

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2019

2018-19



Fresno County Employees' Retirement Association

A Pension Trust Fund for the County of Fresno
And Participating Employers
Fresno, California

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2019

ISSUED BY

DONALD C. KENDIG, CPA
RETIREMENT ADMINISTRATOR

and

DORIS RENTSCHLER, CFP
ASSISTANT RETIREMENT ADMINISTRATOR

FCERA

FRESNO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
7772 N. Palm Ave.
FRESNO, CALIFORNIA 93711
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A Pension Trust Fund for the County of Fresno
and Participating Employers

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Introductory Section



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December 18, 2019

Board of Retirement
Fresno County Employees' Retirement Association
7772 N Palm Ave
Fresno, CA 93711

Dear Board Members:

I am pleased to present this Comprehensive Annual Financial Report ("CAFR") for the Fresno County Employees' Retirement Association ("FCERA"), for the fiscal year ended June 30, 2019.

The CAFR provides members, sponsors/employers, policy makers, regulatory agencies and other users with a thorough and accurate review of the fiscal year's operations, from July 1 to June 30.

In addition, the CAFR serves as a source of reliable information for making responsible management decisions, determining compliance with legal requirements and demonstrating the stewardship of the Board of Retirement of the Fresno County Employees' Retirement Association ("Board"), staff and key consultants who serve the members of FCERA. While good stewardship is clearly demonstrated by the data contained in the CAFR, it is important to note that the management of FCERA is responsible for both the accuracy of the data and the completeness and fairness of the presentation of the financial information, including all disclosures. The accumulation, analysis and presentation of the data rest upon the shoulders of management and supporting staff, and I am thankful to all members of the FCERA team.

Generally Accepted Accounting Principles (GAAP) require that management provide a narrative introduction, overview and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal provides a broader context as compared to the MD&A, and the two should be read in tandem. The MD&A can be found immediately following the Independent Auditor's Report in the Financial Section.

FCERA MISSION STATEMENT AND CORE VALUES

Our mission is to administer the retirement benefits for the members and beneficiaries in a courteous, accurate, prompt and professional manner, while administering fund assets in a manner that achieves investment and funding objectives within prudent levels of risk.

Excellence • Professionalism • Teamwork • Integrity • Accountability • Innovation
"The County of Fresno is an Equal Employment Opportunity Employer."

Letter of Transmittal continued

Our value lies in our commitment to deliver service in an accurate, courteous, prompt and professional manner. Our goal is to provide the highest level of service to our members, the public, our coworkers, and the Board of Retirement. We value:

- *Excellence* - We hold ourselves to high standards of performance demonstrating a value for learning and continuous improvement. We take pride in the work we do, continuously striving to exceed our goals. We encourage an open and diverse environment and a “CAN DO” attitude.
- *Professionalism* - We encourage a professional environment, maintaining confidentiality and performing job functions in an ethical and objective manner. As professionals, we understand the importance of listening to and respecting others’ ideas and perspectives open-mindedly. Professionalism is necessary to keep all employees motivated.
- *Teamwork* - We are committed to a team-oriented approach to provide the highest level of service to our members. We value open communication, sharing knowledge, resources and ideas. Working together to reach common goals is the essence of success. Together we achieve more.
- *Integrity* - We at FCERA act ethically and honestly, honoring our commitments, abiding by policies, and building trust with our members and co-workers. Integrity guides all of our work relationships.
- *Accountability* - We take ownership of our work to provide accurate, complete, and timely results. We accept the responsibility to communicate and interact openly with all FCERA staff to develop the tools and training necessary to complete our assignments. We will take the initiative to be a part of the success of the FCERA team.
- *Innovation* - We promote a resourceful environment where new ideas and approaches are implemented to help our daily tasks flow smoothly and efficiently. Our focus is on proactively communicating and implementing activities to encourage and energize staff to create a positive environment and seek new ways to educate and inform members about the retirement process. It is our goal to plan strategically for the future.

FCERA AND ITS SERVICES

FCERA is a cost-sharing multiple employer public retirement system established by the County of Fresno (the “County”) Board of Supervisors on January 1, 1945 to provide retirement, disability, death and survivor benefits for its members under the California State Government Code, Section 31450 *et. seq.* (the County Employees Retirement Law of 1937, hereinafter “CERL”) and Section 7522 *et. seq.* (the Public Employees’ Pension Reform Act of 2013, hereinafter “PEPRA”). The retirement plan is administered by the Board, which consists of nine voting members and a retiree alternate, who are presented on page 11 of the Introductory Section.

FCERA is governed by the California Constitution, CERL, PEPRA, and regulations, procedures, and policies adopted by the Board. The Fresno County Board of Supervisors may also adopt resolutions, as permitted by the CERL, which may affect benefits for FCERA members.

Letter of Transmittal continued

The Board is responsible for establishing policies governing the administration of the retirement plan, determining benefit allowances, and managing the investments of the Association's assets. The Board defines the duties and oversees the activities of the Retirement Administrator, who in turn, directs and oversees the staff and operations of the Administrative Office.

Participating employer entities (“Sponsors”) include:

- County of Fresno
- Superior Court of California, County of Fresno
- Clovis Veterans Memorial District
- Fresno-Madera Area Agency on Aging
- Fresno Mosquito & Vector Control District

FINANCIAL INFORMATION

As mentioned previously, management is responsible for the accuracy, completeness, fair presentation of information and all disclosures in this Report. In addition, management is also responsible for establishing and maintaining an internal control structure designed to provide reasonable assurance that FCERA’s financial reporting is accurate and reliable. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived, and the valuation of the cost and benefits requires estimates and judgments by management.

Clifton Larson Allen (the “Auditor”) provides financial statement independent audit services to FCERA. The Auditor attests that these financial statements are presented in accordance with GAAP and that the financial statements are free of any material misstatement. Management is responsible for assuring that internal accounting controls are sufficient to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements and supporting schedules. Controls have inherent limitations and do rely on human diligence. Because of these inherent limitations, the internal controls are not exact in their nature, which may lead to the risk that errors or misstatements may occur and may not be identified immediately. FCERA’s current management believes it has prudent and sufficient controls in place to mitigate the inherent risk within its financial reporting and accounting systems.

The accompanying financial statements and transactions are prepared on an accrual basis of accounting. Revenues are recognized when earned, regardless of the date of collection and expenses are recognized when incurred, regardless of when a corresponding cash outlay is made.

GENERAL OPERATIONS

Administering the retirement benefits *for the members and beneficiaries in a courteous, accurate, prompt and professional manner* begins with ongoing direct services to active and retired members, efficient management of the office and business operations, and facilitating the work of the Board, advisors, and professional service providers. Several noteworthy events and major ongoing projects required particular attention and effort during the year.

Letter of Transmittal continued

Board Oversight

Nathan Magsig served as Chair of the Board with Robert Dowell serving as Vice Chair for the first half of the fiscal year (July 1 to December 31, 2018) and Nathan Magsig served as Chair of the Board with Stanley McDivitt serving as Vice Chair for the second half of the fiscal year (January 1 to June 30, 2019) with their terms as officers set to expire December 31, 2019. The Board had one change during the fiscal year with the Board of Supervisor's appointment of Stanley ("Stan") L McDivitt on August 14, 2018. Trustee John Adams was re-elected for another term, expiring 12/31/2021 and the Board of Supervisors reappointed Trustees Coburn and Jolly for another term, also expiring 12/31/2021.

Our longest standing members, Trustees Jolly (2004), Coburn (2012), Dowell (2013) and Rogozinski (2013), provide a good anchor and continuity for our newer members, Trustees Garcia (2016), Magsig (2017) Adams (late 2017), Robinson (2018) and Talford (2018). While Trustee McDivitt (mid 2018) is newest to our Board, he has over two decades of public pension plan administration experience with the City of Fresno Retirement Systems.

Administration and Operations

In February 2017, FCERA formed a limited liability company, FCERA Realty Group LLC (the "LLC"), to acquire three properties 7766, 7772 and 7778 N Palm Avenue. FCERA initially leased 7772 and 7778 from the LLC, but found that the property tax exemption would not transfer over to the LLC, so the LLC transferred the properties to FCERA on October 2, 2019 and the two administrative buildings will appear in the next CAFR as capitalized assets. The third office building, 7766 North Palm Avenue, is currently 33% leased. Separate financial statements for the LLC may be found on FCERA's website, and the LLC investment is reported in FCERA's Statement of Fiduciary Net Position in the real estate investment balances.

The construction of FCERA's offices (tenant improvements) at 7772 and 7778 North Palm Avenue is complete with a closing cost report presented to the Board on June 19, 2019. In summary, the land and shell cost \$4,575,872 and tenant improvements cost \$4,240,688, or \$8,816,560 total (\$480 per s.f.). The cost is offset by the sale of 1111 H Street at \$2,120,000.

This year the Board of Retirement approved a new Procurement and Purchasing Card policies tightening controls on administrative expenditures. The Board also split the Disability policy from the Administrative Hearings and Appeals to the Board policy.

This fiscal year, the Board selected Clifton Larson Allen to replace Brown Armstrong Accountancy Corporation as external auditors, and renewed its relationship with Reed Smith as Fiduciary/Conflicts counsel.

Staffing and Benefit Delivery

We have welcomed Unique A., Office Assistant, to our team. Staff said goodbye to Valerie S., Kim Z. and Maria B. FCERA staff member, Anthony R., promoted from Account Clerk III to fill the Business Systems Analyst position left by Kim Z. We have welcomed back Virginia M., Retirement Specialist who returned to FCERA after a brief transfer to another County department. FCERA

Letter of Transmittal continued

also welcomed Michelle H. Office Assistant, to our strong team of staff who later retired during the same fiscal year. We said a heartfelt, “Goodbye” to Marta G., Supervising Account Clerk, who accepted a promotional opportunity with San Joaquin County Employees’ Retirement Association. Our own FCERA staff member, Monica P., promoted from Office Assistant to fill the Supervising Account Clerk position.

A reclassification study reviewed the classifications of Office Assistant, Account Clerk and Retirement Specialist. Retirement Specialist compensation was adjusted and the Account Clerks were reclassified to Retirement Technicians to appear next fiscal year. Lastly, the Board approved the addition of a Retirement Investment Officer and Retirement Investment Analyst position to our available positions and Doug K. started as FCERA’s first Retirement Investment Officer in September 2019.

Systems

We upgraded our General Ledger accounting system (Microsoft Dynamics NAV) in March 2019 and this upgrade was necessary to keep the system functioning with the latest version of Windows and to continue the system’s maintenance.

ASSET MANAGEMENT AND INVESTING

The Investment Policy Statement (the “IPS”) adopted by the Board defines the framework within which the administration, general consultant and third party investment managers endeavor to meet our mission to *...achieve investment and funding objectives within prudent levels of risk.*

The overall strategic asset allocation has a greater impact on investment performance than portfolio manager selection or the timing of allocations. The asset allocation process determines a fund’s optimal target allocations, which are expected to achieve the fund’s objectives related to expected return, liquidity and risk (defined as volatility). This is reflected through the choice of investments at the asset class level.

Under the IPS the Board operates under a standard of fiduciary care in California commonly known as the "prudent person rule" which requires that the Board discharge its duties 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 and with like aims. When the Board contracts with professional investment advisors, their discretion is defined by our IPS and the discretion provided by contract and guidelines prescribed by the Board. In exercising discretion when managing assets, such service providers become co-fiduciaries to the members.

The prudent person rule requires the Board to diversify the investments of the fund, unless it is clearly prudent not to do so under the circumstances. The Board therefore makes fundamental (basic) policy decisions with respect to the fund, including, but not limited to, the strategic allocation of assets to various investment classes as outlined in the IPS. The table on the following page displays the year-end and future asset allocation targets to be achieved through September 30, 2021 as part of an asset allocation glide path to be completed over a three-year period, starting

Letter of Transmittal continued

June 30, 2018, unless extreme market movements take place or other changes are made:

	2018	2019	2020	2021	Sep. 30, 2021
• Equities.....	36 %	40 %	47 %	48 %	49 %
• Fixed Income	31 %	27 %	25 %	23 %	23 %
• Real Assets	11 %	11 %	8 %	8 %	8 %
• Private Credit and Private Equity.....	14 %	14 %	14 %	14 %	14 %
• Hedge Strategies	8 %	8 %	6 %	6 %	6 %

The Board intends to increase FCERA's allocation to Equities by 13%, from 36% to 49%, over a three-year period, starting June 30, 2018, with offsetting decreases to Fixed Income totaling 8%, from 31% to 23%, to Real Assets totaling 3%, from 11% to 8%, and to Hedge Strategies totaling 2%, from 8% to 6%. Starting September 30, 2019 the reduction in Real Assets took place in full and ahead of schedule with the Board adopting a revised glide path.

There have been a number of investment related investment manager changes this fiscal year:

- Selected T. Rowe Price to replace Ivy Investment Management for the Large Cap Growth Domestic Equity mandate.
- Selected Baillie Gifford to split the Emerging Markets Equity mandate that was previously wholly managed by Mondrian previously.
- Approved a \$45M allocation to Royal Bank of Canada in its RBC Access Capital Community Investment Strategy, with the 1% allocation coming from the Global Sovereign Debt allocation managed by Brandywine.
- Terminated Systematic, FCERA's Small Cap Domestic Equity Value manager, replacing it with PIMCO's Stocks Plus Value.
- Committed \$30M to Kennedy Wilson's Fund VI value added real estate fund.

Other investment related activities included keeping Foster Pepper, and adding Foley Lardner as Investment Counsel after an extended request for proposal process. The Board also kept Verus Investment Consultants after an extensive search, assisted by Cortex Applied Research. The Board continued its custody relationship with Northern Trust, after a search by Verus and added compliance monitoring services, where FCERA's Investment Officer can monitor manager compliance internally. As part of the renewed partnership, FCERA transitioned its securities lending pool to a Northern Trust pool that would allow for additional lending and lending revenue.

Right before year-end, the Board approved a reduction in the amount of active manager risk and active manager fees FCERA incurs by approving a plan to have 75% of its Domestic Large Cap Equity and 50% of its International Developed Large CAP Equity managed passively by Northern Trust. This plan will be funded during the next fiscal year. Lastly, FCERA terminated its commission recapture program after several years of declining revenues as well as discussion from managers that it had the potential to hinder best execution.

ACTUARIAL FUNDING STATUS

The CERL prescribes that the Board should engage a qualified, independent actuarial firm to perform regular valuations of the retirement plan. Further, a detailed study of the retirement plan's economic and non-economic assumptions (forecast parameters) is undertaken every three years, wherein the fund actuary makes recommendations to the Board regarding the assumptions to be used to measure the liabilities and assets of the fund. The primary purpose for these studies is to help determine the actuarially required (and stable) level of contributions needed to meet costs associated with annually accruing benefit commitments (normal cost) and eliminate any past unfunded liabilities (Unfunded Actuarial Accrued Liability or "UAAL") within an accepted amortization period.

The actuarial valuation as of June 30, 2018, completed by Segal Consulting, determined that the ratio of plan assets to plan liabilities was 81.5%, based on a valuation value of assets, which represented an increase over the same ratio on June 30, 2017, of 80.3%. Our funding policy employs a five-year "smoothing" methodology, whereby 20% of a fiscal year's market loss, or gain, in a given fiscal year, is recognized over each of five succeeding years to dampen the "noise" of short-term investment market volatility, creating a lesser "actuarial" loss, or gain. This results in five year "layers" of actuarial losses and gains, resulting in one net actuarial loss or gain that goes into the valuation and determination of employer contributions. In addition, the policy imposes an absolute "corridor" of +/- 30% to the actuarial valuation value of assets (VVA) relative to the market value of assets (MVA). This constrains the variance between the VVA and MVA and prevents the employer contribution requirements from not being sufficient on one side of the corridor, or from being too high on the other side of the corridor. These techniques are used to produce reliable, stable and incrementally manageable changes to required contributions for participating employers.

This is the third fiscal year of the Board adopted an assumed rate of return of 7.00%, gross of administration and net of investment expenses for Fiscal Year (FY) 2018. The Board also adopted a 3.0% inflation rate, and an across-the-board salary increase of 0.50% above inflation. The assumed rate of return has a direct effect on employer contributions relative to market performance. This means that any return of less than 7.00% is considered an actuarial loss, and actuarial gains are not realized until after 7.00% has been exceeded.

The explicit administrative expense assumption was 1.10% of payroll and is allocated to both the employers and members based on the components of the total average contribution rates (before expenses) resulting in an Administrative Expense Load of 0.94% for employers and 0.16% for members.

On April 17, 2019, the Board approved the Actuarial Experience Study for the Period of July 1, 2015 to June 30, 2018, lowering the Inflation assumption from 3.00% to 2.75%, keeping the assumed rate of return at 7.00% and the salary assumption at 0.50% above inflation. The Board also further adjusted mortality assumptions up to reflect continued increases in longevity. These will be reflected in the next fiscal year.

BUDGET

The first part of our mission is to *administer the retirement benefits for the members and beneficiaries in a courteous, accurate, prompt and professional manner...*

Government Code Section 31580.2(a) requires the Board to annually adopt a budget covering the entire expense of administration of the retirement system. The total administrative expenses, which are funded as a component of the member and employer contribution rate, may not exceed the greater of twenty-one hundredths of one percent of the accrued actuarial liability of the system, or two million dollars (\$2,000,000), as adjusted annually by the amount of the annual cost of living adjustment, which is the legislative cap (CAP) on spending.

Government Code Section 31580.2(b) provides an exclusion from the CAP for expenses for computer software, computer hardware, and computer technology consulting services in support of these computer products. These costs are identified as information technology costs herein. While these costs are excluded from the CAP, they are subject to the approval of the Board.

Government Code Section 31596.1 provides that the following types of expenses shall not be considered a cost of administration of the retirement system, but shall be considered as a reduction in earnings from those investments or a charge against the assets of the retirement system as determined by the Board:

- (a) The costs, as approved by the board, of actuarial valuations and services rendered pursuant to Section 31453.
- (b) The compensation of any bank or trust company performing custodial services.
- (c) When an investment is made in deeds of trust and mortgages, the fees stipulated in any agreement entered into with a bank or mortgage service company to service such deeds of trust and mortgages.
- (d) Any fees stipulated in an agreement entered into with investment counsel for consulting or management services in connection with the administration of the board's investment program, including the system's participation in any form of investment pool managed by a third party or parties.
- (e) The compensation to an attorney for services rendered pursuant to Section 31607 [investment related work] or legal representation rendered pursuant to Section 31529.1 [LACERA specific].

The cost of these items are controlled through contract negotiations and are not subject to the Administrative budget process, primarily due to the legally mandated aspects of the actuarial valuations, the fiduciary requirements of hiring investment consulting and investment related legal services, and the de facto fees required to obtain market exposure and to track the investments. These items are not included in the Fiscal Year 2017-18 Proposed Administrative Budget.

For fiscal year ended June 30, 2019, administrative expenses of \$5,980,558 represented 0.10% of the accrued actuarial liability of the plan of \$5,893,909,000. Administrative expenses have historically been well below the statutory limit of 0.21%.

CERTIFICATE OF ACHIEVEMENT

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to FCERA for its CAFR for the fiscal year ended June 30, 2018, on page 10 of the Introductory Section, which marks twenty-two consecutive years that FCERA has achieved this prestigious award. FCERA also received the GFOA award for Outstanding Achievement in Popular Annual Financial Reporting (PAFR). The PAFR provides FCERA's membership with condensed and concise information in an easier to read format than is presented in the CAFR.

ACKNOWLEDGMENTS

The preparation of this CAFR reflects the combined efforts of the FCERA staff Doris Rentschler, Conor Hinds and their supportive staff, and the consultants, Verus, Segal Consulting, and Brown Clifton Larson Allen, all who made significant contributions of time, effort, and expertise.

Lastly, FCERA has many contributors to its success. For their commitment to FCERA, and for their diligent work to assure FCERA's continued successful operation, sincere thanks are owed to the Board of Retirement trustees, all FCERA staff, and all of our experts and advisors.

Respectfully submitted,



Donald C. Kendig, CPA
Retirement Administrator



Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

**Fresno County
Employees' Retirement Association
California**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morill

Executive Director/CEO

The Board of Retirement As of June 30, 2019



CHAIRMAN
NATHAN MAGSIG, MBA, MS
Appointed by Board of Supervisors
Present term expires December 31, 2019



VICE CHAIRMAN
STANLEY L. MCDIVITT
Appointed by Board of Supervisors
Present term expires December 31, 2020



MEMBER
JOHN ADAMS
Elected by General Members
Present term expires December 31, 2021



MEMBER
RAUDEN COBURN, III, DDS
Appointed by Board of Supervisors
Present term expires December 31, 2021



MEMBER
ROBERT DOWELL
Elected by Retirees
Present term expires December 31, 2019



MEMBER
OSCAR J. GARCIA, CPA
Auditor-Controller/Treasurer-Tax Collector
Ex-Officio Trustee



MEMBER
STEVEN JOLLY
Appointed by Board of Supervisors
Present term expires December 31, 2021



MEMBER
JOHN ROBINSON
Elected by Safety Members
Present term expires December 31, 2020

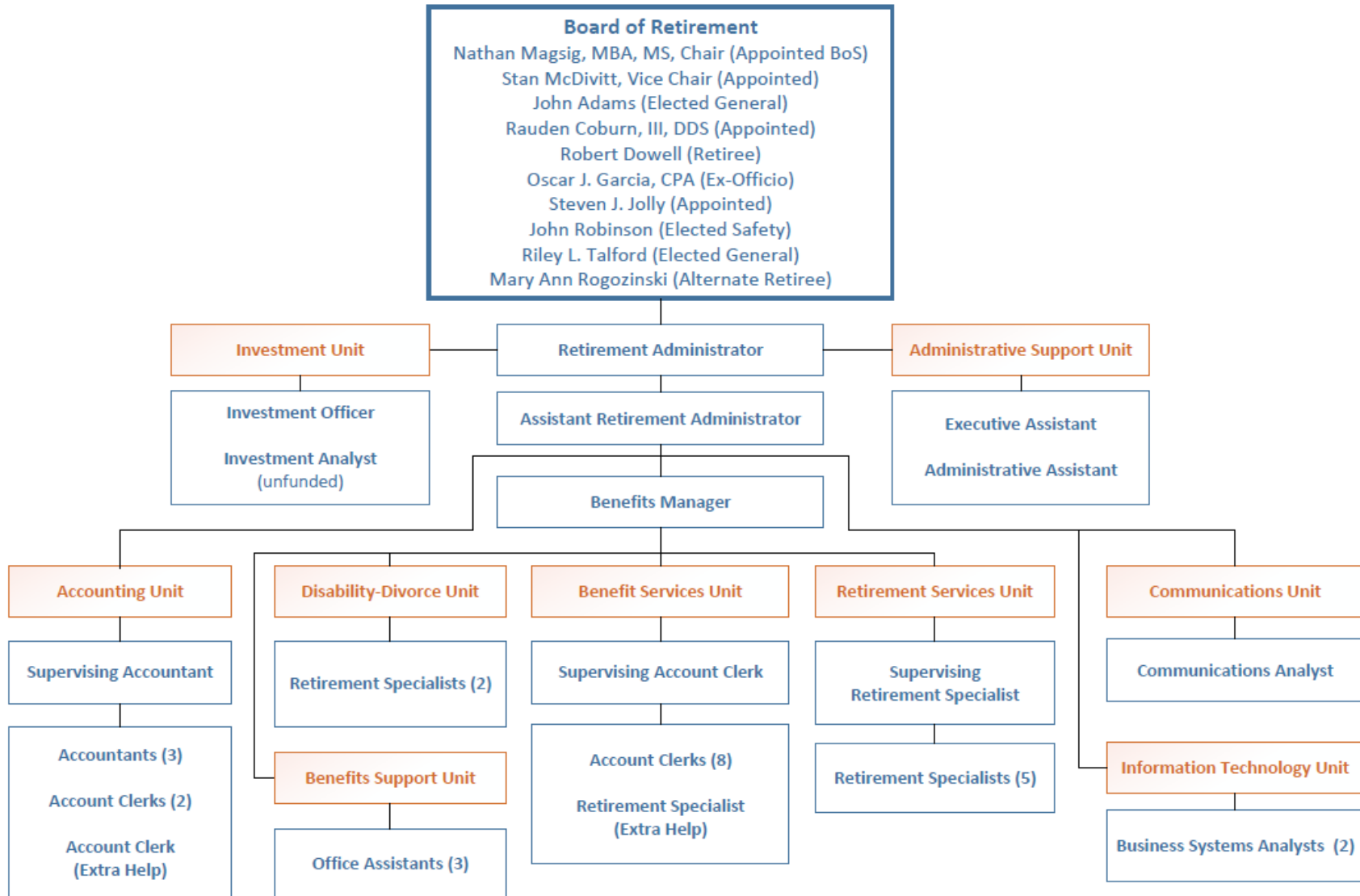


MEMBER
RILEY TALFORD
Elected by General Members
Present term expires December 31, 2020



ALTERNATE RETIRED MEMBER
MARY ANN ROGOZINSKI
Alternate Retired Member - Elected by Retirees
Present term expires December 31, 2019

Administrative Organization Chart



Total number of permanent positions authorized – 36
 Total number of extra-help positions authorized – 2
 Total number of permanent positions funded – 37

List of Professional Consultants

Actuarial Services

- Actuary: Segal Consulting

External Audit Services

- Auditor: CliftonLarsonAllen

Custodial Services

- Custodian Bank: Northern Trust

Investment Consulting Services

- General Investment Consultant: Verus
- Hedge Fund Consultant: Grosvenor Capital Management L.P.
- Private Credit Consultant: The Carlyle Group
- Private Equity Consultant: Hamilton Lane

Legal Services

- Board Counsel: Baker, Manock & Jensen PC
- Disability Hearing Counsel: Fresno County Counsel
- Fiduciary Counsel: Reed Smith LLP
- Investment Counsel: Foster Pepper PLLC and Foley Lardner LLP
- Securities Monitoring & Litigation Counsel:
 - Berman Tabacco
 - Bernstein Litowitz Berger & Grossmann LLP
 - Cohen Milstein Sellers & Toll PLLC

Securities Lending Services

- Asset Servicer: Northern Trust

Pension Management System Services

- Arrivos System Support: Tegrit Group

A complete list of Investment Managers, Schedule of Fees, and Schedule of Commissions can be found on pages 71, 72, and 73 of the Investment Section.

