SAN JOAQUIN
C E R A

Comprehensive Annual Financial Report
For the Year Ended December 31, 2019

San Joaquin County Employees' Retirement Association
San Joaquin County, CA

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

Comprehensive Annual Financial Report

For the Year Ended December 31, 2019

ISSUED BY SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

Johanna Shick, *Chief Executive Officer*
Lily Cherng, CPA *Retirement Financial Officer*

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www.sjcera.org

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Introduction

San Joaquin County Employees' Retirement Association
6 S. El Dorado Street, Suite 400 • Stockton, CA 95202 • (209) 468-2163 • (209) 468-0480 • www.sjcera.org

May 26, 2020

Board of Retirement
6 S. El Dorado Street, Suite 400
Stockton, CA 95202

To SJCERA's Trustees, Members and Beneficiaries, Plan Sponsor and Participating Employers:

I am pleased to present to you the Comprehensive Annual Financial Report (CAFR) for the year ended December 31, 2019. This report provides a detailed overview of the SJCERA Plan and the fund's financial, actuarial and investment-related activities for the year. All data and information presented is accurate and reliable, conforms to generally accepted accounting principles, and is free of material misstatements. This *Letter of Transmittal* is a narrative introduction to the CAFR; I encourage you to read it in conjunction with the *Management's Discussion and Analysis* included in the Financial Section.

SJCERA AND ITS SERVICES

SJCERA is a public retirement system established by the San Joaquin County Board of Supervisors effective June 28, 1946. SJCERA provides retirement, disability and survivors' benefits to eligible General and Safety members employed by the County of San Joaquin and nine other public agencies:

- Lathrop-Manteca Rural Fire Protection District
- Mountain House Community Services District
- San Joaquin County Historical Society and Museum
- San Joaquin County Law Library
- San Joaquin County Mosquito and Vector Control District
- San Joaquin County Superior Court
- San Joaquin Local Agency Formation Commission
- Tracy Public Cemetery District
- Waterloo-Morada Rural Fire Protection District

SJCERA's nine-member Board of Retirement has exclusive control and fiduciary responsibility for administering the benefits and managing the investment of plan assets. The Board oversees the Chief Executive Officer and staff in their administration of the plan in accordance with the County Employees' Retirement Law (CERL) and the Public Employees' Pension Reform Act of 2013 (PEPRA) as adopted by the Board of Supervisors and Board of Retirement, and the bylaws, policies, and procedures adopted by the Board.

The Board of Retirement includes four trustees appointed by the San Joaquin County Board of Supervisors, the San Joaquin County Treasurer-Tax Collector, and four trustees elected by SJCERA members, and one alternate retired member.

FINANCIAL INFORMATION

SJCERA management is responsible for the accuracy, completeness, and fair presentation of the information in this report as well as for establishing and maintaining internal controls that ensure SJCERA's financial reporting is accurate and reliable, and that SJCERA's assets are protected from loss, theft or misuse. Internal controls are designed to provide reasonable, but not absolute, assurance that these objectives are met. Reasonable assurance recognizes the cost of a control relative to the benefits likely to be derived and that these judgments by management are based on estimates.

Brown Armstrong Accountancy Corporation, a certified public accounting firm, has audited SJCERA's financial statements and related disclosures, which are prepared by management. Brown Armstrong attests they are presented in conformity with generally accepted accounting principles (GAAP) in the United States of America as promulgated by the Governmental Accounting Standards Board (GASB) and are free from material misstatement. Internal controls are sufficient to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements and supporting schedules. The accompanying basic financial statements and transactions of the organization are prepared on the accrual basis of accounting.

INVESTMENTS

SJCERA's strategic asset allocation is designed to ensure diversification among asset classes and achieve SJCERA's long-term objectives. For the year ended December 31, 2019, the portfolio gained 13.3 percent net of fees, which was above SJCERA's assumed rate of return of 7.25 percent. As of December 31, 2019, SJCERA's annualized three-year net return was 7.5 percent, the five-year annualized net return was 5.3 percent, and the 10-year annualized net return was 6.5 percent. Plan assets totaled $3.2 billion as of December 31, 2019. More information about SJCERA's investments is included in the Investments section.

FUNDING

SJCERA engages a professional pension actuary to perform an annual actuarial valuation and Governmental Accounting Standards Board (GASB) 67/68 Report. The GASB 67/68 Report indicates that during 2019, SJCERA's total pension liability increased from $4.7 billion to $4.9 billion, the market value of assets increased from $2.8 billion to $3.2 billion, and the net pension liability decreased from $1.9 billion to $1.7 billion.

The actuarial valuation determines the progress made in accumulating sufficient assets to pay benefits when due. The January 1, 2020 valuation, which reflects the plan's progress in 2019, will be available in August 2020, after the publication of this report. As a result, the detailed discussion of funding provided in the Actuarial Section of this report is based on the January 1, 2019 valuation, which reflects SJCERA's progress in 2018.

MAJOR INITIATIVES

As this CAFR is being published during the COVID-19 pandemic, it is a timely reminder of the African proverb: "For tomorrow belongs to the people who prepare for it today." Below is a list of major initiatives accomplished by SJCERA in 2019 to prepare this plan for the future.

Strengthen Fund Stability. Staff completed a comprehensive review of SJCERA's liquidity requirements and the cash-overlay program resulting in a better-structured cash-overlay program. Staff implemented five new investment funds.

Additionally, during 2019, three employers made additional contributions to reduce their portion of the unfunded liability: San Joaquin County (which began paying additional voluntary contributions in 2017), the Mosquito and Vector Control District (which began paying additional voluntary contributions in 2018), and the Superior Court. Their commitment to funding the benefit and their partnership with SJCERA are commendable.

Improve Efficiency. Staff documented, streamlined and/or implemented 24 processes. In addition, SJCERA adopted two measures to track efficiency over time: Cost per Member and Administrative Cost as a Percentage of Contributions.

Deliver Excellent Service and Support. Staff revised and updated prioritized member communications including seven facts sheets. SJCERA's disability fact sheets won a Grand Award for Design and Illustration in the APEX 2019, 31st Annual Awards for Publication Excellence Competition.

Manage Emerging Organizational Needs. Staff documented SJCERA's Continuity of Operations Plan (COOP) and identified and trained individuals to back-up all critical functions. The COOP has been instrumental to SJCERA's successful continuance of services during the COVID-19 shelter-in-place restrictions. Disaster recovery and emergency preparedness will continue to be a focus in 2020.

ACHIEVEMENTS IN FINANCIAL REPORTING AND PLAN ADMINISTRATION

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to SJCERA for its Comprehensive Annual Financial Report (CAFR) for the Year Ended December 31, 2018. This award recognizes compliance with the highest standards for state and local government financial reporting. SJCERA also received the GFOA award for Outstanding Achievement in Popular Annual Financial Reporting (PAFR), a condensed financial report for members, in an easier to read format. Additionally, the Public Pension Coordinating Council honored SJCERA with the Public Pension Standards Award for Funding and Administration.

ACKNOWLEDGMENT

SJCERA's success, as reflected in this report, is the result of the combined effort of many. I want to recognize the trustees of the Board of Retirement for their leadership and policy decisions, which provide direction and focus to our work. Additionally, I want to thank SJCERA's advisors whose diligent efforts help ensure the successful operation of SJCERA. Finally, I want to thank SJCERA's staff for their dedicated service to our members, their commitment to administering the Plan with integrity, and their hard work in compiling this report. None of SJCERA's success would be possible without them.

Sincerely,

JShick

Johanna Shick
Chief Executive Officer

Certificate of Achievement for Excellence in Financial Reporting

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

San Joaquin County

Employees' Retirement Association

California

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2018

Christopher P. Morrill

Executive Director/CEO

Public Pension Standards Award For Funding and Administration 2019

PPCC

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2019

Presented to

SAN JOAQUIN 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

Introduction

Members of the Board of Retirement as of December 31, 2019

MICHAEL RESTUCCIA
Chair
Appointed by Board of Supervisors

MICHAEL DUFFY
Vice Chair
Appointed by Board of Supervisors

RAYMOND MCCRAY
Secretary
Appointed by Board of Supervisors

CHANDA BASSETT
Elected by Safety Members

JENNIFER GOODMAN
Elected by General Members

PHONXAY KEOKHAM
Ex-Officio Member

KATHERINE MILLER
Appointed by Board of Supervisors

MARGO PRAUS
Elected by Retired Members - Alternate

ADRIAN VAN HOUTEN
Elected by Retired Members

J.C. WEYDERT
Elected by General Members

Administrative Organization Chart

- **BOARD OF RETIREMENT**
  - Chief Executive Officer **Johanna Shick**
    - Retirement Administrative Assistant **Andrea Bonilla**
    - Investment Officer **Chris Wisdom**
    - Management Analyst **Greg Frank**
    - Assistant Chief Executive Officer **Kathy Herman**
      - Retirement Supervisor **Marta Gonzalez**
      - Financial Officer **Lily Cherng**
      - Information Systems Manager **Adnan Khan**

List of Professional Consultants

CONSULTING SERVICES

ACTUARY

Cheiron, Inc.

AUDITORS

Brown Armstrong Accountancy Corporation

CUSTODIAN

Northern Trust Company

INFORMATION SYSTEMS

IG, Incorporated

INVESTMENT CONSULTANTS

Meketa Investment Group
StepStone Company

LEGAL COUNSEL

Hanson Bridgett, LLP
Haydel and Ornellas
Law Office of Ted M. Cabral
Morrison & Foerster
Nossaman, LLP
Olson, Hagel & Fishburn, LLP
San Joaquin County Counsel
Vivian W. Shultz, Attorney At Law

Please refer to the Investment Section for a *Schedule of Investment Fees and Commissions*, page 66, and the *List of Investment Managers* on page 69.

Financial

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CERTIFIED PUBLIC ACCOUNTANTS

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BROWN ARMSTRONG
Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Members of the Board of Retirement and Audit Committee of
San Joaquin County Employees' Retirement Association
Stockton, California

Report on the Financial Statements and Other Information

We have audited the accompanying Statement of Fiduciary Net Position of the San Joaquin County Employees' Retirement Association (SJCERA) as of December 31, 2019, the related Statement of Changes in Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise SJCERA's basic financial statements as listed in the table of contents. We have also audited the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) as of and for the year ended December 31, 2019, listed as other information in the table of contents.

Management's Responsibility for the Financial Statements and Other Information

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

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements and other information based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and other information are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements and other information. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements and other information, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to SJCERA's preparation and fair presentation of the financial statements and other information 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 SJCERA's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements and other information.

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

Opinions

In our opinion, the financial statements and other information referred to above present fairly, in all material respects, the Fiduciary Net Position of SJCERA as of December 31, 2019; the changes in the Fiduciary Net Position for the year then ended; the Schedule of Cost Sharing Employer Allocations; and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) as of and for the year ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As described in Note 3 to the financial statements, SJCERA adopted Governmental Accounting Standards Board (GASB) Statement No. 84, *Fiduciary Activities*, effective January 1, 2019. Our opinion is not modified with respect to this matter.

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 Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise SJCERA's basic financial statements. The other supplementary 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 supplementary 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 supplementary 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.

Report on Summarized Comparative Information

We have previously audited SJCERA's December 31, 2018 financial statements, and our report dated May 24, 2019, expressed an unmodified opinion on those audited financial statements. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2018, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated May 26, 2020, on our consideration of SJCERA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of SJCERA's 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 SJCERA's internal control over financial reporting and compliance.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
May 26, 2020

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Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) presents the overview and analysis of the financial activities of the San Joaquin County Employees' Retirement Association (SJCERA or the Plan) for the year ended December 31, 2019. This MD&A presents SJCERA's overall financial position and the results of its operations, in conjunction with SJCERA's financial statements and notes.

FINANCIAL HIGHLIGHTS

- SJCERA's fiduciary net position increased by $403.3 million, or 14.2 percent, to $3.2 billion as of December 31, 2019.
- SJCERA's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2019, the date of the last actuarial valuation, the funded ratio for the actuarial liability was approximately 64.5 percent. In general, this indicates that for every dollar of benefits liability, SJCERA has about 65 cents. The portion of the pension liability attributable to inactive members (retired or deferred) is fully funded by plan assets. (Note 8c provides a more detailed explanation of recent changes in funded ratio.)
- Revenues for the year were $644.6 million, an increase from the prior year's $188.1 million. The increase was mainly caused by the increase in net investment gains compared to the prior year.
- Expenses for the year were $241.3 million, an increase of $15.0 million, or 6.6 percent, from the prior year's $226.3 million. This increase was primarily due to the $14.3 million increase in pension benefit payments to retirees.

OVERVIEW OF FINANCIAL STATEMENTS

The SJCERA 2019 financial statements, notes to the financial statements, required supplementary information, other supplementary information, and other information were prepared in accordance with the accounting principles and reporting standards prescribed by the Governmental Accounting Standards Board (GASB). The following discussion and analysis are intended to serve as an introduction and overview of SJCERA's financial reporting components.

The **Statement of Fiduciary Net Position** is the financial statement that presents the major categories of assets and liabilities and their related values. It represents the resources available for future benefit payments to retirees and beneficiaries and the current liabilities owed as of December 31, 2019, with comparative totals as of December 31, 2018.

The **Statement of Changes in Fiduciary Net Position** is the financial statement that provides an income statement presentation of annual additions to and deductions from the Plan for the year ended December 31, 2019, with comparative totals as of December 31, 2018.

The **Notes to the Financial Statements** provide additional information that is essential to a full understanding of the data provided in the audited financial statements.

The **Required Supplementary Information** provides the Schedule of Changes of Net Pension Liability and Related Ratios, Schedule of Contributions from the Employers and Other Contributing Sources, Schedule of Investment Returns, and Notes to Required Supplementary Information.

The **Other Supplementary Information** includes a Schedule of Administrative Expenses, Schedule of Investment Expenses, and Schedule of Payments to Consultants.

The **Other Information** includes two schedules pertaining to GASB Statement No. 68: the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan.

DEFINED BENEFIT PENSION PLAN FINANCIAL ANALYSIS

As of December 31, 2019, SJCERA's Fiduciary Net Position was $3.2 billion, an increase of $403.3 million. Employer and member contributions of $263.6 million, and a net investment gain of $380.7 million, were offset by benefits payments and administrative expenses of $241.3 million. Over time, increases and decreases in fiduciary net position are one of the indicators of whether SJCERA's financial situation is improving or deteriorating. Additional factors, such as market conditions, also need to be considered in assessing SJCERA's overall financial situation.

The table below compares SJCERA's fiduciary net position as of December 31, 2019 and 2018.

SJCERA FIDUCIARY NET POSITION

	2019	2018	INCREASE (DECREASE) AMOUNT	PERCENT CHANGE
Cash and Receivables	$ 135,994,035	$ 224,623,198	$ (88,629,163)	-39.46%
Investments	3,158,399,420	2,701,518,859	456,880,561	16.91%
Other Assets	261,827	297,261	(35,434)	-11.92%
TOTAL ASSETS	3,294,655,282	2,926,439,318	368,215,964	12.58%
TOTAL LIABILITIES	50,293,455	85,397,242	(35,103,787)	-41.11%
TOTAL FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS	$ 3,244,361,827	$ 2,841,042,076	$ 403,319,751	14.20%

REVENUES – ADDITIONS TO FIDUCIARY NET POSITION

The reserves needed to finance the retiree benefits are accumulated through the collection of employer and member contributions and through earnings on investments. The additions for the year ended December 31, 2019, totaled $644.6 million. Net investment gains totaled $380.7 million. The overall year 2019 revenues increased by $456.5 million from that of the prior year, primarily due to investment gains.

In 2019, the County of San Joaquin (County), the SJC Mosquito and Vector Control District (MVCD), and Superior Court paid additional contributions to decrease their proportionate share

Management’s Discussion and Analysis

of the unfunded actuarial liability (UAL). Employer contributions increased by $16.8 million, or 8.0 percent, over the prior year, and member contributions increased by $2.7 million, or 7.7 percent, over the prior year. The County and the majority of its members equally share the normal cost of pre-funding post-retirement cost-of-living adjustments. Some members also pay 114 percent or 133 percent of the basic member contribution rate, which reduces the employers' Normal Cost portion of the required contribution. Employers pay all of the required UAL amortization payment.

EXPENSES – DEDUCTIONS FROM FIDUCIARY NET POSITION

SJCERA's primary expenses are the payment of benefits to retirees and beneficiaries, the refund of contributions to former members, and the administrative costs. Expenses for the year 2019 totaled $241.3 million, an increase of 6.6 percent over 2018. The increase is primarily attributed to the annual cost-of-living adjustment to retirees' benefit payments and the growth in the number and average amount of benefits paid to retirees.

The table below compares SJCERA's Changes in Fiduciary Net Position.

Changes in Fiduciary Net Position

	2019	2018	INCREASE (DECREASE) AMOUNT	PERCENT CHANGE
ADDITIONS				
Employer Contributions	$ 225,528,756	$ 208,757,572	$ 16,771,184	8.03%
Member Contributions	38,098,688	35,377,951	2,720,737	7.69%
Net Investment Income (Loss) and Miscellaneous Income	380,674,528	(56,397,598)	437,072,126	774.98%
Transfer from Healthcare Custodial Fund	299,014	324,269	(25,255)	-7.79%
TOTAL ADDITIONS	$ 644,600,986	$ 188,062,194	$ 456,538,792	242.76%
DEDUCTIONS				
Retirement Benefit Payments	$ 232,736,441	$ 218,456,053	$ 14,280,388	6.54%
Death Benefits	668,768	622,901	45,867	7.36%
Refund of Contributions	2,944,863	2,364,713	580,150	24.53%
Administrative and Other Expenses	4,931,163	4,865,082	66,081	1.36%
TOTAL DEDUCTIONS	$ 241,281,235	$ 226,308,749	$ 14,972,486	6.62%
NET INCREASE (DECREASE)	$ 403,319,751	$ (38,246,555)	$ 441,566,306	1154.53%
FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS				
Beginning of Year	2,841,042,076	2,879,288,631	(38,246,555)	-1.33%
End of Year	$ 3,244,361,827	$ 2,841,042,076	$ 403,319,751	14.20%

PLAN ADMINISTRATION

SJCERA MEMBERSHIP

The table below provides comparative SJCERA membership data for the last two years. Total membership as of December 31, 2019, was 14,540, an increase of 398 members, or 2.81 percent, compared to December 31, 2018.

SJCERA Membership
AS OF DECEMBER 31, 2019 AND 2018

	2019	2018	INCREASE (DECREASE) AMOUNT	PERCENT CHANGE
Active Members	6,424	6,455	(31)	-0.48%
Retired Members	6,208	6,051	157	2.59%
Deferred Members	1,908	1,636	272	16.63%
TOTAL MEMBERSHIP	14,540	14,142	398	2.81%

ADMINISTRATIVE EXPENSES

The County Employees Retirement Law of 1937 (CERL) Section 31580.2 limits the Administrative Expense to twenty-one hundredths of one percent (0.21 percent) of the accrued actuarial liability (AAL) of the system.

The table below provides comparison of the actual administrative expenses for the fiscal years ended 2019 and 2018. The AAL was used to calculate the statutory budget amount. SJCERA's administrative expenses were well below the limit imposed by CERL for both years.

Compliance with Statutory Limitation Administrative Expenses
AS OF DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)

	2019	2018
BASIS FOR BUDGET CALCULATION (ACCRUED ACTUARIAL LIABILITY)		
Actual Administrative Expenses	$ 3,448	$ 3,650
Accrued Actuarial Liability as Basis for Budget Calculation[1]	4,496,976	4,235,093
ADMINISTRATIVE EXPENSES AS A PERCENTAGE OF		
The Basis for Budget Calculation	0.08%	0.09%
Limit per CERL	0.21%	0.21%

[1] Based on valuations dated January 1, 2018 and January 1, 2017, respectively.

ACTUARIAL VALUATIONS

SJCERA engages an independent actuarial firm, Cheiron, Inc., to perform an annual actuarial valuation to monitor its funding and funding integrity. The valuation assesses the magnitude of SJCERA's benefit commitments, in comparison with the assets expected to be available to support those commitments. In 2019, an Actuarial Experience Study was performed covering experience from January 1, 2016 through December 31, 2018. As a result of the experience study, there were changes in demographic assumptions and no changes in the economic assumptions. The most recent annual actuarial valuation as of January 1, 2019, contains a detailed discussion of the funding requirements. This valuation is used for funding purposes and establishing employer and member contributions rates. As of the January 1, 2019 actuarial valuation, the AAL was $4.72 billion and the Actuarial Value of Assets was $3.04 billion, resulting in a UAL of $1.68 billion. The funded ratio decreased from 64.8 percent last year to 64.5 percent on an actuarial value of assets basis. Using the market value of assets as of the valuation date, the funded ratio decreased from 64.0 percent to 60.2 percent.

For the year ended December 31, 2019, a GASB Statement No. 67/68 report was prepared by Cheiron, Inc., to provide accounting and financial disclosure information. In order to accommodate the annual reporting requirements of our plan sponsors in a timely manner, the valuation was prepared using the January 1, 2019 valuation as the basis for calculating the total pension liability (TPL) and projected to December 31, 2019. Based on this actuarial valuation, the TPL was $4.9 billion compared to a fiduciary net position of $3.2 billion, resulting in the employers' net pension liability (NPL) of $1.7 billion and a fiduciary net position as a percentage of TPL of 65.8 percent. The NPL as a percentage of covered payroll was 372.26 percent. Please see the Note 8 for more details.

REPORTING SJCERA'S FIDUCIARY RESPONSIBILITIES

SJCERA's Board of Retirement and staff are fiduciaries for the pension plan. Accordingly, SJCERA is responsible for ensuring that the assets reported in the statements are used for the intended purpose of paying retirement benefits to the eligible members and beneficiaries.

CONTACTING SJCERA'S MANAGEMENT

This financial report is designed to provide the Board of Retirement, members, taxpayers, and investment managers with a general overview of SJCERA's finances and to show SJCERA's accountability for the money it receives. Any questions about this report, or need for additional financial information, can be addressed to SJCERA, 6 South El Dorado Street, Suite 400, Stockton, California 95202.

