generational mortality improvement scales (from the 2015 to the 2018 tables). StanCERA adopted CalPERS State Safety rates for Safety service-connected disability rates and updated CalPERS non-service connected disability rates for General members. Retirement rates were lowered for pre-PEPRA General members from ages 55-60, and adjusted to CalPERS rates for PEPRA members (General and Safety).

Methods and Assumptions Used in Calculations of Actuarially Determined Contributions

The actuarially determined contribution amounts in the schedule of employer contributions are calculated as of June 30, 2017, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule:

ACTUARIAL VALUATION METHODS AND ASSUMPTIONS

Valuation Date	June 30, 2017
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay
Remaining Amortization Period	Closed period - 19 Years
Asset Valuation Method	Actuarial value: Excess earnings smoothed over five years, 80% / 120% corridor around market
Actuarial Assumptions	
Investment Rate of Return	7.25%, net of investment expenses
Projected Salary Increases	3.25%, plus service-based rates
Attributed to Inflation	3.00%
Cost-of-Living Adjustments	100% of CPI to 3.0% annually with banking, 2.7% annual increases assumed
Mortality	Rates of ordinary death for active Members are specified by the CalPERS Pre-Retirement Non-Industrial Mortality table, adjusted by 100.3% for males and 98.8% for females, with generational mortality improvements projected from 2009 using Scale MP-2015. Duty related mortality rates are only applicable for Safety Active Members, and are based on the CalPERS Pre-Retirmeent Individual Death table without adjustment or projection.
	Rates of motality for healthy retired Members and their beneficiaries are specified by the CalPERS Healthy Annuitant table, adjusted by 93.4% for males and 107.9% for feales, with generational mortality improvements projected from 2009 using Scale MP-2015. Separate mortality assumptions are used for disabled retirees.

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2019 can be found in the June 30, 2017 actuarial valuation report located on StanCERA's website, www.stancera.org.

OTHER SUPPLEMENTAL INFORMATION

SCHEDULE OF ADMINISTRATIVE EXPENSES
For the Fiscal Years Ended June 30, 2019 and 2018

	2019	2018
Personnel Services:		
Salaries and Employee Benefits	$ 1,491,409	$ 1,370,711
Total Personnel Services	1,491,409	1,370,711
Professional Services:		
Computer and Software Services and Support	256,265	220,591
Outside Legal Counsel	102,356	604,623
Disability Hearing Officer/Medical Exams and Reviews	10,388	16,000
External Audit Fees	47,624	44,452
Other Professional Services	1,025	6,959
Total Professional Services	417,658	892,625
Office Expenses:		
Office Supplies	13,160	14,333
Minor Equipment and Computer Supplies	31,473	13,248
Stanislaus County Support Services	168,869	134,958
Contract Services	32,771	32,968
Communications	56,742	66,595
Publications	4,841	4,327
Total Office Expenses	307,856	266,429
Miscellaneous:		
Fiduciary and Staff - Education/Travel	117,425	89,627
Fiduciary and Staff - Meetings/Other Travel	8,300	6,800
Insurance	77,852	80,972
Memberships	6,374	11,280
Depreciation	130,517	72,965
Total Miscellaneous	340,468	261,644
TOTAL ADMINISTRATIVE EXPENSES	$ 2,557,391	$ 2,791,409

OTHER SUPPLEMENTAL INFORMATION (continued)

SCHEDULE OF INVESTMENT MANAGEMENT FEES AND OTHER INVESTMENT EXPENSES
For the Fiscal Years Ended June 30, 2019 and 2018

	2019	2018
Investment Management Fees:		
Domestic Equity	$ 796,475	$ 1,708,833
International Equity	1,338,231	1,569,198
Fixed Income	520,469	475,320
Private Credit	(202,297)	1,972,012
Private Real Estate	2,088,524	1,853,891
Infrastructure	636,451	721,071
Real Estate Securities & Special Situations	67,413	147,006
Risk Parity	1,033,655	457,428
Total Investment Management Fees	6,278,921	8,904,759
Investment Consulting Fees	483,103	291,039
Investment Custodian Fees	323,150	243,531
Investment Legal Fees	21,161	74,163
Other Investment Related Expenses	1,758,022	1,515,476
Total Other Investment Expenses	2,585,436	2,124,209
Actuarial Fees	144,063	91,802
TOTAL INVESTMENT EXPENSES	$ 9,008,420	$ 11,120,770

SCHEDULE OF PAYMENTS TO CONSULTANTS
For the Fiscal Years Ended June 30, 2019 and 2018

	2019	2018
Investment Professional Service Fees:		
Investment Consultants	$ 483,103	$ 291,039
Custodial Fees	323,150	243,531
Investment Attorney	21,161	74,163
Actuarial Fees	144,063	91,802
Total Investment Professional Service Fees	$ 971,477	$ 700,535

Administrative Professional Services Fees:		
Computer and Software Services and Support	$ 256,265	$ 220,591
Outside Legal Counsel	102,356	604,623
Disability Hearing Officer/Medical Exams and Reviews	10,388	16,000
External Audit Fees	47,624	44,452
Other Professional Services	1,025	6,959
Total Administrative Professional Services Fees	$ 417,658	$ 892,625

Investment Section

Stanislaus County Employee Retirement System

Summary

Verus independently calculates the Plan's performance using portfolio market valuation and transaction data provided by the Plan's custodian bank, Northern Trust. Performance calculations are presented, to the greatest degree possible, in accordance with the Global Investment Performance Standards published by the CFA Institute.

The StanCERA Total Fund returned 5.1% net of fees for the fiscal year compared to 5.9% for the Policy Index. The Total Fund earned 9.1%, 5.8%, and 9.8% net of fees for the trailing three-, five-, and ten-year periods ending June 30, 2019, respectively.

Domestic Equities' returns were more in line with expectations this past year. The Russell 3000, an all-cap equity index, returned 9.0% for the one-year ending June 30, 2019. StanCERA's Domestic Equity Portfolio returned 7.6% net of fees for the fiscal year compared to 8.4% for its custom policy index (60% Russell 1000 / 15% Russell 2000 / 25% Russell 3000 + 3%). The Plan's Domestic Equity Portfolio returned 14.3%, 9.3%, and 14.4% net of fees over the trailing three-, five-, and ten-year periods ending June 30, 2019, respectively.

International Equities suffered a bit this past year, represented by MSCI All Country World Index ex-US returning 1.8%. StanCERA's International Equity Portfolio also struggled, returning -0.8% net of fees for the fiscal year compared to the same index. The Plan's International Equity Portfolio fared better over the long term with returns of 9.2%, 2.4%, and 7.3% net of fees over the trailing three-, five-, and ten-year periods ending June 30, 2019, respectively.

The Domestic Fixed Income market bounced back from last year's lackluster performance as volatility in the equity markets drove investors to the more conservative fixed income asset class, as shown by the 7.9% returns of the Bloomberg Barclays US Aggregate Index for the one-year ending June 30, 2019. StanCERA's Domestic Fixed Income portfolio returned 6.5% net of fees for the fiscal year and returned 3.2%, 3.3%, and 5.0% net of fees over the trailing three-, five-, and ten-year periods ending June 30, 2019, respectively.

The US Real Estate market continued to experience some volatility but again generated a positive return for the fiscal year. StanCERA's Real Estate Portfolio returned 6.6% net of fees for the fiscal year compared to 9.8% for the Dow Jones US Select RESI Index. The Plan's Real Estate Portfolio returned 5.9%, 8.5%, and 9.5% net of fees over the trailing three-, five-, and ten-year periods ending June 30, 2019, respectively.

StanCERA's Private Credit Portfolio returned 3.7% net of fees for the fiscal year compared to a custom benchmark index (S&P/LSTA Leveraged Loan Index + 2%) of 6.0%. The Plan's Private Credit Portfolio returned 3.0% and 3.5% over the trailing three- and five-year periods ending June 30, 2019, respectively.

StanCERA's Risk Parity Portfolio was a bright spot in the overall Plan's performance, returning 9.3% net of fees for the one-year period ending June 30, 2019 compared to 6.1% for the custom benchmark (60% MSCI ACWI / 40% Bloomberg Barclays Global Aggregate Index).

StanCERA's Infrastructure Portfolio continues to be another source of strong returns for the Plan returning 12.4% net of fees for the fiscal year compared to 6.7% for the CPI +5% Index. The Plan's Infrastructure Portfolio returned 11.9% over the trailing three-year period ending June 30, 2019.

Investment Policy, Asset Deployment Policy and Performance Measurement Standards

StanCERA periodically reviews and updates its investment policy statement, asset allocation, and related procedures and processes. The primary investment objective is to earn a long-term return sufficient to avoid deterioration in funded status while assuming an acceptable level of investment risk. A secondary goal is to outperform the asset allocation-weighted benchmark (i.e. the "policy index"). At quarterly intervals, the System reviews performance at the total fund, asset-class composite and individual investment strategy levels. At each level, returns are evaluated against pre-determined benchmarks and peers.

The table below shows the current asset allocation as of June 30, 2019, reflective of the recently adopted structure:

Asset Class	Target Allocation
Liquidity Sub-Portfolio	**12**
Cash	1
Short-Term Gov't/Credit	11
Growth Sub-Portfolio	**77**
US Large	14
US Small	3
Private Equity	6
International Developed	23
Core Real Estate	5
Value Add Real Estate	5
Risk Parity	13
Infrastructure	2
Private Credit	6
Risk-Diversifying Sub-Portfolio	**11**
US Treasury	3
Short-Term Gov't/Credit	8
Total Allocation	**100**

Investment Objectives

Investment returns achieved through June 30, 2019 have been calculated using a time-weighted rate of return methodology based upon market values. In fiscal year 2019, StanCERA met its management goals of ensuring sufficient funds available to pay vested benefits and maintain supplemental benefits, complying with applicable fiduciary standards. The following table provides gross-of-fees returns and comparative rankings at the asset class composite and total fund levels:

Periods Ending June 30, 2019	**One Year**	**Three Years**	**Five Years**
US Equity	**7.80%**	**14.50%**	**9.60%**
60% Russell 1000 / 15% Russell 2000 /25% Russell 3000 + 3%	*8.40%*	*14.20%*	*10.10%*
Rank*	53	26	56
International Equity	**-0.40%**	**9.60%**	**2.80%**
MSCI ACWI ex-US Index	*1.80%*	*9.90%*	*2.60%*
Rank	65	41	50
US Fixed Income	**6.60%**	**3.30%**	**3.40%**
Barclays US Aggregate	*7.90%*	*2.30%*	*2.90%*
Rank	77	49	45
Real Estate	**7.30%**	**6.60%**	**9.50%**
DJ US Select Real Estate	*9.80%*	*3.70%*	*7.60%*
Private Credit	**4.30%**	**3.80%**	**4.90%**
S&P/LSTA Leveraged Loan Index +2%	*6.00%*	*7.30%*	*5.70%*
Risk Parity	*9.70%*	--	--
60% MSCI ACWI / 40% Bloomberg Barclays Global Aggregate	*6.10%*	--	--
Infrastructure	**12.40%**	**13.60%**	--
CPI + 5%	*6.70%*	7.10%	--
Total Fund	**5.40%**	**9.50%**	**6.20%**
*Policy Benchmark***	*5.90%*	*8.30%*	*6.00%*
Public Fund Median	*6.23%*	*8.85%*	*5.90%*
Rank	*72*	22	38

* Rankings based on InvestorForce's universe of all Public Defined Benefit Plans. Ranking 1 is highest, 100 is lowest.
** 14% Russell 1000, 3% Russell 2000, 6% Russell 3000, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index +2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills.