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Financial Section



INDEPENDENT AUDITORS' REPORT

Board of Retirement
Fresno County Employees' Retirement Association
Fresno, California

Report on the Financial Statements

We have audited the accompanying financial statements of the Fresno County Employees' Retirement Association (the Plan), which comprise the statement of fiduciary net position and statement of changes in fiduciary net position, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Plan as of June 30, 2019, and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Prior Period Financial Statements

The Plan's financial statements as of and for the year ended June 30, 2018, were audited by other auditors whose report dated December 6, 2018, expressed an unmodified opinion.

Other Matters

Required Supplementary Information

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

Other Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Plan's basic financial statements. The other supplementary information listed in the table of contents is presented for purposes of additional analysis and is 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 2018 other supplementary information was subjected to the auditing procedures applied in the 2018 audit of the basic financial statements by other auditors, whose report on such information stated that it was fairly stated in all material respects in relation to the 2018 financial statements as a whole.

The introductory, investment, actuarial and statistical sections listed in the table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 9, 2019, on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the result of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Plan's internal control over financial reporting and compliance.

A handwritten signature in black ink that reads "CliftonLarsonAllen LLP". The signature is written in a cursive, flowing style.**CliftonLarsonAllen LLP**

Denver, Colorado
December 9, 2019

Management's Discussion and Analysis as of June 30, 2019

We are pleased to provide this overview and analysis of the financial activities of the Fresno County Employees' Retirement Association (FCERA) for the years ended June 30, 2019 and 2018. We encourage readers to take into account the information presented here in conjunction with additional information that we have furnished in the Letter of Transmittal, as well as the Financial Statements.

Overview of the Financial Statements

This Management's Discussion and Analysis is intended to serve as an introduction to FCERA's financial statements, which are comprised of these components:

1. Statement of Fiduciary Net Position
2. Statement of Changes in Fiduciary Net Position
3. Notes to the Basic Financial Statements
4. Required Supplementary Information
5. Other Supplementary Information

The Statement of Fiduciary Net Position is a snapshot of account balances at fiscal year-end. It indicates the assets available for future payments to retirees and their beneficiaries and any current liabilities that are owed as of fiscal year-end. The net position, which is the assets less the liabilities, reflects the funds available for future use.

The Statement of Changes in Fiduciary Net Position provides a view of current fiscal year additions to and deductions from the plan. The trend of additions versus deductions to the plan will indicate whether FCERA's financial position is improving or deteriorating over time.

Both financial statements and the required disclosures are in compliance with the accounting principles and reporting guidelines as set forth by the GASB, using the accrual basis of accounting. FCERA complies with all material requirements of these principles and guidelines.

All of the current year's additions and deductions are taken into account regardless of when cash is received or paid. All investment gains and losses are shown at trade date, not settlement date. In addition, both realized and unrealized gains and losses are shown on investments, and all capital assets are depreciated over their useful lives.

Other factors, such as market conditions, should be considered in measuring FCERA's overall financial strength.

The Notes to the Basic Financial Statements are an integral part of the financial report and provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes provide detailed discussion of key policies, programs, and activities that occurred during the fiscal year.

Required Supplementary Information In addition to the basic financial statements and accompanying notes, this report presents certain required supplementary information, which consist of the Schedule of Employer Contributions, Schedule of Investment Returns, Actuarial Methods and Assumptions, and Schedule of Changes in Net Pension Liability and Related Ratios. Each schedule, as required by GASB 67, presents historical trend information about actuarially determined contributions, investment returns of the Plan and the overall net pension liability.

Other Supplementary Information The schedules of administrative expenses, administrative budget analysis, information technology expenses, investment expenses, and payments to consultants are presented following the Required Supplementary Information.

Financial Highlights

- FCERA's fiduciary net position at the close of fiscal year 2019 totaled \$4.9 billion, an increase of \$234.6 million, or 5.0% from 2018, primarily as a result of the net appreciation in the fair value of investments.
- Total additions, as reflected in the Statement of Changes in Fiduciary Net Position, for the year ended June 30, 2019, were \$520.8 million, which includes employer and employee contributions of \$265.9 million, investment income of \$254.4 million, and net securities lending income of \$442 thousand.
- Employer contributions increased from \$210.5 million in fiscal year 2018 to \$225.5 million in fiscal year 2019 primarily as the result of an increase in contribution rates and an increase in total payroll. Contribution rates are applied on a July 1 through June 30 fiscal year basis and increased as of July 1, 2018. The recommended employer contribution rate increased from 52.33% (2016 valuation effective 7/1/2017) to 54.09% (2017 valuation effective 7/1/2018).
- While the average plan member contribution decreased from 9.51% (2016 valuation effective 7/1/2017) to 9.47% (2017 valuation effective 7/1/2018), member contributions increased for fiscal year 2019 when compared to 2018, mainly due to an increase in age-weighted contribution rates and an increase in total covered payroll. For fiscal years 2019 and 2018, plan member contributions were \$40.5 million and \$38.5 million, respectively.
- Total deductions, as reflected in the Statement of Changes in Fiduciary Net Position, increased from \$269.1 million to \$286.1 million over the prior year, or approximately 6.3%, mainly attributed to the pension payroll. Benefits paid to retirees and beneficiaries increased from \$260.8 million in 2018 to \$277.4 million in 2019, or approximately 6.4%. This increase can be attributed to an increase in the number of retirees and an annual cost of living (COLA) increase of 3%.

Management's Discussion and Analysis as of June 30, 2019 continued

- FCERA's funding objective is to meet long-term benefit obligations through contributions and investment income. As of June 30, 2018, the date of FCERA's last actuarial valuation, the funded ratio for FCERA was 81.5%. In general, this indicates that for every dollar of projected benefits due FCERA has approximately \$0.81 to cover its obligation.
- For the fiscal year ending June 30, 2019, FCERA's investment portfolio earned a 5.6% return net of fees across its major asset classifications, with domestic equity returning 6.7%, international equity assets returning 4.5%, and the fixed income portfolio returned 6.4%. Real estate returned 7.7%, infrastructure returned 16.3%, hedge funds returned 1.1%, commodities returned -8.0%, private equity and private credit returned 8.3% and 5.5%, respectively.

Financial Analysis

As of June 30, 2019, FCERA has total assets of \$5.1 billion. After accounting for current liabilities of \$133.9 million, FCERA has \$4.9 billion in net position restricted for pension benefits compared to \$4.7 billion at June 30, 2018. The net position restricted for pension benefits is available to meet FCERA's ongoing obligation to plan participants and their beneficiaries.

As of June 30, 2019, fiduciary net position increased by 5.0% compared to 2018, primarily due to the changes in the fair value of investments. Current assets consisting of cash, cash equivalents and accounts receivable from the sale of securities yet to settle, increased by moderately over prior year. While current liabilities, mainly consisting of administrative payables, cash collateral payable for securities lending and investment payables from the purchase of investments that have yet to settle, nearly doubled over prior year primarily due to the timing of unsettled trades at June 30, 2019.

Capital Assets

FCERA's investment in capital assets decreased from \$11.5 million to \$10.9 million (net of accumulated depreciation). The investment in capital assets includes the administrative building, pension administration system, servers, equipment, and furniture. The 5.4% decrease in FCERA's investment in capital assets from 2018 to 2019 was primarily due to accumulated depreciation. Completion of FCERA's new buildings were the primary reason for the increase in capital assets at June 30, 2018.

FCERA follows the California Government Code Section 31580.2 that states that expenses for software, hardware, and computer technology consulting services in support of the computer products shall not be a cost of the administration of the retirement system. During fiscal year 2019, FCERA's expenses for software, hardware, and computer technology consulting services decreased to \$399,534 from \$529,443 in fiscal year 2018. The decrease was primarily due to a 50% reduction in the cost of the pension administration service level agreement, computer

Management's Discussion and Analysis as of June 30, 2019 continued

equipment was rented in 2019 and no longer included in FCERA's Property and Equipment costs and 2018 included modifications and upgrade to the Electronic Document Management System.

Condensed Statement of Fiduciary Net Position

June 30, 2019 and 2018

(Dollars in Thousands)

	2019	2018	% Change 2019-2018
Current Assets	\$ 395,497	\$ 358,822	10.2%
Investments	4,661,979	4,393,096	6.1%
Capital Assets, net	10,896	11,512	-5.4%
Total Assets	5,068,372	4,763,430	6.4%
Total Liabilities	133,865	63,559	110.6%
Fiduciary Net Position			
Restricted for Benefits	\$ 4,934,507	\$ 4,699,871	5.0%

FCERA has annual funding valuations completed by its independent actuary, Segal Consulting. The purpose of the valuation is to determine the future contributions by the members and employers needed to pay expected future benefits. Despite variations in the stock market, FCERA's management and independent actuary concur that FCERA remains in a financial position that will enable the plan to meet its obligations to participants and beneficiaries. FCERA remains focused on the long-term performance of the Plan, on a strong and successful investment program, risk management, and strategic planning.

FCERA's Activities

Condensed Statement of Changes in Fiduciary Net Position

For the Fiscal Years Ended June 30, 2019 and 2018

(Dollars in Thousands)

	2019	2018	% Change 2019-2018
Employer Contributions	\$ 225,492	\$ 210,535	7.1%
Plan Member Contributions	40,463	38,467	5.2%
Net Investment Income, before Securities Lending	254,359	312,349	-18.6%
Net Securities Lending Income	442	421	5.0%
Total Additions	520,756	561,772	-7.3%
Pension Benefits	277,417	260,823	6.4%
Refunds	2,615	2,408	8.6%
Administrative	5,981	5,677	5.4%
Other	107	215	-50.2%
Total Deductions	286,120	269,123	6.3%
Change in Fiduciary Net Position	\$ 234,636	\$ 292,649	-19.8%

Additions to Fiduciary Net Position

The primary sources to finance the benefits that FCERA provides to its members are accumulated through the collection of member (employee) contributions, employer contributions, and through the earnings on investments (net of investment expenses). Net Investment Income, before Securities Lending, for the years ended June 30, 2019 and 2018, totaled \$254.4 million and \$312.3 million, respectively.

By fiscal year-end, total additions were \$520.8 million, a decrease from 2018 of 7.3%, primarily due to the reduction in net investment income. The Investment Section of this report reviews the result of investment activity for the fiscal year ended June 30, 2019.

Deductions from Fiduciary Net Position

The primary uses of FCERA's assets include the payment of benefits to retirees and their beneficiaries, refunds of contributions to terminated employees, and the cost of administering the Plan. Deductions in the fiscal year ended June 30, 2019, totaled \$286.1 million, an increase of 6.3% over June 30, 2018. The increases are mostly attributed to the growth in the number of retirees and amount of benefits paid to retirees year over year.

The Board of Retirement (Board) approves the annual budget for FCERA. The California Government Code Section 31580.2(a) limits the annual administrative expenses to not exceed

Management's Discussion and Analysis as of June 30, 2019 continued

the greater of either of the following: (1) twenty-one hundredths of one percent (0.21%) of the accrued actuarial liability of the retirement system; (2) two million dollars (\$2,000,000), as adjusted annually by the amount of the annual Cost of Living Adjustment (COLA) computed in accordance with Article 16.5. The 2019 Technology Budget decreased appropriations by \$88,500. Expenses for computer software, computer hardware, and computer technology consulting services in support of these computer products are not considered a cost of administration of the retirement system. FCERA has consistently met its administrative expenses budget for the current fiscal year and prior fiscal years.

Net Pension Liability

As GASB Statement No. 67 requires, FCERA reports the Total Pension Liability and the Net Pension Liability as calculated by FCERA's actuary. It is important to note that these liabilities are solely calculated for financial reporting purposes and are not intended to provide information about the plan's funded status.

FCERA's Total Pension Liability as of June 30, 2019, was \$6.06 billion, resulting in an increase of 3.1% from \$5.88 billion as of June 30, 2018. FCERA's Net Pension Liability as of June 30, 2019, was \$1.1 billion, representing a decrease of 4.4 % from \$1.2 billion as of June 30, 2018. This \$52 million decrease in liabilities is primarily as a result of the net annual investment return of 5.6 % and the improved Fiduciary Net Position.

GASB Statement No. 67 requires reporting the Fiduciary Net Position as a percentage of the Total Pension Liability. For the fiscal years ended June 30, 2019 and 2018, the Fiduciary Net Position as a percentage of the Total Pension Liability is reported as 81.37% and 79.90% respectively. While growth in the Total Pension Liability at 2019 increased by \$182 million, or 3.1%, from 2018, FCERA's Net Pension Liability decreased due to the increase in Fiduciary Net Position of \$234.6 million, which results in a more favorable financial position at June 30, 2019, when compared to June 30, 2018.

Net Pension Liability

As of June 30, 2019 and 2018

(Dollars in Thousands)

	2019	2018	\$ Change 2019-2018	% Change 2019-2018
Total Pension Liability	\$6,064,375	\$5,881,851	\$ 182,524	3.1%
Less: Fiduciary Net Position	(4,934,507)	(4,699,871)	(234,636)	5.0%
Net Pension Liability	\$1,129,868	\$1,181,980	\$ (52,112)	-4.4%
Fiduciary Net Position as a Percentage of Total Pension Liability	81.37%	79.90%		1.8%

FCERA's Fiduciary Responsibilities

The Board, plan management, and staff are fiduciaries of the pension trust fund. Under the California Constitution, the assets can only be used for the exclusive benefit of Plan participants and their beneficiaries.

Requests for Information

This financial report is designed to provide the Board, our membership, taxpayers, investment managers, and others with a general overview of FCERA's financial condition and to demonstrate FCERA's accountability for the funds under its stewardship. Questions or requests for additional financial information should be addressed to:

FCERA

Attn: Accounting Unit

7772 N. Palm Avenue

Fresno, CA 93711

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Doris Rentschler", written in a cursive style.

Doris Rentschler

Assistant Retirement Administrator

December 18, 2019

Basic Financial Statements

Statement of Fiduciary Net Position

As of June 30, 2019, with Comparative Totals

(Dollars in Thousands)

	2019	2018
Assets		
Cash and cash equivalents with fiscal agents	\$ 267,413	\$ 281,363
Securities lending investments pool:		
Short-term investments	31,757	31,215
Receivables:		
Investment trades receivable	67,111	20,456
Interest and dividends receivable	18,571	16,623
Administrative receivable	24	34
Contributions receivable	10,354	9,040
Securities lending receivable	101	62
Total Receivables	96,161	46,215
Investments, at fair value:		
Domestic and international fixed income	1,529,239	1,553,451
Domestic and international equities	1,793,687	1,643,613
Private equity	508,013	464,949
Real estate	242,656	220,259
Hedge funds	336,514	332,868
Private credit	251,870	177,956
Total Investments	4,661,979	4,393,096
Prepaid expenses	166	29
Capital assets:		
Nondepreciable	24	5
Depreciable, net of accumulated depreciation	10,872	11,507
Total Capital Assets, Net	10,896	11,512
Total Assets	5,068,372	4,763,430
Liabilities		
Accounts payable - purchase of investments	99,579	29,492
Cash collateral payable for securities lending	31,757	31,215
Administrative accounts payable	2,480	2,824
Securities lending bank and broker fees	49	28
Total Liabilities	133,865	63,559
Fiduciary Net Position Restricted for Pension Benefits	\$ 4,934,507	\$ 4,699,871

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

Basic Financial Statements continued

Statement of Changes In Fiduciary Net Position

For the Fiscal Year Ended June 30, 2019, with Comparative Totals

(Dollars in Thousands)

	2019	2018
Additions		
Contributions:		
Employers	\$ 225,492	\$ 210,535
Plan members	40,463	38,467
Total Contributions	265,955	249,002
Investment Income:		
From Investment Activities:		
Net appreciation in fair value of investments	111,022	193,477
Interest	69,971	66,779
Dividends	45,988	38,984
Private markets	55,230	39,217
Investment expenses	(27,957)	(26,422)
Miscellaneous income	105	314
Net investment income, before securities lending	254,359	312,349
From securities lending activities:		
Securities lending income	1,011	763
Securities lending expenses:		
Borrower rebate expenses	(424)	(205)
Securities lending management fees	(145)	(137)
Net income from securities lending activities	442	421
Net investment income	254,801	312,770
Total Additions	520,756	561,772
Deductions		
Benefits paid to plan members and beneficiaries	277,417	260,823
Refunds of member contributions	2,615	2,408
Administrative expenses	5,981	5,677
Other	107	215
Total Deductions	286,120	269,123
Change in Fiduciary Net Position	234,636	292,649
Fiduciary Net Position Restricted for Pension Benefits		
Beginning of Year	4,699,871	4,407,222
End of Year	\$ 4,934,507	\$ 4,699,871

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

Notes to the Basic Financial Statements: Note 1

NOTE 1 - DESCRIPTION OF THE RETIREMENT PLAN (The PLAN)

The following description of the Fresno County Employees' Retirement Association (FCERA) is provided for general information purposes only. FCERA is governed by the Board of Retirement (Board) under the 1937 County Employees Retirement Law (1937 Act) and the California Public Employees' Pension Reform Act (PEPRA) of 2013. Readers should refer to the 1937 Act and PEPRA for more complete information.

General

FCERA is a contributory defined benefit plan initially organized under the provisions of the 1937 Act on January 1, 1945. Effective January 1, 2013, PEPRA added requirements and benefit levels for new members joining the Plan after January 1, 2013, as well as modifying some provisions of the 1937 Act for existing members. FCERA provides benefits upon retirement, death, or disability of members. FCERA is a cost-sharing, multiple-employer plan that includes substantially all full-time employees and permanent part-time employees who work 50% or more for the County of Fresno (County), the Superior Court of California-County of Fresno, Clovis Veterans Memorial District, Fresno-Madera Area Agency on Aging, and Fresno Mosquito & Vector Control District. An employee becomes eligible for membership commencing with the pay period following the date of employment in an eligible permanent position.

Plan Membership

As of June 30, 2019

	2019
Active Members	
Vested	4,498
Non-Vested	3,178
Total Active Members	7,676
Retired Members	7,656
Terminated Members	3,873
Total Membership	19,205

Benefit Provisions

The Board, under the provisions of the 1937 Act, administers benefit provisions adopted by the Plan Sponsors. Benefits are based upon a combination of age, years of service, final average salary (the highest year, highest three consecutive years or average of the highest three one-year periods of employment), benefit tier (including membership classification) and the payment option selected by the member. Disability and death benefits are additionally based upon whether the disability was service connected or not, and whether the death occurred before or after retirement. Retirement benefit payments consist of regular retirement benefits and, depending on the date of retirement, may include cost of living benefits, supplemental benefits, supplemental annuity benefits, and vested health benefits. Benefits may also include a

Notes to the Basic Financial Statements: Note 1 Continued

supplemental cost of living and a non-vested health benefit if approved by the Board. General members enrolled in Tiers 1, 2, 3, or 4 may retire at age 50 with 10 years of service, at any age with 30 years of service, or at age 70 with any years of service. General members enrolled in Tier 5 may retire at age 52 with 5 years of service, or age 70 with any years of service. Safety members enrolled in Tiers 1, 2, or 4 may retire at age 50 with 10 years of service or at any age with 20 years of service. Safety members enrolled in Tier 5 may retire at age 50 with 5 years of service, or age 70 with any years of service.

At June 30, 2019, there were five tiers for general members (1, 2, 3, 4 & 5) and four tiers for safety members (1, 2, 4 & 5). General Tiers 1, 2, 3 and 4, and Safety Tiers 1, 2 and 4 are closed to new members unless they meet the requirements under California Government Code Section 7522 et al. Safety includes members in active law enforcement or certain other "Safety" classifications as designated by the Board.

Disability retirements may be granted as service connected with no minimum service credit required or non-service connected with five years of service credit required.

PEPRA limits the amount of compensation FCERA can use to calculate a retirement benefit. The 2019 compensation limits used to determine contribution amounts for Tier 5 members are \$124,180 for members covered by Social Security and \$149,016 for members not covered by Social Security and will be adjusted in future years for changes in the Consumer Price Index. Most FCERA members are covered by Social Security.