Respectfully Submitted,

Lily Cherng

Lily Cherng, CPA, CGMA
Retirement Financial Officer
May 26, 2020

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
STATEMENT OF FIDUCIARY NET POSITION
AS OF DECEMBER 31, 2019 (WITH COMPARATIVE TOTALS)

	2019		2018	
	Defined Benefit Pension Plan	Post-Employment Healthcare Custodial Fund	Defined Benefit Pension Plan	Post-Employment Healthcare Custodial Fund
Assets				
Cash and Short-Term Investments				
Cash and Cash Equivalents	$ 72,762,977	$ 76,175	$ 129,812,307	$ 10,274
Cash Collateral - Securities Lending	46,038,227	-	81,063,525	-
Total Cash and Short-Term Investments	118,801,204	76,175	210,875,832	10,274
Receivables				
Investment Income Receivables	5,847,455	-	3,643,209	-
Contributions Receivables	8,187,026	-	7,643,798	-
Securities Sold, Not Received	3,111,902	-	2,411,261	-
Miscellaneous Receivables	46,448	-	49,098	-
Total Receivables	17,192,831	-	13,747,366	-
Investments, at Fair Value				
Stable Fixed Income	318,806,931	-	295,492,803	-
Credit	408,015,328	-	317,627,170	-
Global Public Equity	1,089,461,379	-	822,935,436	-
Private Appreciation	415,332,040	-	387,844,390	-
Risk Parity	408,546,978	-	368,268,349	-
Crisis Risk Offset	518,236,764	-	509,350,711	-
Total Investments, at Fair Value	3,158,399,420	-	2,701,518,859	-
Other Assets				
Prepaid Expenses	82,030	-	85,135	-
Equipment and Fixtures, Net	179,797	-	212,126	-
Total Other Assets	261,827	-	297,261	-
Total Assets	3,294,655,282	76,175	2,926,439,318	10,274
Liabilities				
Securities Lending - Cash Collateral	46,038,227	-	81,063,525	-
Securities Purchased, Not Paid	3,402,003	-	2,417,979	-
Accrued Expenses and Other Payables	762,190	-	1,722,948	-
Securities Lending Interest and Other Payables	91,035	-	192,790	-
Total Liabilities	50,293,455	-	85,397,242	-
Fiduciary Net Position Restricted for Pension and Post-Employment Healthcare Benefits	$ 3,244,361,827	$ 76,175	$ 2,841,042,076	$ 10,274

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

Statement of Changes in Fiduciary Net Position

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED DECEMBER 31, 2019 (WITH COMPARATIVE TOTALS)

	2019		2018	
	Defined Benefit Pension Plan	Post-Employment Healthcare Custodial Fund	Defined Benefit Pension Plan	Post-Employment Healthcare Custodial Fund
Additions				
Contributions				
Employer Contributions	$ 225,528,756	$ -	$ 208,757,572	$ -
Member Contributions	38,098,688	-	35,377,951	-
Employer Contributions to Healthcare Benefits	-	4,400,805	-	4,295,486
Total Contributions	263,627,444	4,400,805	244,135,523	4,295,486
Net Investment Income (Loss)				
Net Appreciation (Depreciation) in Fair Value of Investments	345,001,380	-	(74,208,559)	-
Interest	34,070,170	-	17,748,616	-
Dividends	6,958,776	-	11,859,972	-
Real Estate Income, Net	13,540,096	-	8,320,486	-
Investment Expenses	(19,363,548)	-	(20,513,425)	-
Miscellaneous Investment Income	54,974	-	1,353	-
Net Investment Income (Loss), Before Securities Lending Income	380,261,848	-	(56,791,557)	-
Securities Lending Income				
Earnings	2,186,019	-	1,743,726	-
Rebates	(1,734,932)	-	(1,309,501)	-
Fees	(112,594)	-	(108,406)	-
Net Securities Lending Income	338,493	-	325,819	-
Total Net Investment Income (Loss)	380,600,341	-	(56,465,738)	-
Miscellaneous Income	74,187	-	68,140	-
Transfer Between Plans	299,014	-	324,269	-
Total Additions	644,600,986	4,400,805	188,062,194	4,295,486
Deductions				
Benefit Payments	232,736,441	4,035,890	218,456,053	3,968,650
Death Benefits	668,768	-	622,901	-
Refunds of Member Contributions	2,944,863	-	2,364,713	-
Administrative Expenses				
General Administrative Expenses	3,448,181	-	3,650,150	-
Other Expenses				
Information Technology Expenses	260,169	-	194,498	-
Actuary Fees	226,652	-	120,122	-
Fund Legal Fees	996,161	-	900,312	-
Total Administrative and Other Expenses	4,931,163	-	4,865,082	-
Transfer Between Plans	-	299,014	-	324,269
Total Deductions	241,281,235	4,334,904	226,308,749	4,292,919
Changes in Fiduciary Net Position	403,319,751	65,901	(38,246,555)	2,567
Fiduciary Net Position Restricted for Pension and Post-Employment Healthcare Benefits				
Beginning of Year	2,841,042,076	10,274	2,879,288,631	7,707
End of Year	$ 3,244,361,827	$ 76,175	$ 2,841,042,076	$ 10,274

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

The San Joaquin County Employees' Retirement Association (SJCERA) is the public employee retirement system established by the County of San Joaquin (County) and is administered by the Board of Retirement of SJCERA (Board) to provide retirement, disability, and survivor benefits under the County Employees Retirement Law of 1937 (CERL) for the employees of the County and certain special districts within the County. SJCERA also administers the Post-Employment Healthcare Custodial Fund. Although the assets of the plans (defined benefit pension and post-employment healthcare) are commingled for investment purposes, each plan's assets may be used only for the payment of benefits to eligible members and beneficiaries of that plan, in accordance with the terms of the plan. A description of the Post-Employment Healthcare Custodial Fund is located in Note 2. All notes to the financial statements apply to both plans unless indicated otherwise.

NOTE 1 – DEFINED BENEFIT PENSION PLAN DESCRIPTION

A. GENERAL DESCRIPTION

SJCERA is a public retirement system established by the San Joaquin County Board of Supervisors effective June 28, 1946, under the provisions of the CERL and the Public Employees' Pension Reform Act of 2013 (PEPRA). SJCERA is administered by the Board. Pursuant to Government Code Sections 31520.1 and 31520.5, the Board consists of nine regular members, one alternate retired member, and under certain circumstances an alternate safety member. Four members and the alternate member(s) are elected by SJCERA's members, four are appointed by the County Board of Supervisors, and the County Treasurer is an ex-officio member. Board members serve for a term of three years, except for the County Treasurer who is a permanent member. The Board members as of December 31, 2019, were as follows:

Michael Restuccia, Chair	Phonxay Keokham
Michael Duffy, Vice Chair	Katherine Miller
Raymond McCray, Secretary	Margo Praus (Alternate)
Chanda Bassett	Adrian Van Houten
Jennifer Goodman	J.C. Weydert

SJCERA is a multiple-employer retirement system covering the County of San Joaquin, Lathrop-Manteca Rural Fire Protection District, Local Agency Formation Commission (LAFCO), Mountain House Community Service District, SJC Historical Society & Museum, SJC Law Library, SJC Mosquito & Vector Control District, SJC Superior Court, Tracy Public Cemetery District, and Waterloo-Morada Rural Fire Protection District. All employees appointed to full-time, permanent positions with a SJCERA participating employer become SJCERA members. Persons who commence covered employment at age 60 or older may irrevocably elect to waive membership in SJCERA. Public Health, a division of the County's Healthcare Services Department, became a participant of SJCERA effective June 27, 1993. Prior to that date, they were members of the California Public Employees' Retirement System (CalPERS). The elected officials of the County may request to become members of SJCERA. All benefits vest after attaining five years of service credit.

SJCERA has two benefit tiers:

- Tier 1 - Hired into public service before January 1, 2013.
- Tier 2 - Hired into public service for the first time on or after January 1, 2013

Notes to the Financial Statements

There are two types of membership:

1. **Safety Member —** Permanent employees engaged in the performance of active law enforcement, including probation officers and fire suppression employees, are considered Safety Members and are not generally covered by Social Security.

2. **General Member —** All other eligible employees not classified as Safety Members are considered General Members and are covered by Social Security.

Membership Summary

SJCERA's membership as of December 31, 2019, is presented below:

YEAR 2019	RETIREES TIER 1	RETIREES TIER 2	BENEFICIARIES TIER 1	BENEFICIARIES TIER 2	ACTIVE TIER 1	ACTIVE TIER 2	DEFERRED TIER 1	DEFERRED TIER 2	TOTAL TIER 1	TOTAL TIER 2
General	4,458	16	652	-	2,688	2,890	1,179	536	8,977	3,442
Safety	873	2	207	-	538	308	167	26	1,785	336
TOTAL	5,331	18	859	-	3,226	3,198	1,346	562	10,762	3,778

B. PLAN BENEFITS

Eligibility for Retirement

TIER 1:

A Tier 1 member may retire for service at age 50 or older with five or more years of service credit, and at least ten years have elapsed since the date of membership. A General, Tier 1 member may retire at any age with 30 or more years of service. A Safety, Tier 1 member may retire at any age with 20 or more years of service.

TIER 2:

A Tier 2 member may retire for service with five or more years of service credit upon attaining the minimum retirement age: Age 52 for General, Tier 2 members, and Age 50 for Safety, Tier 2 members.

Any member of SJCERA, regardless of benefit tier, may retire at age 70 with no minimum service credit requirement.

Retirement Benefit

The monthly benefit amount at retirement depends upon the type of membership, years of retirement service credit, final average compensation, age at retirement, and the benefit option elected by the member.

TIER 1:

For Tier 1 members, final average compensation for purposes of computing a retirement allowance is the average monthly salary for the highest twelve consecutive months of employment. In addition to base salary, final average compensation may include other items defined as compensation earnable for retirement purposes.

The benefit formula for General, Tier 1 members is 2.6 percent of final average compensation for each year of service credit at age 62. The formula for Safety, Tier 1 members is 3.0 percent of final average compensation for each year of service credit at age 50 effective January 1, 2001. Members who retired prior to April 1, 1982, with 15 years or more of County service, receive an additional $50 monthly supplement commencing at age 65. Members who retired on or after April 1, 1982, but before January 1, 2001, receive a supplemental monthly benefit of $10 per year of service up to 30 years. This "Post 1982" supplemental benefit is payable if sufficient funds exist.

Federal law limits the annual compensation that may be used to calculate retirement benefits (applicable to persons who became SJCERA members on or after January 1, 1996), and the maximum annual benefit payable by SJCERA to any retired member. For 2019, the annual compensation limit under Internal Revenue Code Section 401(a)(17) is $280,000 and the annual benefit limit under Internal Revenue Code Section 415(b) is $225,000. Retired members whose statutory benefits from SJCERA would exceed the annual benefit limitation are eligible for the County's Replacement Benefit Plan.

TIER 2:

For Tier 2 members, final average compensation for purposes of computing a retirement allowance is the average monthly salary for the highest 36 consecutive months of employment. In addition to base salary, final average compensation may include other items defined as pensionable compensation.

The benefit formula for General, Tier 2 members is 2.5 percent of final compensation for each year of service credit at age 67. The formula for Safety, Tier 2 members is 2.7 percent of final compensation for each year of service credit at age 57. PEPRA specifies the maximum annual compensation that may be used to calculate retirement benefits. The limits are adjusted annually based on changes in the Consumer Price Index (CPI). For 2019, the Tier 2 annual compensation limit is $124,180 for those included in the Federal Social Security System and $149,016 for those not included.

Cost-of-Living Adjustment (COLA)

For both Tier 1 and Tier 2 members, monthly allowances are eligible for an annual COLA based on the change in the CPI for the San Francisco-Oakland-San Jose area for the previous calendar year, up to a maximum of 3.0 percent. The Bureau of Labor Statistics does not publish a CPI for San Joaquin County. When the CPI exceeds 3.0 percent in any year, the difference between the actual change in CPI (rounded to the nearest one-half percent) and the 3.0 percent ceiling is "accumulated" for future years when the change is less than 3.0 percent. The plan's actuary has determined that the CPI increased by 3.96 percent in 2018, resulting in the maximum COLA of 3.0 percent, effective in April 2019. Under the statutory requirements of the CERL, this change is rounded to the nearest half percent. Members received an increase in benefits of 3.0 percent in 2019, based on the changes in the CPI. Members' accumulated carry-over balances as of April 1, 2019, will increase 1.0 percent from their balance on April 1, 2018.

Terminated Members' Deferred Retirement Benefit and Withdrawal of Contributions

A Member leaving employment with at least five years of service credit becomes eligible for a retirement benefit once they meet the minimum service retirement age and have not withdrawn their accumulated member contributions.

Members who terminate employment with fewer than five years of service credit may leave their accumulated contributions on deposit until they become eligible for a retirement benefit at age 70. Contributions left on deposit with SJCERA continue to accrue interest.

Upon termination of employment, members may withdraw their member contributions plus interest. Employer-paid contributions are not refundable. Members who take a refund of contributions become ineligible for future SJCERA retirement benefits.

Death Benefits

The beneficiary of an actively employed member who dies prior to attaining five years of credited service is refunded the member's accumulated contributions, with interest, and receives one month's salary for each full year of service, up to a maximum of six months' salary.

If the death occurs after five years of credited service and is not the result of a service-related injury or disease, the surviving spouse or minor children may elect to receive a lump sum benefit of the retirement contributions including interest and one month's salary for each full year of service up to six months' salary; 60 percent of the retirement allowance the deceased member would have received if they had retired with a nonservice-connected disability retirement benefit on the date of death; or a lump sum payment of six months' salary and a reduced monthly retirement benefit. The monthly allowance to minor children is discontinued once they marry or reach age 18 (age 22 if a full-time student).

The beneficiary of a deferred member receives the member's contributions plus accumulated interest.

Upon the death of a retiree, the beneficiary receives a retirement benefit as determined by the benefit option elected by the member at the time of retirement. In addition, the beneficiary also receives a $5,000 death benefit, which is paid from retirement reserves.

NOTE 2 – POST-EMPLOYMENT HEALTHCARE CUSTODIAL FUND

The Post-Employment Healthcare Custodial Fund accounts for assets held as an agent on behalf of others. The funds held within the Post-Employment Healthcare Custodial Fund do not meet the definition of a qualifying Other Post-Employment Benefits (OPEB) Trust under Governmental Accounting Standards Board (GASB) Statement No. 74. This fund is custodial in nature and does not measure the results of operations. GASB Statement No. 84, "Fiduciary Activities," was implemented in 2019. The Post-Employment Healthcare Fund is classified as a Custodial Fund.

The Post-Employment Healthcare Custodial Fund is used as a clearing account for cash flows from employers to fund Sick Leave Bank Benefits for their eligible retired members on a pay-as-you-go basis, and for cash flows out for payment of Sick Leave Bank Benefits. The Sick Leave Bank Benefit allows accumulated unused and uncashed sick leave to be converted to a Sick Leave Bank upon retirement at a rate of $27.65 per hour. Retired or deferred members who were employed prior to August 27, 2001, are eligible for Sick Leave Bank Benefits. In 2007, the San Joaquin Superior Court (Court) extended eligibility for Sick Leave Bank Benefits to Court employees hired on or after August 27, 2001. Employers fund the Sick Leave Bank Benefits and employees are not required to contribute to the plan.

Sick Leave Bank Benefits may be used to pay for employer-sponsored group health, dental, and vision care insurance premiums and/or reimbursement of Medicare Part B premiums for the eligible members, their spouses, and dependents. When a retiree's Sick Leave Bank is depleted, the retiree assumes responsibility for payment of health, dental, and vision care insurance premiums.

SJCERA allocates the investments held at December 31, 2019, between the Defined Benefit Pension Plan and the Post-Employment Healthcare Custodial Fund based on the internal records of the respective accounts at December 31, 2019.

NOTE 3 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – PENSION PLAN

A. BASIS OF ACCOUNTING

SJCERA's financial statements are presented on the accrual basis of accounting. Employer and member contributions that should have been made in the calendar year based on the actuarially determined contribution rates or amounts are recognized as revenues of that calendar year. Contributions receivable pursuant to an installment contract are also recognized in full in the year in which the contract is made. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

B. REPORTING ENTITY

SJCERA, governed by the Board, an independent entity, is a blended component unit of the County. SJCERA's annual financial statements are included in the County's financial reports as a pension trust fund.

C. CASH EQUIVALENTS

SJCERA's cash and short-term investments are managed by The Northern Trust Company (NT) and the County Treasurer.

THE NORTHERN TRUST COMPANY

Cash not required for daily operations is deposited with NT, SJCERA's master custodian for investment securities. NT pools cash from its clients pending permanent investment in its Short-Term Investment Fund (STIF). The cash in the STIF account is invested in high-grade money market instruments with very short maturities, such as bonds, notes, and other evidence of indebtedness, in accordance with SJCERA's investment policy.

The cash collateral received under the securities lending program is invested by NT through its securities lending collateral fund, which is created solely for the investment of cash collateral.

COUNTY TREASURER

Cash necessary for SJCERA's daily operations is pooled with other County funds for short-term investment by the County Treasurer. The County is responsible for the control and safekeeping of all instruments of title and for all investment of the pooled funds.

D. METHOD USED TO VALUE INVESTMENTS

Investments are carried at fair value. Fair values for investments are derived by various methods as indicated in the following table.

INVESTMENTS	SOURCE
Publicly traded stocks and bonds, and issues of the U.S. Government and its agencies	Most recent sales price as of the fiscal year-end. International securities reflect currency exchange rates in effect at December 31, 2019.
Mortgages	Equivalent pricing to comparable Government National Mortgage Association (GNMA).
Real estate equity funds	Fair market value as provided by real estate fund manager.
Real estate title holding corporations and limited liability companies	Fair market value of the investment as provided by fund managers, unless an alternative value has been determined by the Board per SJCERA's Real Estate Investment Policy and reviewed by SJCERA's Investment Consultant.
Private equity	Fair market value as provided by the investment manager and reviewed by SJCERA's Investment Consultant.
Private placement bonds	Face value of the security subject to designated conditions such as sales restrictions or limited marketability.

E. CAPITAL ASSETS

Capital assets, mainly leasehold improvements, furniture, and equipment, acquired by SJCERA are capitalized at cost. Depreciable capital assets are depreciated using the straight-line method over estimated useful lives of three to seven years for computer equipment, furniture, and other equipment. Leasehold improvements are amortized over the life of the lease. Depreciation expenses of the capital assets are included in general administrative expenses.

The change in capital assets owned for the year ended December 31, 2019, is presented below.

	BALANCE DECEMBER 1, 2018	ADDITIONS	DELETIONS	BALANCE DECEMBER 31, 2019
Original Cost	$ 1,738,161	$ 84,035	$ (165,476)	$ 1,656,720
Accumulated Depreciation and Amortization	(1,526,035)	(63,003)	112,115	(1,476,923)
NET BOOK VALUE	$ 212,126	$ 21,032	$ (53,361)	$ 179,797

Depreciation expense for the year ended December 31, 2019, was $63,003.

F. OPERATING LEASE

SJCERA leases office facilities on the fourth floor of 6 S. El Dorado Street in Stockton. In June 2018 SJCERA signed a new 12-year lease with significantly reduced rent. The lease specifies the rate for each year of the term. Total rent expense for the current year was $203,827. The terms of the lease expire at the end of June 2030.

The table below presents SJCERA's future projected rent expense based on the remaining term of the lease agreement is $2,447,201.

YEAR ENDED DECEMBER 31	TOTAL
2020	$ 208,923
2021	214,019
2022	219,114
2023	224,210
2024	229,306
Thereafter	1,351,629
	$ 2,447,201

G. RECEIVABLES

Receivables consist primarily of interest, dividends, investments in transition (traded but not yet settled), and contributions owed by participating employers. Contributions receivable pursuant to an installment contract between the member and SJCERA for purchase of service credit are recognized in full in the year in which the contract is made.

H. USE OF ESTIMATES IN THE PREPARATION OF FINANCIAL STATEMENTS

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

I. IMPLEMENTATION OF NEW GASB PRONOUNCEMENTS

The Governmental Accounting Standards Board (GASB) releases new accounting and financial reporting standards which may have a significant impact on SJCERA's financial reporting process. SJCERA implemented the following standard in 2019.

GASB Statement No. 84 – In January 2017, GASB issued Statement No. 84, Fiduciary Activities. The objective of this statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. This statement is effective for reporting periods beginning after December 15, 2018. SJCERA implemented this statement effective January 1, 2019.

NOTE 4 – CASH AND INVESTMENTS

A. INVESTMENT IN SECURITIES LENDING PROGRAM

SJCERA participates in NT's pooled securities lending program. Under the agreement, NT is authorized to lend the SJCERA securities that it holds to certain SJCERA-approved borrowers. NT does not have the ability to pledge or sell collateral securities unless a borrower default occurs.

All loans are fully collateralized with either cash, securities issued or fully guaranteed by the U.S. government, or irrevocable bank letters of credit. All collateral is held or invested by NT. The term or maturity of the securities loaned is generally matched with the term or maturity of the investment of the cash collateral. U.S. securities are loaned with collateral valued at 102 percent of the fair value of the securities plus any accrued interest. Non-U.S. securities are loaned with collateral valued at 105 percent of the fair value of the securities plus any accrued interest.

As of December 31, 2019, SJCERA had the following securities out on loan.

	FAIR VALUE OF SECURITIES LENT	CASH COLLATERAL VALUE	NON-CASH COLLATERAL VALUE
U.S. Equities	$ 12,917,842	$ 7,901,681	$ 5,394,858
U.S. Debt Securities	84,748,926	38,136,546	48,559,682
TOTAL U.S. SECURITIES	$ 97,666,768	$ 46,038,227	$ 53,954,540
Non-U.S. Equities	$ 22,501,550	-	$ 24,005,453
Non-U.S. Debt Securities	70,083,442	-	74,493,677
TOTAL NON-U.S. SECURITIES	$ 92,584,992	-	$ 98,499,130
TOTAL	$ 190,251,760	$ 46,038,227	$ 152,453,670

The cash collateral is reported on the financial statements as an asset and as a liability of SJCERA. Securities lending transactions collateralized by letters of credit or by securities that SJCERA does not have the ability to pledge or sell unless the borrower defaults are not be reported as assets and liabilities in accordance with GASB Statement No. 28. The potential risks involved in the securities lending program include borrower bankruptcy, collateral deficiencies, settlement problems, corporate actions, dividends, and interest. SJCERA's pro-rata share of net income derived from NT's pooled securities lending transactions in 2019 was $2,186,019. As of December 31, 2019, there was no credit risk exposure to borrowers because the collateral exceeded the amount borrowed. The securities on loan at year-end were $190 million and the collateral received for those securities on loan was $198 million.

B. CASH AND SHORT-TERM INVESTMENTS

The carrying value of cash and short-term investments at December 31, 2019, consists of the following.

		AMOUNT
Cash and Cash Equivalents – Custodian	$	72,386,392
Cash and Cash Equivalents – County Treasury		452,760
TOTAL CASH AND CASH EQUIVALENTS	$	72,839,152
Cash Collateral – Securities Lending – Custodian		46,038,227
TOTAL CASH AND SHORT-TERM INVESTMENTS	$	118,877,379

C. LONG-TERM INVESTMENTS

SJCERA owned the following long-term investments at December 31, 2019.

		FAIR VALUE
INVESTMENTS – CATEGORIZED		
Stable Fixed Income	$	318,806,931
Credit		408,015,328
Global Public Equities		1,089,461,379
Private Appreciation		415,332,040
Risk Parity		408,546,978
Crisis Risk Offset (CRO)		518,236,764
TOTAL INVESTMENTS - CATEGORIZED	$	3,158,399,420
INVESTMENTS – NOT CATEGORIZED		
Investments Held by Broker-Dealers Under Securities Loans		
U.S. Equities	$	7,901,681
U.S. Debt Securities		38,136,546
TOTAL INVESTMENTS HELD BY BROKER-DEALERS UNDER SECURITIES LOANS	$	46,038,227
TOTAL INVESTMENTS	$	3,204,437,647

GASB Statement No. 40, *Deposits and Investments Risk Disclosures*, establishes and modified disclosure requirements related to the following:

- Credit risk
- Custodial credit risk
- Concentration of credit risk
- Interest rate risk
- Foreign currency risk

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. SJCERA's Investment Policy seeks to maintain a diversified portfolio of fixed income instruments in order to obtain the highest total return for the fund at an acceptable level of risk within the asset class. To control such risk, credit quality guidelines have been established for the separately managed accounts. The following table depicts the value of the investments exposed to those risks and the corresponding credit ratings from Standard & Poor's (S&P) as of December 31, 2019.

QUALITY RATINGS	FAIR VALUE
AAA	$ 166,283,426
AA	3,861,174
A	18,848,916
BAA	65,643,998
BA	21,226,922
B	13,354,388
CAA	11,439,350
CA	10,950,626
C	117,674
Not Rated	226,360,244
SUBTOTAL	$ 538,086,718
U.S. Government Agencies - Implied AAA (FNMA, FHLB, FHLMC, FFCB, SLMA, Other)	188,735,541
TOTAL INVESTMENTS IN FIXED INCOME SECURITIES	$ 726,822,259

Custodial Credit Risk

The custodial credit risk represents the risk that, in the event of the failure of the counterparty of a transaction, SJCERA will not be able to recover the value of deposits and investments or collateral securities that are in the possession of an outside party.

DEPOSITS

The deposits with the County Treasurer are uninsured but secured by public funds of the pledging banks. The pool's investments, all held in the County's name, are short-term and include U.S. Treasury Bills, certain Federal agencies' instruments, bankers' acceptances, "prime" commercial paper, certificates of deposit, repurchase agreements, and the State Treasurer's Local Agency Investment Fund.

The cash deposits with NT are uninsured and uncollateralized. All underlying investments in the commingled STIF account are not registered in SJCERA's name.

INVESTMENTS

Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in SJCERA's name, and held by the counterparty. SJCERA's investment securities are not exposed to custodial credit risk because all securities are held by SJCERA's custodial bank in SJCERA's name, or by other qualified third party administrator trust accounts.

Concentration of Credit Risk

This risk represents the potential loss attributable to the magnitude of SJCERA's investments in a single issuer. As of December 31, 2019, for separately managed investment accounts, SJCERA did not hold any investments within any one issuer that would represent five percent (5%) or more of plan fiduciary net position.

Interest Rate Risk

Interest rate risk is the risk that changes in 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 interest rates. It is calculated as the weighted average time to receive a bond's coupon and principal payments. The longer the duration of a portfolio, the greater its price sensitivity to changes in interest rates.

As of December 31, 2019, SJCERA had the following interest rate sensitive investments.