Returns are gross of fees. Returns for periods greater than one-year are annualized. Results of all publicly traded investments are consistent with Global Investment Performance Standards (GIPS) as adopted by the CFA Board of Governors.

All of us here at Verus appreciate the opportunity to assist StanCERA in meeting the Plan's investment objectives. We look forward to continuing in our role of investment advisor and providing guidance to help navigate ever-changing markets.

Respectfully,

Eileen L. Neill, CFA
Managing Director, Senior Consultant

ASSET ALLOCATION

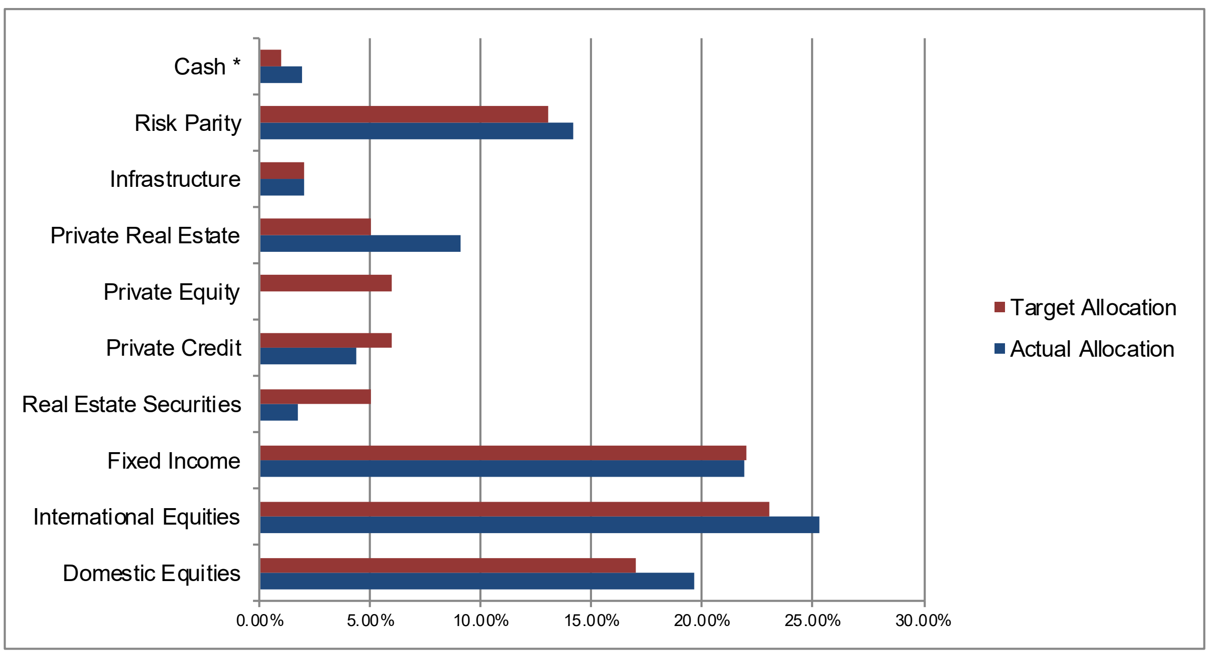
JUNE 30, 2019

Asset Class	Fair Value	Actual Allocation	Target Allocation
Domestic Equities	$ 429,991,929	19.65%	17.00%
International Equities	553,218,608	25.28%	23.00%
Fixed Income	479,716,064	21.92%	22.00%
Real Estate Securities	37,095,763	1.69%	5.00%
Private Credit	95,094,309	4.34%	6.00%
Private Equity	-	0.00%	6.00%
Private Real Estate	197,966,376	9.05%	5.00%
Infrastructure	43,388,166	1.98%	2.00%
Risk Parity	309,627,036	14.15%	13.00%
Cash *	42,500,313	1.94%	1.00%
TOTAL PORTFOLIO**	$ 2,188,598,564	100.00%	100.00%

* Excludes Pooled Cash in County Treasury of $13,742,769.

** Excludes Securities Lending Cash Collateral.

StanCERA's Asset Allocation



SCHEDULE OF INVESTMENT RETURNS
As of June 30, 2019

Investment Managers	One Year	Three Year	Five Year	Ten Year
DOMESTIC EQUITY				
Northern Trust Russell 3000	N/A	N/A	N/A	N/A
Russell 3000	*N/A*	*N/A*	*N/A*	*N/A*
Dodge & Cox	4.0%	13.9%	8.2%	14.0%
BlackRock R1000 Value	8.6%	10.3%	7.6%	N/A
Russell 1000 Value Index	*8.5%*	*10.2%*	*7.5%*	*13.2%*
BlackRock R1000 Growth	11.6%	18.1%	13.4%	N/A
Russell 1000 Growth Index	*11.6%*	*18.1%*	*13.4%*	*N/A*
Capital Prospects	-5.7%	10.8%	5.8%	13.4%
Russell 2000 Value Index	*-6.2%*	*9.8%*	*5.4%*	*12.4%*
FIXED INCOME				
Dimensional Fund Advisors	5.4%	N/A	N/A	N/A
ICE BofAML 1-5 Yrs US Corp & Govt TR	*4.3%*	*N/A*	*N/A*	*N/A*
Insight	7.2%	N/A	N/A	N/A
Barclays US Govt/Credit 1-5 Yr. TR Int TR	*5.3%*	*N/A*	*N/A*	*N/A*
Northern Trust Intermediate Gov't Bond	6.2%	N/A	N/A	N/A
Barclays US Govt Int TR	*6.2%*	*N/A*	*N/A*	*N/A*
Northern Trust Long Term Gov't Bond	12.3%	N/A	N/A	N/A
Barclays US Govt Long TR	*12.3%*	*N/A*	*N/A*	*N/A*
INTERNATIONAL EQUITY				
LSV Asset Management	-2.8%	9.3%	1.7%	7.1%
Fidelity Asset Management	1.1%	8.9%	2.9%	7.4%
MSCI ACWI ex US Index	*1.8%*	*9.9%*	*2.6%*	*7.0%*
REAL ESTATE SECURITIES				
BlackRock US Real Estate Index	9.7%	3.7%	7.5%	N/A
DJ US Select RESI TR USD	*9.8%*	*3.7%*	*7.6%*	*N/A*
PRIVATE CREDIT *				
Medley Opportunity Fund II	1.3%	N/A	N/A	N/A
Raven Opportunity Fund I	2.0%	N/A	N/A	N/A
Raven Opportunity Fund III	5.5%			
White Oak Global Advisors	7.4%	N/A	N/A	N/A
9% Annual	*9.0%*	*N/A*	*N/A*	*N/A*
PRIVATE REAL ESTATE *				
Prime Property Fund	7.2%	8.2%	N/A	N/A
NCREIF ODCE	*6.4%*	*7.6%*	*N/A*	*N/A*
PGIM Real Estate U.S. Debt Fund	N/A	N/A	N/A	N/A
N/A	*N/A*	*N/A*	*N/A*	*N/A*
American Strategic Value Realty	7.8%	9.6%	N/A	N/A
NCREIF Property Index	*6.5%*	*6.9%*	*N/A*	*N/A*
BlackRock US Real Estate Index	9.7%	3.7%	7.5%	N/A
DJ US Select RESI TR USD	*9.8%*	*3.7%*	*7.6%*	*N/A*
Greenfield Acquisition Partners VII	13.4%	N/A	N/A	N/A
Greenfield Acquisition Partners VIII	N/A	N/A	N/A	N/A
NCREIF ODCE +1%	*7.4%*	*N/A*	*N/A*	*N/A*
INFRASTRUCTURE *				
North Haven Partners II	12.2%	N/A	N/A	N/A
CPI + 5%	*7.1%*	*N/A*	*N/A*	*N/A*
RISK PARITY				
AQR Global Risk Premium - EL	8.4%	N/A	N/A	N/A
PanAgora Risk Parity Multi Asset	10.3%	N/A	N/A	N/A
60% MSCI ACWI	*6.1%*	*N/A*	*N/A*	*N/A*
TOTAL FUND	5.1%	9.1%	5.8%	9.8%
Policy Index	*5.9%*	*8.3%*	*6.0%*	*9.4%*

Note: % taken from Verus Quarterly Report presented to Board of Retirement on 8/27/2019.
Using time-weighted rate of return based on the market rate of return.
Does not include Securitites Lending Collateral.

* IRR since inception is reported. One, three, five, and ten year returns are not available for these investments.