Notes to the Basic Financial Statements: Note 1 Continued

The tiers and their basic provisions are listed below:

<i>Tier Name</i>	<i>California Government Code Section</i>	<i>Effective Date</i>	<i>Basic Provisions</i>	<i>Vested Health Benefit</i>	<i>Final Average Salary Period</i>	<i>Plan Sponsors</i>
Pre-Ventura General	31676.12	Various	2.0% at 57; maximum 3% cost of living benefit	Yes	Highest 1 – year	All
General Tier 1	31676.14 and the Settlement Agreement	January 1, 2001	2.5% at 55; maximum 3% cost of living benefit	Yes	Highest 1 - year	All
General Tier 2	31676.16	September 12, 2005	2.0% at 55; maximum 3% cost of living benefit	Yes	Highest 1 - year	County and FMAAA ¹
General Tier 3	31676.15	December 17, 2007	2.0% at 55; maximum 3% cost of living benefit	Yes	3 Highest Years	County
General Tier 4	31676.1	June 11, 2012	2.0% at 61; no cost of living benefit	No	3 Highest Years	County
General Tier 5	7522.20	January 1, 2013	2.5% at 67; no cost of living benefit	No	Highest 3 Consecutive Years	All
Pre-Ventura Safety	31664	Various	2.0% at 50; maximum 3% cost of living benefit	Yes	Highest 1 – year	County and NCFPD ²
Safety Tier 1	31664 and the Settlement Agreement	January 1, 2001	2.5% at 50; maximum 3% cost of living benefit	Yes	Highest 1 - year	County and NCFPD ²
Safety Tier 2	31664.2	September 12, 2005	3.0% at 55; maximum 3% cost of living benefit	Yes	Highest 1 - year	County
Safety Tier 4	31664	June 11, 2012	2.0% at 50; no cost of living benefit	Yes	3 Highest Years	County
Safety Tier 5	7522.25(d)	January 1, 2013	2.7% at 57; no cost of living benefit	No	Highest 3 Consecutive Years	County

¹ FMAAA – Fresno-Madera Area Agency on Aging

² NCFPD – North Central Fire Protection District. NCFPD withdrew active membership from FCERA as of August 31, 2007.

Notes to the Basic Financial Statements: Note 3

Administration

The management of FCERA is vested in the Board, which is composed of the following nine members and an alternate member:

1. County Treasurer,
2. Two active members of FCERA elected by the general members,
3. One active member of FCERA elected by the safety members,
4. One retired member of FCERA elected by the retired members,
5. Four members appointed by the County Board of Supervisors. These members shall be qualified electors of the County who are not connected with County government in any capacity, except one may be a County Supervisor, and
6. One alternate member of FCERA elected by the retired members.

As of the June 30, 2015, Actuarial Valuation adopted by the Board, administrative expenses are financed through a 1.10% load of payroll. The employer's share is 0.94% and employee's share is 0.16% of payroll, allocated to the employer and member rates, respectively.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

FCERA is the public employee retirement system established by the County on January 1, 1945, and administered independently by the Board to provide retirement, disability, death, and survivor benefits for its employees under the 1937 Act. FCERA's actuarially determined financial data is included in the County's Comprehensive Annual Financial Report (CAFR) in the Notes to the Basic Financial Statements and the Required Supplementary Information Section.

Basis of Accounting

FCERA's financial statements are prepared using the accrual basis of accounting. Investment income is recognized when it is earned and expenses are recognized in the period in which they are incurred. Employee and employer contributions are recognized as revenues when due, pursuant to formal commitments, as well as statutory or contractual requirements. Benefits and refunds of prior contributions are recognized when due and payable under the provisions of the Plan.

Notes to the Basic Financial Statements: Note 3 Continued

Deposits and Investments

Cash and cash equivalents with fiscal agent include deposits in the County Treasurer's commingled cash and investment pool and investments held by the custodian bank. Investments with the custodian bank are comprised of foreign currencies, cash held in a short-term investment fund and other short-term, highly liquid investments. Short-term investments considered cash equivalents are recorded at cost, which approximates fair value. The County Treasurer's commingled cash and investment pool operates in accordance with appropriate state laws and regulations and is governed by an investment policy formally adopted by the County. (Please refer to the CAFR prepared by the County for additional information on the County Treasurer's commingled cash and investment pool.)

Plan investments are reported at fair value. The fair values of equity and fixed income securities are derived from quoted market prices. The fair values of private market investments are estimated from fair values provided by the real estate investment funds, futures investment managers, and alternative investment managers. All investment purchases and sales are recorded on the trade date. Additional information regarding the Plan's investments can be found Note 3 and in the Investment Section of this CAFR.

Asset Allocation Policy

The current Board adopted policy targets that were established in September 2018, which resulted from a comprehensive asset/liability study conducted in multiple phases beginning in February 2018 through June of 2018. The new policy reverses the course established in 2013 of de-risking the plan. The Board voted to reallocate a higher proportion of investments into equities exposure and reduce the larger fixed income allocation that FCERA has maintained since 2013. The new asset allocation policy is incorporated into FCERA's updated Investment Policy Statement, which helps guide the manner in which FCERA invests.

Investment Concentrations

FCERA does not hold investments in any one organization that represent 5% or more of the Plan's Fiduciary Net Position.

Implementation of New Accounting Standards

The following standards were issued recently by the Governmental Accounting Standards Board (GASB) for implementation effective for this fiscal year: Statement No. 83, *Certain Asset Retirement Obligations* which is not applicable to FCERA. Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements* which is not applicable to FCERA.

Notes to the Basic Financial Statements: Note 3 Continued

Capital Assets

Capital assets are long-term assets with an initial purchase cost greater than five thousand dollars and are valued at historical cost less accumulated depreciation. Depreciation is calculated using the straight-line method over the estimated useful lives of three years for computer equipment, five years for office equipment, 10 years for furniture, 15 years for software (accounting general ledger and pensions administration systems), and 30 years for buildings. Depreciation expense is reported as part of administrative expense.

Income Taxes

The Internal Revenue Service (IRS) has ruled that plans such as FCERA qualify under Section 401(a) of the Internal Revenue Code (IRC), which prevents FCERA from being subjected to taxation under present income tax laws. In September 2016, the FCERA Plan was again determined by the IRS to be a tax qualified plan. In accordance with this determination, no provisions for income taxes have been made in the accompanying basic financial statements, as FCERA is exempt from federal and state income taxes under provisions of the IRC, Section 401(a), and the California Revenue and Taxation Code, Section 23701, respectively.

Use of Estimates

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

Administrative Expenses

FCERA's Board annually approves the budget for administrative expenses. Government Code Section 31580.2 provides for the adoption by the Board of Retirement an annual budget covering the entire expense of administration. This expense of administration is a direct charge against the earnings of the Plan and shall not exceed the greater of twenty-one hundredths of one percent of the accrued actuarial liability of the Plan or two million dollars (\$2,000,000), as adjusted annually by the amount of the annual cost of living adjustment. Government Code Section 31580.2(b) provides that expenditures for software, hardware and computer technology maintenance and equipment are not considered a cost of administration and are therefore excludable from the administrative expenses. With the exclusion of the information technology costs, FCERA's administrative expenses totaled 0.10% of the total accrued actuarial liability of the Plan.

Related Party Transactions

FCERA leases two side-by-side office locations from the FCERA Realty Group, a limited liability company. Details related to the lease agreement can be found in Note 9.

NOTE 3 - DEPOSITS AND INVESTMENTS

Except as otherwise expressly restricted by the California Constitution and by law, the Board may, at its discretion, invest, or delegate FCERA the authority to invest its assets through the purchase, holding, or sale of any form or type of instrument, or financial transaction when prudent in the informed opinion of the Board. In addition, the Board has established an investment policy that places limits on the compositional mix of cash, fixed income and equity securities, alternative investments, and real estate investments. FCERA currently employs external investment managers to manage its assets subject to the guidelines of the investment policy. GASB Statements Nos. 40 and 53 detail the disclosure requirements associated with FCERA's deposits, investments, and derivatives. The statements identify the following risks: investment risk, custodial credit risk, concentration of credit risk, interest rate risk, and foreign currency risk. Rather than creating an across the board policy addressing limitations on credit ratings of certain debt securities, FCERA has chosen to manage the investment risks detailed in GASB Statements Nos. 40 and 53 by requiring each investment manager responsible for a separately held portfolio to follow specific agreed upon investment guidelines that meet the requirements of FCERA for the individual investment mandate. FCERA's investment guidelines do not govern control over commingled portfolios and therefore only apply to separately held portfolios.

Custodial credit risk - deposits. This type of risk associated with deposits is the risk that, in the event of a failure in a depository financial institution, a government will not be able to recover its deposits or recover collateral securities that are in the possession of an outside party. FCERA does not have a policy for managing custodial credit risk. As of June 30, 2019, all domestic deposits were insured, registered, and held by the custodian bank in FCERA's name. FCERA held foreign currencies deposits at June 30, 2019, with a United States Dollar value of \$2,912,000, all of which is subject to custodial credit risk since the deposits are unsecured and uncollateralized.

Custodial credit risk - investments. For an investment, this is the risk that, in the event of the failure of the counterparty, the government will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. FCERA's investments are not subject to custodial credit risk because investments are insured and registered in FCERA's name. FCERA's investment policy does not limit the amount of securities that can be held by counterparties.

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

Notes to the Basic Financial Statements: Note 3 Continued

statistical rating organizations. FCERA has adopted policies specific to each investment manager to manage credit risk. In general, fixed income securities should be well diversified to avoid undue exposure to any single economic sector, industry, or individual security. The County's external investment pool is unrated for credit risk purposes.

The credit ratings disclosed below were obtained from Moody's rating agency as of June 30, 2019.

Credit Quality Ratings of Investments in Fixed Income Securities

As of June 30, 2019

(Dollars in Thousands)

Moody's Credit Rating	2019	
	Total Fixed Income	FCERA's Fixed Income Securities
Northern Institutional Liquid Assets Portfolio / Tier 1 Quality		\$ 31,757
Fixed Income Securities		
Aaa	12.5%	191,463
Aa	1.2%	18,945
A	9.6%	146,909
Baa	12.1%	184,479
Ba	10.1%	154,986
B	6.7%	102,376
Caa	1.1%	16,334
Agency/Exempt	13.0%	199,024
FNMA/FHLMC (AAA)	3.1%	47,375
NR	30.6%	467,348
Total Fixed Income Securities	100.0%	1,529,239
Total Securities Lending Pool and Fixed Income Securities		\$ 1,560,996

NR = Securities that are not rated by Moody's, an independent ratings agency.

Agency/Exempt = U.S. Treasuries and GNMA Securities that are exempt from rating disclosure and are explicitly guaranteed by the U.S. Government.

FNMA/FHLMC are Government Sponsored Enterprises (GSE's) and only hold the implicit guarantee of the backing of the U.S. Government.

Interest rate risk. Interest rate risk is the risk that changes in the interest rate will adversely affect the fair value of an investment. FCERA has not adopted a policy to manage interest rate risk.

Notes to the Basic Financial Statements: Note 3 Continued

FCERA selected the segmented time distribution method for the following investments subject to interest rate risk at June 30, 2019.

Interest Rate Risk

As of June 30, 2019

(Dollars in Thousands)

Investment Type	Remaining Maturity in Months at June 30, 2019				
		Less than 12 months	13 to 60 months	61 to 120 months	More than 120 months
Northern Institutional Liquid					
Assets Portfolio	\$ 31,757	\$ 31,757	\$ -	\$ -	\$ -
Subtotal	31,757	31,757	-	-	-
U.S. Government and agencies					
U.S. Treasury notes	52,473	732	24,292	23,924	3,525
Federal agency securities	26,398	-	-	2,435	23,963
Subtotal	78,871	732	24,292	26,359	27,488
Derivatives	5,974	3,340	3,738	(1,347)	243
Domestic fixed income	553,254	102,916	182,080	168,916	99,342
Mortgages	9,526	-	-	5,435	4,091
Foreign fixed income	440,132	49,645	108,886	179,809	101,792
Eaton Vance Bank Loans	257,281	257,281	-	-	-
TIPS Index Fund	184,201	184,201	-	-	-
Total Securities Lending Pool and Fixed Income Securities	\$ 1,560,996	\$ 629,872	\$ 318,996	\$ 379,172	\$ 232,956

At June 30, 2019, FCERA had \$25,438,000 invested in the County external investment pool, which has a dollar weighted average maturity of 2.17 years.

Concentration of credit risk. This is the risk of loss attributed to the concentration of FCERA's investment in a single issuer. FCERA's investment policy does not permit any one manager to invest more than five % of the fair value of its portion of the portfolio in any one issue, with the exception of investments issued by the U.S. Government and its agencies. As of June 30, 2019, no investments in any one issuer are greater than 5% of total investments. Investment managers authorized to invest in below investment grade securities are limited to holding no more than 20% of their portfolio market value in such securities.

Foreign currency risk. This is the risk that FCERA will not be able to recover the value of its investment in local currency when the exchange value of the currency lowers. FCERA has not adopted a policy to manage the foreign currency risk. FCERA's investment in foreign currency at June 30, 2019 is as follows:

Notes to the Basic Financial Statements: Note 3 Continued

Foreign Currency Risk

As of June 30, 2019

(Dollars in Thousands)

Currency	Fair Value 2019	
Brazil Real	\$	133
Czech Koruna		212
Chilean Peso		227
Columbian Peso		283
Chinese Yuan		415
Euro		133
Indonesian Rupiah		173
Japanese Yen		597
Mexican Peso		193
Other Foreign Currencies		546
Total Foreign Currency	\$	2,912

Foreign currency table values represent cash deposits expressed in U.S. dollars.

Derivatives. The investment derivatives schedule below reports the fair value and notional value of the derivatives held by FCERA at June 30, 2019. For reporting purposes, FCERA's derivatives are classified as investment derivatives. 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*. FCERA, through its external investment managers, enters into forward foreign currency contracts as well as equity rights to hedge against changes in the fair values of foreign bonds and equity securities, primarily denominated in European and Asian currencies. It is possible that, due to foreign exchange fluctuations, FCERA may be exposed to a potential loss.

Investment Derivatives

As of June 30, 2019

(Dollars in Thousands)

Derivative Type	2019	
	Notional Value	Fair Value
Fixed Income Futures	\$ 128,787	\$ -
Equity Futures	242,399	-
Foreign Exchange Futures	(3,675)	-
Credit Default Swaps	-	771
Forward Foreign Currency	-	2,505
Forward Foreign Swaps	-	(56)
Interest Rate Swaps	-	2,755
Options	-	(60)
Rights	-	59
Total	\$ 367,511	\$ 5,974

Notes to the Basic Financial Statements: Note 3 Continued

FCERA could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. FCERA anticipates that counterparties will be able to satisfy their obligations under the contracts. FCERA's investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits and exposure monitoring procedures, including requirements for cash collateral at certain defined levels. At June 30, 2019, FCERA held \$2,644,000 at its custodian, Northern Trust, to offset potential risks it may encounter through counterparty transactions.

FCERA's comparative counterparty exposure is detailed in the following schedule:

Counterparty Credit Risk Analysis

As of June 30, 2019

(Dollars in Thousands)

	Aa		A		Exchange Traded		Not Rated	Total
Futures	\$	-	\$	-	\$	-	\$	-
Options		-		-		-	(60)	(60)
Rights/Warrants		-		-		-	59	59
Swaps		-		-		-	3,470	3,470
Forwards		-		-		-	2,505	2,505
	\$	-	\$	-	\$	-	\$ 5,974	\$ 5,974

At June 30, 2019, FCERA was exposed to Foreign Currency Risk related to its investments in equity rights and forward contracts denominated in foreign currencies. The table on the following page displays FCERA's position in each of the foreign currency contracts.

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Notes to the Basic Financial Statements: Note 3 Continued

Foreign Currency Risks at Fair Value

As of June 30, 2019

(Dollars in Thousands)

Currency Name	Forward Currency Contracts			
	Equities	Net Receivables	Net Payables	Total Exposure
Argentine peso	\$ -	\$ (5,613)	\$ 4,953	\$ (660)
Australian dollar	-	-	13,815	13,815
Brazilian real	-	(81,920)	88,211	6,291
British pound sterling	-	(2,617)	14,371	11,754
Canadian dollar	-	(714)	1,115	401
Chilean peso	-	(5,511)	22,952	17,441
Chinese yuan renminbi	-	-	647	647
Colombian peso	-	(2,752)	2,778	26
Czech koruna	-	(1,291)	11,020	9,729
Danish krone	-	(4,086)	2,035	(2,051)
Egyptian pound	-	(390)	4,479	4,089
Euro	59	(8,989)	19,044	10,114
Hong Kong dollar	-	(2,103)	1,451	(652)
Hungarian forint	-	(7,417)	499	(6,918)
Indonesian rupiah	-	(4,502)	4,651	149
Japanese yen	-	(4,525)	2,261	(2,264)
Kazakhstan tenge	-	-	1,164	1,164
Malaysian ringgit	-	(3,371)	7,730	4,359
Mexican peso	-	(9,654)	23,970	14,316
New Israeli shekel	-	(396)	-	(396)
New Romanian leu	-	(7,463)	4,074	(3,389)
New Taiwan dollar	-	(8,842)	5,256	(3,586)
New Zealand dollar	-	-	10,458	10,458
Nigerian naira	-	(1,902)	1,642	(260)
Norwegian krone	-	-	24,582	24,582
Peruvian nuevo sol	-	(13,591)	4,533	(9,058)
Philippine peso	-	(67)	1,806	1,739
Polish zloty	-	-	10,572	10,572
Russian ruble	-	(2,443)	7,712	5,269
Singapore dollar	-	(957)	-	(957)
South African rand	-	(25,061)	12,475	(12,586)
South Korean won	-	(5,905)	14,403	8,498
Swedish krona	-	-	21,741	21,741
Swiss franc	-	(764)	764	-
Thai baht	-	-	13,722	13,722
Turkish lira	-	(10,511)	10,554	43
Ukrainian hryvnia	-	-	920	920
Total	\$ 59	\$ (223,357)	\$ 372,360	\$ 149,062

Notes to the Basic Financial Statements: Note 3 Continued

The derivative securities included as equities above consist of rights. Foreign currency forward contracts are commitments to purchase or sell a stated amount of foreign currency at a specific future date.

Interest rate risk applies to derivatives such as Fixed Income Options, Credit Default Swaps, Interest Rate Swaps, Forward Foreign Currency and Rights. At June 30, 2019, FCERA was exposed to the following interest rate risk on its investments in these securities. The table below displays the maturity periods of these derivative investments.

Interest Rate Risk Analysis

As of June 30, 2019

(Dollars in Thousands)

Investment Types	Fair Value	Investment Maturities (in months)				Total
		Less than 12	13 to 60	61 to 120	More than 120	
Credit Default Swaps	\$ 771	\$ (37)	\$ 808	\$ -	\$ -	\$ 771
Foreign Exchange Swaps	(56)	-	(53)	(3)	-	(56)
Forward Currency Contracts	2,505	2,505	-	-	-	2,505
Interest Rate Swaps	2,755	888	3,027	(1,346)	186	2,755
Options	(60)	(16)	(44)	-	-	(60)
Rights	59	-	-	2	57	59
Total	\$ 5,974	\$ 3,340	\$ 3,738	\$ (1,347)	\$ 243	\$ 5,974

Securities Lending. The Board authorized FCERA, through its custodian bank, to enter into securities lending transactions, whereby securities owned by FCERA are loaned on a short-term basis to various banks and brokers. Securities on loan include domestic and international stocks, and U.S. government agency and domestic bonds. All securities on loan must be collateralized at 102% of the fair value of the loaned securities, except for non-United States based equities which are initially collateralized at 105%. Collateral may take the form of cash, commercial paper, certificates of deposit, bankers' acceptances, repurchase and reverse repurchase agreements, obligations issued or guaranteed as to interest and principal by the United States Government (or agencies or instrumentalities thereof), bank time deposits, variable rate demand notes, money market mutual fund and any common trust fund maintained by a bank, other financial institution, any commingled, or pooled trust.

The lending agreement places no restriction on the amount of loans that can be made. FCERA's lending agent is authorized to invest and reinvest cash collateral, but it is not expressly permitted to pledge or sell securities collateral without borrower default. FCERA's agent invests cash collateral in individual securities and the securities are held by the trustee in FCERA's name. The maturities of the investments made with the cash collateral generally match the maturities of their securities on loan.

Notes to the Basic Financial Statements: Note 3 Continued

Securities on Loan - At fiscal year-end, FCERA had no credit risk exposure to borrowers because the collateral received exceeded the amount owed to borrowers. As of June 30, 2019, there were no violations of the securities lending provisions and no losses resulted within the securities lending program due to borrower default.

Reinvestment of Collateral - FCERA is subject to credit risk through the reinvestment of collateral cash which FCERA received at the time securities were placed on loan. The risk can include the devaluation of underlying securities where the collateral has been reinvested. FCERA invests its collateral in Northern Trust's cash collateral pool called the Northern Institutional Liquid Assets Portfolio (NILAP). The NILAP is considered a Tier 1 quality fund, investing in the highest credit quality securities. The goal of the NILAP is to maintain a \$1.00 net asset value per share of the fund, preserving reinvested collateral while providing a stable source of income. The collateral reported in these Financial Statements excludes non-cash collateral which amounts to \$144,230,160 at June 30, 2019. FCERA does not have the ability to sell non-cash collateral unless the borrower of the security defaults on the loan agreement.

FCERA is unable to quantify the dollar devaluation that would have existed if collateral had been called upon. Income from these transactions is reported on the Statement of Changes in Fiduciary Net Position. Securities on loan are reported at fair value on the Statement of Fiduciary Net Position. The carrying values of the cash collateral securities lending investment pool as of June 30, 2019 was \$31,757,439. The fair values of loaned securities are listed below:

Fair Values of Loaned Securities

As of June 30, 2019

(Dollars in Thousands)

	2019
Domestic equity	\$ 8,120
International equity	3,296
Total equity on loan	11,416
U.S. Government and agencies	327
Domestic bonds	18,090
Foreign Bonds	1,076
Total bonds on loan	19,493
Total equities and bonds on loan	\$ 30,909

Highly Sensitive Investments. In its actively managed fixed income portfolio, FCERA utilizes investments that are highly sensitive to interest rate changes. Highly sensitive investments include mortgage-backed securities, asset-backed securities and collateralized mortgage obligations. FCERA's investment portfolio contains certain variable rate notes and collateralized mortgage obligations. At June 30, 2019, FCERA had approximately \$13,263,000 in these investments.

Notes to the Basic Financial Statements: Note 3 Continued

Investment Type

As of June 30, 2019

(Dollars in Thousands)

	2019
Asset - Backed / Variable Rate Notes	\$ 2,025
Collateralized Mortgage Obligations	8,733
Forward Foreign Currency	2,505
Total	\$ 13,263

Fair Value Measurement

FCERA follows GASB Statement No. 72, *Fair Value Measurement and Application*. The statement provides guidance on fair value measurement under accounting principles generally accepted in the United States of America (GAAP), FCERA discloses the fair value of its investments in a hierarchy that prioritizes the inputs to valuation techniques used to measure the fair value. The objective of fair value measurement is to determine the price that would be received to sell an asset or paid to transfer a liability in a transaction between market participants at the measurement date (an exit price). The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- Level 1 – reflects prices quoted in active markets for identical assets;
- Level 2 – reflects prices based on other similar observable inputs; and
- Level 3 – reflects prices based upon unobservable inputs.

FCERA classifies its investments in Level 1 based on direct analysis provided by a primary external pricing service and are quoted in active markets. Investments in Level 1 consist of public equity assets.

Investments classified as Level 2 are based on inputs other than quoted prices attributed to Level 1, but are still observable. Level 2 assets consist of fixed income securities as well as commingled investment funds that may report using the Net Asset Value (NAV). Fixed income investments are valued using a bid evaluation or matrix pricing technique. For commingled investments that are capable of redemption at the NAV per share price at the measurement date, the fair value is classified in Level 2.