INVESTMENT TYPE	FAIR VALUE	WEIGHTED AVERAGE MATURITY – YEARS
U.S. GOVERNMENT AND AGENCY INSTRUMENTS		
U.S. Government Mortgages	$ 84,506,897	23.75
U.S. Government Bonds	195,623,632	19.69
Index Linked Government Bonds	1,631,145	2.40
Municipal / Revenue Bonds	2,097,202	16.66
Agency	3,615,781	16.57
Short-Term Bills and Notes	72,345,143	0.06
TOTAL U.S. GOVERNMENT AND AGENCY INSTRUMENTS	$ 359,819,800	
CORPORATE SECURITIES		
Asset-Backed Securities	$ 32,044,825	18.12
Collateralized Bonds	2,674	26.53
Commercial Mortgage-Backed	18,898,217	17.55
Corporate and Other Credit	105,293,211	10.81
Non-Government Backed Collateralized Mortgage Obligations (CMOs)	41,899,270	17.58
TOTAL CORPORATE SECURITIES	$ 198,138,197	
REAL ESTATE FINANCING	168,864,262	
TOTAL FIXED INCOME SECURITIES	$ 726,822,259	

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates may adversely affect the fair value of an investment. SJCERA's external non-U.S. equity and fixed income investment managers may invest in international securities in accordance with their investment guidelines pertaining to these types of investments.

Currency hedging on an unleveraged basis is permitted by non-U.S. equity managers as a strategy to protect against losses due to currency translations (defensive hedging). However, it is expected that the primary sources of added value for non-U.S. equity investment managers will be stock and country selection, with currency management focused on limiting losses due to fluctuations in currency values. Managers may purchase or sell currency on a spot basis to accommodate securities settlements.

Managers may invest in developed market currencies and emerging market currencies in accordance with their investment guidelines. Permitted derivative instruments are currency spots, currency forward contracts (deliverable or non-deliverable), currency futures, options on currency forwards or futures, and currency swaps. Other investments, contracts, or positions that, in the managers' judgment, are of similar purpose and character and equal credit quality and marketability to any of the investments above, are also permissible.

SJCERA's exposure to foreign currency risk in U.S. dollars as of December 31, 2019 is as follows.

CURRENCY	FAIR VALUE
Australian Dollar	$ (1)
British Pound Sterling	4
Canadian Dollar	4
Euro Currency	28,172
TOTAL	$ 28,179

D. FAIR VALUE MEASUREMENT

In accordance with GASB Statement No. 72, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The statement establishes a fair value hierarchy based on three types of input to develop the fair value measurements for investments. The level is determined based on the lowest level of input significant to the measurement in its entirety. Assets and liabilities measured at fair value are classified into one of the following categories:

Fair Value Hierarchy

Level 1 – reflects unadjusted quoted prices in active markets for identical assets or liabilities accessible on the measurement date. Observable markets include exchange markets, dealer markets, and brokered markets.

Level 2 – reflects similar observable inputs other than quoted market prices. It includes quoted prices for similar assets in active markets or quoted prices for identical or similar assets in inactive markets.

Level 3 – reflects prices based on unobservable sources. They should be used only when relevant Level 1 and Level 2 inputs are unavailable.

The following table presents fair value measurements as of December 31, 2019.

INVESTMENTS BY FAIR VALUE LEVEL	TOTAL FAIR VALUE	QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1)	SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2)	SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)
EQUITIES				
Common Stocks	$ 84,174,100	$ 84,168,256	$ 5,844	$
Preferred Stocks	1,036,940	1,036,940	-	-
TOTAL EQUITIES	$ 85,211,040	$ 85,205,196	$ 5,844	$
FIXED INCOME				
Asset Backed Securities	$ 32,044,825	-	$ 32,044,825	-
Collateralized Bonds	2,674	-	2,674	-
Commercial Mortgage-Backed	18,898,217	-	18,898,217	-
Corporate Bonds	105,293,211	-	105,293,211	-
Funds - Corporate Bonds	53,604,862	-	53,604,862	-
Funds - Government Bonds	13,942,497	-	13,942,497	-
Government Agencies	3,615,781	-	3,615,781	-
Government Bonds	195,623,632	-	195,623,632	-
Government Mortgage-Backed Securities	84,506,897	-	84,506,897	-
Index Linked Government Bonds	1,631,145	-	1,631,145	-
Municipal/Provincial Bonds	2,097,202	-	2,097,202	-
Non-Government Backed CMOs	41,899,270	-	41,899,270	-
Other Fixed Income	111,201,799	-	-	111,201,799
TOTAL FIXED INCOME	$ 664,362,012	-	$ 553,160,213	$ 111,201,799
OTHER ASSETS				
Short-Term Bills and Notes	$ 72,345,143	-	$ 72,345,143	-
Futures Contracts	900,866	-	900,866	-
Options Contracts	714,069	-	714,069	-
Swaps	(667,556)	-	(667,556)	-
TOTAL OTHER ASSETS	$ 73,292,522	-	$ 73,292,522	-
Collateral from Securities Lending	46,038,227	-	46,038,227	-
TOTAL INVESTMENTS BY FAIR VALUE LEVEL	$ 868,903,801	$ 85,205,196	$ 672,496,806	$ 111,201,799
INVESTMENTS MEASURED AT THE NET ASSET VALUE (NAV)				
Global Equities Funds	$ 1,005,293,124			
Fixed Income Funds	159,986,967			
Risk Parity Funds	408,546,978			
Multi-Strategy Hedge Funds	277,614,769			
Hedge Funds - Fixed Income	23,804,720			
Private Equity Funds	186,338,271			
Private Real Estate Funds	273,949,017			
TOTAL INVESTMENTS MEASURED AT NAV	$ 2,335,533,846			
TOTAL INVESTMENTS	$ 3,204,437,647			

Investments Measured at Net Asset Value (NAV)

SJCERA measures certain investments that do not have a readily determinable fair value, such as hedge funds, commingled funds, and private equity funds, using NAV as a practical expedient. The SJCERA investments valued at NAV are the majority holdings for SJCERA portfolio. The following table presents the unfunded commitments, redemption frequency (if currently eligible), and the redemption notice period for SJCERA investments measured at NAV.

The following table presents the investments measured at NAV as December 31, 2019.

INVESTMENTS MEASURED AT NAV	FAIR VALUE	UNFUNDED COMMITMENT	REDEMPTION FREQUENCY IF CURRENTLY ELIGIBLE	REDEMPTION NOTICE PERIOD
Global Equity Funds	$ 1,005,293,124	$ -	Daily, Weekly, Semi-Monthly, Monthly	1-30 Days
Fixed Income Funds	159,986,967	39,871,619	Daily, Not Eligible	1 Day
Risk Parity Funds	408,546,978	-	Monthly	5-15 Days
Multi-Strategy Hedge Funds	277,614,769	-	Daily, Weekly, Semi-Monthly, Monthly	0-15 Days
Hedge Funds	23,804,720	12,717,985	Daily, Quarterly, Not Eligible	0-60 Days
Private Equity Funds	186,338,271	160,811,976	Not Eligible	Not Applicable
Private Real Estate Funds	273,949,017	85,540,866	Quarterly, Not Eligible	5-90 Days, Not Applicable
TOTAL INVESTMENTS MEASURED AT NAV	$ 2,335,533,846	$ 298,942,446		

Global Equity Funds - Assets within these funds represent shares of ownership in U.S. and international corporations, including publicly traded common stocks, American and Global Depository Receipts, as well as Real Estate Investment Trusts (REITS).

Fixed Income Funds - Funds within this segment represent debt instruments of corporations, government or agencies characterized by a fixed or variable interest rate and stated maturity date, including marketable bonds.

Risk Parity Funds - Funds within this segment represent portfolios that seek to balance the risk characteristics of assets across multiple segments. These portfolios generally invest in equities, bonds and commodities among other assets.

Multi-Strategy Hedge Funds - Funds within this segment represent portfolios that seek to balance the risk characteristics of assets across multiple segments. These portfolios generally invest in equities, bonds, and commodities among other assets.

Fixed Income Hedge Funds - Funds within this segment can involve holding both long and short positions in securities instead of traditional long-only investments in publicly traded investments. Portfolios also may utilize derivatives or hedging strategies as well. Multi-Strategy managers utilized various investment segments to invest, including but not limited to, equities, bonds, currency, and commodities.

Private Equity Funds - These funds are illiquid allocations that invest primarily in buyout funds, venture capital, and debt/special situations. These funds are not eligible for redemption and investment periods are generally between five and 15 years.

Private Real Estate Funds - These funds are defined as those investments that are unleveraged or leveraged positions in real property. The portfolio may pursue direct privately held partnership interests, fund-of-funds interests, and direct holdings for its real estate allocation.

E. SUMMARY OF INVESTMENT POLICY

The Board has exclusive control over SJCERA's investment portfolio. The Board established Investment Policies in accordance with applicable local, State, and Federal laws. The Board members exercise authority and control over the management of SJCERA's assets by setting policy, which the staff executes either internally or through the use of external prudent experts. The Board provides oversight and guidance subject to the following basic fiduciary responsibilities.

- Solely in the interest of, and for the exclusive purpose of, providing economic benefits to participants and their beneficiaries.
- With the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character with like objectives.
- Diversify the investments of the plans so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances, it is clearly prudent not to do so. Diversification is applicable to the deployment of the assets as a whole.

F. TARGET ASSET ALLOCATION

The Board completed an asset-liability study during 2019, facilitated by its investment consultant, Meketa Investment Group, and its consulting actuary, Cheiron, Inc. A key aspect of the study was the Board's consensus on how it defines risk and determining its tolerance for risk, which plays a significant role in the selection of the policy mix of assets that comprise the strategic asset allocation for the investment program.

On September 13, 2019, the Board adopted a revised strategic asset allocation policy for SJCERA's investments. On October 11, 2019, the Board adopted an Implementation Plan which describes how the new strategic allocation is to be implemented. The Implementation Plan uses an "evolving policy" framework which allows the portfolio to be adjusted over time, with a target completion deadline of June 30, 2021. The plan also notes that SJCERA will move faster, depending on market conditions.

The strategic asset allocation is expected to improve the likelihood of the plan accomplishing its primary financial objective: to earn a long-term return that, coupled with projected contributions, is projected to be sufficient to attain full funding in the long-term while avoiding substantial deterioration in funded status along the way.

CURRENT ASSET ALLOCATION POLICY[1]			
ASSET CLASS	POLICY ALLOCATION PERCENTAGE	PURPOSE	MAIN RISK EXPOSURES
Global Public Equity[2]	30.00%	Return	Growth, Currency
Stable Fixed Income	10.00%	Income, Stability	Interest Rates
Credit	14.00%	Income, Growth	Growth
Private Appreciation[3]	12.00%	Return	Growth
Risk Parity	14.00%	Balanced Return	Growth, Interest Rates, Inflation
Crisis Risk Offset (CRO) Long Duration Systematic Trend Following Alternative Risk Premia	20.00%	Return and Liquidity During a Growth Crisis	Interest Rates Variable Based on Trends Alternative Factor Risks
	100.00%		

[1] Allocation prior to September 13, 2019 revision

[2] Includes 3% public real estate securities

[3] Includes 7% private real estate equity investments

NOTE 5 – DERIVATIVE FINANCIAL INSTRUMENTS

The Board has authorized certain investment managers to invest in, or otherwise enter into, transactions involving derivative financial instruments when such transactions are consistent with the investment objectives established for a specific investment manager's assignment. A professional investment consultant is employed to monitor and review each investment manager's securities and derivative position as well as the manager's performance relative to established benchmark rates of return and risk measures. Derivative activities must be evaluated within the context of the overall portfolio performance and cannot be evaluated in isolation.

Investment derivatives involve the following types of risks.

> **Market Risk:** Market risk is the risk of change in value of an instrument in response to changes in a market price or index. While all investments are subject to market risk, derivatives often have a higher degree of market risk than other types of investment instruments. Values of cash securities containing derivative features are often more susceptible to market risk than other types of fixed income securities because the amounts and/or timing of their scheduled cash flows may fluctuate under changing market conditions, according to their contractual terms. For other types of derivatives, amounts of contractual cash flows may be either positive or negative depending upon prevailing market conditions relative to the reference prices or rates, and thus the values of such instruments may be positive or negative, despite the fact that little or no cash is initially exchanged to enter into such contacts.

Credit Risk: Credit risk of cash securities containing derivative features is based upon the credit worthiness of the issuers of such securities. It includes the risk that counterparties to contracts will not perform and/or the public exchange will not meet its obligation to assume this counterparty risk. Exchange traded derivatives are generally considered to be of lower credit risk than over-the-counter derivatives due to the exchange's margin requirements. The derivative investments are exchange traded, and credit risk is limited to the clearing corporation. As of December 31, 2019, collateral for derivatives was $8.4 million. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted.

The following Credit Risk Analysis schedule discloses the counterparty credit ratings of SJCERA's derivative investments as December 31, 2019.

CREDIT RISK ANALYSIS
AS OF DECEMBER 31, 2019

	S & P CREDIT RATING	
DERIVATIVE TYPE	A	TOTAL FAIR VALUE
Future Contracts	$ 900,866	$ 900,866
Options Contracts	714,069	714,069
TOTAL	$ 1,614,935	$ 1,614,935

Interest Rate Risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Interest rate swaps are an example of an investment that has a fair value that is highly sensitive to interest rate changes. SJCERA is exposed to interest rate risk in the form of futures contracts and option contracts in the following global government bond markets.

INTEREST RATE RISK
AS OF DECEMBER 31, 2019

GLOBAL BONDS	FUTURES CONTRACTS	OPTIONS CONTRACTS
Canadian Government Bond	$ (8,999,461)	$ -
Long Gilt	14,437,066	-
Japanese Government Bond	(21,011,598)	-
Euro Bond	17,021,756	-
U.S. Ten Year Notes	20,675,922	-
Eurodollars	(30,247,238)	427,169
90 Day Sterling	(135,689,600)	-
TOTAL	$ (143,813,153)	$ 427,169

SJCERA measures derivative interest rate risk using duration with varying maturities of less than three months to more than 10 years. At December 31, 2019, SJCERA had the following investment derivative interest rate risks.

INTEREST RATE RISK ANALYSIS
As of December 31, 2019

(DOLLARS IN THOUSANDS)

DERIVATIVE TYPE	NOTIONAL VALUE	FAIR VALUE	< 3 MONTHS	3 TO 6 MONTHS	6 TO 12 MONTHS	1 TO 5 YEARS	5 TO 10 YEARS	10+ YEARS
Futures Contracts	$ (45,930)	$ -	$ (45,930)	$ -	$ -	$ -	$ -	$ -
Swap Agreements	-	(668)	-	-	-	(668)	-	-
Rights/Warrants	(32,110)	-	-	(32,110)	-	-	-	-
TOTAL	$ (78,040)	$ (668)	$ (45,930)	$ (32,110)	$ -	$ (668)	$ -	$ -

Foreign Currency Risk: Foreign currency risk is the risk that changes in currency exchange rates will adversely affect the fair value of an investment. Currency forward contracts represent foreign exchange contracts that are used to control currency exposure and facilitate the settlement of international security purchase and sale transactions. As of December 31, 2019, SJCERA had the derivative foreign currency exposures listed in the table below.

FOREIGN CURRENCY RISK ANALYSIS
As of December 31, 2019

CURRENCY	FUTURES CONTRACTS
Australian Dollar	$ (6,404,580)
Canadian Dollar	8,402,265
Euro Currency	(13,538,400)
British Pound Sterling	13,624,300
Japanese Yen	(13,405,375)
Swiss Franc	(9,750,000)
TOTAL	$ (21,072,390)

Derivatives are carried as assets when the fair value is positive, and as liabilities when the fair value is negative. Gains and losses from derivatives are included in net investment income (loss). For financial reporting purposes, all SJCERA derivatives are classified as investment derivatives.

Derivative financial instruments held by SJCERA from time to time consist of the following.

FUTURES CONTRACTS

A futures contract represents an agreement to buy (long position) or sell (short position) an underlying asset at a specified future date for a specified price. Payment for the transaction is delayed until a future date, which is referred to as the settlement or expiration date. Futures contracts are standardized contracts traded on organized exchanges.

OPTIONS CONTRACTS

An option contract is a type of derivative security in which a buyer (purchaser) has the right, but not the obligation, to buy or sell a specified amount of an underlying security at a fixed price by exercising the option before its expiration date. The seller (writer) has an obligation to buy or sell the underlying security if the buyer decides to exercise the option.

SWAP AGREEMENTS

A swap is an agreement between two or more parties to exchange a sequence of cash flows over a period of time in the future. No principal is exchanged at the beginning of the swap. The cash flows the counterparties exchange are tied to a "notional" amount. A swap agreement specifies the time period over which the periodic payments will be exchanged. The fair value represents the gains or losses as of the prior marking-to-market.

All investment derivative positions are included as part of investments at fair value on the Statement of Fiduciary Net Position. All changes in fair value are reported as part of net appreciation/(depreciation) in fair value of investments in the Statement of Changes in Fiduciary Net Position. Investment information was provided either by SJCERA's investment managers or SJCERA's custodian bank. The Investment Derivatives schedule below is classified by type and reports the fair value balances and notional amounts of derivatives outstanding as of and for the year ended December 31, 2019.

INVESTMENT DERIVATIVES

As of December 31, 2019

DERIVATIVE TYPE	NOTIONAL AMOUNT	FAIR VALUE
Futures Contracts	$ (209,968,246)	$ 900,866
Options Contracts	1,142,752	714,069
Swap Agreements	-	(667,556)
TOTAL	$ (208,825,494)	$ 947,379

NOTE 6 – CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

DEFINED BENEFIT PENSION PLAN

The funding objective of the plan is to establish contribution rates that, together with investment earnings, will provide sufficient assets to pay all benefits under the plan. The County and participating employers are required to contribute a percentage of their annual covered payroll at actuarially determined rates. Actuarial valuations involve estimates and make assumptions about the probability of events far into the future, therefore, actuarially determined rates are subject to continual revision as results are compared to past expectations and new estimates are made about the future.

EMPLOYER CONTRIBUTIONS

For 2019, the required employer contribution rates including normal cost and amortization of the unfunded actuarial liability (UAL) were determined by using the valuation report as of January 1, 2018.

Effective January 1, 2017, the County began making additional annual contributions ranging from zero percent to five percent of payroll. In 2019, the County made additional $21,025,182 contributions. In November 2018, SJC Mosquito and Vector Control District (MVCD) made an additional $80,000 contribution to decrease its UAL. The MVCD plans to contribute an additional $70,000 per budget year from 2019 through 2024. In June 2019, San Joaquin Superior Court made additional $1,375,000 contributions to decrease its share of the UAL. These additional annual contributions decrease only that individual employer's share of the UAL and not the liability for other entities participating in SJCERA.

The total market value of the additional contributions, including prior year amounts and accumulated interest at the plan's actual rate of return, was $68,994,995 as of December 31, 2019. These assets are included in the calculation of the UAL and funded ratio. However, as requested by the contributors and approved by the Board, the assets in these reserves are not currently included in the calculation of the employer contribution rates.

EMPLOYER RETIREMENT CONTRIBUTION RATES
Expressed as a Percentage of Active Member Payroll

	2019 (PER 1/1/2018 VALUATION)		
	NORMAL COST	UAL AMORTIZATION	TOTAL
TIER 1			
For General Members			
Paying Basic Rate Only (G.C. 31621.3)	18.24%	26.18%	44.42%
Paying Basic Rate with COLA Cost Share	15.60%	26.18%	41.78%
Paying 114% of Basic Rate with COLA Cost Share	15.09%	26.18%	41.27%
For Safety Members			
Paying Basic Rate Only (G.C. 31639.5)	31.94%	52.61%	84.55%
Paying Basic Rate with COLA Cost Share	27.18%	52.61%	79.79%
Paying 133% of Basic Rate with COLA Cost Share	25.70%	52.61%	78.31%
Composite Total for General and Safety Combined			
Paying Basic Rate Only (G.C. 31621.3)	20.78%	31.03%	51.81%
Paying Basic Rate with COLA Cost Share	17.75%	31.03%	48.78%
Paying 114% / 133% of Basic Rate with COLA Cost Share	17.06%	31.03%	48.09%
TIER 2			
For General Members	9.21%	26.18%	35.39%
For Safety Members	14.61%	52.61%	67.22%
COMPOSITE TOTAL FOR GENERAL AND SAFETY COMBINED	9.77%	28.83%	38.60%

The composite employer contribution rates (for General and Safety Members combined) expressed as a percentage, or range of percentages, of covered payroll for the past seven years follows.

CONTRIBUTION YEAR	TIER 1	TIER 2
2019	48.09% – 51.81%	38.60%
2018	45.18% – 48.75%	35.80%
2017	44.31% – 47.91%	34.48%
2016	42.06% – 45.58%	31.95%
2015	39.84% – 43.06%	30.34%
2014	36.59% – 38.93%	29.43%
2013	32.66% – 35.12%	26.65%

MEMBER CONTRIBUTIONS

Member contributions are deducted from the member's salary on a biweekly basis.

Tier 1 member contribution rates are calculated by the actuary using the Entry Age Normal Funding Method (Cost Method). Most Tier 1 members pay one-half of the cost of pre-funding post-retirement COLAs, and some pay an additional percentage of the basic member contribution rate, which reduces the employers' normal cost. Tier 2 members pay a single contribution rate adjusted annually. The required contribution rates are expressed as a percentage of covered payroll. The 2019 contribution rates were determined using the actuarial valuation performed as of January 1, 2018.

Tier 1 members pay contributions based upon their membership category, General or Safety, and age at entry into membership. General Tier 1 members employed before March 7, 1973 and all Safety Tier 1 members stop paying member contributions when they have 30 years of service, but continue to accrue retirement service credit for subsequent active employment subject to membership.

Tier 2 members pay contributions based upon their membership category equal to one-half of the normal cost of the applicable benefits.

In 2019, member contributions totaled $38,098,688 and employer contributions totaled $225,528,756. Member contributions increased by $2.72 million, or 7.69 percent, over the prior year, and employer contributions increased by $16.77 million, or 8.03 percent, over the prior year.

NOTE 7 – FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS

As required by the CERL and the Board's policy, the following reserves from Fiduciary Net Position Restricted for Pension Benefits must be established and used to account for the members', employers', and retirees' contributions. The Unappropriated Earnings Reserve was insufficient to fully credit all reserves with interest earnings at the 7.25 percent assumption rate; only the active and deferred members' reserve was credited with interest at assumed rate in 2019. In addition, there were no excess earnings to fund the Contingency Reserve in 2019.

A. ACTIVE AND DEFERRED MEMBERS' RESERVE

This reserve represents the cumulative contributions made by active members, net of refunds to the members, plus the investment earnings credited to the reserve at the assumption rate.

B. EMPLOYER ADVANCE RESERVES

This reserve represents the cumulative contributions made by the County and participating employers. Interest earnings are credited semi-annually to the reserves at the assumption rate if sufficient unappropriated earnings reserve funds exist.

C. COUNTY ADDITIONAL 5% CONTRIBUTIONS RESERVE

This reserve represents the additional contributions in excess of actuarially determined contributions paid by the County in order to decrease its share of the UAL.

D. RETIRED MEMBERS' RESERVES

These reserves are established to account for the unpaid retirees' pension benefits. Upon a member's retirement, the member's accumulated contributions are transferred from the Active and Deferred Members' Reserve account to the Retired Members' Annuity Reserve account. In addition, the actuarially determined amount of the member's vested interest is transferred from the Employer Advance Reserves account to the Retired Members' Pension Reserve account.

The Retired Members' Reserve account at December 31, 2019, includes the authorized "Purchasing Power" benefit reserve and additional pension benefits specified in the pre-April 1, 1982 class-action lawsuit settlement agreement. These benefits are explained in Note 1b. In accordance with the Statement of Reserve Policy, the post-April 1, 1982 Settlement Reserve is a Special Reserve, which is not included in valuation assets.

E. CONTINGENCY RESERVE

Earnings of the retirement fund during any year in excess of the total interest credited to contributions and reserves during the year remain in the fund as a reserve against deficiencies in interest earnings in other years, losses on investments, and other contingencies. The CERL provides that when the contingency reserve exceeds one percent of total assets, the retirement board may transfer all or any part of the surplus as specified in Government Code Section 31592.2. In June 2017, the Board amended the Reserve Policy, lowering the Contingency Reserve target from three percent to one percent of total assets. The Contingency Reserve is zero percent of the fair value of total assets at December 31, 2019.