SCHEDULE OF INVESTMENTS BY ASSET CLASS AND MANAGER
As of June 30, 2019

Investment Managers	Asset Class	Assets Under Management	% of Fund
DOMESTIC EQUITY			
Dodge & Cox	Large Cap Value	$ 74,434,868	3.40%
BlackRock R1000 Value	Large Cap Value	28,600,999	1.31%
BlackRock R1000 Growth	Large Cap Growth	126,125,815	5.76%
Northern Trust Russell 1000	Large Cap Growth	-	0.00%
Northern Trust Russell 3000	Private Equity	125,518,406	5.74%
Capital Prospects	Small Cap Value	75,311,841	3.44%
FIXED INCOME			
Dimensional Fund Advisors	Core Bond	186,249,188	8.51%
Insight	Core Bond	231,004,254	10.55%
NT Intermediate Bond	Core Bond	45,938,523	2.10%
NT Long Term Bond	Core Bond	16,524,099	0.76%
INTERNATIONAL EQUITY			
LSV Asset Management	Equity Value	268,778,693	12.28%
Fidelity Asset Management	Equity Growth	284,439,915	13.00%
REAL ESTATE SECURITIES			
BlackRock US Real Estate	Real Estate Index	37,095,763	1.69%
PRIVATE CREDIT			
Medley Opportunity Fund II	Private Equity	12,870,265	0.59%
Raven Opportunity Fund I	Private Equity	14,178,245	0.65%
Raven Opportunity Fund III		42,168,305	1.93%
White Oak Global Advisors	Private Equity	25,877,494	1.18%
PRIVATE REAL ESTATE			
American Realty Advisors	Private Real Estate	51,666,921	2.36%
Greenfield Acquisition Partners VII LP	Private Real Estate	13,145,095	0.60%
Greenfield Acquisition Partners VIII LP	Private Real Estate	19,807,000	0.91%
PGIM	Private Real Estate	56,100,410	2.56%
Prime Property Fund	Private Real Estate	57,246,950	2.62%
INFRASTRUCTURE			
North Haven Partners II LP	Infrastructure	43,388,166	1.98%
RISK PARITY			
AQR	Risk Parity	155,849,400	7.12%
PanAgora	Risk Parity	153,777,636	7.03%
Total Assets Under Management		2,146,098,251	
Cash and Short-Term Investments	90 Day T-Bill	42,500,313	1.93%
Total Fund		$ 2,188,598,564	100.00%

Note: Does not include Securities Lending Collateral.
Does not include cash in Treasury Pool.

LARGEST BOND HOLDINGS (BY FAIR VALUE)
JUNE 30, 2019

Shares	Bond	Fair Value
4,168,000	CR SUISSE GROUP 3.8% DUE 06-09-2023	4,322,516
3,900,000	INTEL CORP 3.7% DUE 07-29-2025	4,181,525
3,190,000	COLUMBIA PIPELN 4.5% DUE 06-01-2025	3,433,104
3,264,000	WILLIAMS PARTNERS 3.35% DUE 08-15-2022	3,326,666
3,254,000	NEWELL BRANDS INC 4% DUE 12-01-2024	3,312,640
3,165,000	SANTANDER UK GROUP 3.571% DUE 01-10-2023	3,220,052
2,930,000	SPECTRA ENERGY 4.75% DUE 03-15-2024	3,173,474
3,000,000	NORFOLK SOUTHN 3.65% DUE 08-01-2025	3,163,374
2,855,000	AMERICAN INTL GROUP INC 4.125% DUE 02-15-2024	3,025,289
3,000,000	TORONTO-DOMINION BANK MTN 3.0% 06-11-2020	3,021,660
2,969,000	PVTPL BAYER US FINANCE LLC 2.375% DUE 10-08-2019	2,965,105
2,845,000	CAMPBELL SOUP CO 3.95% DUE 03-15-2025	2,959,503
2,756,000	QUALCOMM INC 3.45% DUE 05-20-2025	2,860,816
2,663,000	HSBC HOLDINGS PLC 4.25% DUE 03-14-2024	2,811,326
2,549,000	CIMAREX ENERGY CO 4.375% DUE 06-01-2024	2,699,745
2,622,000	CAP 1 FINL CORP 3.2% DUE 02-05-2025	2,672,188
2,592,000	ENTERPRISE PRODS 3.35% DUE 03-15-2023	2,665,556
2,540,000	ORACLE CORP 3.4% DUE 07-08-2024	2,661,991
2,600,000	TOTAL CAP INTL 2.7% DUE 01-25-2023	2,639,471
2,606,000	SUMITOMO MITSUI 2.442% DUE 10-19-2021	2,609,711

LARGEST STOCK HOLDINGS (BY FAIR VALUE)
JUNE 30, 2019

Shares	Stock	Fair Value
24,600	ROCHE HLDGS AG GENUSSCHEINE NPV	6,929,631
52,729	NESTLE SA CHF0 (REGD)	5,465,428
165,700	ROYAL DUTCH SHELL 'B'ORD EUR	5,442,978
490,400	AIA GROUP LTD NPV	5,288,474
38,169	SAP SE	5,249,058
56,900	SANOFI EUR	4,918,795
117,300	SAMSUNG ELECTRONIC KRW100	4,774,694
15,829	ROCHE HLDGS AG GENUSSCHEINE NPV	4,458,908
134,645	ROYAL DUTCH SHELL 'A'SHS EUR	4,402,211
599,300	ENEL SPA EUR	4,190,445
523,500	TECHTRONIC INDUSTR NPV	4,007,078
69,600	TOTAL EUR	3,905,560
75,500	NIPPON TELEGRAPH & TELEPHONE CORP NPV	3,515,718
6,900	SWISS LIFE HOLDINGS AG	3,423,815
134,100	KDDI CORP NPV	3,414,733
169,200	GLAXOSMITHKLINE ORD GBP	3,395,064
13,700	ALLIANZ SE NPV(REGD)(VINKULIERT)	3,307,531
469,642	BP ORD USD	3,279,056
468,200	BP ORD USD	3,268,988
37,747	SANOFI EUR	3,263,089

A complete list of portfolio holdings is available on StanCERA’s website at www.stancera.org or upon request.

SCHEDULE OF INVESTMENT MANAGEMENT FEES
For the Years Ended June 30, 2019 and 2018

		2019	2018
Domestic Equities			
BlackRock		$ 22,733	$ 43,792
Capital Prospects		601,752	843,544
Dodge & Cox		172,696	304,642
Jackson Square Partners		-	421,699
Legato Capital Management		-	118,106
Mellon Capital Management		-	5,902
NT Russell 1000		22,027	20,842
	Total Domestic Equities	819,208	1,758,527
International Equities			
LSV Asset Management		663,439	938,512
Fidelity Asset Management		674,792	630,686
	Total International Equities	1,338,231	1,569,198
Fixed Income			
Dimensional Fund Advisors		234,977	281,946
Dodge & Cox		-	16,762
Insight		259,478	127,888
NT Intermediate Bond		19,429	18,551
NT Long Term Bond		6,585	4,652
PIMCO		-	25,521
	Total Fixed Income	520,469	475,320
Real Estate Securities			
BlackRock US Real Estate Index		44,680	97,312
	Total Real Estate Securities	44,680	97,312
Private Credit			
Medley Opportunity Fund Ii		156,129	186,445
Raven Opportunity Fund I		230,841	276,921
Raven Opportunity Fund III		686,551	875,000
White Oak Global Advisors		(1,275,818)	633,646
	Total Direct Lending	(202,297)	1,972,012
Private Real Estate			
American Realty Advisors		446,111	349,359
Greenfield Acquisition Partners VII		379,303	400,313
Greenfield Acquisition Partners VIII		465,114	939,726
Prime Property Fund		525,789	164,493
PGIM		272,207	-
	Tota Private Real Estate	2,088,524	1,853,891
Infrastructure			
North Haven Partners, LP		636,451	721,071
	Total Infrastructure	636,451	721,071
Risk Parity			
AQR		544,002	171,396
PanAgora		489,653	286,032
	Total Infrastructure	1,033,655	457,428
	Total Investment Management Fees	6,278,921	8,904,759
Other Investment Fees and Expenses			
Consultant Fees		483,103	291,039
Custodial Fees		323,150	243,531
Investment Attorney		21,161	74,163
Other Investment Costs		1,758,022	1,515,476
Actuarial Fees		144,063	91,802
	Total Other Investment Expenses	2,729,499	2,216,011
Total Investment Fees and Expenses		$ 9,008,420	$11,120,770

Commission Recapture Program

StanCERA participates in a commission recapture program administered by Cowen. The strategic objective of the Commission Recapture Program is to recapture a portion of trade commissions paid to brokers. The primary goal is to ensure that investment managers provide the best effort to optimize use of StanCERA's assets for the benefit of the members and beneficiaries by recapturing commissions paid on a specific percentage of trades sent to correspondent brokers on a timely basis. For fiscal years ending June 30, 2019 and 2018, Commission Recapture Income was $22,395 and $15,091, respectively.

Below are the commissions paid by StanCERA for fiscal year ending June 30:

		2019		
		# Shares	Commissions	Per Share
Domestic Equities				
Capital Prospects		3,314,459	$ 91,389	$ 0.028
Dodge & Cox		698,941	6,146	0.009
	Total Domestic Equities	4,013,400	97,535	0.024
International Equities				
LSV Asset Management		33,261,797	55,302	0.002
Fidelity Asset Management		21,927,235	175,868	0.008
	Total International Equities	55,189,032	231,170	0.004
	Total Investment Broker Commissions	59,202,432	$ 328,705	$ 0.006

		2018		
		# Shares	Commissions	Per Share
Domestic Equities				
Capital Prospects		3,877,864	$ 104,423	$ 0.027
Dodge & Cox		3,508,233	23,237	0.007
Jackson Square Partners		2,662,942	77,838	0.029
Legato Capital Management		4,639,225	131,318	0.028
	Total Domestic Equities	14,688,264	336,816	0.023
International Equities				
LSV Asset Management		35,115,634	30,657	0.001
Fidelity Asset Management		9,030,800	118,520	0.013
	Total International Equities	44,146,434	149,177	0.003
	Total Investment Broker Commissions	58,834,698	$ 485,993	$ 0.008

Actuarial Section

Via Electronic Mail

September 19, 2019

Actuarial Certification

This is the Actuary's Certification Letter for the Actuarial Section of the Comprehensive Annual Financial Report (CAFR) for the StanCERA Retirement Plan (the Plan) as of June 30, 2019. This letter includes references to two documents produced by Cheiron for the Plan: the Actuarial Valuation Report as of June 30, 2018 (transmitted February 20, 2019) and the GASB 67/68 Report as of June 30, 2019 (transmitted September 19, 2019).

Actuarial Valuation Report as of June 30, 2018

The purpose of the annual Actuarial Valuation Report as of June 30, 2018 is to determine the actuarial funding status of StanCERA on that date and to calculate recommended contribution rates for the participating employers and Plan members for the Fiscal Year 2019-2020. The prior review was conducted as of June 30, 2017, and included recommended contribution rates for the Fiscal Year 2018-2019.

Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize the unfunded actuarial accrued liability (UAAL) plus expected administrative expenses. As of the valuation date (June 30, 2018), the amortization period is 18 years.

The funding objective of the Plan is to accumulate sufficient assets over each Member's working life to provide for Plan benefits after termination of employment or retirement. 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 spreading all investment gains and losses (returns above or below expected returns) over a period of five years. The Actuarial Value is limited to no less than 80% and no more than 120% of market value.

The Board of Retirement is responsible for establishing and maintaining the funding policy of the Plan, subject to the laws of the State of California enacted under the County Employees Retirement Law of 1937 and subsequent legislation.