Notes to the Basic Financial Statements: Note 3 Continued

Where the inputs from market activity are unobservable, the Level 3 classification is used. This classification requires significant judgement and estimation to determine fair value. Due to the difficulty of determining accurate estimates, the values of these investments may differ significantly from values that could have been determined if a market existed at the measurement date.

Investments measured at the Net Asset Value consist of certain commingled funds, real estate funds, private equity, private credit and hedge funds. The structure of real estate, private equity, private credit and hedge funds typically exist as limited partnerships. There are no readily available markets to determine accurate fair value for these limited partnerships as they may contain investments in non-liquid assets, real estate or other assets. The valuations for these investments may occur at various times throughout the investment cycle in accordance with guidelines established through the limited partnership agreement.

FAIR VALUE MEASUREMENT

June 30, 2019

(Dollars in Thousands)

		Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Investments by Fair Value Level	June 30, 2019			
Domestic and International Fixed Income	\$ 1,080,799	-	\$ 1,071,181	\$ 9,618
Domestic and International Equities	1,181,850	\$ 1,177,869	3,969	12
Domestic and International Commingled Funds	1,060,277	618,795	441,482	-
Securities Lending Collateral	31,757	-	31,757	-
Total Investments by Fair Value Level	\$ 3,354,683	\$ 1,796,664	\$ 1,548,389	\$ 9,630

Investments Measured at Net Asset Value (NAV)

Real Estate	\$ 242,656
Private Equity	508,013
Private Credit	251,870
Hedge Funds	336,514
Total Investments Measured at NAV	\$ 1,339,053
Total Investments	\$ 4,693,736

Investment Derivatives ¹

Derivative Type				
Credit Default Swaps	\$ 771	-	\$ 771	-
Forward Foreign Currency	2,505	-	2,505	-
Forward Foreign Swaps	(56)	-	(56)	-
Interest Rate Swaps	2,755	-	2,755	-
Options	(60)	-	(60)	-
Rights	59	59	-	-
Total	\$ 5,974	\$ 59	\$ 5,915	\$ -

Notes to the Basic Financial Statements: Note 3 Continued, Note 4

INVESTMENTS MEASURED AT NET ASSET VALUE

June 30, 2019

(Dollars in Thousands)

Investments Measured at NAV	June 30, 2019	Unfunded Commitments	Frequency (if eligible)	Redemption Notice Period
Real Estate	\$ 242,656	\$ 43,440	Core Fund - Quarterly, Closed-End Funds Not Eligible	Core Fund - 45 days
Private Equity	508,013	140,397	Not Eligible	Not applicable
Private Credit	251,870	358,541	Not Eligible	Not applicable
Hedge Funds:				
Grosvenor Institutional Partners	168,507	-	Quarterly	70 days
GCM Better Futures Fund	168,007	-	Quarterly	60 to 120 days
Total Investments Measured at NAV	\$ 1,339,053	\$ 542,378		

- (1) Real Estate, Private Equity and Private Credit – FCERA’s allocation in these investments totals 43 limited partnerships. The limited partnerships invest primarily in buyout funds, venture capital, distressed debt, mezzanine debt, and special situations. The measurement of the fair values of these investments has been determined using NAV typically one quarter in arrears with updated cash flows. These funds are not eligible for redemption, funding takes place over a time horizon of 1 to 5 years with the expectation of limited partnerships to liquidate within 7 to 12 years.
- (2) Hedge Funds – As of June 30, 2019, FCERA is invested in hedge funds through Grosvenor Better Future Funds, as a fund of one, and a fund of funds investment in Grosvenor Institutional Partners, L.P. Grosvenor relies on fair value determination from managers handling its underlying investments.

NOTE 4 - INVESTMENT TRADES RECEIVABLE AND PAYABLE

Investment trades receivable and payable include forward currency contracts, and sales and purchases of investments. Forward currency contracts are used to control currency exposure and facilitate the settlement of international security purchase and sale transactions. At June 30, 2019, forward foreign currency contracts receivable and payable totaled \$223,357,000 and \$372,360,000, respectively.

Notes to the Basic Financial Statements: Note 5

NOTE 5 – CAPITAL ASSETS

The following is a summary of changes in capital asset activity as of June 30, 2019:

Capital Assets

As of June 30, 2019

(Dollars in Thousands)

	Balance July 1, 2018	Additions	Dispositions/ Reclassifications	Balance June 30, 2019
Capital assets, non depreciable:				
Construction in Progress	\$ 5	24	(5)	\$ 24
Total capital assets, non depreciable	\$ 5	24	(5)	\$ 24
Capital assets, depreciable:				
Computer hardware/software	\$ 9,791	\$ 119	\$ (97)	\$ 9,813
Furniture and fixtures	591			591
Equipment	192			192
Building	3,323	165		3,488
Total capital assets, depreciable	13,897	284	(97)	14,084
Less accumulated depreciation for:				
Computer hardware/software	\$ (2,234)	\$ (708)	97	\$ (2,845)
Furniture and fixtures	(44)	(59)		(103)
Equipment	(32)	(37)		(69)
Building	(80)	(115)		(195)
Total accumulated depreciation	(2,390)	(919)	97	(3,212)
Total capital assets, depreciated, net	\$ 11,507	(635)	-	\$ 10,872
Total capital assets, net	\$ 11,512	(611)	(5)	\$ 10,896
Depreciation charged for the current year and included in administrative expenses totaled:		\$ 919		

NOTE 6 – CONTRIBUTIONS AND RESERVES

Contributions

Contributions are made by the members and the employers at rates recommended by FCERA's independent actuary and approved by the Board and the County Board of Supervisors. Employee contribution rates vary according to age, classification (safety or general), and benefit tier. Employee contribution rates are designed to provide funding for approximately one-fourth of the regular retirement benefits and one-half of all cost of living benefits for members enrolled in Tiers 1 through 4 and one half of the normal cost of the retirement benefit for members enrolled in Tier 5. Members are required to contribute between 3.79% and 12.58% of their annual covered salary. Employee contribution rates are established and may be amended pursuant to Articles 6 and 6.8 of the 1937 Act.

Interest is credited to member contributions every six months based on the prior six months ending balance. Members are not permitted to borrow against their contributions. Upon termination of employment, members may withdraw their contributions by requesting a refund of their accumulated contributions and interest. Non-vested members may leave their contributions on deposit with FCERA without establishing reciprocity. These members receive interest on their contributions and may withdraw their contributions and interest at any time.

Employer contribution rates are determined pursuant to Section 31453 of the 1937 Act and are designed to provide funding for the remaining regular retirement and cost of living benefits, as well as all regular disability and survivors' benefits.

Contribution rates are actuarially determined using the entry age normal method and consist of the normal cost (the estimated amount necessary to finance benefits earned by employees during the current year) and, beginning in 1980, the unfunded actuarial accrued liability, which was amortized over a 30-year period. Effective with the valuation completed for June 30, 2002, the amortization period was modified to allow a 30-year amortization period for changes in the unfunded actuarial accrued liability that result from Plan amendments and a 15-year amortization period for all other changes in the unfunded actuarial accrued liability. The Schedule of Employer Contributions, which includes 10-year historical information, is presented in the Required Supplementary Information section on page 54.

Benefits attributable to employers' contributions do not become vested until completion of five years of credited service. A member may receive a regular retirement allowance after meeting the minimum requirements for eligibility as defined in Note 1 of these Financial Statements.

On September 12, 2012, PEPRA was signed into law by the Governor of California, Jerry Brown, establishing a new tier for General and Safety employees entering FCERA membership on or after January 1, 2013. The benefit formula for General members is 2.5% at age 67 and the Safety formula is 2.5% at age 57. Benefits under the new PEPRA tiers are based on a consecutive three-year final average compensation period.

Notes to the Basic Financial Statements: Note 6 continued

Reserved and Designated Accounts of Net Position Restricted for Pension Benefits

Fiduciary Net Position Restricted for Pension Benefits is segregated into members' and employers' accumulated contributions reserves established by the Board and undistributed earnings. The Board has established reserves for various benefit payments pursuant to the 1937 Act, and it has designated an account for market stabilization. Effective as of fiscal year end June 30, 2009, the Contra Tracking Account was added to represent the amount of interest credited to reserve accounts that had not been paid for out of current earnings.

The amounts and changes in reserves and designations for the year ended June 30, 2019 consist of the following:

Reserve Balances *

As of June 30, 2019

(Dollars in Thousands)

	Balance July 1, 2018	Increase (Decrease) In Fiduciary Net Position	Net Transfers	Balance June 30, 2019
Reserves:				
Members' accumulated contributions	\$ 460,384	\$ 37,848	\$ (37,716)	\$ 460,516
Current service reserve	1,546,164	165,795	(112,294)	1,599,665
Annuity pension reserve	187,660	(30,474)	68,238	225,424
Current service pension reserve	1,419,031	(135,392)	265,851	1,549,490
Settlement annuity pension reserve	705,413	(39,146)	97,167	763,434
Settlement benefit reserve	112,497	(5,341)	7,917	115,073
Cost of living adjustment reserve	1,353,527	(1,143)	121,371	1,473,755
Supplemental cost of living reserve	-	-	-	-
Survivors' death benefit reserve	-	(1,367)	1,367	-
Retiree health benefit reserve	-	-	-	-
Retiree health benefit reserve (VS)	30,662	(4,857)	2,100	27,905
Contingency reserve	-	-	-	-
Designated for market stabilization	(103,087)	-	66,369	(36,718)
Undistributed earnings	-	248,713	(248,713)	-
Contra Tracking Account	(1,012,380)	-	(231,657)	(1,244,037)
Net Position Restricted for Pension Benefits	\$ 4,699,871	\$ 234,636	\$ -	\$ 4,934,507

* Note individual reserve balances may not tie across and down due to rounding.

Notes to the Basic Financial Statements: Note 6 continued

Members' accumulated contributions include all member contributions net of refunds paid to members. At retirement, member balances are transferred to the *annuity and settlement annuity pension reserves* and the *cost of living adjustment reserve*. Employers' contributions are paid into *current service reserve*, *settlement annuity reserve*, and *cost of living reserve*. The employer current service and settlement annuity contributions are combined in the *current service reserve*, although tracked separately within the *current service reserve* balance. When an employee retires, the employer portion of their accumulated contributions for current service and settlement annuity are transferred from the *current service reserve* into the *current service pension reserve* and the *settlement annuity pension reserve*. *Undistributed earnings* are credited with all investment income and charged with investment and other fees. Transfers from undistributed earnings to other reserves are made twice a year.

Prior to July 1, 2007, the Board authorized an annual rate equal to the actuarial rate of return be apportioned as the interest. Effective July 1, 2007, the Board adopted a new interest crediting policy which implemented the following objectives: 1) maintain consistency between the reserving structure accounts and the actuarial funding policies of FCERA, 2) assure that the reserve values track the market value of assets over the long-term and 3) to the extent possible, maintain reasonable stability in both the interest crediting and contribution rates by avoiding charging short-term losses to reserves. This policy resulted in interest apportionments of \$203,536,863 for the December 31, 2018 interest-crediting period, and \$210,463,796 for the June 30, 2019, interest-crediting period. The semi-annual rates of interest for the two periods were 3.5% and 3.5%, respectively. Any additional transfers out of undistributed earnings are made in accordance with the authorization of the Board.

The *survivors' death benefit reserve* is credited with balances transferred from *members' accumulated contributions* and the employer *current service reserve*, in those instances where the survivor of an active deceased member is entitled to continuation benefits. The *current service reserve* consists of current service and settlement annuity contributions (which are tracked separately within the *current service reserve*). Lump sum survivor benefits are paid directly from *members' accumulated contributions* and the *current service reserve*. Pension and disability benefits are paid from the *annuity pension reserve*, *current service* and *settlement annuity pension reserves* and *cost of living adjustment reserve*.

Both the *retiree health benefit* and the *supplemental cost of living reserves* are non-valuation reserves approved annually by the Board. Non-valuation reserves are under the control of the Board and are not available to fund vested benefits of the Plan. The *retiree health benefit reserve* was initiated in 1987 to establish funds for payment of supplemental benefits which would provide retirees additional monies with the expectation (but not the requirement) that the funds be used to offset the cost of health insurance premiums. Effective with the actuarial valuation completed for the year ended June 30, 2003, the retiree health benefit reserve was apportioned into two reserves, the *retiree health benefit reserve* and the *retiree health benefit reserve (VS)* to more clearly account for the liability associated with additional health benefits granted as part of

Notes to the Basic Financial Statements: Note 6 continued

the Settlement Agreement negotiated between the County and certified employee organizations in December 2000. FCERA ceased issuing benefit payments from the non-vested retiree health benefit reserve in November 2014.

The *supplemental cost of living reserve* was established in 1990 to provide additional benefits for eligible members. The benefit was adopted annually under Government Code Section 31874.3 to provide purchasing power protection to those retirees whose accumulated excess cost of living credits exceeds 25%; therefore, the affected members changed each year. The *supplemental cost of living reserve* balance reflects Board approved transfers from *undistributed earnings*. Analysis of the expenses of this reserve indicated that sufficient funding was unavailable to continue the benefit past August 2005. Thus, the Board authorized transfers sufficient to provide funds to continue the benefit at levels in existence at June 30, 2006. FCERA staff, in conjunction with the Actuary, monitors the declining balance of the supplemental cost of living reserve. The Board voted a date certain to cease payments of the supplemental cost of living reserve on August 1, 2016.

The *supplemental benefit reserve* was established to account for the benefit increase given to retirees or the beneficiaries of retirees who retired prior to January 1, 2001, as part of the Settlement Agreement approved in December 2000.

The *supplemental annuity benefit* reserve was established to account for the benefit increase given to members who retired on or after January 1, 2001, as part of the Settlement Agreement approved in December 2000.

The designation for market stabilization serves to spread unanticipated market gains and losses over a five-year period and represents a portion of the variance between net investment earnings and actuarial expectations based on the assumed rate of returns.

FCERA maintains a Statutory Contingency Reserve based on 1% of the total valuation account reserve balances. As part of the Interest Credit policy modified by the Board in September 2008, the Board established an additional Board Contingency Reserve of up to 2% of the total Fiduciary Net Position. Funding of this additional reserve is subject to Board approval.

The Contra Tracking Account represents interest that has been credited to the reserve accounts that was not available to be paid out of the current or excess earnings. A balance in this account is the result of the application of the Board's full interest crediting policy and will be replenished in subsequent periods when there are sufficient earnings.

NOTE 7 - ACTUARIAL VALUATIONS

Pursuant to provisions in the 1937 Act, FCERA engages an independent actuarial firm, Segal Consulting, to perform an annual actuarial valuation. An experience study is performed every three years (triennial experience study).

The economic and non-economic assumptions are updated at the time each triennial experience study is performed. Triennial experience studies serve as the basis for assumptions required in developing employer and member contribution rates necessary to properly fund the Plan. FCERA periodically hires an independent actuarial firm to audit the results of the valuations. New assumptions were adopted by the Board for the June 30, 2019 actuarial valuation based on the results of the July 1, 2015 through June 30, 2018 triennial non-economic and economic Experience Study. The next Experience Study will be completed after the 2021 valuation is issued and results will be incorporated in the 2022 valuation.

The latest actuarial valuation decreased the County normal cost rate from 17.91% to 16.91% of payroll primarily due to the effects of investment gain on valuation value of assets, lower than expected salary increases along with lower than expected cost of living adjustment (COLA) increases as of June 30, 2018. The County's required contribution rate to finance the unfunded actuarial accrued liability (UAAL) increased from 38.02% to 38.90% of payroll. There is a decrease in the total required contribution rate from the prior valuation of 0.12%, from 55.93% to 55.81% of payroll.

NOTE 8 – LEASES

Formation of the FCERA Realty Group, LLC, ("the LLC"), was authorized by the Board of Retirement with the purpose of holding and leasing property. FCERA leases two buildings, 7772 N. Palm and 7778 N. Palm, from the LLC, in order to conduct its administrative operations. The two buildings are each approximately 9,194 square feet. FCERA pays \$40,697 per month which amounts to \$2.21 per square foot per month, triple net. The term of the lease is 10 years.

NOTE 9 – GASB 67 RELATED DISCLOSURES

Long-term Expected Rate of Return by Asset Class

The long-term expected rate of return on the Plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns 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, by adding expected inflation, and deducting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table below.

The long-term expected arithmetic real rate of return assumption of 6.2% was developed through a comprehensive asset-liability study completed in June 2018. However, users of this report must be aware that due to the gradual implementation of the target allocation presented below, there will be a difference between this schedule and the target allocation presented in the Investment Section on pages 66, 67, and 68.

	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
Large Cap U.S. Equity	20%	5.44%
Small Cap U.S. Equity	5%	6.18%
Developed International Equity - Large Cap	15%	6.54%
Developed International Equity - Small Cap	3%	6.64%
Emerging International Equity	6%	8.73%
U.S. Core Fixed Income	4%	1.42%
High Yield Fixed Income	3%	3.64%
Global Bonds	7%	0.16%
Bank Loans	3%	3.45%
TIPS	3%	1.20%
Emerging Market Debt	3%	4.72%
Real Estate	3%	4.51%
Real Estate - Value Added	1%	8.80%
Real Estate - Opportunistic	1%	12.00%
Infrastructure	3%	7.90%
Hedge Funds	6%	3.20%
Private Equity	6%	9.90%
Private Credit	8%	5.80%
Total	100%	

Net Pension Liability

GASB Statement No. 67 requires public pension plans to disclose the net pension liability of the Plan. The net pension liability is measured as the total pension liability less the amount of the Plan's fiduciary net position. The net pension liability is an accounting measurement for financial statement reporting purposes. The components of FCERA's net pension liability at June 30, 2019, are disclosed on the following schedule and on page 56 in the Required Supplementary Information.

Net Pension Liability

As of June 30, 2019

(Dollars in Thousands)

	2019
Total pension liability	\$ 6,064,374,653
Less: Fiduciary net position	(4,934,507,078)
Net pension liability	\$ 1,129,867,575
Fiduciary net position as a percentage of the total pension liability	81.37%

The measurement date of the net pension liability was June 30, 2019. The total pension liability was determined based upon rolling forward the actuarial valuation as of June 30, 2018 to the measurement date.

The following Actuarial Assumptions were approved by the Board of Retirement in April 2019 based on results of the most recent actuarial experience study for the review period of July 2015 through June 2018. The total Plan liability as of June 30, 2019 was re-measured by (1) revaluing the total pension liability as of June 30, 2018 (before the roll forward) to include the following actuarial assumptions that the Retirement Board had adopted for use in the pension funding valuation as of June 30, 2019 and (2) using this revalued total pension liability in rolling forward the results from June 30, 2018 to June 30, 2019. It is important that readers understand that these newest assumptions are included in the GASB 67 Valuation at June 30, 2019 and presented here, but will not match with the assumptions in the Actuarial Section on page 79 as the Actuarial Section reflect the assumptions in place as of July 1, 2018 and applied by employers for contribution calculation purposes for the current reporting fiscal year.

Inflation	2.75%
Salary Increases	General: 4.35% to 11.75%; and Safety: 4.75% to 11.75%, varies by service, including inflation.

Notes to the Basic Financial Statements: Note 9 continued

Investment Rate of Return	7.00%, net of Pension Plan investment expenses, including inflation.
Administrative Expenses	1.20% of payroll, allocated 1.02% to employers and 0.18% to employees.
Mortality	Various rates based on RP-2014 Mortality tables in the June 30, 2018, actuarial valuation.

Discount Rate

The discount rate of 7.00% was used to measure the total pension liability as of June 30, 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 for current Plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future Plan members and their beneficiaries, as well as projected contributions from future Plan members, are not included. Based on those assumptions, the Plan's 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 Plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2019.

Sensitivity of the net pension liability to changes in the discount rate. The following schedule below presents the net pension liability of FCERA as of June 30, 2019, calculated using the discount rate of 7.00%, as well as what the FCERA's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower, 6.00%, or 1-percentage-point higher, 8.00%, than the current rate.

(Dollars in Thousands)	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
FCERA's net pension liability as of June 30, 2019	\$1,966,726	\$1,129,868	\$445,667

Money-Weighted Rate of Return

For the fiscal year ended June 30, 2019, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 5.49%. For commentary on the overall investment performance of the Plan please see the Investment Consultant's Report on

page 61. It is important to note that the Investment Consultant's Report discloses the Plan's return data using the industry standard time-weighted rate of return which will differ from the money-weighted rate of return referenced here. The money-weighted rate of return (identical in concept to Internal Rate of Return) expresses investment performance, net of investment expense, adjusted for the changing amounts (inflows and outflows) actually invested.

NOTE 10 – SUBSEQUENT EVENTS

Date of Management's Review

As of October 2, 2019, the FCERA Realty Group, LLC transferred the ownership of the two administration buildings (7772 & 7778 N. Palm Ave) occupied by FCERA staff back to the Plan to be recognized as capital assets and depreciated over their expected remaining life.

The potential for additional subsequent events were evaluated from the fiscal year-end report date of June 30, 2019 through December 9, 2019, which is the date the financial statements were available to be issued. Management did not identify any additional subsequent events that would require disclosure.

Other Supplementary Information

Schedule of Employer Contributions

Last Ten Fiscal Years

Fiscal Year Ended June 30	Contributions in Relation to the		Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
	Actuarially Determined Contributions	Actuarially Determined Contributions			
2019	\$225,492,000	\$ 225,492,000	\$ -	\$ 423,092,000	53.30%
2018	210,535,000	210,535,000	-	403,018,000	52.24%
2017	198,472,000	198,472,000	-	386,345,000	51.37%
2016	191,529,000	191,529,000	-	370,318,000	51.72%
2015	184,213,000	184,213,000	-	351,109,000	52.47%
2014	165,309,000	165,309,000	-	350,326,000	47.19%
2013	158,572,000	158,572,000	-	346,808,000	45.72%
2012	157,869,000	157,869,000	-	346,742,000	45.53%
2011	130,290,000	130,290,000	-	385,204,000	33.82%
2010	126,138,000	126,138,000	-	392,713,000	32.12%

Schedule of Investment Returns – Pension Plan

*For the Fiscal Years Ended June 30, 2014 through 2019**

	2019	2018	2017	2016	2015	2014
Annual Money-Weighted Rate of Return, Net of Investment Expenses	5.49%	7.62%	10.47%	0.02%	0.02%	17.26%

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

Actuarial Methods and Assumptions

As required by GASB Statement No. 67, FCERA's actuary completed the measure of the net pension liability as of June 30, 2018 and June 30, 2017 by rolling forward the total pension liability information for financial reporting, as of June 30, 2018 and June 30, 2017, respectively. The basis for these calculations was the latest Valuation Report, prepared for funding purposes. All actuarial methods and assumptions used for this roll forward analysis were the same as those used in the June 30, 2017 Valuation Report. Actuarially determined contribution rates are based on the actuarial valuation one year prior to the beginning of the Plan year.

Valuation date	June 30, 2017
Actuarial cost method	Entry age actuarial cost method
Amortization method	Level percent of payroll (3.50% payroll growth assumed).