F. MARKET STABILIZATION DESIGNATION RESERVE

This "designation" account is used to further minimize the impact of the fluctuations in the fair value of the investments owned by SJCERA. It represents the difference between the actuarial value of assets and the fair value of assets at year-end. It is the balance of deferred earnings and losses created by a five-year smoothing of actual gains and losses compared to the assumed investment rate of return.

G. UNAPPROPRIATED EARNINGS RESERVE

The Unappropriated Earnings Reserve (UER) is used to accumulate investment income earned by SJCERA, net of the investment expenses and SJCERA's administration cost. From this unappropriated earnings account, interest is credited to various reserve accounts. In addition, at the Board's discretion and subject to the settlement agreement in 2001, this account may also be used, from time to time, to stabilize the County's and the special districts' actuarially determined contributions, and to fund the market stabilization and contingency reserves accounts.

H. CLASS ACTION SETTLEMENT – POST 4/1/82 RESERVE

The Class Action Settlement – Post 4/1/82 Reserve designates the fund that pays the Post-82 Class Action Settlement allowances for the lifetime of the members and beneficiaries, who retired between April 1, 1982, and December 31, 2000, to the extent sufficient funds are available.

I. MOSQUITO AND VECTOR CONTROL DISTRICT ADDITIONAL CONTRIBUTIONS RESERVE

This reserve represents the additional contributions in excess of actuarially determined contributions paid by the MVCD in order to decrease its share of the UAL.

J. SUPERIOR COURT ADDITIONAL CONTRIBUTION RESERVE

This reserve represents the additional contributions in excess of actuarially determined contributions paid by the Superior Court in order to decrease its share of the UAL.

K. SUMMARY OF RESERVES

A summary of reserved and designated net position at December 31, 2019, follows.

RESERVES		
Active and Deferred Members	$	403,100,250
Employer Advance		1,521,571,733
County Additional 5% Contributions		67,370,988
MVCD Additional Contributions		160,320
Court Additional Contributions		1,463,688
Retired Members		1,232,432,163
Class Action Settlement – Post-4/1/82		65,877
Market Stabilization Designation		18,196,808
TOTAL RESERVES	$	3,244,361,827

NOTE 8 – NET PENSION LIABILITY AND SIGNIFICANT ASSUMPTIONS

A. NET PENSION LIABILITY OF EMPLOYERS

SJCERA is a cost sharing, multiple-employer pension plan with a reporting date of December 31, 2019. Measurements as of the reporting date are based on the fair value of assets as of December 31, 2019, and the total pension liability as of the valuation date, January 1, 2019, projected to December 31, 2019. There were no significant events between the valuation date and the measurement date, so the updated procedures consisted of updated actuarial assumptions, plus the addition of service cost and interest cost offset by benefit payments.

The net pension liability was measured as of December 31, 2019, and determined based upon rolling forward the total pension liability from the actuarial valuation as of January 1, 2019. The net pension liability (i.e., the pension plan's liability determined in accordance with GASB Statement No. 67 less the fiduciary net position) is shown below.

Employers' Net Pension Liability (GASB Statement No. 67)

AS OF DECEMBER 31, 2019

(Dollars in Millions)

Total Pension Liability	$	4,933
Plan Fiduciary Net Position		3,244
Employers' Net Pension Liability	$	1,689
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		65.8%

B. ACTUARIAL ASSUMPTIONS AND SIGNIFICANT ASSUMPTIONS

SJCERA retains an independent actuarial firm to conduct actuarial valuations of the pension plan, monitor SJCERA's funding status, and establish the contribution rate requirements for the pension plan. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future. Projections of benefits for financial reporting purposes are based on the plan and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in accrued actuarial liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. The total pension liability was determined by an actuarial valuation as of January 1, 2019, using the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB Statement No. 67.

In the January 1, 2019 actuarial valuation, the Entry Age Normal Funding Method (Cost Method) was used. The actuarial assumptions include a 7.25 percent investment rate of return, annual inflation rate of 2.90 percent per year, and projected salary increases at 3.15 percent per year for the year ended 2019. The actuarial value of the plan's assets was based on a five-year smoothing of actual versus expected returns.

In 2015, the SJCERA Board changed the funding policy to amortize any unexpected changes in the UAL over a period of 15 years as a level percent of pay, with new amortization layers each year. The 2008 Extraordinary Actuarial Loss, which is amortized over a closed 30-year period, has 20 years remaining. The remaining UAL as of December 31, 2014, which is amortized over a closed 19-year period, has 14 years remaining. The new additions to the UAL on and after January 1, 2014, are amortized over 15 years. The single amortization period for these streams of payments is 15 years as of January 1, 2019. The amortization period for each UAL layer will decrease each year.

The total pension liability for the pension plan was determined by an actuarial valuation as of January 1, 2019, and accepted actuarial procedures were applied to project the total pension liability to December 31, 2019. Key methods and assumptions used in the latest actuarial valuations as of January 1, 2019, follow.

Notes to the Financial Statements

Key methods and assumptions used in the latest actuarial valuation are presented below.

Valuation Date	January 1, 2019
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll with Separate Amortization Periods for Extraordinary Actuarial Gains or Losses
Remaining Amortization Period	2008 Extraordinary Actuarial Loss – 20 years Remaining UAL as of January 1, 2014 – 14 years Subsequent Unexpected Changes in UAL after January 1, 2014 – 15 years Single Equivalent Period as of January 1, 2019 – 15 years
Asset Valuation Method	Smoothed Actuarial Value (5 years): 80%–120% Asset Corridor
ACTUARIAL ASSUMPTIONS:	
Discount Rate	7.25%, Net of Pension Plan Investment Expenses, Including Inflation
Projected Salary Increases	3.15%, Plus Service-Based Rates
General Inflation Rate	2.90%
Cost-of-Living Adjustments	2.60% Per Year Assumed
Healthy Mortality	Mortality rates for General active members are based on the sex distinct Public General 2010 Above-Median Income Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 1.05 for females and no adjustments for males. Mortality rates for Safety active members are based on the sex distinct Public Safety 2010 Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 0.98 for males and 1.06 for females. 10% of Safety member active deaths are assumed to occur in the line of duty. Mortality rates for healthy General annuitants are based on the sex distinct Public General 2010 Above-Median Income Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 1.04 for females and no adjustments for males. Mortality rates for Safety annuitants are based on the sex distinct Public Safety 2010 Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 1.02 for males and 1.05 for females.
Disabled Mortality	Mortality rates for Safety disabled annuitants are based on the sex distinct Public Safety Disabled Annuitant 2010 Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, with a partial credibility adjustment of 1.04 for males and 0.98 for females. Mortality rates for General disabled annuitants are based on the sex distinct Public General Disabled Annuitant 2010 Mortality Table, with a generational mortality improvements projected from 2010 using Projection Scale MP-2018, with a partial credibility adjustment of 1.04 for males and 1.07 for females.

C. FUNDED STATUS AND FUNDING PROGRESS

The annual actuarial valuation determines the progress made in accumulating sufficient assets to pay benefits when due. As of January 1, 2019, the pension plan's accrued actuarial liabilities were $4.72 billion and the actuarial value of assets was $3.04 billion, resulting in UAL of $1.68 billion. The funded status (ratio) of actuarial value of assets over accrued actuarial liabilities was 64.5 percent.

As of the January 1, 2019 actuarial valuation, the funded status decreased to 64.5 percent from 64.8 percent. In addition, for January 1, 2019, the discount rate assumption remained unchanged at 7.25 percent. The 2016-2018 Actuarial Experience Study was performed in 2019, leading to changes in demographic assumptions. No economic assumption changes were made.

SJCERA's Funding Policy provides for regular employer and member contributions at actuarially determined rates, expressed as percentages of annual covered payroll. Contributions required and contributions made are explained in Note 6.

D. ASSET ALLOCATION POLICY AND EXPECTED LONG-TERM RATE OF RETURN BY ASSET CLASS

The allocation of investment assets within SJCERA's portfolio is approved by the Board. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit pension plans. The long-term expected rate of return on defined benefit pension plan investment assets was determined using a building-block method in which best estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation. The following table displays the Board-approved asset allocation policy for 2019 and the long-term expected real rates of return.

ASSET CLASS	TARGET ALLOCATION	ARITHMETIC LONG-TERM EXPECTED REAL RATE OF RETURN
Global Public Equities	30.00%	9.53%
Stable Fixed Income	10.00%	5.10%
Credit	14.00%	8.22%
Risk Parity	14.00%	7.20%
Private Appreciation	12.00%	12.15%
Crisis Risk Offset (CRO)	20.00%	6.15%
Short Term Investments / Cash / Cash Equivalents	0.00%	3.15%
TOTAL	100.00%	

At its September 2019 meeting, the Board approved a new long-term strategic asset allocation policy. The new policy modifies the percentage target allocations in the following way.

- Global Public Equities: Increase from 30.0 percent to 32.0 percent
- Stable Fixed Income: Remains at 10.0 percent
- Credit: Increase from 14.0 percent to 17.0 percent
- Risk Parity: Decrease from 14.0 percent to 10.0 percent
- Private Appreciation: Increase from 12.0 percent to 16.0 percent
- Crisis Risk Offset (CRO): Decrease from 20.0 percent to 15.0 percent
- Short Term Investments/Cash/Cash Equivalents: Remains at 0.0 percent

At the October 2019 meeting, the Board approved an Implementation Plan, which indicates how the new long-term asset allocation is to be phased in over time. It is expected that the transition to the new long-term allocation will be completed by June 2021.

E. DISCOUNT RATE

The discount rate used to measure the total pension liability was 7.25 percent as of December 31, 2019. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2019.

F. SENSITIVITY OF THE NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE

The table below presents the net pension liability of SJCERA as of December 31, 2019, calculated using the discount rate of 7.25 percent, as well as what SJCERA's net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate.

	1% DECREASE (6.25%)	CURRENT DISCOUNT RATE (7.25%)	1% INCREASE (8.25%)
Total Pension Liability	$ 5,595,727,947	$ 4,933,361,306	$ 4,388,802,146
Pension Plan Fiduciary Net Position	3,244,361,827	3,244,361,827	3,244,361,827
COLLECTIVE NET PENSION LIABILITY	$ 2,351,366,120	$ 1,688,999,479	$ 1,144,440,319
Fiduciary Net Position as a Percentage of the Total Pension Liability	58.0%	65.8%	73.9%

G. RATE OF RETURN

For the year ended December 31, 2019, the annual money-weighted rate of return on investments, net of investment expense, was 13.3 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NOTE 9 – INVESTMENT EXPENSES

Investment expenses include fees paid for investment management services, investment consulting services, fund evaluation services, securities custodian services, and interest expense and other fees incurred in security lending transactions.

NOTE 10 – GENERAL ADMINISTRATIVE EXPENSES

General administrative expenses, including the depreciation and amortization of capital assets, are funded by investment income earnings and are limited, pursuant to Government Code Section 31580.2, to twenty-one-hundredths of one percent (0.21 percent) of SJCERA's accrued actuarial liability. The actual administration expense for the year ended December 31, 2019, was 0.08 percent of the accrued actuarial liability. SJCERA was in compliance with this requirement during 2019.

NOTE 11 – PENDING LITIGATION

Allum, et al. v. SJCERA, et al.

SJCERA Retirees Edward Allum and Pauline Toy ("Plaintiff Retirees") have sued SJCERA and its Board of Retirement ("SJCERA Respondents") in San Joaquin County Superior Court, on behalf of a class of similarly situated retirees ("post-'82 Retirees"), alleging that SJCERA breached a 2001 class action settlement agreement and committed other alleged wrongdoing by taking a variety of actions, and allegedly failing to take a variety of actions, related to the reserving for, and payment of, supplemental retirement benefits ("post-'82 Benefits") ("Allum Class Action"). Plaintiff Retirees claim over $25 million in damages.

The SJCERA Respondents have denied the post-'82 Retirees' claims of wrongdoing with respect to the post-'82 Benefits and are vigorously defending themselves in the Allum Class Action. SJCERA and cross-defendant County of San Joaquin each filed Motions for Summary Judgment and/or Summary Adjudication, which the Superior Court granted in their entirety. The Plaintiff Retirees timely filed an appeal with the Third District Court of Appeal.

SJCERA v. Travelers

SJCERA sought coverage for its defense fees and costs incurred in the Allum Class Action ("Allum Litigation") under a fiduciary liability insurance policy issued by SJCERA's prior fiduciary insurance carrier, Travelers Casualty & Surety Company of America ("Travelers"). Travelers declined to provide a defense to SJCERA, and SJCERA filed a lawsuit in the United States District Court, Eastern District of California that alleges both that Travelers breached the insurance contract and acted in bad faith by failing to defend it in the Allum Litigation. The Eastern District of California granted Travelers' motion for summary judgment, ruling that the "prior and pending litigation" exclusion in the Travelers' policy precluded coverage. SJCERA timely filed an appeal with the Ninth Circuit Court of Appeal.

NOTE 12 – COMMITMENTS AND CONTINGENCIES

SJCERA participates in certain investments that require commitments of a specified amount of capital upfront that is then drawn down at a later time as the investment vehicle requires. The total unfunded capital commitment represents the amount of funds that SJCERA could potentially be required to contribute at a future date. SJCERA had unfunded capital commitments totaling $298.9 million at December 31, 2019.

NOTE 13 – SUBSEQUENT EVENTS

SJCERA has evaluated subsequent events through May 26, 2020, the date on which the financial statements were available to be issued. On March 11, 2020, the World Health Organization declared the outbreak of a coronavirus (COVID-19) a pandemic. As a result of the spread of COVID-19, economic uncertainties have arisen which are likely to negatively impact the Net Increase in Fiduciary Net Position. Other financial impact could occur although such potential impact is unknown at this time.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

For the Years Ended*

	DECEMBER 31, 2019	DECEMBER 31, 2018	DECEMBER 31, 2017	DECEMBER 31, 2016	DECEMBER 31, 2015	DECEMBER 31, 2014
TOTAL PENSION LIABILITY						
Service Cost	$ 110,608,926	$ 103,300,553	$ 98,438,144	$ 92,857,369	$ 94,377,630	$ 90,429,416
Interest (Includes Interest on Service Cost)	337,480,353	325,161,265	308,566,601	295,197,992	280,581,484	266,668,435
Change of Benefit Terms	-	-	-	-	-	-
Differences Between Expected and Actual Experience	4,950,114	(49,383,683)	37,219,673	(10,171,368)	(25,752,670)	-
Changes of Assumptions	16,016,526	81,854,664	-	87,601,669	-	-
Benefit Payments, Including Refunds of Employee Contributions	(236,350,072)	(221,443,668)	(205,406,970)	(194,719,177)	(181,468,913)	(165,870,971)
NET CHANGE IN TOTAL PENSION LIABILITY	232,705,847	239,489,131	238,817,448	270,766,485	167,737,531	191,226,880
TOTAL PENSION LIABILITY – BEGINNING	4,700,655,459	4,461,166,328	4,222,348,880	3,951,582,395	3,783,844,864	3,592,617,984
TOTAL PENSION LIABILITY – ENDING (A)	$4,933,361,306	$4,700,655,459	$4,461,166,328	$4,222,348,880	$3,951,582,395	$3,783,844,864
FIDUCIARY NET POSITION						
Contributions – Employer	$ 225,528,756	$ 208,757,572	$ 200,051,742	$ 159,122,523	$ 150,371,556	$ 136,686,133
Contributions – Member	38,098,688	35,377,951	33,634,906	30,117,408	29,026,901	27,367,908
Transfer Between Plans	299,014	324,269	364,714	293,779	378,969	19,968,779
Net Investment Income (Loss)	380,674,528	(56,397,598)	299,960,693	151,114,788	(47,339,750)	110,728,303
Benefit Payments, Including Refunds of Member Contributions	(236,350,072)	(221,443,668)	(205,406,970)	(194,719,177)	(181,468,913)	(165,870,971)
Administrative Expenses	(4,931,163)	(4,865,082)	(4,118,578)	(4,369,744)	(4,075,745)	(4,042,986)
NET CHANGE IN FIDUCIARY NET POSITION	403,319,751	(38,246,555)	324,486,507	141,559,577	(53,106,982)	124,837,166
FIDUCIARY NET POSITION – BEGINNING	2,841,042,076	2,879,288,631	2,554,802,124	2,413,242,547	2,466,349,529	2,341,512,363
FIDUCIARY NET POSITION – ENDING (B)	$3,244,361,827	$2,841,042,076	$2,879,288,631	$2,554,802,124	$2,413,242,547	$2,466,349,529
NET PENSION LIABILITY (A)–(B)	$1,688,999,479	$1,859,613,383	$1,581,877,697	$1,667,546,756	$1,538,339,848	$1,317,495,335
FIDUCIARY NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY	65.76%	60.44%	64.54%	60.51%	61.07%	65.18%
COVERED PAYROLL**	$ 453,710,584	$ 436,763,447	$ 425,886,951	$ 392,227,314	$ 396,136,470	$ 376,030,944
NET PENSION LIABILITY AS A PERCENTAGE OF COVERED PAYROLL	372.26%	425.77%	371.43%	425.15%	388.34%	350.37%

* Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

** Covered Payroll reported by plan sponsors is the payroll on which contributions are based in accordance with GASB Statement No. 82.

SCHEDULE OF CONTRIBUTIONS FROM THE EMPLOYERS AND OTHER CONTRIBUTING SOURCES – DEFINED BENEFIT PENSION PLAN

For the Ten Years Ended December 31

2019–2015

	2019	2018	2017	2016	2015
Actuarially Determined Contributions	$ 203,058,574	$ 188,322,653	$ 179,824,882	$ 159,122,523	$ 150,371,556
Contributions in Relation to the Actuarially Determined Contributions	225,528,756	208,757,572	200,051,742	159,122,523	150,371,556
Contribution Deficiency / (Excess)	$ (22,470,182)	$ (20,434,919)	$ (20,226,860)	$ -	$ -
Covered Payroll*	$ 453,710,854	$ 436,763,447	$ 425,886,951	$ 392,227,314	$ 396,136,470
Contributions as a Percentage of Covered Payroll	49.71%	47.80%	46.97%	40.57%	37.96%

2014–2010

	2014	2013	2012	2011	2010
Actuarially Determined Contributions	$ 136,686,133	$ 119,494,319	$ 108,062,510	$ 112,891,701	$ 104,451,673
Contributions in Relation to the Actuarially Determined Contribution	136,686,133	119,494,319	108,062,510	112,891,701	104,451,673
Contribution Deficiency / (Excess)[1]	$ -	$ -	$ -	$ -	$ -
Covered Payroll[2]	$ 376,030,944	$ 362,650,568	$ 356,419,000	$ 367,344,000	$ 384,442,000
Contributions as a Percentage of Covered Payroll	36.35%	32.95%	30.32%	30.73%	27.10%

* Covered Payroll reported by plan sponsors for 2019, 2018, 2017, 2016, 2015, and 2014. Previous years' amounts are based on projected payroll from the actuarial valuation reports.

The contributions in excess of Actuarially Determined Contributions are due to additional contributions made by the County, the MVCD, and the Court.

SCHEDULE OF INVESTMENT RETURNS

For the Years Ended*

	DECEMBER 31, 2019	DECEMBER 31, 2018	DECEMBER 31, 2017	DECEMBER 31, 2016	DECEMBER 31, 2015	DECEMBER 31, 2014
Annual Money-Weighted Rate of Return, Net of Investment Expense	13.3%	-2.11%	11.85%	6.20%	-2.06%	4.29%

* Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. It is calculated by finding the rate of return that will set the present values of all cash flows and terminal values equal to the value of the initial investment. The money-weighted rate of return is equivalent to the internal rate of return (IRR).

Time-weighted rate of return assumes that all cash distributions are reinvested in the portfolio and the exact same periods are used for comparisons. When calculating the time-weighted rate of return, the effect of varying cash inflows is eliminated by assuming a single investment at the beginning of a period and measuring the growth or loss of fair value to the end of that period.

NOTE 1 – KEY METHODS AND ASSUMPTIONS USED TO DETERMINE CONTRIBUTION RATES

The following actuarial methods and assumptions were used for the year ended December 31, 2019, in the Schedule of Contributions from the Employers and Other Contributing Sources:

Valuation Date	January 1, 2018
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll with Separate Amortization Periods for Extraordinary Actuarial Gains or Losses.
Remaining Amortization Period	2008 Extraordinary Actuarial Loss – 21 years Remaining UAL as of January 1, 2014 – 15 years Subsequent Unexpected Changes in UAL after January 1, 2014 – 15 years Single Equivalent Period as of January 1, 2018 – 16 years
Asset Valuation Method	Smoothed Actuarial Value (5 years) 80%–120% Asset Corridor
ACTUARIAL ASSUMPTIONS:	
Discount Rate	7.25%, Net of Pension Plan Investment Expenses, Including Inflation
Projected Salary Increases	3.15%, Plus Service-Based Rates
General Inflation Rate	2.90%
Cost-of-Living Adjustments	2.6% Per Year Assumed
Healthy Mortality	Mortality rates for active members are based on the sex distinct CalPERS Preretirement Non-Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for healthy members are based on the sex distinct CalPERS Healthy Annuitant Mortality Table, with a partial credibility adjustment of 1.10 for Safety members, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for active members who die in the line-of-duty are based on the sex distinct CalPERS Preretirement Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.
Disabled Mortality	Mortality rates for Safety disabled annuitants are based on the sex distinct CalPERS Industrially Disabled Annuitant Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for General disabled annuitants are based on the sex distinct CalPERS Non-Industrially Disabled Annuitant Mortality Table, with a partial credibility adjustment of 1.05, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.

A complete description of the methods and assumptions used to determine contribution rates for the year ending December 31, 2019, can be found in the January 1, 2018 actuarial valuation report.

NOTE 2 – CHANGES OF ASSUMPTIONS

In 2019, the most recent Actuarial Experience Study was performed since the last valuation, covering experience from January 1, 2016 through December 31, 2018, leading to changes in demographic assumptions, such as merit salary increases, retirement rates, termination rates, disability rates, and other assumptions. No changes were made to the economic assumptions. The Board of Retirement elected to maintain the economic assumptions used in the last actuarial valuation, which include a 7.25% long-term rate of return on plan assets, an annual increase in prices measured by the CPI of 2.90%, a real return on assets of 4.35%, an annual wage increase equal to 25 basis points greater than price increases (3.15% total), and a post-retirement COLA average growth rate of 2.6%.

SCHEDULE OF ADMINISTRATIVE EXPENSES

For the Year Ended December 31, 2019

		2019
GENERAL ADMINISTRATIVE EXPENSES (Expenses Subject to the Statutory Limit)		
Personnel Services		
Staff Salaries	$	1,481,103
Cafeteria Benefits		139,425
Insurance		281,200
Social Security		106,216
Retirement		632,046
TOTAL PERSONNEL SERVICES	$	2,639,990
Professional Services		
Professional and Specialized Services	$	297,417
Allocated Department Costs		58,748
TOTAL PROFESSIONAL SERVICES	$	356,165
Communications		
Postage	$	15,118
Telephone		20,893
Travel		41,251
TOTAL COMMUNICATIONS	$	77,262
Rentals / Equipment		
Office Space and Equipment	$	221,025
Depreciation-Equipment		34,949
TOTAL RENTALS/EQUIPMENT	$	255,974
Miscellaneous		
Office Supplies / Expense	$	26,540
Subscriptions and Periodicals		3,671
Memberships		6,725
Maintenance		3,791
Insurance		78,063
TOTAL MISCELLANEOUS	$	118,790
TOTAL GENERAL ADMINISTRATIVE EXPENSES	$	3,488,181
OTHER EXPENSES (Expenses Not Subject to the Statutory Limit)		
Information Technology Expenses	$	260,169
Actuary Fees		226,652
Fund Legal Fees		996,161
TOTAL OTHER EXPENSES	$	1,482,982
TOTAL GENERAL ADMINISTRATIVE AND OTHER EXPENSES	**$**	**4,931,163**

SCHEDULE OF INVESTMENT EXPENSES

For the Year Ended December 31, 2019

		2019
INVESTMENT MANAGEMENT FEES		
Global Public Equities	$	1,691,044
Stable Fixed Income		1,191,819
Credit		3,968,632
Risk Parity		1,593,621
Private Appreciation		6,168,553
Credit Risk Offset		2,979,213
Short-Term Investments / Cash / Cash Equivalents		9,000
TOTAL INVESTMENT MANAGEMENT FEES	$	17,601,882
OTHER INVESTMENT FEES AND EXPENSES		
Custodian Fees	$	163.501
Investment Consultant Fees		326,000
Investment Legal Fees		128,674
Miscellaneous Investment Expense		1,143,491
TOTAL OTHER INVESTMENT FEES AND EXPENSES	$	1,761,666
TOTAL INVESTMENT EXPENSE	$	19,363,548
SECURITIES LENDING FEES		
Securities Lending Fees and Rebates	$	1,847,526
TOTAL INVESTMENT FEES AND EXPENSES	$	21,211,074

SCHEDULE OF PAYMENTS TO CONSULTANTS

For the Year Ended December 31, 2019

		2019
NATURE OF SERVICE		
Actuarial-Retainer and Valuation	$	226,652
Audit		60,670
Fund Legal Fees		996,161
Business Technology Services		79,350
TOTAL PAYMENTS TO CONSULTANTS	$	1,362,833

SCHEDULE OF COST SHARING EMPLOYER ALLOCATIONS

For the Year Ended December 31, 2019

EMPLOYER	PROPORTIONATE SHARE [1]	NET PENSION LIABILITY [2]
County of San Joaquin	93.1531%	$ 1,573,354,707
Superior Court	3.9474%	66,670,904
Lathrop-Manteca Rural Fire Protection District	1.3516%	22,829,316
SJC Mosquito and Vector Control District	0.5076%	8,573,397
Waterloo-Morada Rural Fire Protection District	0.4683%	7,909,217
Mountain House Community Services District	0.4451%	7,517,184
Tracy Public Cemetery District	0.0597%	1,009,089
SJC Historical Society and Museum	0.0460%	777,034
San Joaquin County Law Library	0.0212%	358,631
Local Agency Formation Commission	0.0000%	-
TOTAL	100.0000%	$ 1,688,999,479

[1] As SJCERA is a cost sharing multiple-employer pension plan, each employer participating in SJCERA must reflect a portion of the collective net pension liability and pension expense in their financial statements. The calculation for the proportionate share for each employer allocates net pension liability and pension expense based on each employer's share of the unfunded liability amortization payment. The proportionate shares are then adjusted to account for the additional contributions made by the County of San Joaquin, the SJC Mosquito and Vector Control District, and Superior Court for the year ended December 31, 2019.