We prepared the following schedules, which we understand will be included in the Actuarial Section of the CAFR, based on the June 30, 2018 actuarial valuation. All historical information prior to the June 30, 2008 actuarial valuation shown in these schedules is based on information reported by the prior actuary, Buck Consultants.

- Statement of Current Actuarial Assumptions and Methods
- Membership Information (Active, Deferred, and Retired)

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- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Development of 2018 Experience Gain/(Loss)
- Schedule of Funded Liabilities by Type (formerly referred to as the Solvency Test)
- Summary of Plan Provisions

We reviewed the actuarial assumptions shown in the schedules and found them to be reasonably appropriate for use under the Plan. The assumptions used in this report reflect the results of an Experience Study performed by Cheiron covering the period from July 1, 2015 through June 30, 2018, and approved by the Board. The assumptions used in the most recent valuation are intended to produce results that, in the aggregate, reasonably approximate the anticipated future experience of the Plan. The next experience analysis is expected to cover the years through 2021.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the requirements of the Actuarial Standards of Practice, in particular Standards No. 4, 27, 35, and 44.

GASB 67/68 Report as of June 30, 2019

The purpose of GASB 67/68 Report as of June 30, 2019 is to provide accounting and financial reporting information under GASB 67 for StanCERA and under GASB 68 for Stanislaus County and the other participating employers. This report is not appropriate for other purposes, including the measurement of funding requirements for StanCERA.

For financial reporting purposes, the Total Pension Liability is based on the June 30, 2018 actuarial valuation updated to the measurement date of June 30, 2019. There were no significant events of which we were aware between the valuation date and the measurement date so the update procedures only included the addition of service cost and interest cost offset by actual benefit payments.

Please refer to our GASB 67/68 report as of June 30, 2019 for additional information related to the financial reporting of the System. We prepared the following schedules for inclusion in the Financial Section of the CAFR based on the June 30, 2019 GASB 67/68 report:

- Change in Net Pension Liability
- Sensitivity of Net Pension Liability to Changes in Discount Rate
- Schedule of Changes in Net Pension Liability and Related Ratios
- Notes to the Schedule of Employer Contributions

We certify that the report was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for disclosure purposes have been prepared in accordance with our understanding of generally accepted accounting principles as promulgated by the GASB.

Disclaimers

In preparing our reports, we relied on information (some oral and some written) supplied by StanCERA. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and, changes in plan provisions or applicable law.

These reports are for the use of StanCERA and its auditor in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of these reports is not an intended user and is considered a third party.

Cheiron's reports were prepared solely for StanCERA for the purposes described herein, except that the Plan's auditor may rely on these reports solely for the purpose of completing an audit related to the matters herein. They are not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

We hereby certify that these reports and their contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. These reports do not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Respectfully Submitted,

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SUMMARY OF ASSUMPTIONS AND FUNDING METHODS

The following assumptions along with the post-retirement and pre-retirement demographic experiences are based on StanCERA's actuarial experience study from July 1, 2015 through June 30, 2018, approved by the StanCERA Board of Retirement on January 22, 2019. The actuarial valuation for fiscal year ending June 30, 2018 was approved by the StanCERA Board of Retirement on February 26, 2019, which incorporated the following assumptions. The purpose of the annual actuarial valuation report as of June 30, 2018 is to determine the actuarial funding status of StanCERA on that date and to calculate recommended contribution rates for the participating employers and StanCERA members for the fiscal year 2019-2020. The prior actuarial valuation conducted as of June 30, 2017 included recommended contribution rates for the fiscal year 2018-2019 which was approved by the StanCERA Board of Retirement on February 28, 2018.

Plan Description

A summary of plan provisions can be found in Note 1 of the Notes to Basic Financial Statements.

Actuarial Methods

Actuarial Cost Method

Annual contributions are computed under the Entry Age Normal Actuarial Cost Method, computed to the final decrement. A schedule of actuarially determined contributions compared to actual contributions can be found in the Required Supplementary Information section following the Notes to the Basic Financial Statements.

The excess of the Actuarial Accrued Liability over Plan assets is the Unfunded Actuarial Accrued Liability. The liability for each valuation group is amortized as a level percentage of payroll over a closed period (18 years as of the current valuation).

Actuarial Value of Plan Assets

The Actuarial Value of Plan Assets is a modified market-related value. The fair value of assets is adjusted to recognize, over a five-year period, differences between actual investment earnings and the assumed investment return. The Actuarial Value of Plan Assets is limited to no less the 80% and no more than 120% of the fair value. As of June 30, 2011, the Actuarial Value was reset to equal fair value.

ACTUARIAL VALUATION METHODS AND ASSUMPTIONS

Valuation Date	June 30, 2018	June 30, 2017
Actuarial Cost Method	Entry Age Normal	Entry Age Normal
Amortization Method	Level percent of Pay	Level percent of Pay
Remaining Amortization Period	18 Years	19 Years
Asset Valuation Method	Modified Market-Related Value smoothed over a five year period	Modified Market-Related Value smoothed over a five year period

Actuarial Assumptions

1. Rate of Return – The annual rate of return is assumed to be 7.00% net of investment expenses.
2. Cost of Living – The cost of living is assumed to be 2.75% per year as measured by the Consumer Price Index.
3. Administrative Expenses – An allowance of $2,825,625 has been included in the annual cost calculation.
4. Interest Credited to Employee Accounts – 0.25% annually.
5. Increases in Pay – Base salary increase is assumed at 3.00%. Assumed pay increases for active Members consist of increases due to salary adjustments (as noted above), plus service-based increases due to longevity and promotion, as shown below.

Longevity & Promotion Increases		
Service	Safety	General
0	5.00%	7.00%
1	5.00%	6.00%
2	5.00%	5.00%
3	5.00%	4.00%
4	5.00%	3.00%
5	3.50%	2.00%
6	2.50%	1.75%
7	1.50%	1.50%
8	1.25%	1.25%
9	1.00%	1.00%
10	0.75%	0.75%
11+	0.50%	0.50%

6. PEPRA Compensation Limit – Assumption used for increasing the compensation limit that applies to PEPRA members is 2.75%.
7. Post Retirement COLA – 100% of Consumer Price Index up to 3% annually with banking, 2.6% annual increases assumed.
8. Social Security Wage Base – For projecting the Social Security Benefit, the annual Social Security Wage Base increase is assumed to be 3.00% per year. General Tier 3 members have their benefits offset by an assumed Social Security Benefit.
9. Internal Revenue Code Section 415 Limit – not reflected in the valuation for funding purposes.
10. Internal Revenue Code Section 401(a)(17) – not reflected in the valuation for funding purposes.
11. Family Composition – Spouses of male members are assumed to be three years younger than the member. Spouses of female members are assumed to be two years older than the member.

Percent Married	
Gender	Percentage
Males	80%
Females	50%

12. Accumulated Vacation Time Load – Active members' service retirement and related benefits are loaded by 1.75% for Safety Members and 1.00% for General Members.

13. Rates of Separation – Separate rates of termination are assumed among Safety and General Members. Termination rates do not apply once a member is eligible for retirement.

Termination (all types)		
	Safety	General
Service	All	All
0	18.0%	18.0%
1	14.0%	12.0%
2	11.7%	9.0%
3	9.4%	7.0%
4	7.1%	6.0%
5	5.0%	5.0%
10	3.5%	5.0%
15	2.9%	3.4%
20	1.5%	0.0%
25	1.3%	0.0%
30+	0.0%	0.0%

14. Withdrawal – Rates of withdrawal apply to active Members who terminate their employment and withdraw their member contributions. 50% of all General Member terminations with less than ten years of service and 20% of those with ten or more years of service are assumed to take a refund of contributions. 35% of all Safety Member terminations with less than ten years of service and 10% of those with ten or more years of service are assumed to take a refund of contributions.

15. Vested Termination – Rates of vested termination apply to active Members who terminate their employment after five years of service and leave their member contributions on deposit with the Plan. Tier 3 General Members are assumed to begin receiving benefits at age 65; all other General Members at age 58. Safety Members are assumed to begin receiving benefits at age 53. 50% of vested terminated General members are assumed to be reciprocal, and 65% of vested Safety members are assumed to be reciprocal. Reciprocal members are assumed to receive 3.75% annual pay increases from the date of transfer to the assumed retirement date.

16. Service Connected-Disability – Separate rates are assumed among Safety and General Members. Rates for both sexes for Safety Members are combined.

Service-Connected Disability			
	Safety	General	
Age	All	Female	Male
20	0.0020%	0.0002%	0.0043%
25	0.0760%	0.0004%	0.0102%
30	0.1700%	0.0008%	0.0211%
35	0.2640%	0.0024%	0.0284%
40	0.3600%	0.0056%	0.0401%
45	0.4570%	0.0101%	0.0613%
50	0.5570%	0.0162%	0.0897%
55	0.6580%	0.0249%	0.1227%
60	0.7620%	0.0349%	0.1637%
65	0.8690%	0.0000%	0.0000%

Actuarial Assumptions (continued)

17. Non Service-Connected Disability - Separate rates are assumed among Safety and General Members. Rates for both sexes for Safety Members are combined. Rates shown are applied after five years of service.

Non Service-Connected Disability			
	Safety	General	
Age	All	Female	Male
20	0.0100%	0.0100%	0.0170%
25	0.0100%	0.0100%	0.0170%
30	0.0200%	0.0240%	0.0190%
35	0.0300%	0.0710%	0.0390%
40	0.0400%	0.1350%	0.1020%
45	0.0500%	0.1880%	0.1510%
50	0.0800%	0.1990%	0.1580%
55	0.1300%	0.1490%	0.1580%
60	0.2000%	0.1050%	0.1530%
65	0.2000%	0.0880%	0.1280%
70+	0.0000%	0.0840%	0.1020%

18. Rates for Mortality for Healthy Lives – Rates of mortality for active Members are specified by the CalPERS Pre-Retirement Non-Industrial Mortality table, adjusted by 97.2% for males and 101.6% for females, with generational mortality improvements projected from 2009 using SOA Scale MP-2018.

Mortality Rates			
	Duty Death	Ordinary Death - General & Safety	
Age	Safety All	Female	Male
20	0.0030%	0.0215%	0.0320%
25	0.0070%	0.0248%	0.0413%
30	0.0100%	0.0269%	0.0505%
35	0.0120%	0.0378%	0.0588%
40	0.0130%	0.0539%	0.0774%
45	0.0140%	0.0766%	0.1094%
50	0.0150%	0.1079%	0.1600%
55	0.0160%	0.1550%	0.2353%
60	0.0170%	0.2261%	0.3446%
65	0.0180%	0.3324%	0.4949%
70	0.0190%	0.4747%	0.6891%

19. Disabled Member Mortality –

Nonservice-Connected Disability Members are specified by the CalPERS Non-Industrial Disable Annuitant Mortality table, adjusted 104.5% for females, with generational mortality improvements projected from 2009 using SOA Scale MP-2018.