Other Supplementary Information continued

Remaining amortization period	15 years remaining over a declining period as of June 30, 2018 actuarial valuation for unfunded actuarial accrued liability (UAAL) established as of June 30, 2003 plus 15 years (declining) for UAAL due to actuarial gains or losses, changes in actuarial assumptions or plan amendments established on each subsequent valuation.
Asset valuation method	The actuarial value of assets is determined by recognizing any difference between the actual and the expected market return over 10 six-month interest crediting periods. The actuarial value of assets is further adjusted, if necessary, to be within 30% of the market value of assets. The valuation value of assets is the actuarial value of assets reduced by the value of the non-valuation reserves. Deferred gains and losses as of June 30, 2015 have been combined and will be recognized in equal amounts over a period of four and a half years from that date.
<u>Actuarial assumptions:</u>	
Investment rate of return	7.00% net of pension plan investment expenses (includes inflation at 3.00%).
Inflation rate	3.00%
Administrative expenses	1.10% of payroll allocated to both the employer and member based on the components of the total contribution rate (before expenses) for the employer and member.
Projected salary increases	Rates vary by service type:
- General Members	Salary increases range from 4.50% to 11.50%, including 3.00% inflation.
- Safety Members	Salary increases range from 4.90% to 11.50%, including inflation.
Cost of living adjustments	3.00% of retirement income for General Tiers 1, 2 and 3, and Safety Tiers 1 and 2. 0.00% for General and Safety Tiers 4 and 5.

Other Supplementary Information continued

Other assumptions

Same as the assumptions in the June 30, 2016 funding actuarial valuation.

Other information

All members with membership dates on or after January 1, 2013 enter the Tier 5 created by PEPRA.

Schedule of Changes in Net Pension Liability and Related Ratios

For the Fiscal Years Ended June 30, 2019, 2018, 2017, 2016, 2015, 2014, and 2013*

	2019	2018	2017	2016	2015	2014	2013
Total pension liability							
Service cost	\$ 108,089,840	\$ 108,233,884	\$ 109,231,556	\$ 105,592,251	\$ 104,671,060	\$ 107,568,854	\$ 98,293,207
Interest	410,338,790	393,404,348	381,845,701	366,855,100	355,525,811	341,121,326	336,460,778
Change of benefit terms	-	-	-	-	-	-	-
Differences between expected and actual experience	12,058,315	(70,094,731)	(70,197,987)	(42,178,682)	(50,048,133)	(146,396,595)	(143,645,760)
Changes of assumptions	(67,930,738)	-	-	235,227,824	-	-	265,552,249
Benefit payments, including refunds of employee contributions	(280,032,239)	(263,231,547)	(249,846,894)	(240,231,254)	(231,396,472)	(224,392,602)	(212,956,631)
Other ¹	-	-	-	-	10,306,014	-	-
Net change in total pension liability	\$ 182,523,968	168,311,954	171,032,376	425,265,239	189,058,280	77,900,983	343,703,843
Total pension liability - beginning	5,881,850,685	5,713,538,731	5,542,506,355	5,117,241,216	4,928,182,936	4,850,281,953	4,506,578,110
Total pension liability - ending (a)	\$ 6,064,374,653	5,881,850,685	5,713,538,731	5,542,506,455	5,117,241,216	4,928,182,936	4,850,281,953
Fiduciary net position							
Contributions - employer	225,491,692	210,534,894	198,472,119	191,529,239	184,213,235	165,309,213	158,572,420
Contributions - employee	40,463,120	38,467,001	36,259,132	35,211,756	33,109,947	30,153,934	30,515,683
Net investment income (loss)	254,693,657	312,556,013	417,603,730	(4,319,055)	360,796	583,169,608	378,483,400
Benefit payments, including refunds of employee contributions	(280,032,239)	(263,231,547)	(249,846,894)	(240,231,354)	(231,396,472)	(224,392,602)	(212,956,631)
Administrative expenses	(5,980,558)	(5,676,721)	(4,762,253)	(4,814,003)	(4,297,090)	(3,541,682)	(3,633,683)
Other	-	-	-	-	-	(21,269)	(42,121)
Net change in fiduciary net position	234,635,672	292,649,640	397,725,834	(22,623,417)	(18,009,584)	550,677,202	350,939,068
Fiduciary net position - beginning	4,699,871,406	4,407,221,766	4,009,495,932	4,032,119,349	4,050,128,933	3,499,451,731	3,148,512,663
Fiduciary net position - ending (b)	4,934,507,078	4,699,871,406	4,407,221,766	4,009,495,932	4,032,119,349	4,050,128,933	3,499,451,731
Net pension liability - ending (a) - (b)	\$ 1,129,867,575	\$ 1,181,979,279	\$ 1,306,316,965	\$ 1,533,010,523	\$ 1,085,121,867	\$ 878,054,003	\$ 1,350,830,222
Fiduciary net position as a percentage of the total pension liability	81.37%	79.90%	77.14%	72.34%	78.79%	82.18%	72.15%
Covered payroll²	\$ 423,092,000	\$ 403,018,000	\$ 386,345,000	\$ 370,318,000	\$ 351,109,000	\$ 350,326,000	\$ 346,808,000
Net pension liability as percentage of covered payroll	267.05%	293.28%	338.12%	413.97%	309.06%	250.64%	389.50%

Notes to Schedule:

Benefit changes: All new members with membership dates on or after January 1, 2013 enter the new tier created by PEPRA.

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

¹ Estimated liability impact for including a group of about 1,420 members reported for the first time as vested terminated members in the June 30, 2015 funding valuation.

² Covered payroll is the payroll on which contributions to the pension plan are based.

Other Supplementary Information continued

Schedule of Administrative Expenses

For the Fiscal Year Ended June 30, 2019, with Comparative Totals

(Dollars displayed as Actual)	2019	2018
Personnel Services		
Salaries and Benefits	\$ 3,058,014	\$ 2,971,745
Total Personnel Services	3,058,014	2,971,745
Office Expenses		
Election Expenses	-	18,813
Office Supplies and Miscellaneous Admin.	69,117	65,593
Postage	29,370	26,935
Telephone	20,258	7,608
Utilities	38,654	31,239
Total Office Expenses	157,399	150,187
Other Services and Charges		
Bad Debt Expense	-	30,197
Equipment / Furnishings	909	22,220
Insurance	144,102	143,655
Maintenance	55,161	50,350
Operating Leases Buildings	380,948	277,724
Professional and Specialized Services	555,050	530,779
Disability Expenses	384,208	386,452
Data Processing Services	227,123	187,311
Transportation, Travel, and Education - Staff	52,895	39,583
Transportation, Travel, and Education - Board	45,330	53,997
Total Other Services and Charges	1,845,726	1,722,268
Depreciation	919,419	832,521
Total Administrative Expenses	\$ 5,980,558	\$ 5,676,721

Other Supplementary Information continued

Administrative Budget Analysis

For the Fiscal Year Ended June 30, 2019

(Dollars displayed as Actual)	Approved Budget	Final Budget	Fiscal Year Expenses	Percentage Expended
Personnel Services				
Salaries	\$ 2,006,874	\$ 2,006,874	\$ 1,747,673	87.08%
Benefits	1,604,866	1,604,866	1,310,341	81.65%
Total Personnel Services	3,611,740	3,611,740	3,058,014	84.67%
Professional Services				
Actuarial ¹	85,500	85,500	39,470	46.16%
Legal Counsel	335,000	335,000	105,396	31.46%
Professional Services - Disability	325,000	325,000	384,208	118.22%
Other Professional Services	327,500	327,500	410,184	125.25%
Total Professional Services	1,073,000	1,073,000	939,258	87.54%
Travel, Transportation, and Education				
Transportation, Travel, and Education - Board	92,500	92,500	45,330	49.01%
Transportation, Travel, and Education - Staff	73,000	73,000	52,895	72.46%
Total Travel, Transportation, and Education	165,500	165,500	98,225	59.35%
Other				
Data Processing	357,000	357,000	227,123	63.62%
Depreciation	1,045,059	1,045,059	919,419	87.98%
Insurance	175,000	175,000	144,102	82.34%
Maintenance	175,100	175,100	55,161	31.50%
Office Supplies and Miscellaneous Admin.	300,840	300,840	158,308	52.62%
Operating Leases	-	-	380,948	0.00%
Total Other	2,052,999	2,052,999	1,885,061	91.82%
Capital Assets ^{2, 3}	-	-	-	N/A
Total Administrative Expenses ⁴	\$ 6,903,239	\$ 6,903,239	\$ 5,980,558	86.63%

¹ Excludes annual valuation costs which are included as part of investment expenses.

² Capital Assets are included in the adopted Administrative Budget when purchased.

However, the costs are recognized as a result of the depreciation process.

³ Computer Equipment is included in Information Technology (IT) Infrastructure page 59

⁴ As defined in Government Code Section 31580.2, excludes Information Technology expenses.

Other Supplementary Information continued

Schedule of Information Technology Expenses

For the Fiscal Year Ended June 30, 2019, with Comparative Totals

(Dollars displayed as Actual)	2019	2018
Property and Equipment	\$ -	\$ 26,618
Pension System Maintenance	107,154	188,006
Subtotal Excluded IT Expenses ¹	107,154	214,624
IT Infrastructure ²	292,380	314,819
Total Information Technology Expenses	\$ 399,534	\$ 529,443

¹ As defined by Government Code Section 31580.2.

² IT Infrastructure amounts are accounted for in the Depreciable Capital Assets.

Schedule of Investment Expenses

For the Fiscal Year Ended June 30, 2019, with Comparative Totals

(Dollars displayed as Actual)	2019	2018
Investment Manager Fees	\$ 27,230,807	\$ 25,550,805
Custodian Service Fees ²	118,000	118,050
Actuarial Valuation Fees ^{1, 2}	113,000	68,000
Due Diligence Travel	7,887	5,715
Investment Legal Fees ²	69,467	226,848
Investment Consultant Fees ²	418,217	452,347
Subtotal Investment Expenses²	27,957,378	26,421,765
Securities Lending Expenses	568,773	342,345
Total Investment and Security Lending Expenses	\$ 28,526,151	\$ 26,764,110

¹ Actuarial Valuation Fees are the fees for producing the Actuarial Valuation Report.

² Investment Legal Fees, Investment Consultant Fees, Custodian Service Fees, and Actuarial Valuation Fees can also be found on page 60 as Payments to Consultants.

Schedule of Payments to Consultants

For the Fiscal Year Ended June 30, 2019, with Comparative Totals

(Dollars displayed as Actual)	2019	2018
Disability Attorney Fees	\$ 139,375	\$ 103,058
Retirement Board Attorney Fees	105,396	148,296
Disability Medical, Investigation, and Copying Fees	244,833	283,394
Other Professional Expenses	347,884	259,845
Audit Fees	62,300	62,200
Actuarial Consulting Fees (non-actuary study costs)	39,470	60,438
Actuarial Valuation Fees ¹	113,000	68,000
Investment Legal Fees ¹	69,467	226,848
Custodian Service Fees ¹	118,000	118,050
Investment Consultant Fees ¹	418,217	452,347
Data Processing Fees	227,123	187,311
Total Payments to Consultants	\$ 1,885,065	\$ 1,969,787

Refer to page 72 for information on fees paid to investment managers.

¹ Investment Legal Fees, Investment Consultant Fees, Custodian Service Fees, and Actuarial Valuation Fees can also be found on page 59 as Investment Expenses.



Investment Section

August 31, 2019

Board of Trustees
Fresno County Employees' Retirement Association
7772 N. Palm Avenue
Fresno, CA 93711

Dear Trustees:

Verus Advisory ("Verus") is pleased to provide the Board of Trustees of Fresno County Employees' Retirement Association ("FCERA") with an overview of the market environment, an update on performance, and a summary of recent developments for the fiscal year ended June 30, 2019.

Investment Landscape

U.S. Equity

U.S. equities delivered strong returns over the trailing 1-year period ending in June; the S&P 500 Index returned 10.4 percent, weathering a healthy degree of volatility along the way. Last December, trade uncertainty and a decision from the Federal Reserve to hike interest rates helped to spark a 19.8 percent decline in the S&P 500 Index from previous peak levels. Year-to-date, U.S. large-cap equities have led global equity markets higher, and the S&P 500 Index advanced 18.5 percent, nearly recovering from the selloff at the end of 2018.

In recent periods, equity and bond markets have benefited from Federal Reserve support during periods of market stress. In late 2018 and the first half of 2019 some weakness appeared in the U.S. economy and markets grew shaky. During this time the Fed stepped in, indicating much easier monetary policy, boosting asset prices. Many investors have expressed concern regarding the level of the current (cycle-high) fed funds range relative to past business cycle highs. This has left many to ask how impactful further central bank easing might be as U.S. interest rates approach zero.

A variety of secular trends have helped cultivate a supportive environment for U.S. stocks. Technological advances, lower interest rates, and falling corporate tax rates have all helped to boost corporate profit margins to record highs. As earnings expectations moderate, these margins may be increasingly scrutinized by investors. Per FactSet, the estimated year-over-year revenue and earnings growth for the S&P 500 Index in the second quarter are 3.7 percent and -3.0 percent respectively. At the end of the first quarter, expectations called for revenue and earnings growth of 4.5 percent and -0.5 percent, respectively, indicating that analysts' expectations fell markedly over the second quarter.

International Equity

International equities underperformed domestic stocks as U.S. exceptionalism remained the story. For the year ending June 30th, 2019, the S&P 500 Index delivered a 10.4 percent return, outpacing the MSCI ACWI Index (up 5.7 percent), the MSCI Emerging Markets Index (up 1.2 percent), and the MSCI EAFE Index (up 1.1 percent). Within emerging market equities, Latin American equities (MSCI EM Latin America up 18.4 percent) diverged from Asian equities (MSCI EM Asia down 2.3 percent), likely aided by lower levels of economic exposure to the Chinese economy, which in Q2 grew only 6.2 percent from the prior year, its lowest rate since 1992.

Interest rate differentials between U.S. Treasuries and sovereign bonds in Europe and Japan widened as the Federal Reserve hiked rates while the European Central Bank and the Bank of Japan held rates steady. Expanding interest rate differentials likely contributed to the strength of the U.S. dollar over the period, which presented headwinds for unhedged investors in international equities. The only major international developed currency which strengthened vs. the dollar over the trailing year was the Japanese yen. The yen firmed up 2.8 percent relative to the dollar, mostly due to risk-off currency flows during the market selloff in the 4th quarter of 2018, where international investors sought safe-haven in the Japanese currency. Elsewhere, the British pound sterling weakened as uncertainty surrounding Brexit continued to drive trading in the currency.

Fixed Income

In late 2018, the Federal Reserve tightened monetary policy further with 0.25 percent rate hikes in September and December, bringing the target range for federal funds to 2.25 - 2.50 percent. In December, escalating geopolitical tensions and expectations for slowing global growth weighed on market sentiment, and despite the Fed cutting its guidance for additional rate hikes in 2019 from three to two, markets sold off. Moving into 2019, the Fed pivoted to a much more dovish stance, starting by clarifying its “patient approach” to future rate hikes, walking back its previous commitment to “further gradual increases”. In March, the Fed announced its balance sheet “normalization” process would unwind faster than originally anticipated, which effectively eased financial conditions by creating additional market liquidity. Finally, in June the Fed pledged to “act as appropriate to sustain the expansion”, an initiative unsupported by the Fed’s stated mandate of targeting maximum employment, stable prices, and moderate long-term interest rates. Analysts viewed the Fed’s language as effective in preparing markets for a 0.25 percent cut during its July meeting, and perhaps another 0.25 - 0.50 percent in cuts by the end of the calendar year.

The shift to more accommodative monetary policy is not a phenomenon unique to the Fed – the European Central Bank, the Bank of Japan, and others have also changed their tune, citing benign inflation pressures and an uncertain geopolitical backdrop as justification for lower rates. Still, with U.S. unemployment near 50-year lows and equities near all-time highs, some analysts have expressed concern over the strength of the Fed’s stimulus measures should a recession rear its head.

Falling ten-year sovereign yields were one of the biggest stories driving markets over the year. Ten-year Treasury yields reached as high as 3.2 percent in November but ended Q2 2019 at 2.0 percent. Long-duration U.S. Treasuries were top performers in the U.S., gaining 12.3 percent over the year and benefitting from precipitous declines in yields. Hard-currency emerging market debt (up 12.4 percent) was the top fixed income performer over the year, and outperformed local-currency EMD (up 9.0 percent), mostly due to a period of emerging market currency weakness last summer. In Europe, yields on many ten-year sovereign bonds established fresh all-time lows with German yields falling from 0.3 to -0.3 percent and French yields falling from 0.7 to 0.0 percent. In Italy, yields fell from 2.6 to 2.1 percent, but spiked as high as 3.6 percent in the fourth quarter of last year due to concerns that the sitting coalition government would not respect the fiscal budget deficit limits enforced by the European Union. Over the year, the value of global negative-yielding debt rose from \$8.16 trillion to \$12.92 trillion.

In U.S. credit, high yield and investment grade spreads remained near cycle highs at 3.8 percent and 1.2 percent. The BBgBarc U.S. High Yield Corporate Index and BBgBarc U.S. Agg Corporate Index returned 7.5 and 7.9 percent over the period, respectively.

Outlook

Global economic growth expectations have been revised slightly lower over the year, but on balance appear to remain supportive for risk assets over the medium term. Subdued inflation prints around the world have encouraged central bankers to issue accommodative guidance, and unemployment has reached cycle lows across most of the developed world. Valuations have expanded since last year but are not yet viewed as stretched. Per FactSet, on July 12th, the forward 12-month P/E ratio of the S&P 500 Index was 17.1x, above both its five-year (16.5x) and 10-year (14.8x) averages.

July 1st marked the beginning of the record-setting 121st month of the current U.S. economic expansion. While many have expressed anxiousness regarding the length of the expansion, we do not see many red flags in the short- to intermediate-term. Looking ahead, market participants are likely to remain fixated on global central bank policy, evolving international trade relations, and the impacts of protectionist measures like tariffs on global growth.

Plan Performance

The FCERA investment portfolio (“the Portfolio”) earned a 5.6% return net of fees for the fiscal year ending June 30, 2019. This return outperformed the policy index return by 0.5%. Portfolio risk as measured by standard deviation has fallen over the last several years. For the trailing ten and seven-year periods, the Portfolio’s standard deviation was 8.7% and 7.3% respectively.

Returns were generally moderate across most asset classes and marked by significant intra-period volatility. The domestic equity portfolio finished the fiscal year up 6.7% but lagged the Russell 3000 index return of 9.0%. The largest detractor was value-oriented strategies, which have lagged more growth-focused investment strategies. The Portfolio’s international public markets equity investments were up 4.5%, significantly outperforming the benchmark return of 1.8%. Private equity produced net returns of 8.3% versus 2.0% for its benchmark. Private credit was up 5.5% but lagged its public markets benchmark by 40 basis points.

Performance across real assets was mixed as the Portfolio’s infrastructure allocation, while relatively small, did very well, up 16.3% for the period. Conversely, commodities were the worst performing asset class, losing 8.0% compared to a 6.8% loss for the benchmark. Real estate fared better, up 7.7% compared to 5.5% for the benchmark.

Hedge funds generated net returns of 1.1%, trailing the benchmark return of 1.2%. Amidst a period of shifting federal reserve policy from hawkish to dovish, rates rallied, and the fixed income portfolio finished the year up 6.4%, outpacing the benchmark return of 5.8%.

On a longer-term annualized basis, the Portfolio has generated consistent performance in line with the historically more-conservative strategic target. For the three-years ending June 30, 2019, the Portfolio returned 7.7%, outperforming the policy index return by a full 100 basis points. Over the five-year period, the Portfolio returned 4.5%, outperforming the policy index by 40 basis points. For the trailing ten-year period, the Portfolio returned 8.7% while the policy index

returned 8.1%.

In computing individual manager returns, Verus utilizes the industry-standard approach of computing a time-weighted rate of return based on the market rate of return. All returns cited are net of investment manager fees.

Plan Activity

During the 2019 fiscal year we worked with staff and the Board to continue implementation of the asset-liability study that was conducted during 2018. This included managing the portfolio through a glidepath designed to minimize the timing risks associated with a relatively material increase in the target allocation to equity.

During the fiscal year we also worked with the Board to make several changes to the active managers responsible for managing various allocations across the portfolio; this included education and analysis aimed at aligning the sources of active risk with our conviction in managers' ability to generate alpha.

Verus assisted FCERA in completing an RFP for custodial and benefit disbursement services, the outcome of which was to re-validate confidence in the value received by the existing vendor. Lastly, Verus worked to provide education on a variety of important topics to assist the Board in their understanding of various portfolio management concepts.

All of us here at Verus appreciate the opportunity to assist the FCERA Board in meeting the Plan's investment objectives. We are confident in the direction of the portfolio, and we look forward to continuing our partnership as we navigate ever-changing capital markets.

Sincerely,



Jeffrey J. MacLean
Chief Executive Officer

General Information

The goal of Fresno County Employees' Retirement Association (FCERA) is to provide retirement compensation, death benefits, and disability benefits to its members. The Plan should meet this goal through prudent investment of employee and employer contributions.

The County Employees Retirement Law of 1937 governs the Plan. California Public Law (including Sections 31594 and 31595) also regulates Plan action. Sections 31594 and 31595 are especially important because they provide for prudent person governance of the Plan. These laws do not specify the type, amount, and quality of Plan investments. Rather, these laws guide the Plan to make investments assumed to be in the best interest of the Plan's beneficiaries. Such decisions should be consistent with the decisions of other investors possessing similar information.

The Board of Retirement has exclusive control of the investments of the Plan's retirement fund. The assets of the Plan are trust funds and shall be held for the exclusive purposes of providing benefits to its members in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the Plan. Except as otherwise expressly restricted by the California Constitution and by law, the Board may, in its discretion, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding, or sale of any form or type of investment financial instrument, or financial transaction when prudent in the informed opinion of the Board.

The officers and employees of the Board shall discharge their duties to the Plan as follows:

- The Board will act solely in the interest of and for exclusive purposes of providing benefits to participants and their beneficiaries. The Board will keep employer contributions to the Plan at a minimum level. The Board will also pay reasonable expenses required to administer the plan.
- The Board will act like a prudent person under equivalent circumstances and having similar goals. Attention to care, skill, prudence, and diligence is of utmost importance when acting on behalf of the Plan.
- The Board shall diversify the Plan's investments 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. The diversification of the Plan's portfolio is displayed in the tables and graphs included in the following pages.

The Plan's assets are exclusively managed by external, professional investment management firms. The Board closely monitors the performance of the managers with the assistance of an external investment consultant.

Summary of Investment Objectives

Summary of Investment Objectives

The Plan's primary objective is to efficiently allocate and manage the assets dedicated to the payment of retirement and disability benefits. While recognizing the importance of "preservation of capital," the Plan also adheres to the principle that varying degrees of investment risk are generally rewarded with compensating returns in the long run.

To accomplish its investment objectives, the Plan has established a series of procedures and guidelines. The procedures, grouped together as the Investment Policy, serve to guide the Plan's investment program. The procedures also help to define the responsibilities of the Board members as they relate to the investment process.

The policy drives the investment actions of the Plan. This policy considers various mixes of different investment asset class risk and return expectations for each mixed-class portfolio current and projected plan liabilities. The policy places responsibility for proxy voting with its equity investment managers.

The Investment Results on page 68 are based on time-weighted rate of return using fair value and are annualized for three and five years. All other information is reported at fair value.

Target and Actual Asset Allocations

The Board reviews the Plan's investment results each quarter. Periodically, the Board reviews the asset allocation, taking into consideration the latest actuarial study. Based on this review, the Board adopts an asset allocation mix with the goal of helping the Plan achieve a fully funded status. Each asset class has a target allocation. The Plan treats these targets as long-term funding objectives. Adhering to these targets allows the Plan to keep investment risk at a manageable level and minimizes investment costs.

One keystone of asset allocation is diversification among asset classes. Diversification helps to maintain risk at a tolerable level. Therefore, the Board reviews the investment performance and volatility of each asset class on a regular basis over various time periods (quarterly, annually, multi-years) to ensure that the current allocation continues to meet the Plan's needs.