[2] Proportionate share of net pension liability is based on the total pension liability from the January 1, 2019 actuarial valuation rolled forward to December 31, 2019.

SCHEDULE OF EMPLOYER PENSION AMOUNTS ALLOCATED BY COST SHARING PLAN

For the Year Ended December 31, 2019

		DEFERRED OUTFLOWS OF RESOURCES				DEFERRED INFLOWS OF RESOURCES				PENSION EXPENSE		
EMPLOYER	NET PENSION LIABILITY	DIFFERENCES BETWEEN EXPECTED AND ACTUAL EXPERIENCE	CHANGES OF ASSUMPTIONS	CHANGES IN PROPORTION AND DIFFERENCES BETWEEN CONTRIBUTIONS AND PROPORTIONATE SHARE OF PENSION EXPENSE	TOTAL DEFERRED OUTFLOWS OF RESOURCES	DIFFERENCES BETWEEN EXPECTED AND ACTUAL EXPERIENCE	DIFFERENCES BETWEEN PROJECTED AND ACTUAL INVESTMENT EARNINGS	CHANGES IN PROPORTION AND DIFFERENCES BETWEEN CONTRIBUTIONS AND PROPORTIONATE SHARE OF PENSION EXPENSE	TOTAL DEFERRED INFLOWS OF RESOURCES	PROPORTIONATE SHARE OF PLAN PENSION EXPENSE	NET AMORTIZATION OF DEFERRED AMOUNTS FROM CHANGES IN PROPORTION AND PROPORTIONATE SHARE OF PENSION EXPENSE	TOTAL PENSION EXPENSE
County of San Joaquin	$ 1,573,354,707	$ 17,557,451	$ 74,006,708	$ 2,220,717	$ 93,784,876	$ 29,496,433	$ 16,972,964	$ 7,000,972	$ 53,470,369	$ 265,047,606	$ (2,583,413)	$ 262,464,193
Superior Court	66,670,904	743,997	3,136,034	3,381,599	7,261,630	1,249,911	719,229	1,407,114	3,376,254	11,231,392	1,502,420	12,733,812
Lathrop-Manteca Rural Fire Protection District	22,829,316	254,758	1,073,834	2,444,949	3,773,541	427,992	246,277	1,243,354	1,917,623	3,845,831	625,385	4,471,216
SJC Mosquito and Vector Control District	8,573,397	95,673	403,271	276,266	775,210	160,730	92,488	336,464	589,682	1,444,276	(63,537)	1,380,739
Waterloo-Morada Rural Fire Protection District	7,909,217	88,261	372,030	472,785	933,076	148,278	85,323	332,560	566,161	1,332,388	18,968	1,351,356
Mountain House Community Services District	7,517,184	83,886	353,590	1,185,280	1,622,756	140,928	81,094	276,195	498,217	1,266,346	348,652	1,614,998
Tracy Public Cemetery District	1,009,089	11,261	47,465	121,309	180,035	18,918	10,886	25,247	55,051	169,991	38,982	208,973
SJC Historical Society and Museum	777,034	8,671	36,550	408,237	453,458	14,567	8,382	32,882	55,831	130,899	105,577	236,476
San Joaquin County Law Library	358,631	4,001	16,870	180,283	201,154	6,724	3,868	36,637	47,229	60,415	25,940	86,355
Local Agency Formation Commission	-	-	-	-	-	-	-	-	-	-	(18,974)	(18,974)
TOTALS	$ 1,688,999,479	$ 18,847,959	$ 79,446,352	$ 10,691,425	$108,985,736	$ 31,664,481	$ 18,220,511	$ 10,691,425	$ 60,576,417	$ 284,529,144	$ -	$ 284,529,144

Numbers may not sum to total due to rounding.

NOTE 1 – BASIS OF PRESENTATION AND BASIS OF ACCOUNTING

Because San Joaquin County Employees' Retirement Association (SJCERA) is a cost sharing multiple-employer pension plan, employers participating in SJCERA are required to report a portion of the collective Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows of Resources in their financial statements for fiscal periods beginning on or after June 15, 2014, in accordance with Governmental Accounting Standards Board (GASB) Statement No. 68, Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27. GASB Statement No. 68 requires that the proportionate share for each employer be determined based on the employer's projected long-term contribution effort to the pension.

SJCERA's actuary prepared the following documents, (1) the Schedule of Cost Sharing Employer Allocations and (2) the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan, in accordance with accounting principles generally accepted in the United States of America as applicable to governmental organizations based on information provided by SJCERA. These documents provide the required information for financial reporting related to SJCERA that employers may use in their financial statements. The measurement date for SJCERA is December 31, 2019. Measurements are based on the fair value of assets as of December 31, 2019, and the Total Pension Liability, $4,933,361,306 as of December 31, 2019, was measured as of a valuation date of January 1, 2019, and projected to December 31, 2019.

NOTE 2 – AMORTIZATION OF DEFERRED OUTFLOWS AND DEFERRED INFLOWS OF RESOURCES

The difference between projected and actual investment earnings on pension plan investments is amortized over five years on a straight-line basis. One-fifth is recognized in Total Pension Expense for each of the five years. The changes in assumptions and differences between expected and actual experience are recognized over the average of the expected remaining service lives of all active and inactive members of SJCERA, which is also five years. The net effect of the change in the employer's proportionate share of the collective net pension liability and collective deferred outflows of resources and deferred inflows of resources is recognized over the average expected remaining service lives of all active and inactive members of SJCERA.

Investment

MEKETA
INVESTMENT GROUP

411 NW Park Avenue
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May 12, 2020

Board of Trustees
San Joaquin County Employees' Retirement Association
6 South El Dorado Street
Suite 400
Stockton, CA 95202

Dear Trustees:

Enclosed is our report on the investment activity for the San Joaquin County Employees' Retirement Association (SJCERA) for the period ending December 31, 2019.

SJCERA - Total Fund Performance

As of December 31, 2019, the SJCERA Portfolio had approximately $3.2 billion in total assets, an increase of roughly $390 million for the calendar year due to cash flows and investment results[1]. The SJCERA Total Fund generated a gross of fees return of 13.9% for the calendar year, outperforming its policy benchmark by 0.9%. All of the asset classes provide positive absolute performance on 2019, including cash. Private Appreciation, which includes private equity and private real estate, provided strong double-digit returns, meaningfully, outperforming its benchmark over the one-year period, gross of fees. Additionally, Risk Parity provided significant outperformance relative to its benchmark in 2019. Global Equity, largely driven by U.S. markets, was the strongest performing asset class during the year up over 25%. Performance for all of the strategic classes were positive over the short and long-term periods. Each quarter, the Pension Plan reviews the performance of the total fund along with the underlying strategic classes and individual managers versus their appropriate benchmarks. In 2019, SJCERA met its primary goal of ensuring sufficient funds were available to make scheduled benefit payments.

Market Review

Following a volatile fourth quarter of 2018 that saw most major markets deliver negative returns, 2019 saw sharply positive returns across most major asset classes, with riskier assets generating particularly strong results. The Federal Reserve began 2019 with an abrupt "dovish pivot" towards a more accommodative monetary policy stance, after a gradual tightening of monetary policy in 2018 and tighter liquidity conditions helped catalyze the aforementioned Q4 2018 selloff. Outside of the US, major central banks affirmed similar accommodative policy stances in 2019. This pivot set the stage for strong performance in global equities and other risk assets. Monetary accommodation persisted throughout 2019. Prompted by ongoing concerns regarding slower global growth and the trade standoff between the US and China, the Federal Reserve cut rates by 0.25% three times over the course of the year (August, September, and October) to settle at a range of 1.50-1.75% by year-end. Throughout the

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[1] Private Appreciation and Credit class data is lagged one quarter.

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May 12, 2020

complicated market conditions of the past few years, with its constant review and oversight, the Board continues to position SJCERA for competitive long-term performance consistent with its objectives.

Strategic Asset Allocation

In 2019, SJCERA completed an extensive review of its strategic allocation in conjunction with the plans long-term liabilities. As a result of this review, SJCERA adopted a Functional Framework to structuring the portfolio that helps make the portfolio more transparent and the underlying risks that drive the behavior of the portfolio more easily understood. The 2019 asset allocation is designed to help further balance diversification of portfolio between return seeking investments and those that protect the portfolio in down markets. The 2019 strategic allocation will take some time to implement as Meketa and SJCERA review changing market conditions, investment timing and payments to beneficiaries. The move to the new strategic framework should improve the likelihood of the plan accomplishing its primary financial objective: to earn a long-term return that, coupled with projected contributions, is projected to be sufficient to attain full funding in the long term while avoiding substantial deterioration in funded status along the way.

Gross of Fees Investment Performance as of December 31, 2019:

Asset Class	Market Value ($000)	%	Annualized 1 Year	Annualized 3 Years	Annualized 5 Years	Annualized 10 Years
SJCERA Total Plan	3,220,072	100.0	13.9	8.2	6.1	7.2
*Policy Benchmark**** *			*13.0*	*8.4*	*6.6*	*7.0*
Global Equity	1,091,741	33.9	25.2	11.6	8.2	8.6
MSCI AC World Index			*27.3*	*13.0*	*9.0*	*9.4*
Private Appreciation*	392,681	12.2	11.7	13.8	12.3	15.8
MSCI ACWI +2%			*4.0*	*12.5*	*9.4*	*11.1*
Stable Fixed Income	326,018	10.1	8.5	4.9	4.5	6.1
Blmbg BC US. Agg			*8.7*	*4.0*	*3.0*	*3.7*
Credit*	393,850	12.2	4.7	4.7	4.7	6.1
*Custom Credit Benchmark** *			*4.7*	*5.3*	*4.7*	*6.6*
Risk Parity	408,547	12.7	19.9	8.5	5.2	3.7
ICE BofA-ML 3mo US TBill +4%			*6.4*	*5.7*	*5.1*	*4.6*
CRO (SM)	522,597	16.2	4.2	2.7	4.1	12.5
*CRO Benchmark*** *			*9.0*	*4.2*	*2.9*	*4.4*
Cash	84,638	2.6	1.9	1.3	0.9	0.5
BofA Merrill Lynch 3 Month US T-Bill			*2.3*	*1.7*	*1.1*	*0.6*

*Asset class performance for Credit and Private Appreciation lagged one quarter
**50% Bloomberg Barclays High Yield/ 50% S&P leveraged loans
***1/3 BB Long Duration Treasuries, 1/3 BTOPS 50 Index, 1/3 5% Annual
****The Policy benchmark currently consists of 36% MSCI ACWI, 11% MSCI ACWI +2% (lag), 10% BB Aggregate index, 14% Custom Credit, 14% BofA Merrill Lynch Tbills + 5%, 15% CRO Custom benchmark

Rates of return are represented using a time-weighted rate of return methodology based upon market values.

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Asset Allocation as of December 31, 2019

	INVESTMENT	ACTUAL ALLOCATION	TARGET ALLOCATION
Global Public Equities	$ 1,089,461,379	33.7%	30.0%
Stable Fixed Income	318,806,931	9.9%	10.0%
Credit	408,015,328	12.6%	14.0%
Risk Parity	408,546,978	12.6%	14.0%
Private Appreciation	415,332,040	12.9%	12.0%
Crisis Risk Offset (CRO)	518,236,764	16.0%	20.0%
Short Term Investments / Cash / Cash Equivalents	72,839,152	2.3%	0.0%
TOTAL	$ 3,231,238,572	100.0%	100.0%

List of Largest Assets Held

LARGEST STOCK HOLDINGS (BY FAIR VALUE)
December 31, 2019

	SHARES	STOCKS	FAIR VALUE
1	1,839,586	CF Blackrock Russell 1000 Index Fund	$ 463,259,525
2	1,500,322	CF Panagora Diversified Ltd Ser III Sub-Ser 6	201,560,785
3	8,099,920	CF Blackrock MSCI World Ex-US Index A Fund	180,172,712
4	8,467,311	CF LOFIV - Alternative Risk Premia Core V10	80,247,246
5	773,503	CF Blackrock Russell 2000 Growth Fund	40,791,195
6	2,144,123	CF Blackrock Developed Ex-US Real Estate Index Fund	30,493,654
7	14,953	Stone Harbor Leveraged Loan B Shr	19,215,175
8	14,210	American Tower Corp	3,265,742
9	19,372	Crown Castle Intl Corp New Com	2,753,730
10	22,053	Prologis Inc Com	1,965,804

A complete list of the stock holdings is available upon request.

LARGEST BOND HOLDINGS (BY FAIR VALUE)
December 31, 2019

	PAR	BONDS	FAIR VALUE
1	497,390	CF NB High Income Fund LLC	$ 25,992,522
2	2,330,221	MFO Neuberger Berman Income FDS New Floating Rate Income FD Instl CL	22,649,744
3	20,000,000	United States Treas Bds DTD 00246 3% Due 11-15-2045 Reg	22,426,562
4	37,700,000	United States Treas Bd Stripped Prin Pmt 02-15-2044 Reg	21,055,885
5	20,500,000	United States Treas Bds DTD 00247 2.5% Due 02-15-2046 Reg	20,981,269
6	1,395,645	MFO Stone Hbr Invt Fds Emerging Mkts Debt Fd Instl Cl	13,942,497
7	9,850,000	United States Treas Bds 5.500 Due 08-15-2028 Reg	12,684,184
8	10,900,000	United States Treas Bds 3.125% Due 11-15-2041 Reg	12,387,680
9	9,100,000	United States Treas Bds DTD 05-16-2011 4.375 Due 05-15-2041 Reg	12,288,199
10	18,000,000	United States Gov Natl Treas Bd Stripped Prin Pmt 4.375 05-15-2040	11,292,795

A complete list of the bond holdings is available upon request.

Schedule of Investment Fees

		2019
INVESTMENT MANAGEMENT FEES		
Global Public Equities	$	1,691,044
Stable Fixed Income		1,191,819
Credit		3,968,632
Risk Parity		1,593,621
Private Appreciation		6,168,553
Credit Risk Offset (CRO)		2,979,213
Short Term Investments / Cash / Cash Equivalents		9,000
	$	17,601,882
OTHER INVESTMENT FEES AND EXPENSES		
Custodian Fees	$	163,501
Investment Consultant Fees		326,000
Investment Legal Fees		128,674
Miscellaneous Investment Expense		1,143,491
Notional Investment Expense		0
	$	1,761,666
TOTAL INVESTMENT EXPENSES	$	19,363,548
SECURITIES LENDING FEES		
Securities Lending Fees and Interest Expense	$	1,847,526
TOTAL INVESTMENT FEES AND EXPENSES	$	21,211,074

Schedule of Fees and Commissions

FOR THE YEAR ENDED DECEMBER 31, 2019

RANK	BROKER	COMMISSIONS PAID	PERCENTAGE OF TOTAL COMMISSIONS
1	Tourmaline Partners, LLC	$ 8,263.56	13.13%
2	Jones Trading Institutional Services, LLC	3,983.12	6.33%
3	Citigroup Global Markets, Inc. CP & CD	2,971.76	4.72%
4	J.P. Morgan Securities, LLC / JPMC	2,844.94	4.52%
5	Northern Trust Securities, Inc.	2,770.68	4.40%
6	Goldman, Sachs & Co.	2,651.52	4.21%
7	UBS Securities, LLC	2,371.27	3.77%
8	Liquidnet, Inc.	2,206.94	3.51%
9	Jefferies LLC	2,139.87	3.40%
10	ISI Group, Inc.	1,896.26	3.01%
11	Others*	30,847.54	49.00%
		$ 62,947.46	100.00%

* Includes approximately 70 additional firms each with less than 2.9% of total commissions.

Investment Summary

		FAIR VALUE DECEMBER 31, 2019	PERCENTAGE OF MARKET VALUE
GLOBAL PUBLIC EQUITIES			
BlackRock MSCI World Ex-US	$	180,172,712	5.6%
BlackRock R1000 Index-Large Cap Core		463,259,525	14.3%
BlackRock R2000 Growth Index		40,791,195	1.3%
Blackrock RE Dev EX US		30,493,654	0.9%
Capital Prospects – Small Cap Value		42,143,875	1.3%
Invesco REIT		42,024,381	1.3%
PIMCO RAE FUNDAMENTAL (Research Affiliates) Emerging		106,109,875	3.3%
PIMCO RAE FUNDAMENTAL (Resarch Affiliates) International		184,466,162	5.7%
TOTAL GLOBAL PUBLIC EQUITIES	$	1,089,461,379	33.7%
STABLE FIXED INCOME			
Dodge & Cox – Fixed	$	103,832,871	3.2%
Double Line – MBS		103,772,261	3.2%
Prima – Mortgage Inv. Trust		111,201,799	3.5%
TOTAL STABLE FIXED INCOME	$	318,806,931	9.9%
CREDIT			
Crestline – Opportunity Fund II	$	23,804,721	0.7%
Medley Capital – Opportunity Fund II		16,962,712	0.5%
Mesa West III		2,253,507	0.1%
Mesa West IV		42,701,741	1.3%
Neuberger Berman		83,281,172	2.6%
Raven Capital – Fund II		14,632,753	0.5%
Raven Capital – Fund III		39,417,258	1.2%
Stone Harbor – Absolute Return		115,202,394	3.6%
White Oak Summit		46,449,070	1.4%
White Oak Yield Spectrum		23,310,000	0.7%
TOTAL CREDIT	$	408,015,328	12.6%
RISK PARITY			
Bridgewater All-Weather	$	206,986,193	6.4%
PanAgora Diversified Risk		201,560,785	6.2%
TOTAL RISK PARITY	$	408,546,978	12.6%
PRIVATE APPRECIATION			
Almanac Realty	$	5,383,673	0.2%
Angelo Gordon & Co.		20,085,429	0.6%
Blackrock Global Energy & Power		8,709,903	0.3%
Colony Realty Parners III		2,129,787	0.1%
Colony Realty Parners IV		253,093	0.0%
Greenfield V		320,776	0.0%

(Continued on page 68)

Investment Summary (cont.)

		FAIR VALUE DECEMBER 31, 2019	PERCENTAGE OF MARKET VALUE
Greenfield VI		488,122	0.0%
Greenfield VII		13,848,317	0.4%
Greenfield VIII		18,672,405	0.6%
Legacy Fund II		1,000	0.0%
Miller Global Fund V		11,724	0.0%
Miller Global Fund VI		1,194,181	0.0%
Miller Global Fund VII		702,302	0.0%
Morgan Creek III		9,563,550	0.3%
Morgan Creek V		10,736,156	0.3%
Morgan Creek VI		21,801,373	0.7%
Oaktree Middle Market		5,496,862	0.2%
Ocean Avenue II		39,645,961	1.2%
Ocean Avenue III		56,618,468	1.8%
Ocean Avenue IV		5,662,308	0.2%
Principal US Property		34,120,637	1.1%
Prologis / AMB Propery		72,086,892	2.2%
RREEF America II		51,479,474	1.6%
Stockbridge Value Fund II		28,103,690	0.9%
Walton Street Fund V		2,924,571	0.1%
Walton Street Fund VI		5,291,386	0.2%
TOTAL PRIVATE APPRECIATION	$	415,332,040	12.9%
CRISIS RISK OFFSET (CRO)			
AQR Style Premia	$	33,411,730	1.0%
Dodge & Cox Long Duration		166,661,917	5.2%
Graham Tactical Trend		94,213,414	2.9%
Lombard Odier		80,247,246	2.5%
Mount Lucas - Managed Futures		80,737,102	2.5%
PE Diversified Global Macro / Almond Global		62,965,355	1.9%
TOTAL CRISIS RISK OFFSET (CRO)	$	518,236,764	16.0%
TOTAL INVESTMENT AT FAIR VALUE	$	3,158,399,420	
SHORT TERM INVESTMENTS / CASH / CASH EQUIVALENTS			
Parametric PIOS	$	4,856,533	0.2%
STIF – Northern Trust		67,982,619	2.1%
TOTAL SHORT TERM INVESTMENTS	$	72,839,152	2.3%
TOTAL	$	3,231,238,572	100.0%

List of Investment Managers

CREDIT

Crestline Associates
Medley Capital
Mesa West Capital
Neuberger Beman
Raven Capital Management
Stone Harbor Investment Partners
White Oak Global Advisors

CRISIS RISK OFFSET

AQR Capital Management
Dodge & Cox Investment Managers (Long Duration)
Graham Capital Management
Mount Lucas Management
PE Global, LLC

GLOBAL PUBLIC EQUITIES

BlackRock Institutional Trust Co.
Capital Prospects
Invesco Advisers Inc.
PIMCO RAE Fundamental Funds

PRIVATE APPRECIATION

Almanac Realty Investors
Angelo Gordon & Co.
Blackrock Global Energy & Power
Colony Realty Partners

PRIVATE APPRECIATION (CONT.)

Deutsche Asset & Wealth Management (RREEF)
Greenfield Acquistion Partners
Miller Global Properties
Morgan Creek Capital Management
Oaktree Middle Market
Ocean Avenue Capital Partners
Principal Financial Group
Prologis
Steelwave
Stockbridge Value Fund
Walton Street Capital

RISK PARITY

Bridgewater Associates (All Weather)
PanAgora Asset Management, Inc.