Service-Connected Disability Members are adjusted by 101.9% for males using the same table and scale.

Diabled Mortality Rates				
	NonService Connected		Service Connected	
Age	Female	Male	Female	Male
45	0.8920%	1.2970%	0.2980%	0.3440%
50	1.2850%	1.7840%	0.4950%	0.5420%
55	1.3270%	2.0950%	0.4600%	0.6480%
60	1.5780%	2.6340%	0.6330%	0.8840%
65	2.1380%	3.1200%	1.0660%	1.4550%
70	2.9410%	3.8900%	1.7750%	2.2540%
75	4.0410%	5.3980%	2.9520%	3.9080%
80	6.2870%	8.2300%	4.9780%	6.7540%
85	10.3270%	13.1660%	7.9590%	10.5870%
90	16.8060%	18.4690%	12.3350%	16.4930%

20. Retired Member and Beneficiary Mortality - specified by the CalPERS Non-Industrial Disable Annuitant Mortality table, adjusted by 97.2% for males and 104.1% for females, with generational mortality improvements projected from 2009 using Scale MP-2018.

Retired Mortality Rates		
Age	Female	Male
45	0.2210%	0.2340%
50	0.5150%	0.5170%
55	0.4790%	0.6180%
60	0.5560%	0.7940%
65	0.7790%	1.0260%
70	1.3170%	1.7170%
75	2.2830%	2.9000%
80	3.8470%	5.1280%
85	6.9490%	9.1650%
90	12.8410%	15.7330%

21. Mortality Improvement – The mortality assumptions employ a fully generational mortality improvement projection from base year 2009 using Scale MP-2018.

22. Service Retirement – Assumed to occur among eligible members in accordance with the following table for non-PEPRA tiers 1 through 5.

Service Retirement - General			
	Years of Service		
Age	0-9	10-29	30+
40-44	0.00%	0.00%	0.00%
45-49	0.00%	0.00%	10.00%
50-54	0.00%	5.00%	10.00%
55	0.00%	7.50%	20.00%
56	0.00%	7.50%	20.00%
57	0.00%	7.50%	20.00%
58	0.00%	12.50%	20.00%
59	0.00%	12.50%	20.00%
60	0.00%	12.50%	25.00%
61	0.00%	20.00%	25.00%
62	0.00%	25.00%	40.00%
63	0.00%	20.00%	25.00%
64	0.00%	25.00%	25.00%
65	0.00%	35.00%	35.00%
66	0.00%	45.00%	45.00%
67	0.00%	20.00%	25.00%
68	0.00%	20.00%	25.00%
69	0.00%	20.00%	25.00%
70	50.00%	50.00%	100.00%
71	50.00%	50.00%	100.00%
72	50.00%	50.00%	100.00%
73	50.00%	50.00%	100.00%
74	50.00%	50.00%	100.00%
75+	100.00%	100.00%	100.00%

Service Retirement - Safety			
	Years of Service		
Age	0-9	10-19	20+
40-48	0.00%	0.00%	5.00%
49	0.00%	0.00%	20.00%
50	0.00%	10.00%	30.00%
51	0.00%	10.00%	20.00%
52	0.00%	10.00%	20.00%
53	0.00%	10.00%	20.00%
54	0.00%	10.00%	20.00%
55	0.00%	10.00%	30.00%
56	0.00%	10.00%	30.00%
57	0.00%	10.00%	30.00%
58	0.00%	10.00%	30.00%
59	0.00%	10.00%	30.00%
60	0.00%	25.00%	100.00%
61	0.00%	25.00%	100.00%
62	0.00%	25.00%	100.00%
63	0.00%	25.00%	100.00%
64	0.00%	25.00%	100.00%
65	0.00%	100.00%	100.00%
6	0.00%	100.00%	100.00%
67	0.00%	100.00%	100.00%
68	0.00%	100.00%	100.00%
69	0.00%	100.00%	100.00%
70+	100.00%	100.00%	100.00%

Actuarial Assumptions (continued)

23. PEPRA – Retirement for members in PEPRA, Tier 6, are assumed to occur among eligible members in accordance with the sample rates below, from the full tables CALPERS Public Agency Miscellaneous 2% @ 62 table for General and the CALPERS Public Agency Safety Police 2.7% @ 57 table for Safety:

Service Retirement - General (PEPRA)				
	Years of Service			
Age	5	10	25	35
50-51	0.00%	0.00%	0.00%	0.00%
52	0.50%	0.80%	1.90%	3.80%
53	0.70%	1.10%	2.10%	4.80%
54	0.70%	1.10%	2.30%	5.40%
55	1.00%	1.90%	6.10%	15.20%
56	1.40%	2.60%	7.50%	16.70%
57	1.80%	2.90%	7.40%	14.30%
58	2.30%	3.50%	7.30%	13.50%
59	2.50%	3.80%	9.20%	17.50%
60	3.10%	5.10%	11.10%	18.30%
61	3.80%	5.80%	12.10%	23.20%
62	4.40%	7.40%	16.40%	27.10%
63	7.70%	10.50%	19.20%	26.60%
64	7.20%	10.10%	18.70%	27.60%
65	10.80%	14.10%	23.90%	34.80%
66	13.20%	17.20%	29.20%	42.60%
67	13.20%	17.20%	29.20%	40.50%
68	12.00%	15.60%	26.50%	38.70%
69	12.00%	15.60%	26.50%	36.80%
70	12.00%	15.60%	26.50%	38.70%
71	12.00%	15.60%	26.50%	38.70%
72	12.00%	15.60%	26.50%	38.70%
73	12.00%	15.60%	26.50%	38.70%
74	12.00%	15.60%	26.50%	38.70%
75+	100.00%	100.00%	100.00%	100.00%

Service Retirement - Safety (PEPRA)				
	Years of Service			
Age	5	10	25	35
50	5.00%	5.00%	5.00%	11.00%
51	4.00%	4.00%	5.75%	13.92%
52	3.80%	3.80%	5.80%	13.21%
53	3.80%	3.80%	7.74%	28.98%
54	3.80%	3.80%	9.31%	33.25%
55	6.84%	6.84%	13.40%	38.76%
56	6.27%	6.27%	12.28%	34.49%
57	6.00%	6.00%	11.75%	32.00%
58	8.00%	8.00%	13.75%	35.00%
59	8.00%	8.00%	14.00%	40.00%
60	15.00%	15.00%	15.00%	35.00%
61	14.40%	14.40%	14.40%	26.40%
62	15.00%	15.00%	15.00%	33.00%
63	15.00%	15.00%	15.00%	40.00%
64	15.00%	15.00%	15.00%	52.50%
65+	100.00%	100.00%	100.00%	100.00%

24. Changes in actuarial assumptions – Details of all assumption changes can be found in the Actuarial Experience Study Report on StanCERA's website at http://www.stancera.org for the period covering July 1, 2015 through June 30, 2018. The proposed assumptions were summarized and reviewed with the Board at the January 22, 2019 Board meeting, at which the Board provided direction to proceed with the valuation based on those assumptions.

Participant data on active and inactive Members and their beneficiaries as of the valuation date was supplied by the Plan staff on direction of the Executive Director on electronic media. Member data was neither verified nor audited.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA
FOR FISCAL YEARS ENDED JUNE 30

Valuation Date	Plan Type	Number	Annual Salary	Average Annual Salary	% Increase (Decrease) in Average Salary	Number of Employers
6/30/2008	General	3,719	$ 230,942,000	$ 62,098	27.88%	
	Safety	731	44,638,000	61,064	5.18%	
	Total	4,450	$ 275,580,000	$ 61,928	23.73%	8
6/30/2009	General	3,627	$ 201,144,000	$ 55,457	-10.69%	
	Safety	739	47,172,000	63,832	4.53%	
	Total	4,366	$ 248,316,000	$ 56,875	-8.16%	8
6/30/2010	General	3,464	$ 202,200,198	$ 58,372	5.26%	
	Safety	685	46,630,275	68,073	6.64%	
	Total	4,149	$ 248,830,473	$ 59,974	5.45%	8
6/30/2011	General	3,232	$ 184,906,498	$ 57,211	-1.99%	
	Safety	637	41,800,298	65,621	-3.60%	
	Total	3,869	$ 226,706,796	$ 58,596	-2.30%	8
6/30/2012	General	3,233	$ 179,260,736	$ 55,447	-3.08%	
	Safety	661	41,657,273	63,022	-3.96%	
	Total	3,894	$ 220,918,009	$ 56,733	-3.18%	8
6/30/2013	General	3,230	$ 176,437,755	$ 54,625	-1.48%	
	Safety	694	42,590,563	61,370	-2.62%	
	Total	3,924	$ 219,028,318	$ 55,818	-1.61%	8
6/30/2014	General	3,303	$ 179,606,090	$ 54,377	-0.45%	
	Safety	689	43,422,198	63,022	2.69%	
	Total	3,992	$ 223,028,288	$ 55,869	0.09%	8
6/30/2015	General	3,421	$ 188,550,804	$ 55,116	1.36%	
	Safety	723	49,166,923	68,004	7.91%	
	Total	4,144	$ 237,717,727	$ 57,364	2.68%	8
6/30/2016	General	3,521	$ 198,457,059	$ 56,364	2.26%	
	Safety	727	52,020,521	71,555	5.22%	
	Total	4,248	$ 250,477,580	$ 58,964	2.79%	8
6/30/2017	General	3,552	$ 201,758,423	$ 56,801	0.78%	
	Safety	757	54,385,261	71,843	0.40%	
	Total	4,309	$ 256,143,684	$ 59,444	0.81%	8
6/30/2018	General	3,658	$ 211,919,963	$ 57,933	1.99%	
	Safety	794	58,835,257	74,100	3.14%	
	Total	4,452	$ 270,755,220	$ 60,817	2.31%	8

Note: The annual salary presented here is annualized historical salary. The covered payroll shown in the Notes to the Basic Financial Statements is actual pensionable salaries. Salary shown in the schedule of Funding Progress is based on projected salary from the actuarial valuation.

Note: The employers participating in the Plan include Stanislaus County, Stanislaus County Superior Court, City of Ceres and five small districts.