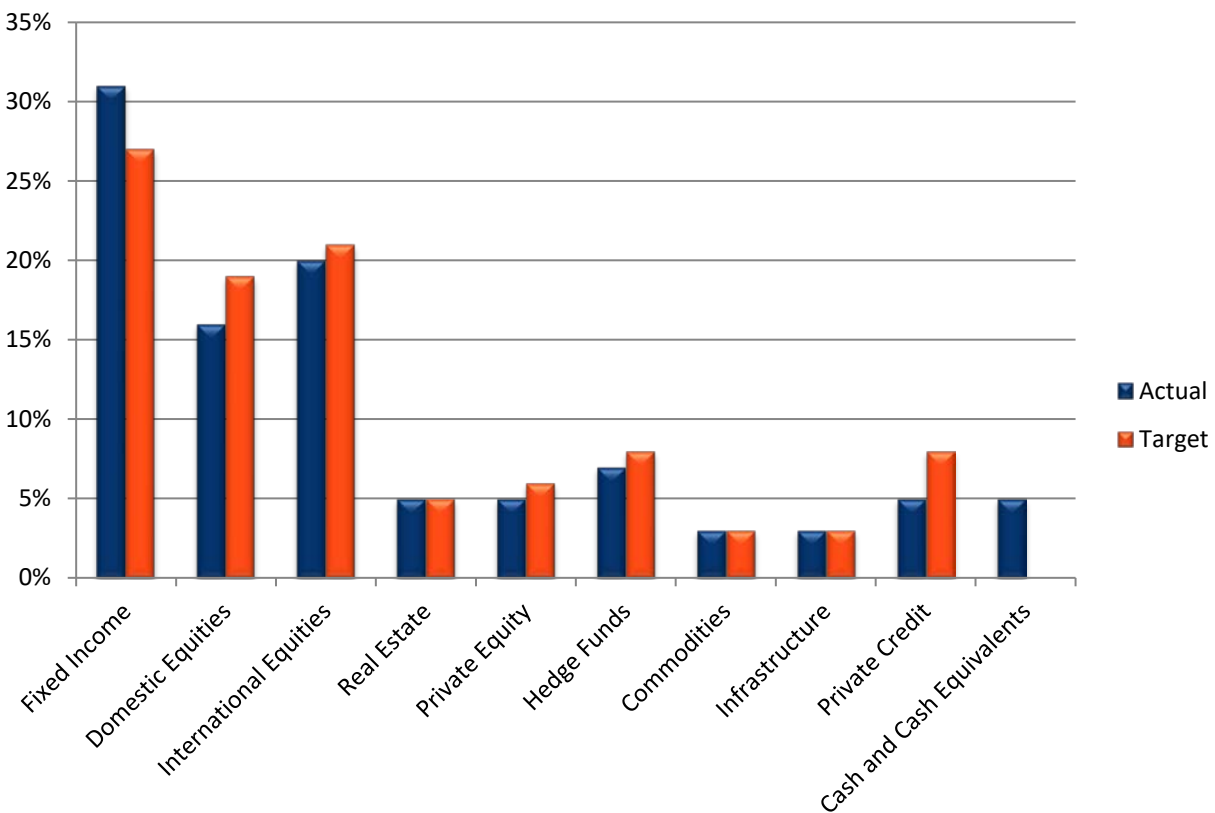
Over time, the Board implements the asset allocation plan by hiring investment managers to invest assets on behalf of the Plan, subject to investment guidelines incorporated into each firm's investment management contract.

The information provided on subsequent pages is a representation of the Plan's financial statements. Individually, they may not tie to the investment consultant's report on pages 61 to 63 of this Comprehensive Annual Financial Report (CAFR) due to the different reporting methodologies used by the investment consultant and the Plan.

Target and Actual Asset Allocations continued

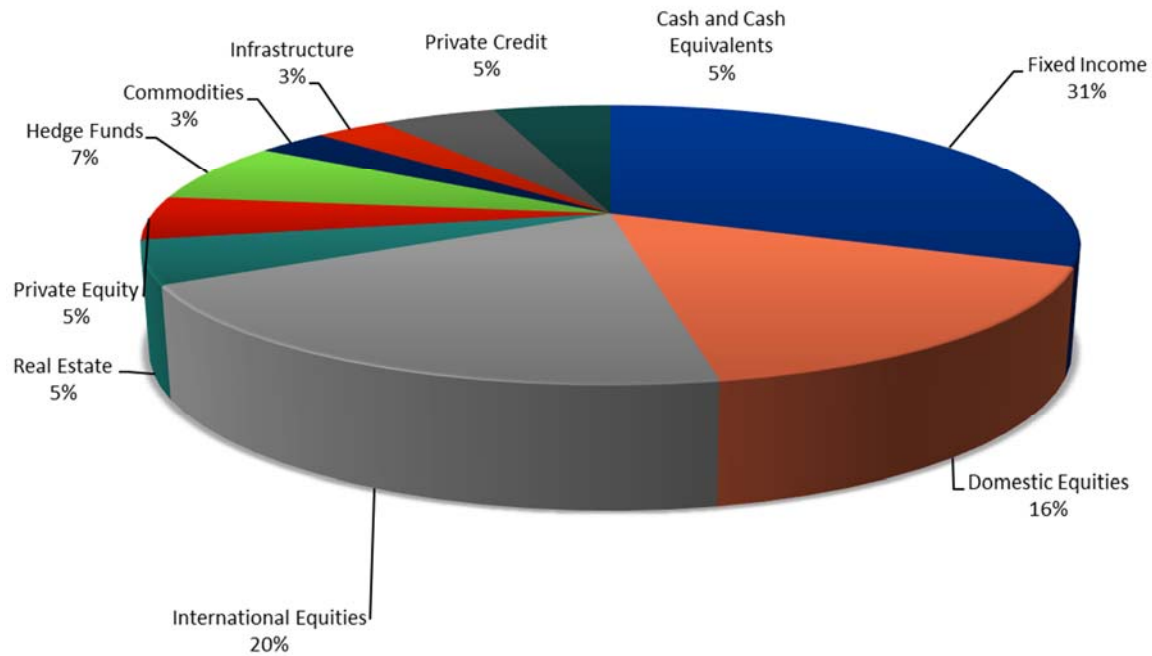
For example, the investment consultant reports cash held with investment managers as part of the investment manager's investment portfolio not as cash and cash equivalents as reported on the Investment Summary. Also, the target asset allocation calls for all cash requirements of the Plan to be classified as Fixed Income. However, the Plan's actual operating cash is reported separately in the Financial Statements and on the Investment Summary.

The fiscal year 2018 – 2019 target and actual asset allocations are presented in the following graphs and charts.

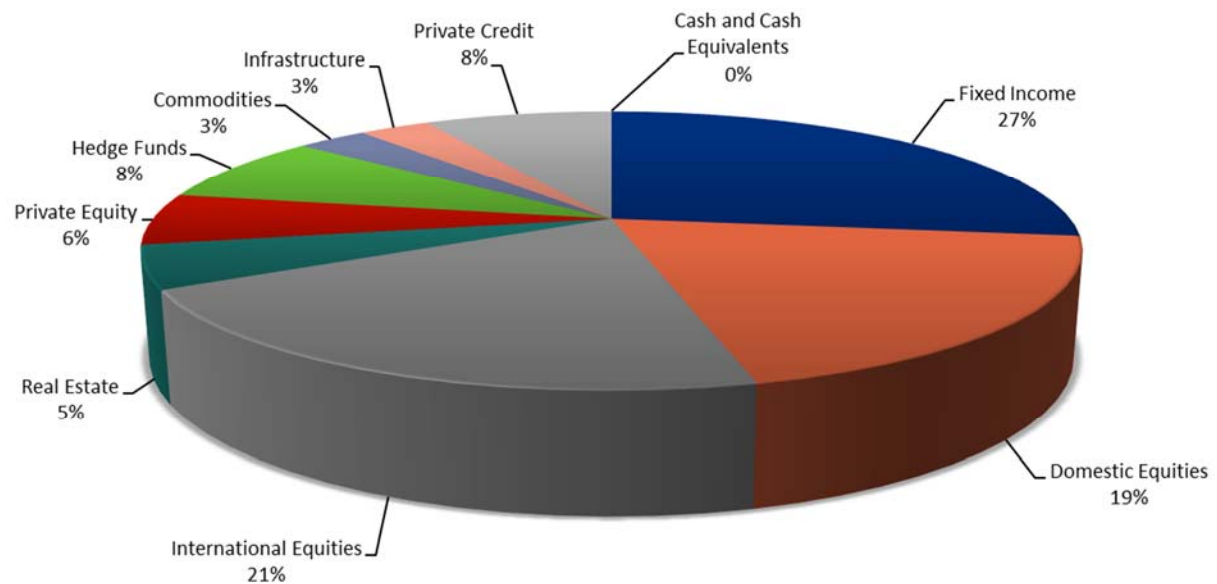


Target and Actual Asset Allocations continued

Actual Percentage



Target Percentage



Investment Results

Investment Results

As of June 30, 2019

Investments	Current Year	3-Year Return	5-Year Return	10-Year Return
Fixed Income				
Investment Grade Credit	11.50%	4.60%	0.00% ¹	0.00% ¹
Benchmark : BBgBarc US Credit TR	10.30%	3.70%	3.90%	5.80%
Access Capital	0.00%	0.00% ¹	0.00% ¹	0.00% ¹
Benchmark : BBgBarc US Securitized Index	6.30%	2.10%	2.60%	3.50%
Domestic High Yield	6.80%	6.60%	0.00% ¹	0.00% ¹
Benchmark : BBgBarc US High Yield TR	7.50%	7.50%	4.70%	9.20%
Domestic Senior Loan	2.90%	4.80%	0.00% ¹	0.00% ¹
Benchmark : Leveraged Loan Index	4.00%	5.20%	3.70%	6.20%
Eaton Vance Senior Loan Plus	3.70%	0.00% ¹	0.00% ¹	0.00% ¹
Leveraged Loan Index	4.00%	5.20%	3.70%	6.20%
TIPS Index Fund	4.80%	2.00%	1.70%	3.60%
Benchmark : BBgBarc US TIPS TR	4.80%	2.10%	1.80%	3.60%
Global Sovereign	4.40%	2.50%	0.00% ¹	0.00% ¹
Benchmark : Citi WGBI	5.50%	1.00%	0.80%	2.20%
Emerging Markets Debt	10.50%	4.80%	-0.40%	0.00% ¹
Benchmark : JP Morgan GBI EM Diversified	9.00%	4.20%	-0.50%	3.40%
Equities				
Domestic Large Capital Value	2.60%	10.60%	6.00%	12.50%
Benchmark: Russell 1000 Value	8.50%	10.20%	7.50%	13.20%
Domestic Small Capital	-4.10%	0.00% ¹	0.00% ¹	0.00% ¹
Benchmark: Russell 2000	-3.30%	12.30%	7.10%	13.40%
Domestic Large Capital	10.40%	14.20%	10.70%	14.70%
Benchmark: S&P 500 Index	10.40%	14.20%	10.70%	14.70%
Domestic Large Capital Growth	0.00%	0.00% ¹	0.00% ¹	0.00% ¹
Benchmark: Russell 1000 Growth	11.60%	18.10%	13.40%	16.30%
Emerging Markets Equity	4.90%	6.60%	0.20%	5.10%
Benchmark: MSCI Emerging Markets	1.20%	10.70%	2.50%	5.80%
International Emerging Markets Equity	0.00%	0.00% ¹	0.00% ¹	0.00% ¹
Benchmark: MSCI Emerging Markets	1.20%	10.70%	2.50%	5.80%
International Growth	10.30%	10.90%	4.00%	0.00% ¹
Benchmark: MSCI EAFE	1.10%	9.10%	2.20%	6.90%
International Equity	-2.20%	9.00%	1.40%	0.00% ¹
Benchmark : MSCI EAFE	1.10%	9.10%	2.20%	6.90%
International Equity Small Cap	-2.40%	9.10%	4.10%	0.00% ¹
Benchmark : S&P Developed ex U.S. SC	-5.70%	8.60%	3.90%	9.50%
Private Markets				
Real Estate	6.20%	7.00%	9.20%	9.00%
Benchmark : NCREIF ODCE	5.50%	6.60%	8.80%	8.90%
Infrastructure	16.30%	15.60%	0.00% ¹	0.00% ¹
Benchmark : NCREIF ODCE	5.50%	6.60%	8.80%	8.90%
Hedge Funds	1.10%	4.80%	2.40%	3.30%
Benchmark : HFRI FOF Composite Index	1.20%	4.20%	2.20%	3.20%
Private Equity	8.30%	12.20%	8.30%	12.50%
Benchmark : Russell 2000	2.00%	11.50%	6.60%	13.20%
Commodities	-8.00%	-2.00%	-5.80%	0.00% ¹
Benchmark : Bloomberg Commodity Index	-6.80%	-2.20%	-9.10%	-3.70%
Private Credit	5.50%	7.00%	4.30%	16.40%
Benchmark: BBgBarc US Corp High Yield	5.90%	6.60%	4.20%	9.00%
Cash, Custodial, and Investment Pool				
Cash	2.70%	1.30%	1.00%	0.80%
Benchmark: 91-Day Treasury Bill	2.30%	1.40%	0.90%	0.50%
Total Fund	5.60%	7.70%	4.50%	8.70%

Notes: Hedge Funds, Private Equity and Commodities are net of fees. Private Equity returns are lagged one quarter. Other investments are reported gross of fees. Investment results were prepared using a time-weighted rate of return based on the market rate of return.

¹ Domestic Fixed Income and Emerging Market Debt is incorporated under Global Fixed Income. Return data will be available for the 3, 5 and 10 year going forward. Private Equity and Private Credit return data for the 5 year results are not currently available due to a change in reporting software at June 30, 2016. Infrastructure was funded in May 2015.

Investment Summary

Investment Summary

As of June 30, 2019

(Dollars in Thousands)

Investments	Fair Value	Actual Percentages ²	Target Percentages
Fixed Income			
Domestic Fixed Income	\$ 654,475	13.28%	16.00%
Foreign Fixed Income	439,814	8.92%	11.00%
U.S. Government and Agencies ¹	428,976	8.70%	0.00%
Total Fixed Income	1,523,265	30.90%	27.00%
Equities			
Domestic Equities	771,334	15.65%	19.00%
International Equities	1,012,181	20.53%	21.00%
Real Estate Investment Trusts	10,172	0.21%	0.00%
Total Equities	1,793,687	36.39%	40.00%
Private Markets and Alternatives			
Real Estate	242,656	4.92%	5.00%
Private Equity	226,899	4.60%	6.00%
Hedge Funds	336,514	6.83%	8.00%
Commodities	127,495	2.59%	3.00%
Infrastructure	153,619	3.12%	3.00%
Private Credit	251,870	5.11%	8.00%
Total Private Markets and Alternatives	1,339,053	27.16%	33.00%
Derivatives	5,974	0.12%	0.00%
Total Investments	4,661,979	94.58%	100.00%
Cash and Cash Equivalents			
Cash Held in County Investment Pool	28,051	0.57%	0.00%
Short - Term Investment with Fiscal Agent	239,362	4.86%	0.00%
Total Cash and Cash Equivalents	267,413	5.42%	0.00%
Total Investments, Cash and Cash Equivalent	\$ 4,929,392	100.00%	100.00%

¹ Includes TIPS.

² Amounts may not equal 100% due to rounding.

Largest Fixed Income and Equity Holdings

Largest Fixed Income Holdings (By Fair Value)

As of June 30, 2019

Par	Name	Yield	Maturity Date	Fair Value
\$ 844	FUT SEP 19 CBT 5Y T-NOTE	-0.6800	09/30/2019	\$ 99,723,875
37,785,000	WI UNITED STATES TREAS NTS FLTG RT	2.2370	04/30/2021	37,754,923
316	FUT SEP 19 CBT 5Y T-NOTE	N/A	09/30/2019	37,337,375
189	FUT SEP 19 CBT 5Y T-NOTE	N/A	10/01/2019	22,331,531
98	FUT SEP 19 US 2YR T-NOTE	-0.6700	09/30/2019	21,087,609
135	FUT SEP 19 US T-BONDS	N/A	09/19/2019	21,005,156
18,665,000	UNITED STATES TREAS BDS TBOND FIXED	2.7320	02/15/2049	20,499,415
156	FUT SEP 19 10 YR T-NOTES	N/A	09/19/2019	19,963,125
1,567,391	MFO PIMCO PAPS ASSET BACKED SECURITIES	3.9670	N/A	19,952,886
18,945,000	WI TREASURY SEC TREAS NTS FLTG	2.2130	01/31/2021	18,927,665
\$ 76,964,129	Total			\$ 318,583,560

Largest Equity Holdings (By Fair Value)

As of June 30, 2019

Shares	Name	Fair Value
16,963	AMAZON.COM INC	\$ 32,121,646
107,851	LINDE PLC	21,696,280
161,700	MICROSOFT CORP	21,661,332
106,369	FACEBOOK INC	20,529,217
132,811	DEUTSCHE BOERSE AG NPV (REGD)	18,814,899
17,122	ALPHABET INC	18,539,702
99,229	WIRECARD AG NPV	16,729,944
159,557	NESTLE SA CHF0.10(REGD)	16,538,288
44,646	BOEING CO	16,251,590
91,400	VISA INC	15,862,470
937,648	Total	\$ 198,745,368

A complete list of portfolio holdings is available upon request.

List of Investment Managers

Domestic Bonds

Eaton Vance
Loomis Sayles
RBC Access Capital
State Street TIPS Index Fund
Western Asset Management Company

Global Bonds

Brandywine
Pimco EMD

Domestic Stocks

Aronson, Johnson & Ortiz, L.P.
PIMCO Stocks Plus
State Street Global Advisors
T. Rowe Price US Large Cap

International Stocks

Artisan Partners International
Baillie Gifford
Mondrian Investment Partners
Research Affiliates

Private Credit

AlpInvest FC Credit Partners VII
Angelo Gordon VII
Carlyle CPC V, L.P.
Carlyle TCG BDC II
Colony Distressed Credit I, L.P.
Colony Distressed Credit III, L.P.
CVI Credit Value Fund III
EQT Credit Opportunities III
GSO European Senior Debt Fund, L.P.
KKR Mezzanine Partners
Lone Star Fund IV
Oaktree Opportunities IX, L.P.
OHA Strategic Credit Fund II
TCW Shop III
TSSP Adjacent Opportunities

Private Equity

Avista Capital IV
Blackstone IV
Hamilton Lane Advisors LLC
Hamilton Lane VI
Hamilton Lane IX
Hamilton Lane Secondary IV
H.I.G. Growth Buyouts & Equity III
Horsley Bridge XI
K4 Private Investors L.P.
Kelso Investment Associates X, L.P.
Landmark Equity, XIV, L.P.
New Mountain Partners III
Platinum Equity Small Cap
SK Capital Partners V-A, L.P.
Thomas H. Lee Equity Fund VIII
WP Equity Partners, L.P.
WP Private Equity VIII, L.P.
WP Private Equity X, L.P.
WP Private Equity, XII L.P.

Real Estate Investments

FCERA Realty Group, LLC
Gerding Edlen Green Cities III, L.P.
Invesco Core Real Estate
Invesco US Value-Add Fund V, L.P.
Kennedy Wilson Real Estate Fund V, L.P.
Kennedy Wilson Real Estate Fund VI, L.P.
TA Realty Associates IX

Infrastructure

IFM Global Infrastructure

Hedge Fund

GCM Better Futures Fund
Grosvenor Capital Management

Commodities

Invesco Commodity Trust

Cash Overlay

Parametric

Schedule of Fees

Schedule of Fees

For the Fiscal Year Ended June 30, 2019, with Comparative Totals

	2019	2018
Investment Managers' Fees		
Domestic Equity Managers:		
Pimco Stocks Plus Small AR	\$ 353,401	\$ 129,617
State Street Global Advisors	51,395	49,504
Systematic Financial Management	143,053	331,622
T. Rowe Price US Large Cap	295,855	-
Waddell & Reed Investment Management	230,821	692,325
Total Domestic Equity Managers	1,074,525	1,203,068
International Equity Managers:		
Artisan International	990,921	690,366
Baillie Gifford	765,910	-
Mondrian Investment Partners	2,285,415	3,018,240
Research Affiliates	271,945	460,663
Total International Equity Managers	4,314,190	4,169,269
Domestic Fixed Income Managers:		
Barclays U.S. AGG Bond	-	1,594
Brandywine Global	266,595	384,282
Eaton Vance	1,553,864	1,599,112
Loomis Sayles	778,716	755,145
Pimco EMD	993,649	1,069,787
RBC Access Capital	100,468	-
State Street TIPS Index Fund	70,689	67,637
Western Asset Management Company	611,276	657,090
Total Domestic Fixed Income Managers	4,375,256	4,534,647
Private Market Managers:		
Private Equity	2,849,670	3,604,632
Real Estate	2,573,860	2,192,949
Hedge Funds	5,256,361	4,411,209
Commodities	816,182	1,125,879
Infrastructure	1,108,772	1,296,422
Private Credit	4,663,997	2,782,055
Total Private Market Managers	17,268,841	15,413,146
Total Investment Managers' Fees	27,032,812	25,320,130
Cash Overlay Manager:		
Parametric	197,995	230,675
Total Cash Overlay Managers	197,995	230,675
Other Investment Expenses		
Securities Lending Management Fees & Rebates	568,773	342,345
Due Diligence Travel	7,887	5,715
Custodian Service Fees	118,000	118,050
Actuarial Valuation Fees	113,000	68,000
Consulting and Legal Fees	487,684	679,195
Total Other Investment Expenses	\$ 1,295,344	\$ 1,213,305

Schedule of Commissions

Schedule of Commissions

As of June 30, 2019

Brokerage Firm	Rank	Number of Shares Traded	Total Commissions	Commissions Per Share	Percentage of Commissions
J.P. MORGAN SECURITIES PLC	1	32,093,743,000	\$ 38,638	\$ 0.00000	7.73%
MORGAN STANLEY AND CO., LLC	2	6,409,273,671.92	38,525	0.00001	7.71%
MERRILL LYNCH INTERNATIONAL LIMITED	3	17,424,991,727.00	23,982	0.00000	4.80%
INSTINET INVESTMENT SERVICES LIMITED	4	2,891,810.00	22,770	0.00787	4.55%
INVESTMENT TECHNOLOGY GROUP INC.	5	1,736,753.00	17,964	0.01034	3.60%
NATIONAL FINANCIAL SERVICES LLC	6	3,343,659.00	16,880	0.00505	3.38%
BANK OF AMERICA CORPORATION	7	10,827,206.00	15,437	0.00143	3.09%
PERSHING SECURITIES LIMITED	8	2,317,864.00	14,868	0.00641	2.98%
HSBC SECURITIES (USA) INC.	9	23,442,883,369.00	14,473	0.00000	2.90%
GOLDMAN, SACHS AND CO.	10	40,029,350,149.40	13,799	0.00000	2.76%
LIQUIDNET INC	11	987,215.00	13,680	0.01386	2.74%
PENSERRASECURITIES	12	2,625,185.00	13,167	0.00502	2.64%
COWEN AND COMPANY LLC	13	427,895.00	12,837	0.03000	2.57%
SOCIETE GENERALE LONDON BRANCH	14	653,823.00	12,414	0.01899	2.48%
HSBC BANK PLC	15	341,479,590.00	11,965	0.00004	2.39%
MACQUARIE BANK LIMITED	16	4,123,464.00	11,427	0.00277	2.29%
CREDIT SUISSE SECURITIES(EUROPE)LTD	17	16,429,816.00	11,297	0.00069	2.26%
J.P. MORGAN SECURITIES LLC	18	42,875,777.00	10,964	0.00026	2.19%
DEUTSCHE BANK SECURITITES	19	1,927,974.00	7,810	0.00405	1.56%
INSTINET EUROPE LIMITED	20	1,214,403	7,532	0.00620	1.51%
Top 20 Firms by Commission Dollars		119,834,104,351	\$ 330,429	\$ 0.11297	66.13%
All other Brokerage Firms		599,687,491,651	169,201	0.00000	33.87%
Total Brokerage Commissions		719,521,596,002	\$ 499,630	\$ 0.11297	100.00%



Actuarial Section



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June 18, 2019

Board of Retirement
Fresno County Employees' Retirement Association
7772 N Palm Ave
Fresno, CA 93711

**Re: June 30, 2018 Actuarial Valuation for the Fresno County Employees'
Retirement Association**

Dear Members of the Board:

Segal Consulting (Segal) prepared the June 30, 2018 actuarial valuation of the Fresno County Employees' Retirement Association (FCERA) for funding purposes. We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices and FCERA's funding policy that was originally approved by the Board in 2015 and reaffirmed by the Board in 2017. In particular, it is our understanding that the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice (ASOPs).