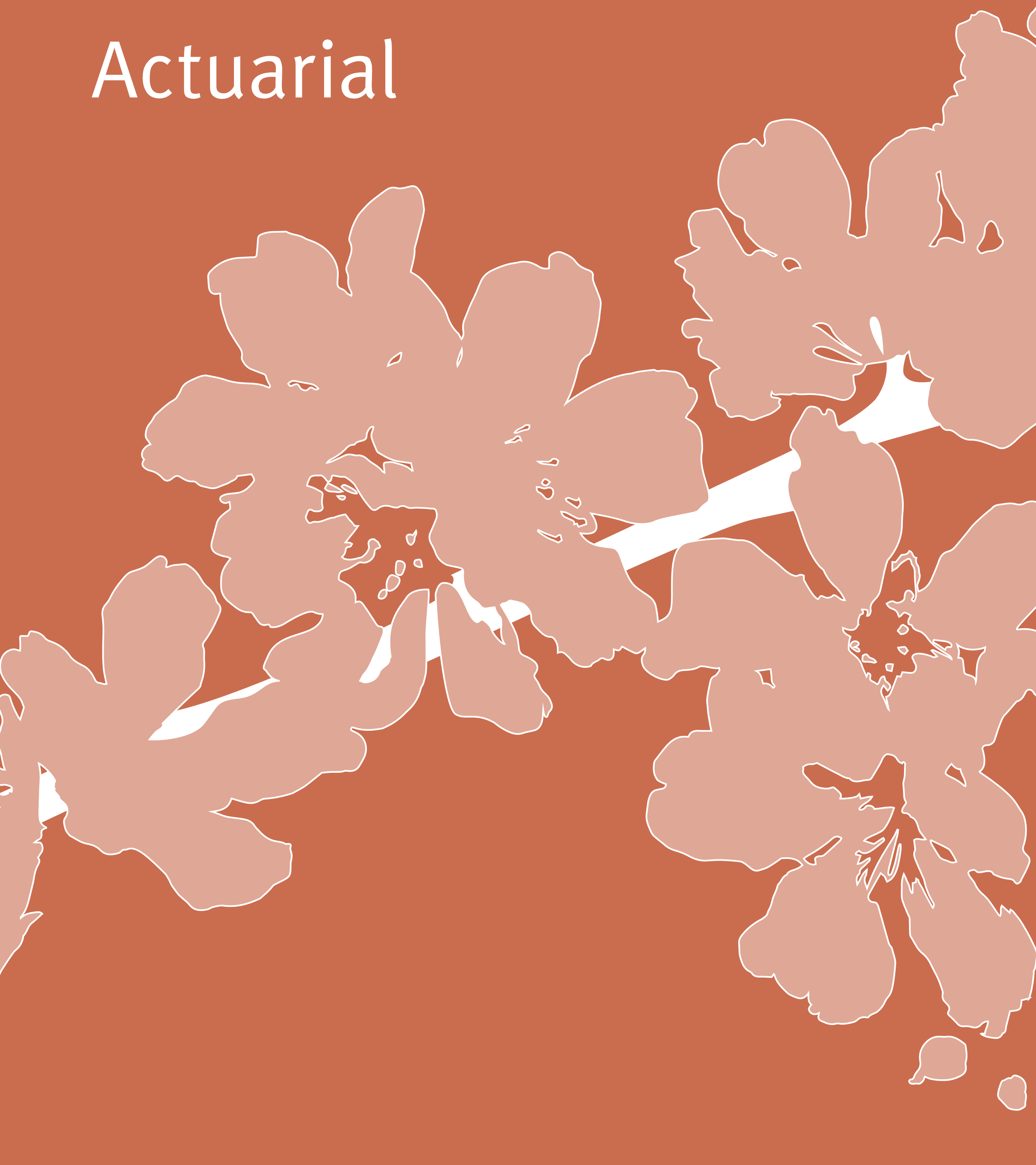
SHORT TERM INVESTMENTS / CASH / CASH EQUIVALENTS

Parametric Portfolio Associates, LLC
STIF - Northern Trust Company

STABLE FIXED INCOME

Dodge & Cox Investment Managers (Fixed Income)
DoubleLine Capital
Prima Capital Advisors

Actuarial



CHEIRON *Classic Values, Innovative Advice*

May 15, 2020

Retirement Board of San Joaquin
County Employees' Retirement Association
6 South El Dorado Street, Suite 400
Stockton, CA 95202

Actuarial Certification

Dear Members of the Board:

This is the Actuary's Certification Letter for the Actuarial Section of the Comprehensive Annual Financial Report (CAFR) for the San Joaquin County Employees' Retirement Association (the Plan) as of December 31, 2019. This letter includes references to two documents produced by Cheiron for the Plan: the Actuarial Valuation Report as of January 1, 2019 (August 14, 2019) and the GASB 67/68 Report as of December 31, 2019 (May 5, 2020).

Actuarial Valuation Report as of January 1, 2019

The purpose of the annual Actuarial Valuation Report as of January 1, 2019 is to determine the actuarial funding status of the Plan on that date and to calculate recommended contribution rates for the participating employers and Plan members for the year 2020. The prior review was conducted as of January 1, 2018 and included recommended contribution rates for the year 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 and expected administrative expenses) plus a level percentage of payroll to amortize the unfunded actuarial liability (UAL). As of the valuation date (January 1, 2019), the amortization period is 20 years for half of the 2008 investment loss and 14 years for the remaining UAL as of January 1, 2014. Any unexpected change in the UAL occurring after January 1, 2014 is amortized over a closed 15-year period.

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, with adjustments for certain Special Reserves. 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, limited by a corridor that restrains the Actuarial Value to within 20% of the market value of assets.

The Board of Retirement is responsible for establishing and maintaining the funding policy of the Plan.

www.cheiron.us 1.877.CHEIRON (243.4766)

Actuary’s Certification Letter

Board Members
May 15, 2020
Page 2

We prepared the following schedules, which we understand will be included in the Actuarial Section of the CAFR, based on the January 1, 2019 actuarial valuation. All historical information prior to the January 1, 2013 actuarial valuation shown in these schedules is based on information reported by EFI Actuaries, which was acquired by Cheiron in January 2013.

- Summary of Actuarial Assumptions and Methods
- Schedule of Active Member Valuation Data
- Schedule of Retirees and Beneficiaries Valuation Data
- Retirants and Beneficiaries Added to and Removed from Retiree Payroll
- Schedule of Funded Liabilities by Type
- Actuarial Value of Assets and Reserves
- Summary of Plan Provisions

The assumptions used in this report reflect the results of an Experience Study performed by Cheiron covering the period from January 1, 2016 through December 31, 2018 and approved by the Board at their August 21, 2019 meeting. 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.

This actuarial valuation report and its 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. 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 December 31, 2019

The purpose of GASB 67/68 Report as of December 31, 2019, is to provide accounting and financial reporting information under GASB 67 for the Plan and under GASB 68 for the County of San Joaquin and other participating employers. This report is not appropriate for other purposes, including the measurement of funding requirements for the Plan.

For financial reporting purposes, the Total Pension Liability is based on the January 1, 2019, actuarial valuation updated to the measurement date of December 31, 2019. There were no significant events 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.

Beginning of year measurements are based on the actuarial valuation as of January 1, 2018. The December 31, 2018, Total Pension Liability presented in the GASB 67/68 Report was based upon the same data, plan provisions, actuarial methods, and assumptions as were used in the Actuarial Valuation Report as of January 1, 2018. The December 31, 2019, Total Pension Liability presented in the GASB 67/68 Report was based upon the same data, plan provisions,

CHEIRON

Board Members
May 15, 2020
Page 3

actuarial methods, and assumptions as were used in the Actuarial Valuation Report as of January 1, 2019.

Please refer to our GASB 67 report as of December 31, 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 December 31, 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
- Schedule of Employer Contributions
- Notes to the Schedule of Employer Contributions

The GASB 67 report and its 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. 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 the San Joaquin County Employees' Retirement Association. 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.

Cheiron's reports were prepared for the Plan for the purposes described herein and for the use by the plan auditor and participating employers' auditors in completing an audit related to the matters herein. Other users of these reports are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

CHEIRON

Actuary's Certification Letter

Board Members
May 15, 2020
Page 4

As credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in these reports. 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,
Cheiron

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Summary of Actuarial Assumptions and Methods

Actuarial assumptions and methods are both recommended by our actuaries, Cheiron, and adopted by the Board of Retirement on an annual basis. The most current Actuarial Valuation was conducted on January 1, 2019 for the period ending December 31, 2018.

An Experience Analysis is completed once every three years. The most recent Experience Analysis was conducted on August 12, 2019 for the years 2016 through 2018.

ACTUARIAL COST METHOD	Entry Age Normal Cost Method
UNFUNDED LIABILITY	The excess of the Actuarial Liability over Plan assets is the Unfunded Actuarial Liability (UAL). Half the actuarial loss experienced in 2008 was deemed to be an Extraordinary Actuarial Loss. Thus, 50% of the loss is separately amortized as a level percentage of pay over a closed 30-year period, with 20 years remaining as of January 1, 2019. The remainder of the Plan's UAL as of January 1, 2014 is being amortized over a closed 19 year period (14 years remaining as of January 1, 2019), decreasing by one year in each annual valuation report. All subsequent unexpected change in the UAL after January 1, 2014 is amortized over a 15 year closed period, beginning from the date the change is measured.
VALUATION INTEREST RATE	The annual rate of return on all Plan assets is assumed to be 7.25%, net of investment expenses.
INFLATION ASSUMPTION	2.90% per annum
ADMINISTRATIVE EXPENSES	Administrative expenses are assumed to be $4,762,311 for the next year, to be split between employees and employers based on their share of the overall contributions. Expenses are expected to growth with the cost of living (by 2.90% per year).
POST RETIREMENT COLA	Benefits are assumed to increase after retirement at the rate of 2.6% per year.
INCREASES IN PAY	Assumed pay increases for active members consist of increases due to base salary adjustments plus service-based increases due to longevity and promotion. Rates vary by age and classification (See *Salary Scale Schedule*).
ASSET VALUATION METHOD	The Plan uses a modified market-related value method called the Actuarial Value of Plan Assets. The fair value of assets is adjusted to recognize, over a five-year period, differences between actual investment earnings and the assumed investment return. Accordingly, only 20% of this difference is being recognized in any one year (See *Actuarial Value of Assets Schedule*). The actuarial value of assets is limited to no less than 80% and no more than 120% of the fair value.

(*Continued on page 76*)

Summary of Actuarial Assumptions and Methods

HEALTHY MEMBER MORTALITY	Mortality rates for General active members are based on the sex distinct Public General 2010 Above-Median Income Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 1.05 for females and no adjustment for males. Mortality rates for Safety active members are based on the sex distinct Public Safety 2010 Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 0.98 for males and 1.06 for females. 10% of Safety member active deaths are assumed to occur in the line of duty. Mortality rates for healthy General annuitants are based on the sex distinct Public General 2010 Above-Median Income Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 1.04 for females and no adjustment for males. Mortality rates for Safety annuitants are based on the sex distinct Public Safety 2010 Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2018, and a partial credibility adjustment of 1.02 for males and 1.05 for females.
DISABLED MEMBER MORTALITY	Mortality rates for Safety disabled annuitants are based on the sex distinct Public Safety Disabled Annuitant 2010 Mortality Table with generational mortality improvements projected from 2010 using Projection Scale MP-2018, with a partial credibility adjustment of 1.04 for males and 0.98 for females. Mortality rates for General disabled annuitants are based on the sex distinct Public General Disabled Annuitant 2010 Mortality Table with generational mortality improvements projected from 2010 using Projection Scale MP-2018, with a partial credibility adjustment of 1.04 for males and 1.07 for females.
VESTED TERMINATION RATES	Rates vary by service and classification (See *Probabilities of Separation Schedule*).
WITHDRAWAL RATES	Rates vary by service and classification (See *Probabilities of Separation Schedule*).
DISABILITY RATES	Rates vary by age, gender and classification (See *Probabilities of Separation Schedule*).
DUTY DISABILITY RATES	Rates vary by age, gender and classification (See *Probabilities of Separation Schedule*).

(*Continued on page 77*)

Summary of Actuarial Assumptions and Methods

SERVICE RETIREMENT RATES	Rates vary by age, service, gender and classification (See *Probabilities of Separation Schedule*).
FAMILY COMPOSITION	55% of female members and 75% of male members are assumed to be married. Male members are assumed to be four years older than their spouses. Female members are assumed to be two years younger than their spouses.
VESTED TERMINATIONS	No terminations are assumed for participants who are eligible for retirement. 60% of all General Member terminations with less than five years of service, 30% of those with five to fourteen years of service, and 10% those with 15 or more years of service, are assumed to take a refund of contributions. 60% of all Safety Member terminations with less than five years of service, 30% of those with five to 9 years of services, and 15% of those with 10 or more years of service, are assumed to take a refund of contributions. 75% of vested terminated General Members with less than five years of service, 25% of those with five to 14 years of service, and 30% of those with 15 or more years of service, are assumed to be reciprocal. 67% of vested terminated Safety Members with less than five years of service, and 50% of those with five or more years of service, are assumed to be reciprocal.
DEFERRAL AGE FOR VESTED TERMINATORS	Vested terminated General Members are assumed to begin receiving benefits at age 58 terminated. Vested Terminated Safety Members are assumed to begin receiving benefits at age 50, unless they have outgoing reciprocity, in which case they are assumed to begin receiving benefits at age 53.
EMPLOYMENT STATUS	No future transfers among member groups are assumed.

Schedule of Active Member Valuation Data

ACTUARIAL VALUATION DATE	PLAN TYPE	MEMBERS	ANNUAL PAYROLL	AVERAGE ANNUAL SALARY	AVERAGE SALARY INCREASE
	General	4,990	$ 320,526,792	$ 64,234	5.56%
	Safety	925	70,801,157	76,542	2.62%
01/01/2010	TOTAL	5,915	391,327,949	66,159	5.21%
	General	4,643	308,183,424	66,376	3.33%
	Safety	830	64,817,396	78,093	2.03%
01/01/2011	TOTAL	5,473	373,000,820	68,153	3.01%
	General	4,441	298,308,687	67,172	1.20%
	Safety	813	64,041,814	78,772	0.87%
01/01/2012	TOTAL	5,254	362,350,501	68,967	1.19%
	General	4,492	301,505,122	67,120	-0.08%
	Safety	803	64,386,900	80,183	1.79%
01/01/2013	TOTAL	5,295	365,892,022	69,101	0.19%
	General	4,748	316,885,044	66,741	-0.57%
	Safety	805	65,640,055	81,540	1.69%
01/01/2014	TOTAL	5,553	382,525,099	68,886	-0.31%
	General	4,879	322,836,680	66,169	-0.86%
	Safety	827	68,491,483	82,819	1.57%
01/01/2015	TOTAL	5,706	391,328,163	68,582	-0.44%
	General	5,131	340,731,847	66,407	0.36%
	Safety	793	66,456,278	83,804	1.19%
01/01/2016	TOTAL	5,924	407,188,125	68,735	0.22%
	General	5,291	373,202,798	70,535	6.22%
	Safety	811	67,593,920	83,346	-0.55%
01/01/2017	TOTAL	6,102	440,796,718	72,238	5.10%
	General	5,370	381,151,442	70,978	0.63%
	Safety	848	70,776,611	83,463	0.14%
01/01/2018	TOTAL	6,218	451,928,053	72,681	0.61%
	General	5,485	401,820,940	73,258	3.21%
	Safety	860	72,680,957	84,513	1.26%
01/01/2019	TOTAL	6,345	$ 474,501,897	$ 74,784	2.89%

Payroll figures represent year end monthly retirement benefits annualized and exclude Post-Employment Healthcare benefit and benefits under the Class Action Settlement. The most current Actuarial Valuation was conducted on January 1, 2019 for the period ending December 31, 2018. The information in subsequent years is currently not available.

Schedule of Retirees and Beneficiaries Valuation Data

ACTUARIAL VALUATION DATE	PLAN TYPE	MEMBER RETIREMENTS	BENEFICIARY CONTINUANCE	MEMBERS AND BENEFICIARIES REMOVED	TOTAL RETIREES ON PAYROLL	ANNUAL RETIREMENT PAYROLL	AVERAGE ANNUAL ALLOWANCE	AVERAGE ALLOWANCE % INCREASE
	General	207	31	104	3,522	$ 78,988,070	$ 22,427	6.3%
	Safety	24	7	11	730	32,575,964	44,625	3.6%
01/01/2010	TOTAL	231	38	115	4,252	111,564,034	26,238	5.3%
	General	242	35	102	3,697	85,931,078	23,243	3.6%
	Safety	65	5	8	792	36,354,738	45,902	2.9%
01/01/2011	TOTAL	307	40	110	4,489	122,285,816	27,241	3.8%
	General	240	42	108	3,871	92,938,361	24,009	3.3%
	Safety	32	4	14	814	38,098,866	46,805	2.0%
01/01/2012	TOTAL	272	46	122	4,685	131,037,227	27,970	2.7%
	General	278	27	135	4,041	102,025,575	25,248	5.2%
	Safety	52	12	20	856	42,008,598	49,075	4.9%
01/01/2013	TOTAL	330	39	155	4,897	144,034,173	29,413	5.2%
	General	213	52	134	4,172	109,864,971	26,334	4.3%
	Safety	22	11	20	869	43,546,661	50,111	2.1%
01/01/2014	TOTAL	235	63	154	5,041	153,411,632	30,433	3.5%
	General	247	51	112	4,358	120,722,240	27,701	5.2%
	Safety	29	14	21	891	45,889,472	51,503	2.8%
01/01/2015	TOTAL	276	65	133	5,249	166,611,712	31,742	4.3%
	General	228	45	136	4,494	129,928,957	28,912	4.4%
	Safety	54	15	19	941	50,813,875	54,000	4.9%
01/01/2016	TOTAL	282	60	155	5,435	180,742,832	33,255	4.8%
	General	251	40	128	4,657	139,511,334	29,957	3.6%
	Safety	40	12	22	971	54,508,607	56,137	4.0%
01/01/2017	TOTAL	291	52	150	5,628	194,019,941	34,474	3.7%
	General	249	49	149	4,806	149,183,295	31,041	3.6%
	Safety	46	12	13	1,016	57,837,517	56,927	1.4%
01/01/2018	TOTAL	295	61	162	5,822	207,020,812	35,558	3.1%
	General	290	47	133	5,010	161,602,326	32,256	3.9%
	Safety	39	8	20	1,043	61,364,472	58,835	3.4%
01/01/2019	TOTAL	329	55	153	6,053	$ 222,966,798	$ 36,836	3.6%

Payroll figures represent year end monthly retirement benefits annualized and exclude Post-Employment. Healthcare benefit and benefits under the Class Action Settlement. The most current Actuarial Valuation was conducted on January 1, 2019 for the period ending December 31, 2018. The information in subsequent years is currently not available.

Retirees and Beneficiaries Added to and Removed from Retiree Payroll

	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS AT YEAR END			
FISCAL YEAR	MEMBER COUNT	ANNUAL ALLOWANCE (IN 000'S)[1]	MEMBER COUNT	ANNUAL ALLOWANCE (IN 000'S)	MEMBER COUNT	ANNUAL ALLOWANCE (IN 000'S)	% INCREASE IN RETIREE ALLOWANCE	AVERAGE ANNUAL ALLOWANCE
2010	353	$ 12,918	(116)	$ (2,196)	4,489	$ 122,286	3.82%	$ 27,241
2011	318	11,544	(122)	(2,793)	4,685	131,037	2.67%	27,969
2012	361	16,400	(149)	(3,403)	4,897	144,034	5.16%	29,413
2013	297	12,908	(153)	(3,530)	5,041	153,412	3.47%	30,433
2014	340	16,230	(132)	(3,030)	5,249	166,612	4.30%	31,742
2015	341	17,766	(155)	(3,651)	5,435	180,737	4.77%	33,255
2016	343	17,151	(150)	(3,868)	5,628	194,020	3.66%	34,474
2017	355	17,288	(161)	(4,287)	5,822	207,021	3.15%	35,558
2018	382	19,839	(151)	(3,893)	6,053	222,967	3.59%	36,836
2019	354	$ 21,214	(199)	$ (5,902)	6,208	$ 238,279	4.20%	$ 38,383

[1] Includes COLA amounts not included in previous year's Annual Allowance totals.

Schedule of Funded Liabilities by Type

(DOLLARS IN THOUSANDS)								
	ACTUARIAL ACCRUED LIABILITY							
ACTUARIAL VALUATION DATE	(1) ACTIVE MEMBERS CONTRIBUTIONS	(2) RETIREES AND BENEFICIARIES	(3) ACTIVE MEMBERS (EMPLOYER FINANCED PORTION)	TOTAL ACTUARIAL ACCRUED LIABILITY	ACTUARIAL VALUE OF ASSETS	PORTION OF ACCRUED LIABILITIES COVERED BY REPORTED ASSETS (1)	(2)	(3)
1/1/2010	187,987	1,373,257	1,208,368	2,769,612	1,949,011	100%	100%	32.0%
1/1/2011	193,613	1,495,665	1,228,410	2,917,688	2,120,384	100%	100%	35.0%
1/1/2012	202,925	1,627,338	1,218,058	3,048,321	2,130,053	100%	100%	25.0%
1/1/2013	209,987	1,810,776	1,332,531	3,353,294	2,125,700	100%	100%	8.0%
1/1/2014	258,198	1,956,931	1,346,730	3,561,859	2,285,166	100%	100%	5.0%
1/1/2015	276,818	2,117,010	1,337,806	3,731,634	2,471,291	100%	100%	6.0%
1/1/2016	297,179	2,347,908	1,361,303	4,006,390	2,604,473	100%	98%	0.0%
1/1/2017	318,021	2,513,640	1,403,433	4,235,094	2,733,852	100%	96%	0.0%
1/1/2018	344,504	2,706,791	1,445,681	4,496,976	2,913,161	100%	95%	0.0%
1/1/2019	$ 368,550	$ 2,910,061	$ 1,442,676	$ 4,721,287	$ 3,044,898	100%	92%	0.0%

This schedule excludes Post 4/1/82 Retiree Class Action Settlement Reserve and Unapportioned Earnings Reserve. The most current Actuarial Valuation was conducted on January 1, 2019 for the period ending December 31, 2018. The information in subsequent years is currently not available.

Schedule of Funding Progress Defined Benefit Pension Plan

FOR THE LAST TEN FISCAL YEARS ENDED DECEMBER 31

(DOLLARS IN THOUSANDS)						
ACTUARIAL VALUATION DATE	ACTUARIAL VALUE OF ASSETS[1] (A)	ACTUARIAL LIABILITY (AL) (B)	UNFUNDED ACTUARIAL LIABILITY (UAL) (B-A)	FUNDED RATIO (A/B)	COVERED PAYROLL[2] (C)	UAL AS A PERCENTAGE OF ANNUAL COVERED PAYROLL ((B-A)/C)
1/1/2019	$ 3,044,897	$ 4,721,287	$ 1,676,390	64.5%	$ 481,917	347.9%
1/1/2018	2,913,161	4,496,976	1,583,815	64.8%	458,991	345.1%
1/1/2017	2,733,852	4,235,094	1,501,242	64.6%	447,685	335.3%
1/1/2016	2,604,473	4,006,390	1,401,917	65.0%	413,552	339.0%
1/1/2015	2,471,291	3,731,634	1,260,343	66.2%	397,636	317.0%
1/1/2014	2,285,166	3,561,859	1,276,693	64.2%	388,691	328.5%
1/1/2013	2,125,700	3,353,294	1,227,594	63.4%	365,892	335.5%
1/1/2012	2,130,053	3,048,321	918,268	69.9%	356,419	257.6%
1/1/2011	2,120,384	2,917,688	797,304	72.7%	367,344	217.0%
1/1/2010	$ 1,949,011	$ 2,769,612	$ 820,601	70.4%	$ 385,442	212.9%

[1] The actuarial value of assets reflects the smoothing method that adjusts fair value differences between the assumed and the actual investment return over a 5-year period.

[2] Represents the annualization of active members' pay rates on December 31 as determined by the actuarial study.

Assumed Probabilities of Separation from Active Membership (General)

AGE	NON-DUTY DEATH	ORDINARY DISABILITY	SERVICE RETIREMENT[1]	DUTY DEATH	DUTY DISABILITY
GENERAL MEMBERS - MALE					
20	0.0004	0.000	0.000	0.000	0.001
25	0.0003	0.000	0.000	0.000	0.001
30	0.0004	0.000	0.000	0.000	0.001
35	0.0005	0.000	0.000	0.000	0.001
40	0.0006	0.001	0.000	0.000	0.004
45	0.0008	0.001	0.000	0.000	0.004
50	0.0012	0.001	0.030	0.000	0.003
55	0.0019	0.001	0.065	0.000	0.004
60	0.0029	0.001	0.090	0.000	0.004
65	0.0041	0.001	0.250	0.000	0.005
GENERAL MEMBERS - FEMALE					
20	0.0001	0.001	0.000	0.000	0.000
25	0.0001	0.001	0.000	0.000	0.000
30	0.0002	0.001	0.000	0.000	0.000
35	0.0003	0.001	0.000	0.000	0.000
40	0.0004	0.002	0.000	0.000	0.001
45	0.0005	0.002	0.000	0.000	0.001
50	0.0008	0.003	0.035	0.000	0.001
55	0.0012	0.004	0.035	0.000	0.001
60	0.0019	0.005	0.125	0.000	0.002
65	0.0027	0.005	0.250	0.000	0.002

[1] Lower rates assumed for members with less than 10 years of service, and higher rates assumed for members with at least 30 years of service.

The probabilities for each cause of separation represent the likelihood that a given member will separate at a particular age for the indicated reason. As an example, if the probability of separation of a male general member at age 50 is 0.030, that indicates that 3.0% of active general members are expected to separate from service during the year. Rates of Duty and Non-Duty Death are for active members who reach the given age during 2019.