SCHEDULE OF FUNDING PROGESS
FOR YEARS ENDED JUNE 30

Actuarial Valuation Date	Valuation Assets [1]	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	Unfunded AAL as a % of Covered Payroll
2008	$1,317,167,000 [2]	$1,548,824,000	$ 231,657,000	85.0%	$ 275,580,000	84.1%
2009	$1,171,767,000	$1,653,716,000	$ 481,949,000	70.9%	$ 248,316,000	194.1%
2010	$1,325,801,000	$1,737,824,000	$ 412,023,000	76.3%	$ 248,830,473	165.6%
2011	$1,372,046,000	$1,757,717,000	$ 385,671,000	78.1%	$ 226,706,796	170.1%
2012	$1,451,764,000	$1,888,713,000	$ 436,950,000	76.9%	$ 220,918,009	197.8%
2013	$1,524,076,000	$1,919,227,000	$ 395,151,000	79.4%	$ 219,028,318	180.4%
2014	$1,644,077,000	$2,026,371,000	$ 382,294,000	81.1%	$ 223,028,288	171.4%
2015	$1,763,629,000	$2,391,522,000	$ 627,893,000	73.7%	$ 237,717,727	264.1%
2016	$1,845,764,000	$2,537,067,000	$ 691,302,000	72.8%	$ 250,477,580	276.0%
2017	$1,968,231,000	$2,648,162,000	$ 679,930,000	74.3%	$ 256,143,684	265.4%
2018	$2,100,278,000	$2,749,068,000	$ 648,790,467	76.4%	$ 270,755,220	239.6%

[1] Excludes value of Non-Valuation Reserves.
[2] Includes $50 million tranferred from Non-Valuation Reserves as of June 30, 2008.

RETIREES AND BENEFICIARIES ADDED TO
AND REMOVED FROM RETIREE PAYROLL
FOR YEARS ENDED JUNE 30

Actuarial Valuation Date	At Beginning of Year	Added During Year	Allowances Added	Removed During Year	Allowances Removed	At End of Year	Retiree Payroll	% Increase in Retiree Payroll	Average Annual Allowance
2008	2,445	369	$ 9,084,777	148	$ 1,731,738	2,666	$ 63,296,000	19.18%	$ 23,742
2009	2,666	156	$ 2,168,425	71	$ 647,870	2,751	$ 66,720,003	5.41%	$ 24,253
2010	2,751	159	$ 3,349,900	80	$ 751,427	2,830	$ 71,464,735	7.11%	$ 25,334
2011	2,830	263	$ 4,724,416	78	$ 1,194,042	3,015	$ 74,826,404	4.70%	$ 25,732
2012	3,015	226	$ 3,565,634	99	$ 978,729	3,142	$ 80,157,222	7.12%	$ 26,737
2013	3,142	198	$ 6,036,138	91	$ 1,144,584	3,249	$ 89,975,736	12.25%	$ 27,694
2014	3,249	222	$ 6,703,273	86	$ 1,725,066	3,385	$ 96,405,454	7.15%	$ 28,480
2015	3,385	237	$ 7,778,716	83	$ 2,043,313	3,539	$ 104,052,097	7.93%	$ 29,402
2016	3,539	211	$ 7,066,750	99	$ 2,160,689	3,651	$ 111,260,240	6.93%	$ 30,474
2017	3,651	202	$ 6,749,973	107	$ 2,471,229	3,746	$ 117,901,627	5.97%	$ 31,474
2018	3,746	233	$ 7,555,825	123	$ 3,109,178	3,856	$ 124,995,337	6.02%	$ 32,416

SCHEDULE OF FUNDED LIABILITIES BY TYPE
(SOLVENCY TEST)
FOR YEARS ENDED JUNE 30

Valuation Date		Actuarial Accrued Liabilities (AAL) for: 1 Active Member Contributions	2 Retirees & Beneficiaries	3 Active Members Employer Portion	Actuarial Accrued Liabilities	Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets 1	2	3
2008	1	$ 272,657,000	$ 739,838,000	$ 536,329,000	$ 1,548,824,000	$ 1,317,167,000	100%	100%	57%
2009		$ 298,342,000	$ 781,082,000	$ 574,292,000	$ 1,653,716,000	$ 1,171,767,000	100%	100%	16%
2010		$ 323,940,000	$ 829,323,000	$ 584,561,000	$ 1,737,824,000	$ 1,325,801,000	100%	100%	30%
2011		$ 337,201,000	$ 897,384,000	$ 523,133,000	$ 1,757,717,000	$ 1,372,046,000	100%	100%	26%
2012		$ 351,569,000	$ 987,546,000	$ 549,598,000	$ 1,888,713,000	$ 1,451,764,000	100%	100%	20%
2013	2	$ 191,968,000	$ 1,065,792,000	$ 661,466,000	$ 1,919,227,000	$ 1,524,076,000	100%	100%	40%
2014		$ 193,301,000	$ 1,144,734,000	$ 688,335,000	$ 2,026,371,000	$ 1,644,077,000	100%	100%	44%
2015		$ 196,074,000	$ 1,328,846,000	$ 850,510,000	$ 2,391,522,000	$ 1,763,629,000	100%	100%	28%
2016		$ 200,960,000	$ 1,427,166,000	$ 908,941,000	$ 2,537,067,000	$ 1,845,764,000	100%	100%	24%
2017		$ 206,386,000	$ 1,510,151,000	$ 931,625,000	$ 2,648,162,000	$ 1,968,231,000	100%	100%	27%
2018		$ 213,223,000	$ 1,590,078,000	$ 945,767,000	$ 2,749,068,000	$ 2,100,278,000	100%	100%	31%

[1] Reflects tranfer as of June 30, 2008 of $50 million from Non-Valuation to Valuation Reserves.

ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE
FOR YEARS ENDED JUNE 30

Plan Year Ending		Actuarial (Gains)/Losses: Asset Sources	Liability Sources	Total	Changes in Plan Provisions	Changes in Assumption/ Methods
2008		$ (50,709,169)	$ 67,324,195	$ 67,324,195	$ -	$ -
2009		$ 228,905,354	$ 12,996,828	$ 241,902,182	$ -	$ -
2010		$ (76,507,113)	$ 37,492,978	$ 37,492,978	$ -	$ (51,743,766)
2011		$ 49,205,018	$ (2,387,353)	$ 46,817,665	$ -	$ (72,085,966)
2012		$ (5,283,786)	$ 6,191,029	$ 907,243	$ -	$ 52,606,350
2013		$ 10,200,000	$ 8,500,000	$ 18,700,000	$ -	$ (63,400,000)
2014		$ (22,600,000)	$ 6,100,000	$ (16,500,000)	$ -	$ 400,000
2015		$ (20,600,000)	$ (5,600,000)	$ (26,200,000)	$ -	$ 269,800,000
2016	1	$ 16,300,000	$ 28,900,000	$ 45,200,000	$ -	$ -
2017		$ (20,800,000)	$ (8,900,000)	$ (29,700,000)	$ -	$ -
2018		$ (12,400,000)	$ 16,800,000	$ 4,400,000	$ -	$ (37,800,000)

[1] Changes due to Actuarial Audit included as Liability Loss of $700,000.

A 10 year schedule of actuarially determined contributions compared to actual contributions can be found in the Required Supplementary Information to the Financial Statements on page 46.

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Statistical Section

STATISTICAL INFORMATION

This section provides a multi-year trend of financial and demographic information to facilitate a more comprehensive understanding of this year's financial statements, note disclosures, and supplementary information covering StanCERA's Plan. The financial and operating information provides additional perspective, context, and detail for StanCERA's Fiduciary Net Position, revenues and expenses by source, number of retirees by benefit type, payments made to retirees by benefit type, membership history, and the participating employers. The financial and operating trend information is located below and on the following pages.

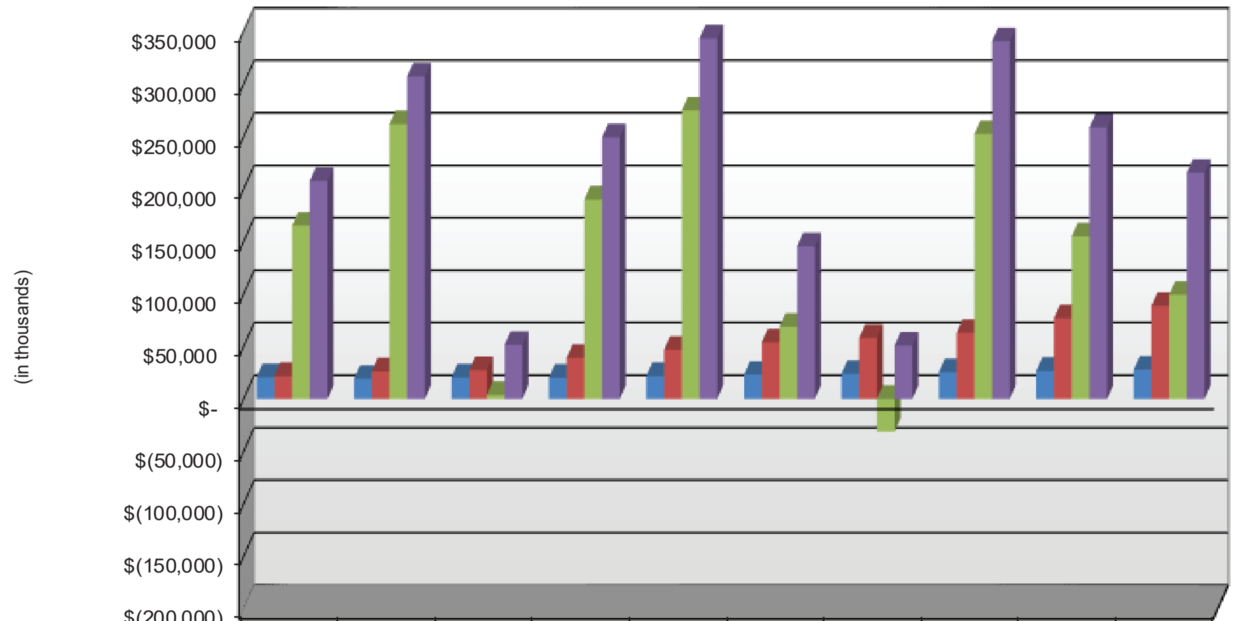
CHANGES IN FIDUCIARY NET POSITION

Last Ten Fiscal Years ending June 30

Additions To Fiduciary Net Position	2019	2018	2017	2016	2015
Employer Contributions	$ 88,589,381	$ 76,966,471	$ 63,024,559	$ 58,196,310	$ 53,849,031
Plan Member Contributions	27,742,863	26,746,289	25,463,745	23,916,508	22,960,235
Net Investment Income (Loss)	99,280,525	154,988,199	252,309,706	(31,322,276)	68,722,781
Total Additions	$ 215,612,769	$ 258,700,959	$ 340,798,010	$ 50,790,542	$ 145,532,047
Deductions From Fiduciary Net Position					
Pension Benefits	$ 129,100,668	$ 121,138,269	$ 114,290,758	$ 106,928,097	$ 99,811,849
Refunds	2,674,023	2,033,847	2,553,100	1,237,713	2,046,307
Administrative Expense	2,557,391	2,791,409	2,644,554	2,315,223	2,378,966
Total Deductions	$ 134,332,082	$ 125,963,525	$ 119,488,412	$ 110,481,033	$ 104,237,122
Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits	$ 81,280,687	$ 132,737,434	$ 221,309,598	$ (59,690,491)	$ 41,294,925
Fiduciary Net Position Restricted for Pension Benefits					
Beginning of Year	2,126,960,745	1,994,223,311	1,772,913,713	1,832,604,204	1,791,309,279
End of Year	$2,208,241,432	$2,126,960,745	$1,994,223,311	$1,772,913,713	$1,832,604,204