Actuarial valuations are performed on an annual basis with the last valuation completed as of June 30, 2018. The actuarial calculations presented in the valuation report have been made on a basis consistent with our understanding of the historical funding methods used in determination of the liability for statutory retirement benefits.

The June 30, 2018 actuarial valuation is based on the plan of benefits verified by FCERA and on participant and financial data provided by FCERA. Segal conducted an examination of these data elements and found them to be reasonably consistent and comparable with data used for other purposes. However, the scope of this examination does not qualify as an audit. Summaries of the employee data used in performing the actuarial valuations over the past several years are provided in our valuation report.

We did not audit the Association's financial statements. For actuarial valuation purposes, Retirement Plan assets are valued at actuarial value. Under this method, the assets used to determine employer contribution rates take into account market value by recognizing the differences between the total return at market value and the expected investment return over a five-year period. The deferred gains and losses are further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets.

One of the general goals of an actuarial valuation is to establish contribution rates, which, over time, will remain level as a percentage of payroll unless Plan benefit provisions are changed. Actuarial funding is based on the Entry Age Cost Method. Under this method, the employer contribution rate provides for current cost (Normal Cost) plus a level percentage of payroll to amortize any unfunded actuarial accrued liability (UAAL). The UAAL is amortized as a level percentage of payroll over a declining period with 15 years remaining for the outstanding balance of the UAAL established as of the June 30, 2003 valuation and a separate 15-year period is used for new UAAL established on each subsequent valuation as a result of actuarial gains/losses or changes in actuarial assumptions. Any increase in UAAL due to new benefit improvements is also amortized over 15 years. The progress being made towards meeting the funding objective through June 30, 2018 is illustrated in the Schedule of Funding Progress.

Note number 2 to the Financial Statements and the Required Supplemental Information (RSI) included in the Financial Section were prepared by the Association based on the results of the Governmental Accounting Standards (GAS) Statement No. 67 actuarial valuation as of June 30, 2018 prepared by Segal. For the Financial Section of the Comprehensive Annual Financial Report, Segal provided the Schedule of Change in Net Pension Liability and Schedule of Employer Contributions as shown in the RSI. A listing of supporting schedules Segal prepared for inclusion in the Actuarial and Statistical Sections of the Association's CAFR is provided below. These schedules were prepared based on the results of the actuarial valuation as of June 30, 2018 for funding purposes.

1. Schedule of Funded Liabilities by Type;
2. Actuarial Analysis of Financial Experience;
3. Schedule of Funding Progress;
4. Average Benefit Payments; and
5. Years of Life Expectancy after Service and Disability Retirement.

The valuation assumptions included in the Actuarial Section were adopted by the Retirement Board based on the June 30, 2015 Experience Analysis or in conjunction with the June 30, 2016 actuarial valuation. Note that the investment return assumption was developed without taking into consideration the impact of the Board's policy of utilizing excess earnings to provide contribution offsets and additional settlement and non-statutory benefits.¹ It is our opinion that the assumptions used in the June 30, 2018 valuation produce results, which, in aggregate, reflect the future experience of the Plan. An experience analysis is performed every

¹ Under the Board's interest crediting policy, the balance of \$1,012.4 million (negative) in the Contra Tracking Account has to be fully restored before any excess earnings can be utilized in the future to provide any of the above offsets and benefits.

three years and the next experience analysis is due to be performed as of June 30, 2018 and any changes in assumptions that result will be reflected in the June 30, 2019 valuation.

In the June 30, 2018 valuation, the ratio of the valuation assets to actuarial accrued liabilities (funded percentage) increased from 80.3% to 81.5%. The aggregate employer rate has increased from 55.10% of payroll to 55.81% of payroll before reflecting the three-year phase-in as discussed below (to the 55.10% rate determined in the June 30, 2017 valuation), while the aggregate member rate has decreased from 9.34% to 9.31% of payroll.

In 2016, the Board approved a three-year phase-in of the employer cost impact due to the changes in actuarial assumptions in the June 30, 2016 valuation. For the June 30, 2018 valuation, the phase-in has been completed.

Under the actuarial value of assets method, the total unrecognized investment losses as of June 30, 2018 are \$103.1 million. These investment losses will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, and will offset any investment gains that may occur after June 30, 2018. If the Association earns the assumed net rate of investment return of 7.00% per year on a market value basis, that will result in investment losses on the valuation value of assets in the next few years. This means that, if the actual market return is equal to the assumed 7.00% rate and all other actuarial assumptions are met, the contribution requirements would increase in the next few years.

The current unrecognized investment losses represent about 2.2% of the market value of assets. Unless offset by future investments gains or other favorable experience, the recognition of the \$103.1 million in past market losses is expected to have an impact on the Association's future funded ratio and the aggregate employer contributions. This potential impact may be illustrated as follows:

- If the deferred losses were recognized immediately in the valuation value of assets, the funded percentage would decrease from 81.5% to 79.7%.
- If the deferred losses were recognized immediately in the actuarial value of assets, the aggregate employer contribution rate would increase from 55.8% of payroll to 57.9% of payroll.

The undersigned are members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

Sincerely,



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



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

AW/gxk
Enclosures

Summary of Actuarial Assumptions and Methods

The Entry Age Normal Actuarial Cost Method was used in conjunction with the following actuarial assumptions. The Unfunded Actuarial Accrued Liability (UAAL) established as of the June 30, 2003 valuation is being amortized over a declining 30-year period with 15 years remaining as of June 30, 2018. Any new UAAL established on each subsequent valuation after June 30, 2003, as a result of actuarial gains or losses and changes in actuarial assumptions is amortized over a separate 15-year declining period. The increase in UAAL due to benefit improvements is amortized over 30 years for periods ending through June 30, 2010, and is 15 years for all periods thereafter. The following interest rate assumptions along with the post retirement and pre-retirement demographic experiences are based on the plan's actuarial valuation as of June 30, 2018, which determines the employer and membership contribution rates. The actuarial valuation report as of June 30, 2018, was approved and adopted by the Fresno County Employees' Retirement Association (FCERA) Board of Retirement (the Board) on December 19, 2018.

- | | | |
|----|--|--|
| 1. | Investment Rate of Return | 7.00% per annum |
| 2. | Interest Credited to Employee Accounts | Nominal rate of 3.00% per annum, compounded semiannually |
| 3. | Inflation | 3.00% per annum |
| 4. | Salary Scale: | |
| | • General Members | Salary increases range from 4.50% to 11.50% based on years of service (merit ranges from 1.00% to 8.00%; plus 3.00% inflation plus 0.50% "across the board" salary increase) |
| | • Safety Members | Salary increases range from 4.90% to 11.50% based on years of service (merit ranges from 1.40% to 8.00%; plus 3.00% inflation plus 0.50% "across the board" salary increase) |
| 5. | Asset Valuation | Smoothed market value |
| 6. | Spouses and Dependents | 75% of male active members and 50% of female active members assumed married at retirement, with wives assumed three years younger than husbands |
| 7. | Rates of Termination of Employment | 0.00% to 17.00%, depending on age, gender, and service classification |
| 8. | Years of Life Expectancy After Retirement: | |
| | • General Members | RP-2014 Healthy Annuitant Mortality Table with two-dimensional scale MP2015D set forward one year for females |

Summary of Actuarial Assumptions and Methods continued

	<ul style="list-style-type: none"> Safety Members 	RP-2014 Healthy Annuitant Mortality Table with two-dimensional scale MP2015D set back two years
9.	Years of Life Expectancy After Disability	RP-2014 Healthy Annuitant Mortality Table with two-dimensional scale MP2015D set forward eight years for General members, and forward seven years for Safety members
10.	Life Expectancy After Retirement for Employee Contribution Rate Purposes:	
	<ul style="list-style-type: none"> General Members 	RP-2014 Healthy Annuitant Mortality Table with two-dimensional scale MP2015D, set forward one year for females, weighted 35% male and 65% female for members and 65% male and 35% female for beneficiaries
	<ul style="list-style-type: none"> Safety Member 	RP-2014 Healthy Annuitant Mortality Table with two-dimensional scale MP2015D, set back two years weighted 80% male and 20% female
11.	Reciprocity Assumption	20% of General and 30% of Safety members who terminate with less than 5 years of service and 35% of General and 55% of Safety members who terminate with 5 or more years of service are assumed to enter a reciprocal system
12.	Vested Terminations	Varies by age and years of service
13.	Service and Disability Retirements	Varies by tier of membership and by age
14.	Gains & Losses	16 years (declining) for UAAL established as of June 30, 2003 plus 15 years (declining) for UAAL and change in actuarial assumptions established on each subsequent valuation. The increase in UAAL due to benefit improvements is amortized over 30 years for periods ended June 30, 2010 and 15 years for all periods thereafter

Note: Information compiled from Actuarial Report prepared by Segal Consulting as of June 30, 2018. Please refer to page 51 for the latest GASB 67 Valuation Assumptions and page 54 for the latest actuarial valuation methods applied during this fiscal period, July 1, 2018 to June 30, 2019.

Active Member Data

Schedule of Active Member Valuation Data

Valuation Date	Plan Type	Number	Annual Payroll (in thousands)	Average Monthly Salary	% Increase in Average Salary
6/30/2018	General	6,520	\$ 360,143	4,603	2.8%
	Safety	938	71,536	6,355	3.0%
	Total	7,458	\$ 431,679	4,823	2.8%
6/30/2017	General	6,421	\$ 344,809	4,475	1.9%
	Safety	932	68,951	6,165	2.0%
	Total	7,353	\$ 413,760	4,689	2.0%
6/30/2016	General	6,377	\$ 335,815	4,388	0.5%
	Safety	920	66,719	6,043	0.0%
	Total	7,297	\$ 402,534	4,597	0.6%
6/30/2015	General	6,159	\$ 322,735	4,367	2.7%
	Safety	842	61,040	6,041	-0.6%
	Total	7,001	\$ 383,775	4,568	2.1%
6/30/2014	General	6,130	\$ 312,663	4,250	-0.8%
	Safety	838	61,111	6,077	1.6%
	Total	6,968	\$ 373,774	4,470	-0.5%
6/30/2013 ²	General	6,020	\$ 309,356	4,282	-1.4%
	Safety	846	60,723	5,981	-4.3%
	Total	6,866	\$ 370,079	4,492	-1.6%
6/30/2012 ¹	General	5,900	\$ 307,416	4,342	-8.1%
	Safety	777	58,180	6,240	-6.8%
	Total	6,677	\$ 365,596	4,563	-7.2%
6/30/2011	General	5,996	\$ 337,646	4,693	0.8%
	Safety	767	61,330	6,663	-1.8%
	Total	6,763	\$ 398,976	4,916	0.2%
6/30/2010	General	6,134	\$ 342,741	4,656	3.1%
	Safety	812	66,120	6,786	4.6%
	Total	6,946	\$ 408,861	4,905	3.2%
6/30/2009	General	6,489	\$ 351,233	4,511	3.1%
	Safety	918	71,286	6,471	8.0%
	Total	7,407	\$ 422,519	4,754	4.1%

¹ New benefit tier effective June 2012.

² New benefit tier effective January 2013.

Please see Note 1 Description of the Plan-Benefit Provisions pages 27 to 29.

Source: Segal Consulting Actuarial Valuation Reports dated June 30, 2009 through 2018.

Retiree Payroll & Funding Progress

Schedule of Retirants and Beneficiaries Added to and Removed From Retiree Payroll

(Dollars in Thousands)

Fiscal Year	Number at Beginning of Fiscal Year	Number Added to Payroll	Allowances Added	Number Removed From Payroll	Allowances Removed	Number at End of Fiscal Year	Annual Allowance (in thousands)	Percent Increase in Annual Allowance	Average Annual Allowance (in thousands)	Percent Increase/ (Decrease) in Average Annual Allowance
2018-19	7,448	397	\$7,043	189	\$2,821	7,656	\$277,292	6.32%	36	3.43%
2017-18	7,240	399	8,219	191	2,835	7,448	260,806	5.74%	35	2.79%
2016-17	7,035	373	7,394	168	2,213	7,240	246,649	3.66%	34	0.72%
2015-16	6,843	339	7,606	147	2,064	7,035	237,950	3.88%	34	1.05%
2014-15	6,626	367	7,972	150	1,871	6,843	229,053	3.11%	33	-0.16%
2013-14	6,403	368	7,584	145	1,885	6,626	222,155	5.46%	34	1.91%
2012-13	6,148	397	8,249	142	2,132	6,403	210,654	8.97%	33	4.63%
2011-12	5,769	525 ¹	10,794	146	2,033	6,148	193,320	7.36%	31	0.74%
2010-11	5,509	414	9,022	154	1,827	5,769	180,063	6.33%	31	1.54%
2009-10	5,283	378	8,182	152	1,356	5,509	169,338	9.40%	31	4.91%

¹ Number Added to Payroll in Year 2011-12 has been revised to tie to the Number at End of Fiscal Year and to reconcile with the Schedule of Membership reported in the Notes to the Financial Section in the 2011-2012 CAFR.

Source: Schedule provided by FCERA.

Schedule of Funding Progress

(Dollars in Thousands)

Actuarial Valuation Date	Valuation Value of Assets (VVA) (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c) ⁽¹⁾	UAAL as a Percentage of Covered Payroll [(b) - (a)]/(c)
2017-18	\$ 4,802,958	\$ 5,893,909	\$ 1,090,951	81.5%	\$ 431,678	252.7%
2016-17	4,529,508	5,643,444	1,113,936	80.3%	413,760	269.2%
2015-16	4,278,001	5,472,149	1,194,148	78.2%	402,535	296.7%
2014-15	4,092,647	5,074,333	981,686	80.7%	383,775	255.8%
2013-14	3,824,221	4,876,754	1,052,533	78.4%	373,774	281.6%
2012-13	3,518,982	4,694,780	1,175,798	75.0%	370,079	317.7%
2011-12	3,305,045	4,345,402	1,040,357	76.1%	365,596	284.6%
2010-11	3,114,483	4,237,961	1,123,478	73.5%	398,976	281.6%
2009-10	2,983,044	4,092,464	1,109,420	72.9%	408,861	271.3%
2008-09	2,864,956	3,644,743	779,787	78.6%	422,519	184.6%

Source: Schedule provided by Segal Consulting.

¹ Covered payroll represents compensation earnable and pensionable compensation. Only compensation earnable and pensionable compensation that would possibly go into the determination of retirement benefits are included.

Actuarial Analysis

Schedule of Analysis of Financial Experience

(Dollars in Thousands)

Changes to UAAL	2018
1 Unfunded actuarial accrued liability at beginning of year	\$ 1,113,936
2 Total Normal Cost payable at middle of year ⁽¹⁾	111,958
3 Expected administrative expenses	4,550
4 Expected employer and member contributions ⁽²⁾	(270,584)
5 Interest (full year on (1) plus half year on (2)+(3)+(4))	74,352
6 Expected unfunded actuarial accrued liability at end of year	1,034,212
7 Actuarial (gain)/loss due to all changes: <u>Experience (gain)/loss</u>	
a. Loss from investment return on valuation value of assets (6.49%) less than assumed	23,013
b. Loss from actual contributions less than expected ⁽³⁾	22,325
c. Gain from lower than expected salary increases	(3,346)
d. Other experience losses	14,747
e. Subtotal	56,739
Actual unfunded actuarial accrued liability at end of year (6) + (7e)	\$ 1,090,951

⁽¹⁾ Excludes administrative expense load.

⁽²⁾ Includes contributions toward administrative expenses.

⁽³⁾ Primarily as a result of the first year of the three-year phase-in of the contribution rate impact of the assumption changes determined in the June 30, 2016 valuation, as paid in 2017-2018.

Changes to UAAL	2017
1 Unfunded actuarial accrued liability at beginning of year	\$ 1,194,148
2 Total Normal Cost payable at middle of year ⁽¹⁾	112,990
3 Expected administrative expenses	4,426
4 Expected employer and member contributions ⁽²⁾	(267,118)
5 Interest (full year on (1) plus half year on (2)+(3)+(4))	79,069
6 Expected unfunded actuarial accrued liability at end of year	1,123,515
7 Actuarial (gain)/loss due to all changes: <u>Experience (gain)/loss</u>	
a. Loss from investment return on valuation value of assets (6.36%)	27,432
b. Loss from actual contributions less than expected ⁽³⁾	33,501
c. Gain from lower than expected salary increases	(16,634)
d. Gain from lower than expected COLA increases	(45,521)
e. Other experience gains	(8,357)
f. Subtotal	(9,579)
Actual unfunded actuarial accrued liability at end of year (6) + (7f)	\$ 1,113,936

⁽¹⁾ Excludes administrative expense load.

⁽²⁾ Includes contributions toward administrative expenses.

⁽³⁾ Contribution loss from one-year delay in implementing higher contribution rates recommended in June 30, 2016 valuation.

Source: Information for 2017 and 2018 schedules provided by Actuary, Segal Consulting.

Funded Liabilities by Type

Schedule of Funded Liabilities by Type

(Dollars in Thousands)

Valuation Date	Actuarial Accrued Liabilities (AAL) for				Portion of Accrued Liabilities Covered by Reported Assets		
	(1) Active Member Contributions ^(a)	(2) Vested, Retirants and Beneficiaries	(3) Active Members Employer Financed	Valuation Value of Assets (VVA)	(1) Active Member Contributions	(2) Vested, Retirants and Beneficiaries	(3) Active Members Employer Financed
June 30, 2018	\$ 460,384	\$ 3,992,258	\$ 1,441,267	\$ 4,802,958	100%	100%	24%
June 30, 2017	460,664	3,764,617	1,418,163	4,529,508	100%	100%	21%
June 30, 2016	444,552	3,609,392	1,418,205	4,278,001	100%	100%	16%
June 30, 2015	427,130	3,347,346	1,299,857	4,092,647	100%	100%	24%
June 30, 2014	412,209	3,142,414	1,322,131	3,824,221	100%	100%	20%
June 30, 2013	398,888	2,961,186	1,334,706	3,518,982	100%	100%	12%
June 30, 2012	385,537	2,731,606	1,228,259	3,305,045	100%	100%	15%
June 30, 2011	379,029	2,486,960	1,371,972	3,114,483	100%	100%	18%
June 30, 2010	370,623	2,365,220	1,356,621	2,983,044	100%	100%	18%
June 30, 2009	356,159	2,055,024	1,233,560	2,864,956	100%	100%	37%

(a) Equal to the total balance (in market value) of the reserve account maintained for member contributions.

Source: Information provided by Segal Consulting.

Probability of Occurrence

Probabilities of Separation from Active Service

(Current Assumptions)

Age	Total Terminations	Ordinary Death ¹	Total Disability ²
General Members – Male			
20	0.05750	0.00000	0.00010
30	0.05300	0.00030	0.00020
40	0.03920	0.00040	0.00120
50	0.03440	0.00110	0.00250
60	0.03100	0.00350	0.00680
General Members – Female			
20	0.05750	0.00000	0.00010
30	0.05300	0.00020	0.00020
40	0.03920	0.00030	0.00100
50	0.03440	0.00080	0.00170
60	0.03100	0.00190	0.00330
Safety Members – Male			
20	0.03500	0.00000	0.00050
30	0.02900	0.00030	0.00240
40	0.01850	0.00040	0.00560
50	0.01500	0.00110	0.00760
60	0.00600	0.00350	0.03200
Safety Members – Female			
20	0.03500	0.00000	0.00050
30	0.02900	0.00020	0.00240
40	0.01850	0.00030	0.00560
50	0.01500	0.00080	0.00760
60	0.00600	0.00190	0.03200

¹ All pre-retirement deaths are assumed to be non-service connected.

² 50% of General disabilities are assumed to be duty disabilities. The other 50% are assumed to be ordinary disabilities. 100% of Safety disabilities are assumed to be duty disabilities.

Note: Information compiled from Actuarial Report prepared by Segal Consulting dated June 30, 2018. Assumptions for separation from active service are based on combined tiers with the exception of service retirement.

Probability of Occurrence continued

Probabilities of Separation from Active Service

(Current assumptions)

Age	Service Retirement
General Tier 1 - Male	
50	0.05000
55	0.08000
60	0.25000
65	0.45000
70	0.50000
General Tier 1 - Female	
50	0.04000
55	0.09000
60	0.20000
65	0.35000
70	0.50000
General Tier 2 - Male and Female	
50	0.03000
55	0.08400
60	0.15000
65	0.35000
70	0.70000
General Tier 3 - Male and Female	
50	0.02400
55	0.06700
60	0.15400
65	0.34600
70	0.60000
General Tier 4 - Male and Female	
50	0.02000
55	0.04000
60	0.09000
65	0.23000
70	0.60000
General Tier 5 - Male and Female	
50	0.00000
55	0.03500
60	0.08500
65	0.22000
70	0.60000
Safety Tiers 1 and 2 - Male and Female	
50	0.05000
55	0.40000
60	0.40000
65	1.00000
Safety Tiers 4 and 5 - Male and Female	
50	0.04000
55	0.20000
60	0.45000
65	1.00000

Note: Information compiled from Actuarial Report prepared by Segal Consulting dated June 30, 2018. Assumptions for separation from active service are based on combined tiers with the exception of service retirement.

Proportions of Withdrawals from Active Service

Proportion of Withdrawals from Active Service

(Current assumptions)

Years of Service	Refunds	Deferred Vested
0	60.00%	40.00%
1	60.00%	40.00%
2	60.00%	40.00%
3	60.00%	40.00%
4	60.00%	40.00%
5	30.00%	70.00%
6	30.00%	70.00%
7	30.00%	70.00%
8	30.00%	70.00%
9	30.00%	70.00%
10	25.00%	75.00%
11	25.00%	75.00%
12	25.00%	75.00%
13	25.00%	75.00%
14	25.00%	75.00%
15	15.00%	85.00%
16	15.00%	85.00%
17	15.00%	85.00%
18	15.00%	85.00%
19	15.00%	85.00%
20 or more	10.00%	90.00%

Note: Probability of refunds by age are not available. Refunds are more closely associated with years of service. Information compiled from Actuarial Report prepared by Segal Consulting dated June 30, 2018.