Assumed Probabilities of Separation from Active Membership (Safety)

AGE	NON-DUTY DEATH	ORDINARY DISABILITY	SERVICE RETIREMENT[1]	DUTY DEATH	DUTY DISABILITY
SAFETY MEMBERS - MALE					
20	0.0004	0.000	0.050	0.004	0.000
25	0.0004	0.000	0.050	0.004	0.001
30	0.0005	0.000	0.050	0.005	0.001
35	0.0006	0.000	0.050	0.006	0.002
40	0.0007	0.000	0.050	0.007	0.004
45	0.0008	0.000	0.050	0.008	0.008
50	0.0011	0.001	0.150	0.011	0.014
55	0.0017	0.001	0.200	0.017	0.014
SAFETY MEMBERS - FEMALE					
20	0.0002	0.000	0.050	0.002	0.000
25	0.0002	0.000	0.050	0.002	0.001
30	0.0004	0.000	0.050	0.004	0.001
35	0.0005	0.000	0.050	0.005	0.002
40	0.0006	0.000	0.050	0.006	0.004
45	0.0007	0.000	0.050	0.007	0.009
50	0.0009	0.001	0.150	0.009	0.014
55	0.0014	0.001	0.200	0.014	0.014

[1] Lower rates assumed for members with less than 20 years of service.

The probabilities for each cause of separation represent the likelihood that a given member will separate at a particular age for the indicated reason. As an example, if the probability of separation of a male Safety member at age 50 is 0.150, that indicates that 15.0% of active Safety members are expected to separate from service during the year.

Salary Increase, Termination, and Withdrawal Assumptions

YEARS OF SERVICE	SALARY INCREASE		WITHDRAWAL		TERMINATION	
	GENERAL	SAFETY	GENERAL	SAFETY	GENERAL[1]	SAFETY[2]
0	0.1140	0.1347	0.105	0.054	0.070	0.036
1	0.1037	0.1347	0.066	0.042	0.044	0.028
2	0.0728	0.0831	0.060	0.030	0.040	0.020
3	0.0728	0.0831	0.047	0.030	0.031	0.020
4	0.0521	0.0831	0.041	0.027	0.027	0.018
5	0.0521	0.0547	0.019	0.010	0.044	0.023
6	0.0521	0.0444	0.018	0.009	0.042	0.021
7	0.0521	0.0444	0.014	0.005	0.032	0.011
8	0.0444	0.0444	0.014	0.005	0.032	0.011
9	0.0444	0.0444	0.011	0.005	0.026	0.011
10	0.0418	0.0444	0.011	0.002	0.026	0.013
11	0.0418	0.0444	0.008	0.002	0.019	0.013
12	0.0418	0.0444	0.008	0.002	0.019	0.013
13	0.0418	0.0444	0.008	0.002	0.018	0.013
14	0.0418	0.0444	0.008	0.002	0.018	0.013
15	0.0367	0.0444	0.003	0.001	0.023	0.006
16	0.0367	0.0444	0.003	0.001	0.023	0.006
17	0.0367	0.0444	0.003	0.001	0.023	0.006
18	0.0367	0.0444	0.003	0.001	0.023	0.006
19	0.0367	0.0444	0.003	0.001	0.023	0.006
20	0.0367	0.0444	0.001	0.000	0.009	0.000
21	0.0367	0.0444	0.001	0.000	0.009	0.000
22	0.0367	0.0444	0.001	0.000	0.009	0.000
23	0.0367	0.0444	0.001	0.000	0.009	0.000
24	0.0367	0.0444	0.001	0.000	0.009	0.000
25	0.0367	0.0444	0.001	0.000	0.009	0.000
26	0.0367	0.0444	0.001	0.000	0.009	0.000
27	0.0367	0.0444	0.001	0.000	0.009	0.000
28	0.0367	0.0444	0.001	0.000	0.009	0.000
29	0.0367	0.0444	0.001	0.000	0.009	0.000
30+	0.0315	0.0444	0.000	0.000	0.000	0.000

[1] 75% of vested terminated General Members with less than five years of service, 25% of those with five to 14 years of service, and 30% of those with 15 or more years of service are assumed to be reciprocal.

[2] 67% of vested terminated Safety Members with less than five years of service, and 50% of those with five or more years of service are assumed to be reciprocal.

Actuarial Value of Assets and Reserves

The Actuarial Value of Assets represents a "smoothed" value developed by the actuary to reduce contribution volatility, which could develop due to short-term fluctuations in the Market Value of Assets. For this System, the Actuarial Value of Assets is calculated by recognizing the deviation of actual investment returns compared to the expected return over a five-year period.

The dollar amount of the expected return on the Market Value of Assets is determined using the actual contributions, administrative expense, and benefit payments during the year. Any difference between this amount and the actual investment earnings is considered a gain or loss. However, in no event will the Actuarial Value of Assets be less than 80% or more than 120% of market value on the valuation date. The following table shows the development of the actuarial asset value.

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS AS OF JANUARY 1, 2019

YEAR	(A) CONTRIBUTIONS	(B) BENEFITS	(C) ADMIN. EXPENSE	(D) HEALTHCARE FUND TRANSFER	(E) EXPECTED RETURN	(F) ACTUAL RETURN	(G)=(F)−(E) ADDITIONAL EARNINGS	(H) NOT RECOGNIZED	(I)=(G)X(H) UNRECOGNIZED EARNINGS
2015	179,398,457	181,468,912	4,075,745	378,969	184,778,322	(47,339,751)	(232,118,073)	20%	(46,423,615)
2016	189,239,931	194,719,177	4,369,744	293,779	178,243,779	151,114,788	(27,128,991)	40%	(10,851,596)
2017	233,686,648	205,406,970	4,118,578	364,714	189,960,353	299,960,693	110,000,340	60%	66,000,203
2018	244,135,523	221,443,667	4,865,082	324,269	209,406,849	(56,397,598)	(265,804,447)	80%	(212,643,558)

(1)	Total Unrecognized Dollars		(203,918,566)
(2)	Market Value of Assets as of December 31, 2018		2,841,042,076
(3)	Preliminary Actuarial Value of Assets as of December 31, 2018: [(2) – (1)]		3,044,960,642
(4)	Corridor Limits		
	a. 80% of Net Fair Value		2,272,833,661
	b. 120% of Net Fair Value		3,409,250,491
(5)	Actuarial Value of Assets after Corridor		3,044,960,642
(6)	Ratio of Actuarial Value to Market Value [(5) ÷ (2)]		107.18%
(7)	Market Stabilization Designation [(2) – (5)]		(203,918,566)
(8)	Special (Non Valuation) Reserves:		
	Class Action Settlement – Post 4/1/1982		62,951
	Contingency		0
	Undistributed Earnings Reserve		0
	Total Special Reserves		62,951
(9)	ACTUARIAL VALUE OF ASSETS FOR THE FUNDING RATIO: [(5) – (8)]	$	3,044,897,691
(10)	ADDITIONAL COUNTY CONTRIBUTION RESERVES	$	40,548,809
(11)	ACTUARIAL VALUE OF ASSETS USED FOR CALCULATING THE EMPLOYER CONTRIBUTION RATES: [(9) – (10)]	$	3,004,348,882

MEMBERSHIP

Membership is mandatory upon appointment to a full-time, permanent position with the County or other participating employer. Persons who commence covered employment at age 60 or older may irrevocably elect to waive membership in SJCERA.

Tier 1 - Employees who established and maintain membership in SJCERA prior to January 1, 2013, and other eligible employees as defined by law, participate in the defined benefit formula that was in place before January 1, 2013, termed "SJCERA Tier 1."

Tier 2 - Employees who establish membership in SJCERA on or after January 1, 2013, who are subject to the provisions of the Public Employees' Pension Reform Act of 2013 (Article 4 (commencing with Section 7522, et seq.) of Chapter 21 of Division 7 of Title 1 of the Government Code), also known as "PEPRA," participate in the defined benefit formula prescribed by PEPRA for these employees, termed "SJCERA Tier 2."

FINAL AVERAGE SALARY

For Tier 1 members, final compensation for purposes of computing a retirement allowance is the average monthly salary for the highest twelve consecutive months of employment. In addition to base salary, final compensation may include other items defined as compensation earnable for retirement purposes. Overtime pay is excluded.

For Tier 2 members, final compensation for purposes of computing a retirement allowance is the average monthly salary for the highest thirty-six consecutive months of employment. In addition to base salary, final compensation may include other items defined as pensionable compensation. Allowances, incentives, employer contributions to deferred compensation, annual leave cash outs and overtime pay are excluded.

CONTRIBUTIONS

Member contributions are based upon membership category, General or Safety, are expressed as a percentage of covered payroll, and are deducted from employees' earnings on a biweekly basis. Collective bargaining agreements and employment resolutions may also specify terms that affect members' retirement contributions.

Tier 1 members pay contributions also based upon the age at which the employee entered SJCERA membership. General members of Tier 1 employed prior to March 7, 1973, and all Safety members of Tier 1 stop paying member contributions when they have 30 years of service credit, but continue to accrue retirement service credit for subsequent active employment subject to membership.

Tier 2 members pay contributions equal to one-half of the normal cost of their applicable benefits.

Summary of Major Plan Provisions

Member contributions are credited with interest semi-annually. Upon termination of employment prior to retirement, a member may elect to withdraw his or her accumulated member contributions and interest, terminating SJCERA membership and forfeiting all related rights and benefits.

VESTING

A member with five years of retirement service credit is vested in the plan as long as accumulated member contributions remain on deposit with SJCERA.

SERVICE RETIREMENT

TIER 1 MEMBERS:

For retirements effective January 1, 2001 and later, retirement benefits are as provided under Sections 31676.14 and 31664.1 of the County Employees' Retirement Law.

A Tier 1 member may retire for service at age 50 or older with five years of service credit, and at least ten years has elapsed since the date of membership. A General Member may retire at any age with 30 or more years of service. A Safety Member may retire at any age with 20 or more years of service.

Tier 1 provides a 2.6 percent of final compensation for each year of service credit at age 62 benefit formula for General Members, and a 3.0 percent of final compensation for each year of service credit at age 50 benefit formula for safety members of Tier 1. Social Security integration reduces benefits by one-third on the first $350 of monthly final average salary. The maximum benefit payable is the lesser of 100 percent of final average salary or the federal annual compensation limit under Internal Revenue Code Section 401(a)(17), if applicable.

TIER 2 MEMBERS:

Tier 2 Members – Retirement benefits are as provided under Sections 7522.20 and 7522.25(d) of PEPRA.

A Tier 2 member may retire for service with five years of service credit upon attaining the minimum retirement age: Age 52 for General Members, and Age 50 for Safety Members.

Tier 2 provides a 2 percent of final compensation for each year of service credit at age 62 benefit formula for General Members, and a 2.7 percent of final compensation for each year of service credit at age 57 benefit formula for Safety Members. PEPRA specifies the maximum annual compensation that may be used to calculate retirement benefits. A lower limit applies to members whose service under SJCERA is also covered by Social Security, and a higher limit applies to members whose service under SJCERA is not covered by Social Security. These limits are adjusted annually based on changes in the Consumer Price Index.

Any member of SJCERA, regardless of benefit tier, may retire at age 70 with no minimum service credit requirement.

DISABILITY RETIREMENT

Members with five years of service credit, regardless of age, are eligible to apply for a non-service connected disability retirement. If granted, the benefit is the greater of:

1) 1.5% of final average salary for General Members, or 1.8% for final average salary for Safety Members, for each year of service, not to exceed 33 ⅓% of final average salary, or
2) the amount of the member's service retirement benefit, if the member is eligible to retire for service.

Any active member, regardless of years of service credit, is eligible to apply for a service-connected disability retirement. If granted, the benefit is the greater of:

1) 50% of the member's final average salary, or
2) the amount of the member's service retirement benefit, if the member is eligible to retire for service.

DEATH BENEFITS

Basic Death Benefit - The beneficiary of a member who dies prior to attaining five years of credited service receives a refund of the member's accumulated contributions and interest plus one month's salary for each full year of service, up to a maximum of six months' salary.

If the death occurs after the member attained five years of credited service and is not the result of a service-related injury or disease, the surviving spouse or minor children may elect to receive, in lieu of the Basic Death Benefit, either 60% of the retirement allowance to which the deceased member would have been entitled had the member retired for service or non-service-connected disability on the date of death, or a lump sum payment of six months' salary and a reduced monthly retirement benefit. The monthly allowance payable to a minor child is discontinued when the child marries or attains age 18, or age 22 if a full-time student.

Upon the death of a retiree, the beneficiary may receive a continuance of 100%, 60%, or 50% of the deceased member's retirement benefit as determined by the type of retirement and benefit option elected by the member. The beneficiary also receives a $5,000 lump-sum death benefit.

COST-OF-LIVING BENEFITS

All monthly allowances are eligible for an annual cost-of-living adjustment (COLA) based on the change in the Consumer Price Index (CPI) for the San Francisco-Oakland-San Jose area for the previous calendar year, up to a maximum of 3.0%. When the CPI exceeds 3.0% in any year, the difference between the actual change in CPI (rounded to the nearest one-half percent) and the 3.0% ceiling is “accumulated” for future years when the change is less than 3.0%.

Statistical

Summary of Statistical Data

This section of the Comprehensive Annual Financial Report provides additional historical perspective, context, and detail in order to provide a more comprehensive understanding of this year's financial statements, note disclosures, and supplementary information.

This section provides supplementary information according to Governmental Accounting Standards Board (GASB) Statement No. 44, which establishes and modifies required data by providing multi-year trend information to provide an understanding of how the organization's financial activities and positions have changed over time. The Statistical Information is presented to include two main categories required by pension plans: Financial Trends Information and Operating Information.

FINANCIAL TRENDS

Ten-year Trend Information is presented to assist users in understanding how the Plan's financial position has changed over time and provides historical information as to total plan net position and total changes in plan net position, the Plan's additions by source, deductions by type, benefits and refunds by type (service retirement, disability retirement, survivors/beneficiaries benefits, refunds and death benefits).

OPERATING INFORMATION

Operating Information is intended to provide information about operations and resources to assist readers in using financial statement information to understand and assess a government's economic condition. The following schedules present the average monthly benefit, average final salary, organized in five-year increments of credit service and since retirement, as well as the participating employers and their corresponding covered employees.

Schedule of Fiduciary Net Position

For the last ten fiscal years ended December 31

(DOLLARS IN THOUSANDS)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ASSETS										
Cash and Cash Equivalents	$ 118,801	$ 210,876	$ 185,216	$ 225,343	$ 226,912	$ 250,500	$ 169,701	$ 208,032	$ 195,648	$ 183,531
Receivables	17,193	13,747	8,862	10,524	8,930	12,081	28,491	11,152	9,587	34,581
Investments	3,158,399	2,701,519	2,773,701	2,463,816	2,328,265	2,371,380	2,256,908	2,054,715	1,851,212	1,842,483
Prepaid Expenses	82	85	90	127	112	86	82	101	91	75
Equipment and Fixtures, Net	180	212	74	116	192	315	427	487	572	635
TOTAL ASSETS	$3,294,655	$2,926,439	$2,967,943	$2,699,926	$2,564,411	$2,634,362	$2,455,610	$2,274,487	$2,057,110	$2,061,305
LIABILITIES										
Securitites Lending – Cash Collateral	$ 46,038	$ 81,063	$ 86,901	$ 141,349	$ 147,106	$ 164,195	$ 107,127	$ 108,958	$ 104,691	$ 113,171
Securities Purchased, Not Paid	3,402	2,418	173	2,542	2,739	1,671	5,433	3,783	1,455	16,858
Accrued Expenses and Other Payables	762	1,723	1,475	1,170	1,306	2,138	1,538	1,329	1,019	1,278
Securities Lending Interest and Other Expense	91	193	105	63	17	8	-	2	-	12
TOTAL LIABILITIES	$ 50,293	$ 85,397	$ 88,654	$ 145,124	$ 151,168	$ 168,012	$ 114,097	$ 114,072	$ 107,165	$ 131,319
FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS	$3,244,362	$2,841,042	$2,879,289	$2,554,802	$2,413,243	$2,466,350	$2,341,513	$2,160,415	$1,949,945	$1,929,986

Schedule of Changes in Fiduciary Net Position

For the last ten fiscal years ended December 31

	(DOLLARS IN THOUSANDS)									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Member Contributions	$ 38,099	$ 35,378	$ 33,635	$ 30,117	$ 29,027	$ 27,368	$ 22,690	$ 19,900	$ 14,041	$ 13,098
Employer Contributions:										
Retirement Plan	225,529	208,758	200,052	159,123	150,372	136,686	119,494	108,063	112,892	104,452
Post-Employment Health Plan	0	0	0	0	0	0	0	0	0	0
Investment Income	380,600	(56,466)	299,882	151,031	(47,449)	110,651	198,173	230,954	29,262	217,123
Miscellaneous	74	68	78	84	109	77	72	62	68	46
Transfers Between Plan	299	324	365	294	379	19,969	204	339	154	166
TOTAL ADDITIONS	$644,601	$188,062	$534,012	$340,649	$132,438	$294,751	$340,633	$359,317	$ 156,417	$334,885
DEDUCTIONS										
Benefits	$233,405	$ 219,079	$ 203,109	$ 192,732	$ 179,585	$ 164,335	$ 154,233	$ 143,669	$ 131,642	$ 121,641
Post-Employment Health Benefits	0	0	0	0	0	0	0	0	0	0
Administrative Expenses	4,931	4,865	4,119	4,370	4,076	4,043	4,135	3,869	3,749	3,682
Refunds	2,945	2,365	2,298	1,987	1,884	1,536	1,169	1,309	1,068	1,251
Miscellaneous	0	0	0	0	0	0	0	0	0	0
Transfers Between Plan	0	0	0	0	0	0	0	0	0	0
TOTAL DEDUCTIONS	$241,281	$226,309	$209,526	$199,089	$185,545	$169,914	$159,537	$148,848	$ 136,459	$126,573
CHANGE IN FIDUCIARY NET POSITION	$403,320	$ (38,247)	$324,486	$141,560	$(53,107)	$124,837	$181,096	$210,469	$ 19,958	$208,312

Schedule of Revenue By Source And Expenses By Type

SCHEDULE OF REVENUE BY SOURCE

YEAR ENDED	MEMBER CONTRIBUTIONS	EMPLOYER CONTRIBUTIONS		INVESTMENT INCOME	MISC	TRANSFER BETWEEN PLANS	TOTAL
		RETIREMENT PLAN	POST EMPLOYMENT HEALTH PLAN				
2010	$ 13,098,043	$ 104,451,673	$ 0	$217,123,404	$ 46,407	$ 165,625	$334,885,152
2011	14,040,773	112,891,701	0	29,262,231	68,107	154,232	156,417,044
2012	19,900,088	108,062,510	0	230,953,847	61,657	339,344	359,317,446
2013	22,689,882	119,494,319	0	198,172,396	72,467	204,375	340,633,439
2014	27,367,908	136,686,133	0	110,651,111	77,192	19,968,779	294,751,123
2015	29,026,901	150,371,556	0	(47,449,240)	109,490	378,969	132,437,676
2016	30,117,408	159,122,523	0	151,031,174	83,614	293,779	340,648,498
2017	33,634,906	200,051,742	0	299,882,451	78,242	364,714	534,012,055
2018	35,377,951	208,757,572	0	(56,465,738)	68,140	324,269	188,062,194
2019	38,098,688	225,528,756	0	380,600,341	74,187	299,014	644,600,986

SCHEDULE OF EXPENSES BY TYPE

YEAR ENDED	BENEFITS	POST EMPLOYMENT HEALTH BENEFITS	ADMINISTRATIVE EXPENSES	REFUNDS	MISC	TRANSFER BETWEEN PLANS	TOTAL
2010	$ 121,640,992	$ 0	$ 3,681,545	$ 1,250,644	$ 0	$ 0	$126,573,181
2011	131,641,539	0	3,748,948	1,067,734	0	0	136,458,221
2012	143,669,140	0	3,869,321	1,308,900	0	0	148,847,361
2013	154,232,885	0	4,134,716	1,168,934	0	0	159,536,535
2014	164,335,273	0	4,042,986	1,535,698	0	0	169,913,957
2015	179,585,136	0	4,075,745	1,883,777	0	0	185,544,658
2016	192,732,311	0	4,369,744	1,986,866	0	0	199,088,921
2017	203,109,466	0	4,118,578	2,297,504	0	0	209,525,548
2018	219,078,954	0	4,865,082	2,364,713	0	0	226,308,749
2019	233,405,209	0	4,931,163	2,944,863	0	0	241,281,235

Schedule of Benefit Expenses By Type

YEAR END	PLAN TYPE	SERVICE RETIREMENT PAYROLL	DISABILITY RETIREMENT PAYROLL	SURVIVORS AND BENEFICIARIES	REFUNDS OF MEMBERS CONTRIBUTIONS	DEATH BENEFITS	TOTAL
	General	$ 71,097,399	$ 7,044,294	$ 7,789,890	$ 1,159,876	$ 511,293	$ 87,602,752
	Safety	24,861,690	7,618,760	3,874,365	90,768	0	36,445,583
2010	TOTAL	$ 95,959,089	$ 14,663,054	$ 11,664,255	$ 1,250,644	$ 511,293	$ 124,048,335
	General	$ 77,067,730	$ 7,136,889	$ 8,549,504	$ 1,016,661	$ 537,007	$ 94,307,791
	Safety	26,462,625	7,889,616	3,963,168	51,073	35,000	38,401,482
2011	TOTAL	$ 103,530,355	$ 15,026,505	$ 12,512,672	$ 1,067,734	$ 572,007	$ 132,709,273
	General	$ 82,676,254	$ 9,694,257	$ 8,823,169	$ 1,150,943	$ 503,221	$ 102,847,844
	Safety	27,151,058	10,311,212	4,405,737	157,957	104,232	42,130,196
2012	TOTAL	$ 109,827,312	$ 20,005,469	$ 13,228,906	$ 1,308,900	$ 607,453	$ 144,978,040
	General	$ 95,109,549	$ 5,667,332	$ 8,876,109	$ 900,756	$ 572,733	$ 111,126,479
	Safety	31,116,346	8,938,667	3,912,149	268,178	40,000	44,275,339
2013	TOTAL	$ 126,225,895	$ 14,605,999	$ 12,788,257	$ 1,168,934	$ 612,733	$ 155,401,818
	General	$ 100,668,155	$ 8,493,931	$ 9,401,576	$ 1,427,885	$ 548,606	$ 120,540,152
	Safety	31,407,516	9,555,857	4,184,681	107,813	74,951	45,330,819
2014	TOTAL	$ 132,075,671	$ 18,049,788	$ 13,586,257	$ 1,535,698	$ 623,557	$ 165,870,971
	General	$ 110,694,430	$ 8,608,271	$ 9,864,262	$ 1,584,403	$ 449,742	$ 131,201,108
	Safety	35,096,063	10,179,970	4,580,169	299,374	112,229	50,267,805
2015	TOTAL	$ 145,790,493	$ 18,788,241	$ 14,444,431	$ 1,883,777	$ 561,971	$ 181,468,913
	General	$ 118,912,565	$ 8,650,277	$ 10,544,504	$ 1,840,117	$ 563,769	$ 140,511,232
	Safety	38,262,562	10,660,155	5,083,479	146,749	55,000	54,207,945
2016	TOTAL	$ 157,175,127	$ 19,310,432	$ 15,627,983	$ 1,986,866	$ 618,769	$ 194,719,177
	General	$ 126,046,097	$ 8,807,111	$ 10,729,415	$ 2,108,790	$ 656,206	$ 148,347,619
	Safety	40,336,132	11,088,325	5,401,180	188,714	45,000	57,059,351
2017	TOTAL	$ 166,382,229	$ 19,895,436	$ 16,130,595	$ 2,297,504	$ 701,206	$ 205,406,970
	General	$ 137,812,569	$ 9,134,223	$ 11,265,536	$ 1,975,078	$ 565,401	$ 160,752,807
	Safety	42,762,050	11,814,374	5,667,301	389,635	57,500	60,690,860
2018	TOTAL	$ 180,574,619	$ 20,948,597	$ 16,932,837	$ 2,364,713	$ 622,901	$ 221,443,667
	General	$ 146,798,807	$ 9,654,798	$ 11,818,934	$ 2,756,097	$ 583,768	$ 171,612,404
	Safety	46,270,186	12,185,339	6,008,377	188,766	85,000	64,737,668
2019	TOTAL	$ 193,068,993	$ 21,840,137	$ 17,827,311	$ 2,944,863	$ 668,768	$ 236,350,072

Schedule of Retired Members By Type

ACTUARIAL VALUATION DATE	PLAN TYPE	MEMBERS WITH SERVICE RETIREMENTS	MEMBERS WITH DISABILITY RETIREMENTS	SURVIVORS AND BENEFICIARIES	TOTAL
	General	2,654	373	495	3,522
	Safety	420	184	126	730
01/01/2010	TOTAL	3,074	557	621	4,252
	General	2,799	383	515	3,697
	Safety	469	188	135	792
01/01/2011	TOTAL	3,268	571	650	4,489
	General	2,946	381	544	3,871
	Safety	485	190	139	814
01/01/2012	TOTAL	3,431	571	683	4,685
	General	3,113	387	541	4,041
	Safety	514	195	147	856
01/01/2013	TOTAL	3,627	582	688	4,897
	General	3,227	388	557	4,172
	Safety	516	199	154	869
01/01/2014	TOTAL	3,743	587	711	5,041
	General	3,385	393	580	4,358
	Safety	524	205	162	891
01/01/2015	TOTAL	3,909	598	742	5,249
	General	3,506	390	598	4,494
	Safety	554	210	177	941
01/01/2016	TOTAL	4,060	600	775	5,435
	General	3,655	399	603	4,657
	Safety	572	215	184	971
01/01/2017	TOTAL	4,227	614	787	5,628
	General	3,789	402	615	4,806
	Safety	600	221	195	1,016
01/01/2018	TOTAL	4,389	623	810	5,822
	General	3,969	406	635	5,010
	Safety	619	227	197	1,043
01/01/2019	TOTAL	4,588	633	832	6,053

Figures are extracted from actuarial reports which include individuals receiving divorce settlement payments.
The most current Actuarial Valuation was conducted as of January 1, 2019 for the period ending December 31, 2018.
The information in subsequent years is currently not available.