Additions To Fiduciary Net Position	2014	2013	2012	2011	2010
Employer Contributions	$ 46,763,996	$ 39,077,480	$ 27,314,032	$ 26,256,729	$ 21,814,194
Plan Member Contributions	21,867,911	20,285,888	20,525,295	19,197,052	20,746,411
Net Investment Income (Loss)	274,896,108	189,988,287	3,724,754	261,842,492	165,053,844
Total Additions	$ 343,528,015	$ 249,351,655	$ 51,564,081	$ 307,296,273	$ 207,614,449
Deductions From Fiduciary Net Position					
Pension Benefits	$ 93,076,127	$ 86,722,499	$ 80,062,975	$ 74,725,248	$ 71,286,016
Refunds	1,706,344	1,926,062	1,927,058	2,007,309	1,910,690
Administrative Expense	2,249,260	2,065,345	2,144,748	2,037,167	2,307,436
Total Deductions	$ 97,031,731	$ 90,713,906	$ 84,134,781	$ 78,769,724	$ 75,504,142
Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits	$ 246,496,284	$ 158,637,749	$ (32,570,700)	$ 228,526,549	132,110,307
Fiduciary Net Position Restricted for Pension Benefits					
Beginning of Year	1,544,812,995	1,386,175,246	1,418,745,946	1,190,219,397	1,058,109,090
End of Year	$1,791,309,279	$1,544,812,995	$1,386,175,246	$1,418,745,946	$1,190,219,397

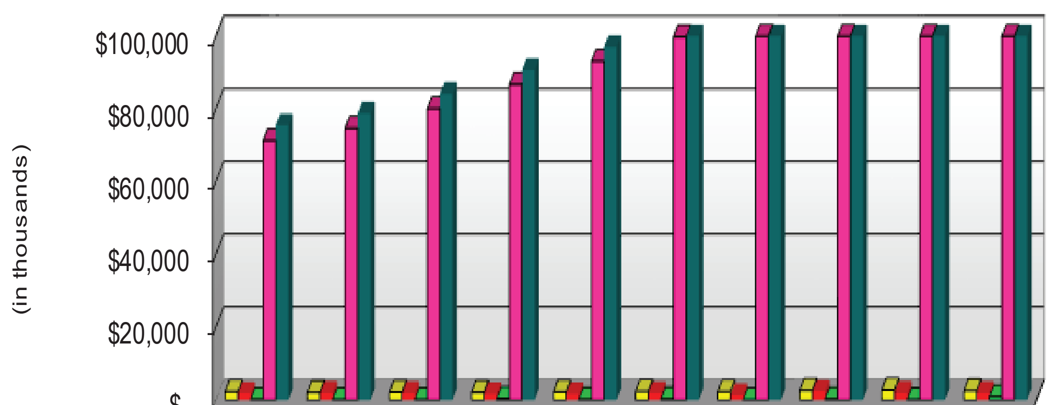
Additions by Source
(for years ending June 30)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Plan Member Contrib.	$20,746	$19,197	$20,525	$20,286	$21,868	$22,960	$23,917	$25,464	$26,747	$27,743
Employer Contrib.	$21,814	$26,257	$27,314	$39,077	$46,764	$53,849	$58,196	$63,024	$76,966	$88,589
Investments	$165,054	$261,842	$3,725	$189,988	$274,896	$68,723	$(31,322)	$252,310	$154,988	$99,281
Total	$207,614	$307,296	$51,564	$249,351	$343,528	$145,532	$50,791	$340,798	$258,701	$215,613

Data Source:
CAFR Financial Section, Statement of Changes in Fiduciary Net Position in Management Discussion

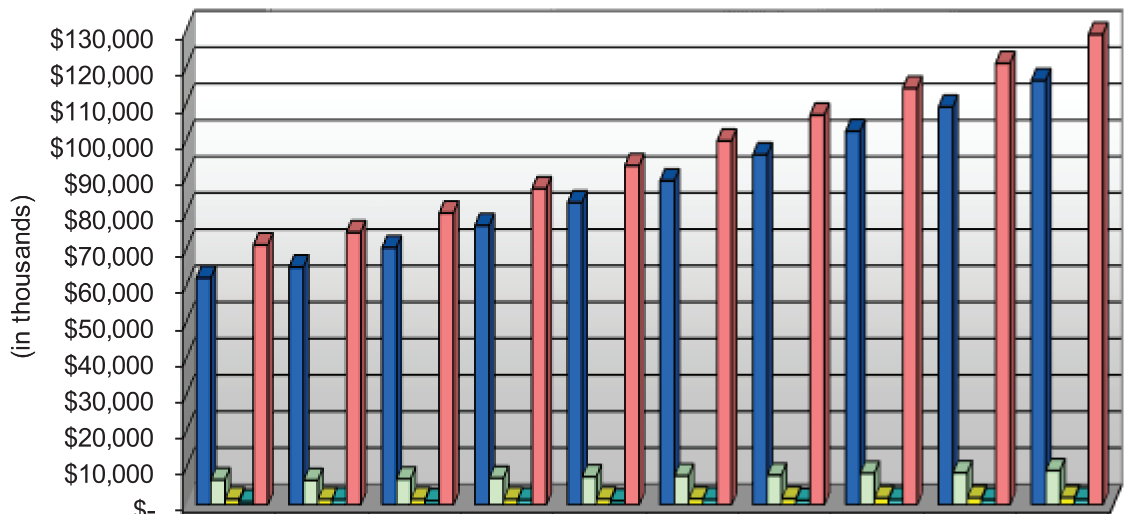
Deductions by Type
(for years ending June 30)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Administrative	$2,307	$2,037	$2,145	$2,065	$2,249	$2,379	$2,315	$2,644	$2,792	$2,557
Refunds - Separation	$1,732	$1,906	$1,833	$1,546	$1,516	$1,759	$1,219	$2,298	$1,906	$1,826
Refunds - Death	$179	$102	$94	$380	$191	$287	$19	$255	$128	$848
Benefits	$71,286	$74,725	$80,063	$86,723	$93,076	$99,812	$106,928	$114,291	$121,138	$129,101
Total	$75,504	$78,770	$84,135	$90,714	$97,032	$104,237	$110,481	$119,488	$125,964	$134,332

Data Source:
CAFR Financial Section, Statement of Changes in Fiduciary Net Position

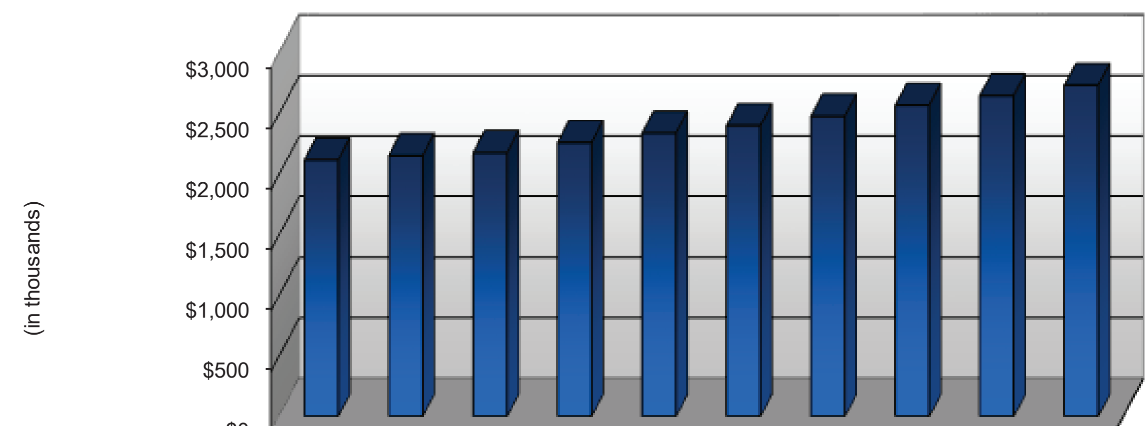
Benefit Expense by Type
(for years ending June 30)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Service	$62,221	$65,210	$70,525	$76,629	$82,899	$88,905	$96,058	$102,484	$109,159	$116,406
Serv. Conn. Dis.	$6,792	$6,672	$7,020	$7,271	$7,636	$7,911	$8,072	$8,591	$8,752	$9,328
Non-Serv. Dis.	$1,496	$1,446	$1,471	$1,475	$1,526	$1,577	$1,631	$1,819	$1,869	$1,934
Surv. Death Ben.	$777	$1,397	$1,047	$1,348	$1,015	$1,419	$1,167	$1,397	$1,358	$1,433
Total	$71,286	$74,725	$80,063	$86,723	$93,076	$99,812	$106,928	$114,291	$121,138	$129,101

Data Source: StanCERA Pension Administration System

Average Monthly Retirement Benefits
(for years ending June 30)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Monthly Allowance	$2,115	$2,153	$2,177	$2,260	$2,337	$2,398	$2,478	$2,568	$2,646	$2,731

Data Source: StanCERA Pension Administration System

RETIRED MEMBERS BY BENEFIT TYPE
as of June 30, 2019

Amount Monthly Benefit	Total # Retirees	Service Retirement	Service Connected Disability	Non-Service Disability	Survivors
General Members					
$0-500	350	337	0	7	6
501-1,000	475	420	2	31	22
1,001-1,500	522	458	13	43	8
1,501-2,000	418	365	33	17	3
2,001-2,500	330	292	31	5	2
2,501-3,000	266	244	13	6	3
3,001-3,500	183	176	7	0	0
3,501-4,000	162	159	0	0	3
4,001-4,500	121	119	2	0	0
4,501-5,000	112	110	1	1	0
over 5,000	345	343	2	0	0
Totals	3,284	3,023	104	110	47
Safety Members					
$0-500	28	14	12	2	0
501-1,000	25	21	0	2	2
1,001-1,500	31	29	0	1	1
1,501-2,000	45	37	3	5	0
2,001-2,500	37	29	5	2	1
2,501-3,000	66	26	39	0	1
3,001-3,500	95	37	55	1	2
3,501-4,000	55	39	16	0	0
4,001-4,500	47	35	11	0	1
4,501-5,000	32	31	0	0	1
over 5,000	189	175	12	0	2
Totals	650	473	153	13	11
TOTALS	3,934	3,496	257	123	58