Schedule of Average Monthly Benefit Payments by Number of Years of Credited Service

	NUMBER OF YEARS OF COUNTY SERVICE CREDIT						
RETIREMENT EFFECTIVE DATE	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2011							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 470	$ 1,205	$ 1,464	$ 2,615	$ 3,302	$ 3,968	$ 4,670
Average Final Compensation	$ 5,518	$ 5,903	$ 4,928	$ 6,463	$ 6,110	$ 5,541	$ 5,570
Count	12	26	56	27	41	16	39
SAFETY MEMBERS							
Average Benefits	$ 922	$ 1,112	$ 2,551	$ 3,970	$ 7,499	$ 7,790	$ 10,586
Average Final Compensation	$ 9,746	$ 4,483	$ 5,290	$ 7,767	$ 10,430	$ 9,162	$ 10,797
Count	2	6	3	3	4	5	3
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 622	$ 890	$ 773	$ 1,367	$ 1,838	$ 2,039	$ 3,281
Average Final Compensation	$ 9,807	$ 4,816	$ 3,578	$ 4,371	$ 4,108	$ 3,364	$ 5,366
Count	5	9	11	10	5	5	5
SAFETY MEMBERS							
Average Benefits	$ 825	$ 859	$,591	$ 3,334	$ 0	$ 0	$ 3,829
Average Final Compensation	$ 9,779	$ 4,960	$ 2,795	$ 9,010	$ 0	$ 0	$ 5,257
Count	1	1	2	1	0	0	1
2012							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 517	$ 1,077	$ 1,481	$ 2,129	$ 2,729	$ 4,198	$ 6,317
Average Final Compensation	$ 7,532	$ 5,925	$ 5,233	$ 4,900	$ 5,338	$ 6,449	$ 7,295
Count	19	31	56	36	42	30	44
SAFETY MEMBERS							
Average Benefits	$ 429	$ 2,194	$ 3,026	$ 4,186	$ 5,302	$ 9,183	$ 13,206
Average Final Compensation	$ 6,793	$ 5,812	$ 6,636	$ 8,124	$ 7,306	$ 13,360	$ 13,606
Count	4	5	7	3	14	11	5
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 331	$ 1,189	$ 1,017	$ 1,525	$ 1,274	$ 3,105	$ 2,783
Average Final Compensation	$ 4,482	$ 3,558	$ 2,664	$ 2,604	$ 3,639	$ 4,794	$ 3,940
Count	4	4	8	3	1	2	4
SAFETY MEMBERS							
Average Benefits	$ 0	$ 1,039	$ 2,423	$ 3,450	$ 3,573	$ 3,206	$ 4,887
Average Final Compensation	$ 0	$ 6,972	$ 7,561	$ 1,358	$ 1,776	$ 3,836	$ 6,169
Count	0	2	2	2	1	3	2

Schedule of Average Monthly Benefit Payments by Number of Years of Credited Service

RETIREMENT EFFECTIVE DATE	NUMBER OF YEARS OF COUNTY SERVICE CREDIT 0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2013							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 433	$ 1,410	$ 1,589	$ 2,556	$ 3,149	$ 4,241	$ 5,837
Average Final Compensation	$ 7,695	$ 7,279	$ 5,787	$ 6,125	$ 6,132	$ 6,467	$ 6,718
Count	10	25	40	35	35	26	29
SAFETY MEMBERS							
Average Benefits	$ 1,165	$ 1,435	$ 2,621	$ 3,501	$ 4,260	$ 11,134	$ 9,279
Average Final Compensation	$ 9,478	$ 7,434	$ 6,316	$ 7,044	$ 5,599	$ 13,945	$ 9,670
Count	3	2	7	4	1	2	2
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 687	$ 1,000	$ 883	$ 1,182	$ 2,063	$ 1,572	$ 2,985
Average Final Compensation	$ 3,804	$ 4,531	$ 3,953	$ 3,163	$ 3,722	$ 1,821	$ 3,681
Count	6	9	15	7	5	2	5
SAFETY MEMBERS							
Average Benefits	$ 650	$ 3,101	$ 1,385	$ 2,012	$ 1,918	$ 3,745	$ 4,936
Average Final Compensation	$ 4,955	$ 10,868	$ 2,506	$ 3,966	$ 2,525	$ 6,184	$ 5,381
Count	3	1	2	1	2	1	1
2014							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 461	$ 1,237	$ 1,775	$ 2,567	$ 4,363	$ 4,570	$ 6,392
Average Final Compensation	$ 8,494	$ 6,593	$ 5,772	$ 6,380	$ 7,652	$ 6,782	$ 7,760
Count	13	28	50	46	26	43	39
SAFETY MEMBERS							
Average Benefits	$ 1,715	$ 2,429	$ 3,207	$ 4,546	$ 3,993	$ 7,239	$ 11,302
Average Final Compensation	$ 7,439	$ 6,281	$ 6,826	$ 8,863	$ 6,031	$ 8,897	$ 11,762
Count	2	3	5	5	4	7	1
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 478	$ 1,016	$ 1,007	$ 935	$ 2,002	$ 1,153	$ 2,941
Average Final Compensation	$ 5,752	$ 4,218	$ 2,698	$ 2,835	$ 4,914	$ 2,966	$ 8,069
Count	12	6	13	4	6	1	5
SAFETY MEMBERS							
Average Benefits	$ 2,030	$ 2,464	$ 2,890	$ 3,326	$ 3,002	$ 3,282	$ 0
Average Final Compensation	$ 9,251	$ 8,582	$ 5,516	$ 4,818	$ 2,992	$ 4,429	$ 0
Count	2	3	4	1	2	2	0

Schedule of Average Monthly Benefit Payments by Number of Years of Credited Service

RETIREMENT EFFECTIVE DATE	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2015							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 319	$ 969	$ 1,877	$ 2,334	$ 3,290	$ 4,418	$ 5,705
Average Final Compensation	$ 5,983	$ 5,857	$ 6,166	$ 5,409	$ 5,854	$ 6,614	$ 6,691
Count	14	26	40	43	26	27	38
SAFETY MEMBERS							
Average Benefits	$ 585	$ 2,212	$ 3,041	$ 3,959	$ 6,341	$ 8,438	$ 10,290
Average Final Compensation	$ 7,403	$ 6,103	$ 6,469	$ 6,943	$ 8,580	$ 9,869	$ 11,511
Count	2	3	6	3	11	23	2
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 576	$ 989	$ 1,002	$ 1,803	$ 3,042	$ 2,827	$ 5,276
Average Final Compensation	$ 3,420	$ 6,179	$ 3,344	$ 4,974	$ 7,108	$ 6,234	$ 5,851
Count	6	10	11	3	5	2	5
SAFETY MEMBERS							
Average Benefits	$ 530	$ 2,019	$ 2,184	$ 1,970	$ 2,767	$ 5,547	$ 5,026
Average Final Compensation	$ 6,053	$ 11,396	$ 9,909	$ 3,888	$ 3,983	$ 8,256	$ 5,406
Count	2	1	2	1	3	3	3
2016							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 310	$ 1,410	$ 1,816	$ 2,607	$ 3,457	$ 4,047	$ 5,986
Average Final Compensation	$ 6,616	$ 6,159	$ 6,368	$ 6,088	$ 6,269	$ 5,888	$ 7,069
Count	21	27	52	50	22	31	41
SAFETY MEMBERS							
Average Benefits	$ 3,817	$ 1,759	$ 2,546	$ 6,290	$ 5,510	$ 10,275	$ 10,494
Average Final Compensation	$ 7,634	$ 5,986	$ 6,353	$ 11,453	$ 8,566	$ 12,432	$ 11,081
Count	1	6	6	3	7	14	2
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 313	$ 858	$ 1,065	$ 1,877	$ 2,207	$ 1,763	$ 2,769
Average Final Compensation	$ 5,727	$ 4,674	$ 4,527	$ 3,984	$ 7,223	$ 4,176	$ 3,314
Count	5	7	11	7	2	4	1
SAFETY MEMBERS							
Average Benefits	$ 495	$ 2,235	$ 1,253	$ 1,661	$ 4,086	$ 5,943	$ 4,712
Average Final Compensation	$ 7,339	$ 9,643	$ 3,843	$ 2,755	$ 5,646	$ 8,004	$ 4,804
Count	2	4	1	1	1	1	2

Schedule of Average Monthly Benefit Payments by Number of Years of Credited Service

RETIREMENT EFFECTIVE DATE	NUMBER OF YEARS OF COUNTY SERVICE CREDIT 0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2017							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 377	$ 1,420	$ 2,070	$ 2,325	$ 3,951	$ 4,678	$ 6,187
Average Final Compensation	$ 9,793	$ 6,878	$ 6,534	$ 5,719	$ 6,851	$ 6,763	$ 7,391
Count	23	36	42	48	22	31	33
SAFETY MEMBERS							
Average Benefits	$ 787	$ 1,223	$ 2,529	$ 3,318	$ 5,973	$ 7,370	$ 9,169
Average Final Compensation	$ 9,859	$ 5,688	$ 6,385	$ 6,311	$ 9,021	$ 9,265	$ 9,050
Count	5	4	7	8	6	8	1
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 678	$ 1,055	$ 1,622	$ 1,126	$ 1,850	$ 1,779	$ 5,139
Average Final Compensation	$ 5,110	$ 4,344	$ 4,225	$ 3,696	$ 4,288	$ 1,841	$ 6,188
Count	12	9	10	6	5	2	3
SAFETY MEMBERS							
Average Benefits	$ 667	$ 2,413	$ 1,292	$ 0	$ 0	$ 3,922	$ 6,511
Average Final Compensation	$ 5,605	$ 6,311	$ 3,454	$ 0	$ 0	$ 4,565	$ 2,765
Count	2	3	2	0	0	2	2
2018							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 596	$ 1,166	$ 1,759	$ 2,671	$ 3,522	$ 5,202	$ 6,036
Average Final Compensation	$ 9,601	$ 6,704	$ 5,920	$ 6,603	$ 6,555	$ 7,633	$ 6,975
Count	21	45	47	55	25	33	39
SAFETY MEMBERS							
Average Benefits	$ 2,721	$ 2,622	$ 2,166	$ 3,313	$ 3,997	$ 7,453	$ 10,935
Average Final Compensation	$ 5,485	$ 8,987	$ 6,168	$ 6,135	$ 6,442	$ 9,615	$ 11,725
Count	1	3	5	5	8	7	4
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 224	$ 659	$ 1,201	$ 1,204	$ 2,150	$ 2,590	$ 2,759
Average Final Compensation	$ 4,220	$ 3,482	$ 5,324	$ 4,292	$ 3,513	$ 3,538	$ 4,382
Count	3	5	10	10	1	5	9
SAFETY MEMBERS							
Average Benefits	$ 0	$ 1,724	$ 3,203	$ 0	$ 1,201	$ 0	$ 6,213
Average Final Compensation	$ 0	$ 6,376	$ 4,065	$ 0	$ 3,140	$ 0	$ 4,768
Count	0	3	1	0	1	0	3

Schedule of Average Monthly Benefit Payments by Number of Years of Credited Service

RETIREMENT EFFECTIVE DATE	NUMBER OF YEARS OF COUNTY SERVICE CREDIT						
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2019							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 329	$ 1,131	$ 1,780	$ 3,030	$ 3,676	$ 4,796	$ 7,232
Average Final Compensation	$ 8,019	$ 7,276	$ 6,189	$ 6,988	$ 7,047	$ 7,062	$ 8,554
Count	21	35	40	36	30	30	37
SAFETY MEMBERS							
Average Benefits	$ 596	$ 2,060	$ 3,057	$ 3,965	$ 4,206	$ 9,630	$ 17,094
Average Final Compensation	$ 9,587	$ 6,917	$ 6,658	$ 7,484	$ 7,156	$ 11,287	$ 17,300
Count	6	5	5	6	10	10	5
Survivors / QDROs							
GENERAL MEMBERS							
Average Benefits	$ 235	$ 927	$ 994	$ 1,599	$ 2,453	$ 2,930	$ 4,532
Average Final Compensation	$ 6,898	$ 5,691	$ 3,777	$ 5,652	$ 4,288	$ 4,213	$ 5,778
Count	6	8	12	7	8	6	10
SAFETY MEMBERS							
Average Benefits	$ 712	$ 1,280	$ 1,831	$ 0	$ 3,258	$ 4,435	$ 6,246
Average Final Compensation	$ 7,533	$ 7,809	$ 5,374	$ 0	$ 4,504	$ 4,987	$ 6,460
Count	2	2	3	0	3	2	1

Schedule of Average Monthly Benefit Payments by Number of Years Since Retirement

GENERAL AND SAFETY MEMBERS

YEAR ENDED		NUMBER OF YEARS SINCE RETIREMENT 0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2009	Average Benefit	$ 2,549	$ 2,408	$ 1,959	$ 1,846	$ 1,723	$ 1,527	$ 1,339
	Number of Retirees	1,312	1,083	729	506	307	170	145
2010	Average Benefit	$ 2,569	$ 2,565	$ 2,052	$ 1,972	$ 1,764	$ 1,602	$ 1,329
	Number of Retirees	1,384	1,153	790	502	319	185	156
2011	Average Benefit	$ 2,639	$ 2,564	$ 2,199	$ 2,006	$ 1,870	$ 1,743	$ 1,364
	Number of Retirees	1,430	1,190	838	522	333	196	$ 176
2012	Average Benefit	$ 2,798	$ 2,591	$ 2,473	$ 2,075	$ 1,839	$ 1,874	$ 1,376
	Number of Retirees	1,515	1,185	947	545	334	194	177
2013	Average Benefit	$ 2,840	$ 2,755	$ 2,609	$ 2,049	$ 2,029	$ 1,881	$ 1,348
	Number of Retirees	1,520	1,211	990	577	372	208	163
2014	Average Benefit	$ 2,961	$ 2,873	$ 2,706	$ 2,223	$ 2,106	$ 1,899	$ 1,477
	Number of Retirees	1,609	1,224	987	642	404	209	174
2015	Average Benefit	$ 3,139	$ 2,918	$ 2,921	$ 2,333	$ 2,221	$ 1,995	$ 1,566
	Number of Retirees	1,587	1,291	1,046	692	412	212	194
2016	Average Benefit	$ 3,254	$ 3,057	$ 2,960	$ 2,532	$ 2,285	$ 2,022	$ 1,765
	Number of Retirees	1,606	1,351	1,073	742	428	234	194
2017	Average Benefit	$ 3,178	$ 3,236	$ 3,023	$ 2,874	$ 2,350	$ 2,084	$ 1,750
	Number of Retirees	1,605	1,434	1,067	831	452	245	188
2018	Average Benefit	$ 3,259	$ 3,283	$ 3,235	$ 3,050	$ 2,353	$ 2,314	$ 1,838
	Number of Retirees	1,694	1,441	1,101	873	466	271	207
2019	Average Benefit	$ 3,341	$ 3,456	$ 3,409	$ 3,205	$ 2,526	$ 2,263	$ 1,990
	Number of Retirees	1,710	1,508	1,106	870	520	281	213

Schedule of Average Monthly Benefit Payments by Number of Years Since Retirement

GENERAL MEMBERS

YEAR ENDED		NUMBER OF YEARS SINCE RETIREMENT 0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
	Average Benefit	$ 2,278	$ 1,923	$ 1,632	$ 1,683	$ 1,524	$ 1,250	$ 1,073
2009	Number of Retirees	1,108	850	598	433	271	143	119
	Average Benefit	$ 2,269	$ 2,093	$ 1,696	$ 1,806	$ 1,549	$ 1,379	$ 1,015
2010	Number of Retirees	1,149	912	640	428	285	157	126
	Average Benefit	$ 2,349	$ 2,168	$ 1,737	$ 1,799	$ 1,649	$ 1,506	$ 1,050
2011	Number of Retirees	1,198	976	654	444	289	169	141
	Average Benefit	$ 2,456	$ 2,285	$ 1,893	$ 1,868	$ 1,614	$ 1,617	$ 1,108
2012	Number of Retirees	1,267	992	721	467	283	166	145
	Average Benefit	$ 2,572	$ 2,370	$ 2,062	$ 1,787	$ 1,855	$ 1,623	$ 1,003
2013	Number of Retirees	1,297	1,000	762	485	319	177	132
	Average Benefit	$ 2,689	$ 2,566	$ 2,133	$ 1,847	$ 1,950	$ 1,628	$ 1,158
2014	Number of Retirees	1,371	1,030	767	524	342	180	144
	Average Benefit	$ 2,821	$ 2,577	$ 2,359	$ 1,942	$ 2,036	$ 1,763	$ 1,269
2015	Number of Retirees	1,353	1,066	821	560	345	188	160
	Average Benefit	$ 2,887	$ 2,721	$ 2,483	$ 2,005	$ 2,085	$ 1,778	$ 1,428
2016	Number of Retirees	1,358	1,125	878	576	360	201	159
	Average Benefit	$ 2,884	$ 2,836	$ 2,659	$ 2,201	$ 2,112	$ 1,872	$ 1,331
2017	Number of Retirees	1,357	1,195	887	628	384	204	151
	Average Benefit	$ 2,937	$ 2,967	$ 2,767	$ 2,402	$ 2,081	$ 2,103	$ 1,422
2018	Number of Retirees	1,434	1,222	903	667	392	227	165
	Average Benefit	$ 2,961	$ 3,135	$ 3,018	$ 2,498	$ 2,137	$ 2,083	$ 1,580
2019	Number of Retirees	1,432	1,274	922	666	423	234	175

Schedule of Average Monthly Benefit Payments by Number of Years Since Retirement

SAFETY MEMBERS

YEAR ENDED		NUMBER OF YEARS SINCE RETIREMENT						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
	Average Benefit	$ 4,022	$ 4,178	$ 3,453	$ 2,811	$ 3,220	$ 2,997	$ 2,553
2009	Number of Retirees	204	233	131	73	36	27	26
	Average Benefit	$ 4,033	$ 4,353	$ 3,570	$ 2,931	$ 3,567	$ 2,848	$ 2,646
2010	Number of Retirees	235	241	150	74	34	28	30
	Average Benefit	$ 4,134	$ 4,371	$ 3,841	$ 3,183	$ 3,322	$ 3,223	$ 2,633
2011	Number of Retirees	232	214	184	78	44	27	35
	Average Benefit	$ 4,543	$ 4,164	$ 4,322	$ 3,312	$ 3,086	$ 3,397	$ 2,589
2012	Number of Retirees	248	193	226	78	51	28	32
	Average Benefit	$ 4,398	$ 4,581	$ 4,437	$ 3,431	$ 3,076	$ 3,354	$ 2,813
2013	Number of Retirees	223	211	228	92	53	31	31
	Average Benefit	$ 4,526	$ 4,505	$ 4,705	$ 3,896	$ 2,968	$ 3,582	$ 3,013
2014	Number of Retirees	238	194	220	118	62	29	30
	Average Benefit	$ 4,975	$ 4,531	$ 4,975	$ 3,990	$ 3,171	$ 3,814	$ 2,964
2015	Number of Retirees	234	225	225	132	67	24	34
	Average Benefit	$ 5,266	$ 4,730	$ 5,104	$ 4,364	$ 3,345	$ 3,506	$ 3,295
2016	Number of Retirees	248	226	195	166	68	33	35
	Average Benefit	$ 4,788	$ 5,234	$ 4,819	$ 4,956	$ 3,691	$ 3,140	$ 3,459
2017	Number of Retirees	248	239	180	203	68	41	37
	Average Benefit	$ 5,030	$ 5,047	$ 5,371	$ 5,148	$ 3,795	$ 3,406	$ 3,471
2018	Number of Retirees	260	219	198	206	74	44	42
	Average Benefit	$ 5,298	$ 5,200	$ 5,371	$ 5,514	$ 4,220	$ 3,162	$ 3,879
2019	Number of Retirees	278	234	184	204	97	47	38

Schedule of Participating Employers

For the Last Ten Fiscal Years ended December 31

	2019		2018		2017		2016		2015		2014		2013		2012	2011	2010
	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2			
COUNTY OF SAN JOAQUIN																	
General Members	2,483	2,702	2,750	2,473	2,962	2,050	3,205	1,717	4,614	1,416	4,864	918	5,138	507	5,379	5,308	5,476
Safety Members	509	276	563	235	596	204	622	138	800	85	861	59	881	12	901	920	945
TOTAL	2,992	2,978	3,313	2,708	3,558	2,254	3,827	1,855	5,414	1,501	5,725	977	6,019	519	6,280	6,228	6,421
SUPERIOR COURT																	
General Members	177	135	184	114	194	105	202	101	255	66	263	38	269	20	289	326	357
Safety Members	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	177	135	184	114	194	105	202	101	255	66	263	38	269	20	289	326	357
LATHROP–MANTECA RURAL FIRE PROTECTION DISTRICT																	
General Members	1	3	1	3	1	2	1	2	1	1	1	1	1	0	1	0	0
Safety Members	21	23	21	19	25	7	25	8	41	8	42	7	43	3	45	39	41
TOTAL	22	26	22	22	26	9	26	10	42	9	43	8	44	3	46	39	41
WATERLOO-MORADA RURAL FIRE PROTECTION DISTRICT																	
General Members	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Safety Members	8	9	10	6	11	6	12	6	14	7	12	6	13	5	15	15	17
TOTAL	8	9	10	6	11	6	12	6	14	7	12	6	13	5	15	15	18
OTHER PARTICIPATING EMPLOYERS (GENERAL MEMBERS)																	
SJC Mosquito & Vector Control District	19	17	21	15	23	11	26	9	30	8	32	7	38	2	38	38	37
Mountain House Community Services District	4	24	4	23	6	17	6	13	10	11	9	9	13	5	16	14	14
Tracy Public Cemetery District	2	5	2	4	2	4	2	4	5	5	5	4	6	3	6	8	7
San Joaquin County Law Library	1	1	1	0	1	1	1	0	1	0	1	0	2	0	2	1	1
SJC Historical Society & Museum	1	3	1	3	1	0	2	0	2	0	2	0	2	0	2	2	2
Local Agency Formation Commission	0	0	0	2	0	0	0	0	0	0	0	0	1	0	1	1	2
TOTALS	27	50	29	47	33	33	37	26	48	24	49	20	62	10	65	64	63
GRAND TOTAL	3,226	3,198	3,558	2,897	3,822	2,407	4,104	1,998	5,773	1,607	6,092	1,049	6,407	557	6,695	6,672	6,900

Acknowledgments

COMPILATION, EDITING AND REVIEW

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DESIGN AND LAYOUT

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