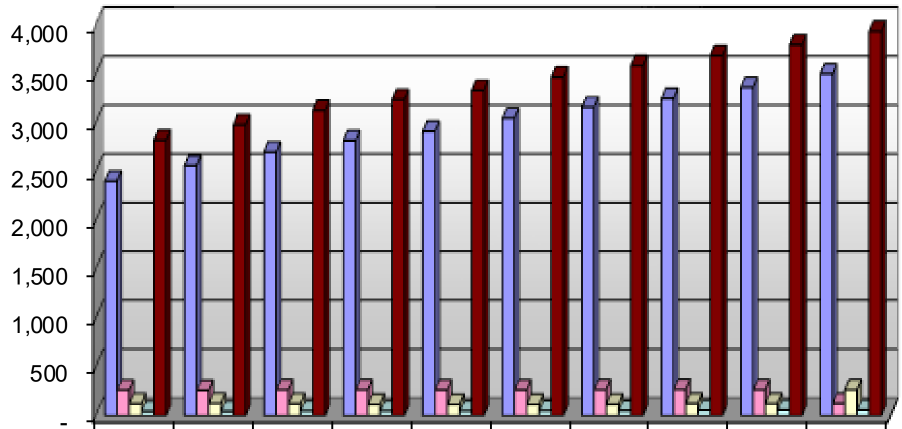
Data Source: StanCERA Pension Administration System

AVERAGE BENEFIT PAYMENTS
As of Fiscal Year End June 30

	Beneficiaries & Dro's	Service Years Credited 0-5	5-10	10-15	15-20	20-25	25-30	30+
Fiscal Year Ending June 30, 2010								
Average Monthly Benefit	$1,345	$602	$1,038	$1,171	$1,834	$2,550	$3,753	$5,172
Avg Final Average Salary	$1,106	$3,177	$2,516	$2,322	$2,400	$2,486	$3,233	$4,192
Number of Active Retirees	366	157	330	536	434	405	318	270
Fiscal Year Ending June 30, 2011								
Average Monthly Benefit	$1,362	$621	$1,044	$1,192	$1,843	$2,581	$3,785	$5,260
Avg Final Average Salary	$1,176	$3,840	$3,286	$2,862	$3,009	$3,364	$3,790	$5,232
Number of Active Retirees	389	169	350	574	454	424	331	298
Fiscal Year Ending June 30, 2012								
Average Monthly Benefit	$1,405	$596	$1,040	$1,212	$1,918	$2,654	$3,860	$5,152
Avg Final Average Salary	$2,612	$4,848	$3,857	$3,620	$3,963	$4,393	$4,812	$5,815
Number of Active Retirees	383	176	366	606	484	446	335	320
Fiscal Year Ending June 30, 2013								
Average Monthly Benefit	$1,430	$657	$1,100	$1,295	$2,003	$2,792	$4,007	$5,309
Avg Final Average Salary	$2,662	$5,058	$4,110	$3,748	$4,047	$4,516	$4,962	$5,872
Number of Active Retirees	387	195	376	634	498	469	344	331
Fiscal Year Ending June 30, 2014								
Average Monthly Benefit	$1,467	$651	$1,124	$1,354	$2,082	$2,836	$4,088	$5,427
Avg Final Average Salary	$2,745	$5,272	$4,205	$3,927	$4,235	$4,596	$5,089	$5,948
Number of Active Retirees	389	206	394	680	524	488	353	349
Fiscal Year Ending June 30, 2015								
Average Monthly Benefit	$1,508	$638	$1,143	$1,403	$2,164	$2,938	$4,217	$5,566
Avg Final Average Salary	$2,846	$5,627	$4,328	$4,055	$4,379	$4,675	$5,175	$6,047
Number of Active Retirees	399	222	407	699	551	511	375	360
Fiscal Year Ending June 30, 2016								
Average Monthly Benefit	$1,548	$652	$1,186	$1,462	$2,231	$3,034	$4,342	$5,669
Avg Final Average Salary	$2,901	$5,766	$4,535	$4,187	$4,513	$4,779	$5,297	$6,061
Number of Active Retirees	412	230	420	699	573	525	398	380
Fiscal Year Ending June 30, 2017								
Average Monthly Benefit	$1,620	$791	$1,203	$1,520	$2,338	$3,172	$4,482	$5,790
Avg Final Average Salary	$3,006	$5,453	$4,588	$4,293	$4,666	$4,946	$5,413	$6,076
Number of Active Retirees	378	274	438	716	593	547	413	384
Fiscal Year Ending June 30, 2018								
Average Monthly Benefit	$1,768	$801	$1,208	$1,551	$2,406	$3,289	$4,600	$5,912
Avg Final Average Salary	$3,617	$5,738	$4,679	$4,379	$4,776	$5,123	$5,512	$6,102
Number of Active Retirees	333	281	461	732	614	548	430	397
Fiscal Year Ending June 30, 2019								
Average Monthly Benefit	$1,851	$891	$1,222	$1,616	$2,503	$3,493	$4,713	$6,057
Avg Final Average Salary	$3,674	$6,014	$4,734	$4,487	$4,907	$5,361	$5,574	$6,203
Number of Active Retirees	351	298	470	753	642	572	440	408

Membership History (Retired)

(for years ending June 30)

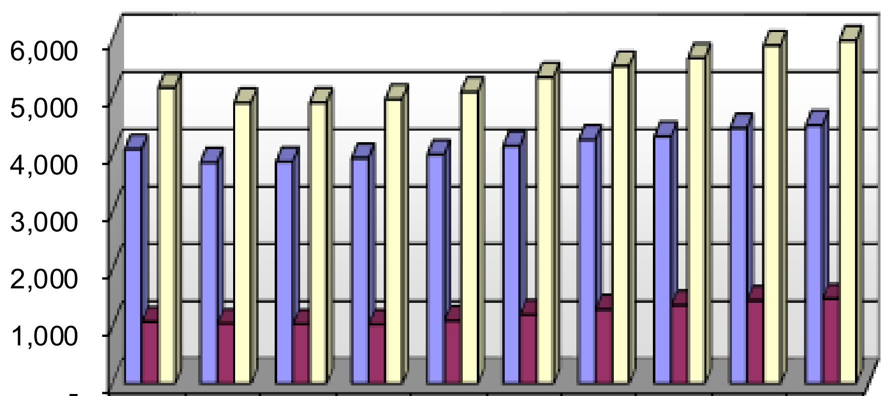


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Service	2,399	2,558	2,697	2,814	2,910	3,043	3,157	3,245	3,359	3,497
Serv. Conn. Dis.	258	254	262	262	260	260	262	264	262	121
Non-Serv. Dis.	119	122	119	113	112	113	114	121	120	261
Surv. Death Ben.	42	42	45	45	46	48	49	53	55	55
Total	2,818	2,976	3,123	3,234	3,328	3,464	3,582	3,683	3,796	3,934

Data Source: StanCERA Pension Administration System

Membership History (Active & Deferred)

(for years ending June 30)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Active Members	4,085	3,854	3,868	3,931	3,993	4,145	4,249	4,309	4,452	4,504
Inactive Members	1,075	1,042	1,032	1,028	1,095	1,198	1,289	1,367	1,445	1,476
Total	5,160	4,896	4,900	4,959	5,088	5,343	5,538	5,676	5,897	5,980

Data Source: StanCERA Pension Administration System

PARTICIPATING EMPLOYERS AND ACTIVE MEMBERS
WITH PERCENTAGE OF TOTAL SYSTEM
for years ended June 30

	2019		2018		2017		2016		2015	
Stanislaus County:										
General Members	3,305	73.4%	3,307	74.3%	3,202	74.3%	3,156	74.3%	3,062	73.9%
Safety Members	734	16.3%	721	16.2%	676	15.7%	645	15.2%	643	15.5%
Total	4,039		4,028		3,878		3,801		3,705	
Participating Agencies:										
Stanislaus County Superior Court	239	5.3%	219	4.9%	217	5.0%	228	5.4%	224	5.4%
City of Ceres	185	4.1%	171	3.8%	180	4.2%	184	4.3%	181	4.4%
East Side Mosquito Abatement District	10	0.2%	9	0.2%	9	0.2%	10	0.2%	8	0.2%
Hills Ferry Cemetery	3	0.1%	3	0.1%	3	0.1%	3	0.1%	3	0.1%
Keyes Community Services District	7	0.2%	6	0.2%	6	0.2%	6	0.2%	6	0.2%
Salida Sanitary District	7	0.2%	6	0.1%	7	0.2%	7	0.2%	7	0.2%
Stanislaus Council of Governments	14	0.3%	10	0.2%	9	0.2%	10	0.2%	11	0.3%
Total	465		424		431		448		440	
Total Active Membership	4,504		4,452		4,309		4,249		4,145	

	2014		2013		2012		2011		2010	
Stanislaus County:										
General Members	2,963	74.2%	2,903	73.8%	2,852	73.7%	2,841	73.7%	3,013	73.8%
Safety Members	602	15.1%	606	15.4%	574	14.8%	553	14.3%	601	14.7%
Total	3,565		3,509		3,426		3,394		3,614	
Participating Agencies:										
Stanislaus County Superior Court	212	5.3%	205	5.2%	229	5.9%	245	6.4%	252	6.2%
City of Ceres	181	4.5%	178	4.5%	173	4.5%	173	4.5%	178	4.4%
East Side Mosquito Abatement District	9	0.2%	10	0.3%	10	0.3%	11	0.3%	11	0.3%
Hills Ferry Cemetery	3	0.1%	4	0.1%	4	0.1%	4	0.1%	4	0.1%
Keyes Community Services District	6	0.2%	5	0.2%	6	0.2%	6	0.2%	6	0.1%
Salida Sanitary District	7	0.2%	7	0.2%	7	0.2%	7	0.2%	7	0.1%
Stanislaus Council of Governments	10	0.3%	13	0.3%	13	0.3%	14	0.3%	13	0.3%
Total	428		422		442		460		471	
Total Active Membership	3,993		3,931		3,868		3,854		4,085	

Data Source: StanCERA Pension Administration System

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