Years of Life Expectancy after Service Retirement

Years of Life Expectancy after Service Retirement

(Current Assumptions)

Age	Years of Life Expectancy
General Members - Male	
50	33.10
60	24.60
70	16.80
80	10.00
90	5.00
100	2.20
110	1.10
General Members - Female	
50	35.20
60	26.40
70	18.10
80	10.80
90	5.40
100	2.40
110	1.10
Safety Members - Male	
50	34.80
60	26.30
70	18.30
80	11.20
90	5.80
100	2.60
110	1.20
Safety Members - Female	
50	37.80
60	29.00
70	20.50
80	12.90
90	6.80
100	3.10
110	1.40

Years of Life Expectancy after Disability Retirement

Years of Life Expectancy after Disability Retirement

(Current assumptions)

Age	Years of Life Expectancy	
General Members	Male	Female
20	51.40	54.70
30	43.30	46.40
40	34.80	37.80
50	26.30	29.00
60	18.30	20.50
70	11.20	12.90
80	5.80	6.80
90	2.60	3.10
100	1.20	1.40
110	0.80	0.80
Safety Members	Male	Female
20	52.20	55.60
30	44.10	47.30
40	35.70	38.70
50	27.10	29.90
60	19.10	21.30
70	11.90	13.60
80	6.20	7.30
90	2.90	3.30
100	1.30	1.50
110	0.90	0.90

Note: Information provided by Segal Consulting.

Summary of Major Plan Provisions

1. ELIGIBILITY

First day of pay period following date of employment in an eligible position.

2. DEFINITION OF SALARY

- Tiers 1 and 2
Highest one-year average compensation earnable.
- Tiers 3 and 4
Highest three-year average compensation earnable.
- Tier 5
Highest consecutive three years of pensionable compensation.

3. SERVICE RETIREMENT

Benefit Level

- Tier 1
 - General offers 2.5% at age 55, California Government Code § 31676.12, 31676.14 and 31627.
 - Safety offers 2.5% at age 50, California Government Code § 31664 and 31627.
- Tier 2
 - General offers 2% at age 55, California Government Code § 31676.16.
 - Safety offers 2.29% at age 50, California Government Code § 31664.2.
- Tier 3
 - General offers 2% at age 55, California Government Code § 31676.15.
- Tier 4
 - General offers 1.49% at age 55, California Government Code § 31676.1.
 - Safety offers 2% at age 50, California Government Code § 31664.
- Tier 5
 - General offers 1% at age 52, California Government Code § 7522.20(a).
 - Safety offers 2% at age 50, California Government Code § 7522.25(d).

Summary of Major Plan Provisions continued

Eligibility

- Early Retirement
 - Tiers 1, 2, 3, and 4 - Age 50 with 10 years of service, or any age with 30 years of service for General, or any age with 20 years of service for Safety.
 - Tier 5 – Age 52 with 5 years of service for General or age 50 with 5 years of service for Safety
- Benefit Adjustments
 - General and Safety Tier 1
 - Reduced for retirement before age 55 and age 50, respectively.
 - Increased for retirement after age 55 and age 50, respectively.
 - Maximum benefit for retirement at or after age 60 and age 55, respectively.
 - General Tiers 2 and 3
 - Reduced for retirement before age 55.
 - Increased for retirement after age 55.
 - Maximum benefit for retirement at or after age 62 or age 65, respectively.
 - Safety Tier 2
 - Reduced for retirement before age 50.
 - Increased for retirement after age 50.
 - Maximum benefit for retirement at or after age 55.
 - General and Safety Tier 4
 - Reduced for retirement before age 61 $\frac{1}{4}$, General only.
 - Increased for retirement after age 61 $\frac{1}{4}$ and age 50, respectively.
 - Maximum benefit for retirement at or after age 65 or age 55, respectively.
 - General and Safety Tier 5
 - Reduced for retirement before age 62.
 - Maximum benefit for retirement at or after age 67 or age 57, respectively.

4. DISABILITY RETIREMENT

- Non-service connected

1.5% for General Tiers 1, 2, 4, and 5; 1.8% General Tier 3; and 1.8% for Safety of final average salary per year of service, with a maximum of 33.33% if projected service is used (age 65 for General Tiers 1, 2, 4, and 5; age 65 for Tier 3; age 55 for Safety), or service retirement benefit (if eligible).

Summary of Major Plan Provisions Continued

- Service-connected

Greater of 50% of final average salary or service retirement benefit (if eligible).

5. DEATH BEFORE RETIREMENT

- Refund of contributions plus 1/12th of monthly salary per year of service, maximum of six months' salary.
- If eligible for non-service connected disability or service retirement, eligible beneficiary will receive 60% of member's accrued allowance.
- If service-connected, beneficiary will receive 50% of final compensation or 100% of service retirement, if eligible.

6. DEATH AFTER RETIREMENT

- Service retirement or non-service connected disability, eligible beneficiary will receive 60% of member's allowance.
- Service disability, eligible beneficiary will receive 100% of member's allowance.

7. VESTING

- After five years of service.
- Must leave contributions on deposit.

8. MEMBERS' CONTRIBUTIONS

- Tiers 1, 2, 3, and 4 - Based on entry age.
- Tier 5 – Flat rate as determined by valuation.

9. COST OF LIVING

Maximum 3% COLA for members enrolled in Tiers 1, 2, and 3. No COLA for members enrolled in Tier 4 or 5.

Note: Information for the Summary of Major Plan Provisions was compiled from the Actuarial Report prepared by Segal Consulting dated June 30, 2018.



Statistical Section

STATISTICAL SECTION INFORMATION

This section contains additional comparative information in order to provide a more detailed understanding of the financial statements, note disclosures and supplementary information. The financial trend information displayed on the following pages is intended to show how FCERA's financial position has changed over a period of time, including changes of plan net position, revenues and expenses, retiree benefit information and membership history.

The Table of Changes in Fiduciary Net Position details the plan's additions and deductions by source and plan's net change over the past 5 years.

Several schedules of Retired Members illustrate benefits paid by retirement type, service, disability and survivors, for both general and safety (law enforcement) classifications and numeric counts of retirees by classification. The 10-years of Average Annual Benefit schedules further breaks down retiree counts and benefit payments by Benefit Tiers and by years of benefit service. The Retired Members by Type of Benefit provides additional information regarding the membership type and benefit option of retirees.

The Schedule of Active and Deferred Members provides membership counts by classification, active vested, active non-vested and deferred status. Two schedules of membership by participating employer are provided that compares current active membership to membership 10-years prior, along with a schedule of employer contribution rates over the past 10-years by Benefit Tier.

The last schedule provides 10-years of Benefits and Refund information by benefit type and classification, including active employee death benefits.

Combined these schedules show trends in membership and benefit payments, allowing the reader to have a more complete picture of the activity over time.

Fiduciary Net Position

Table of Changes in Fiduciary Net Position

Last Ten Fiscal Years

(Dollars in Thousands)

	2019	2018	2017	2016	2015
Additions					
Employer Contributions	\$ 225,492	\$ 210,535	\$ 198,472	\$ 191,529	\$ 184,213
Member Contributions	40,463	38,467	36,259	35,212	33,110
Net Investment Income/(Loss)	254,801	312,770	417,681	(4,258)	406
Total Additions	520,756	561,772	652,412	222,483	217,729
Deductions ¹					
Total Benefit Expenses	\$ 277,417	\$ 260,823	\$ 247,491	\$ 238,028	\$ 229,115
Refunds	2,615	2,408	2,356	2,203	2,282
Administrative Expenses	5,981	5,677	4,762	4,814	4,297
Other	107	215	77	61	45
Total Deductions	286,120	269,123	254,686	245,106	235,739
Change in Fiduciary Net Position	\$ 234,636	\$ 292,649	\$ 397,726	\$ (22,623)	\$ (18,010)
	2014	2013	2012	2011	2010
Additions					
Employer Contributions	\$ 165,309	\$ 158,572	\$ 157,869	\$ 130,290	\$ 126,138
Member Contributions	30,154	30,516	32,627	31,293	32,209
Net Investment Income/(Loss)	583,169	378,483	(10,242)	605,422	341,439
Total Additions	778,632	567,571	180,254	767,005	499,786
Deductions ¹					
Total Benefit Expenses	\$ 222,289	\$ 210,745	\$ 193,535	\$ 180,363	\$ 169,526
Refunds	2,103	2,211	1,786	2,044	1,915
Administrative Expenses	3,542	3,634 ²	3,597	4,108	3,570
Other	21	42 ²	N/A	N/A	N/A
Total Deductions	227,955	216,632	198,918	186,515	175,011
Change in Fiduciary Net Position	\$ 550,677	\$ 350,939	\$ (18,664)	\$ 580,490	\$ 324,775

¹ See page 104 for detailed information on Benefit and Refund deductions by type.

² Restated as defined in Government Code Section 31580.2, excludes Information Technology expenses.

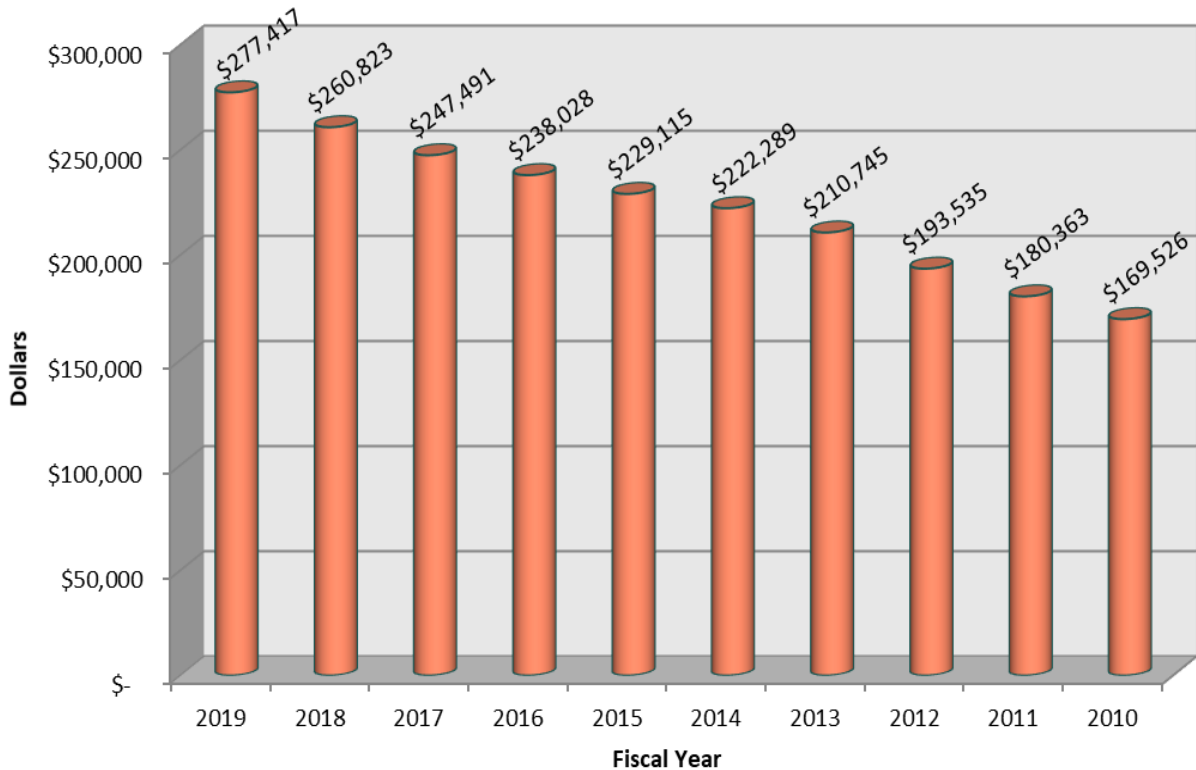
Retired Members

Schedule of Benefit Expenses by Type

Last Ten Fiscal Years

(Dollars in Thousands)

FISCAL YEAR-END	SERVICE		SURVIVOR		DISABILITIES		TOTAL ¹
	GENERAL	SAFETY	GENERAL	SAFETY	GENERAL	SAFETY	
2019	\$ 220,173	\$ 39,011	\$ 1,402	\$ 766	\$ 8,060	\$8,005	\$ 277,417
2018	207,672	35,617	1,283	753	7,927	7,571	\$ 260,823
2017	198,137	33,063	2,536	1,898	5,970	5,887	\$ 247,491
2016	185,490	36,201	2,498	1,432	5,230	7,177	\$ 238,028
2015	179,054	34,516	2,298	1,426	5,314	6,507	\$ 229,115
2014	173,829	33,021	2,004	1,200	5,411	6,824	\$ 222,289
2013	165,066	31,343	1,971	994	5,241	6,130	\$ 210,745
2012	151,022	28,698	1,899	741	4,883	6,292	\$ 193,535
2011	139,412	26,584	1,548	703	5,655	6,461	\$ 180,363
2010	131,465	24,758	1,392	536	5,015	6,360	\$ 169,526



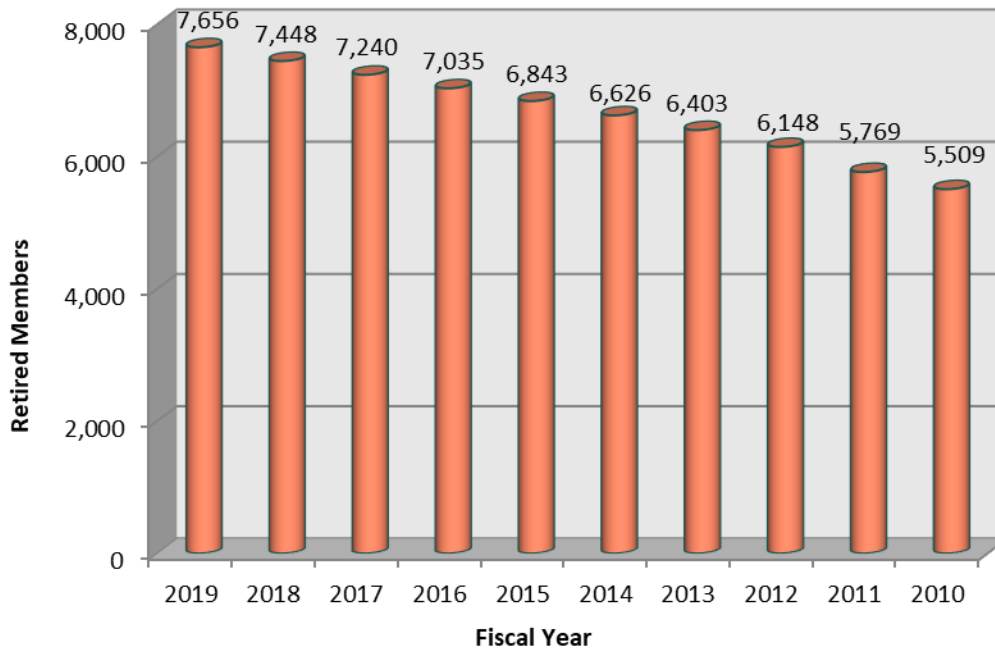
¹ Total Benefit Expenses are the actual expenses paid and will not equal Total Average Annual Benefits reported on page 97.

Retired Members continued

Schedule of Retired Members by Type of Retirement

Last Ten Fiscal Years

FISCAL YEAR-END ¹	GENERAL	SAFETY	SURVIVOR	TOTAL
2019	6,505	1048	103	7,656
2018	6,345	999	104	7,448
2017	6,191	943	106	7,240
2016	6,036	901	98	7,035
2015	5,874	872	97	6,843
2014	5,687	841	98	6,626
2013	5,498	805	100	6,403
2012	5,276	772	100	6,148
2011	4,937	733	99	5,769
2010	4,705	702	102	5,509



¹ Includes a correction to the allocation of General, Safety Retired and Survivor at June 30, 2017.
Total count for year-end 2017 remains unchanged.

Source: Schedule provided by FCERA

Retired Members continued

Schedule of Average Annual Benefit and Membership Distribution of Retired Members

Last Ten Fiscal Years

Valuation Date	Plan Type	Annual ² Number	Total Average ¹ Annual Benefits	Annual Average Benefits	Average Monthly Benefits	% Change in Average Benefits
6/30/2018	General Tier 1	6,353	\$ 217,672,944	\$ 34,263	\$ 2,855	3.7%
	General Tier 2	24	513,504	21,396	1,783	-10.2%
	General Tier 3	42	641,544	15,275	1,273	6.6%
	Safety Tier 1	1,025	51,218,664	49,969	4,164	3.2%
	Safety Tier 5	1	24,612	24,612	2,051	100.0%
	Total	7,445	\$ 270,071,268	\$ 36,276	\$ 3,023	3.6%
6/30/2017	General Tier 1	6,186	\$ 204,466,584	\$ 33,053	\$ 2,754	2.6%
	General Tier 2	17	404,940	23,820	1,985	-2.6%
	General Tier 3	28	401,304	14,332	1,194	-67.2%
	Safety Tier 1	969	46,903,332	48,404	4,034	1.7%
	Total	7,200	\$ 252,176,160	\$ 35,024	\$ 2,919	2.2%
6/30/2016	General Tier 1	6,068	\$ 195,506,184	\$ 32,219	\$ 2,685	1.2%
	General Tier 2	16	391,296	24,456	2,038	-18.3%
	General Tier 3	15	655,668	43,711	3,643	236.6%
	Safety Tier 1	933	44,399,616	47,588	3,966	-0.2%
	Total	7,032	\$ 240,952,764	\$ 34,265	\$ 2,855	1.1%
6/30/2015	General Tier 1	5,918	\$ 188,340,180	\$ 31,825	\$ 2,652	2.2%
	General Tier 2	11	329,076	29,916	2,493	-8.1%
	General Tier 3	9	116,892	12,988	1,082	-20.8%
	Safety Tier 1	901	42,943,056	47,662	3,972	0.8%
	Total	6,839	\$ 231,729,204	\$ 33,883	\$ 2,824	2.0%
6/30/2014	General Tier 1	5,707	\$ 177,666,204	\$ 31,131	\$ 2,594	2.7%
	General Tier 2	8	260,352	32,544	2,712	24.8%
	General Tier 3	6	98,388	16,398	1,367	-18.0%
	Safety Tier 1	849	40,128,876	47,266	3,939	2.6%
	Total	6,570	\$ 218,153,820	\$ 33,205	\$ 2,767	2.7%
6/30/2013	General Tier 1	5,536	\$ 167,842,464	\$ 30,318	\$ 2,527	2.5%
	General Tier 2	5	130,380	26,076	2,173	2.1%
	General Tier 3	3	59,988	19,996	1,666	-9.5%
	Safety Tier 1	819	37,731,336	46,070	3,839	1.6%
	Total	6,363	\$ 205,764,168	\$ 32,338	\$ 2,695	2.3%
6/30/2012	General Tier 1	5,425	\$ 160,482,984	\$ 29,582	\$ 2,465	4.4%
	General Tier 2	5	127,740	25,548	2,129	2.9%
	General Tier 3	2	44,208	22,104	1,842	2.9%
	Safety Tier 1	803	36,393,984	45,323	3,777	4.0%
	Total	6,235	\$ 197,048,916	\$ 31,604	\$ 2,634	4.3%
6/30/2011	General Tier 1	5,118	\$ 145,020,096	\$ 28,335	\$ 2,361	1.4%
	General Tier 2	5	124,080	24,816	2,068	-18.2%
	General Tier 3	2	42,960	21,480	1,790	-45.6%
	Safety Tier 1	762	33,218,904	43,594	3,633	0.7%
	Total	5,887	\$ 178,406,040	\$ 30,305	\$ 2,525	1.3%
6/30/2010	General Tier 1	4,908	\$ 137,157,624	\$ 27,946	\$ 2,329	-2.4%
	General Tier 2	5	151,680	30,336	2,528	N/A
	General Tier 3	1	39,480	39,480	3,290	N/A
	Safety Tier 1	722	31,247,496	43,279	3,607	2.2%
	Total	5,636	\$ 168,596,280	\$ 29,914	\$ 2,493	-1.6%
6/30/2009	General Tier 1	4,481	\$ 128,267,304	\$ 28,625	\$ 2,385	8.0%
	General Tier 2	-	-	-	-	N/A
	General Tier 3	-	-	-	-	N/A
	Safety Tier 1	672	28,448,568	42,334	3,528	3.3%
	Total	5,153	\$ 156,715,872	\$ 30,413	\$ 2,534	7.3%

¹ Total Average Annual Benefits will not equal the Actual Total Benefit Expenses reported on page 94.

² Total Annual Membership provided by the Actuary will not equal the Actual Membership reported on page 95.

Note: See page 97 for information organized by years of credited service in five-year increments.

Note: Effective with fiscal year ended June 30, 2007 the schedule has been expanded to display membership by benefit tier.

Source: Information above provided by Segal Consulting.

Retired Members continued

Schedule of Average Benefit Payments by Years of Credited Service

Last Ten Fiscal Years

Retirement Effective Date	Years of Credited Service ¹						
	0-4	5-9	10-14	15-19	20-24	25-29	30 and over
Period 7/1/2017 to 6/30/2018							
Average monthly benefit	\$945	\$882	\$2,172	\$2,915	\$4,264	\$4,865	\$6,723
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	14	31	54	75	47	63	35
Period 7/1/2016 to 6/30/2017							
Average monthly benefit	\$483	\$1,011	\$1,908	\$2,742	\$3,711	\$4,805	\$5,753
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	16	33	44	61	43	54	36
Period 7/1/2015 to 6/30/2016							
Average monthly benefit	\$519	\$1,692	\$2,428	\$2,672	\$3,217	\$4,674	\$5,688
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	15	42	71	48	46	49	28
Period 7/1/2014 to 6/30/2015							
Average monthly benefit	\$654	\$1,242	\$1,974	\$3,483	\$3,412	\$4,967	\$5,549
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	18	52	66	70	36	46	35
Period 7/1/2013 to 6/30/2014							
Average monthly benefit	\$747	\$1,033	\$1,743	\$2,704	\$3,528	\$4,867	\$6,666
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	4	25	84	56	45	37	40
Period 7/1/2012 to 6/30/2013							
Average monthly benefit	\$1,064	\$1,341	\$2,038	\$3,268	\$4,072	\$4,714	\$5,842
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	10	27	46	24	43	21	41
Period 7/1/2011 to 6/30/2012							
Average monthly benefit	\$331	\$1,327	\$1,972	\$2,795	\$3,605	\$5,141	\$6,031
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	7	47	89	60	90	50	65
Period 7/1/2010 to 6/30/2011							
Average monthly benefit	\$699	\$1,489	\$1,847	\$2,881	\$3,140	\$5,237	\$5,703
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	16	47	63	57	58	29	40
Period 7/1/2009 to 6/30/2010							
Average monthly benefit	\$706	\$1,144	\$1,860	\$2,996	\$3,793	\$4,692	\$5,674
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	18	44	69	46	54	39	58
Period 7/1/2008 to 6/30/2009							
Average monthly benefit	\$539	\$1,116	\$1,772	\$2,643	\$3,746	\$4,489	\$5,937
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of retired members	11	51	75	59	50	34	54

¹ Table Represents new retirees added to rolls in the period(s) noted.

Notes: N/A means that information is not available.











Average final average salary is not available at this time due to system constraints.

Source: Information provided by Segal Consulting.

Active and Deferred Members

Schedule of Active and Deferred Members

Last Ten Fiscal Years

Date	Plan Type	Active Vested	Active Nonvested	Total Active Members	Deferred Members
6/30/2019	General	3,911	2,767	6,678	
	Safety	587	411	998	
	Total	4,498	3,178 	7,676	3,873
6/30/2018	General	3,931	2,588	6,519	
	Safety	609	329	938	
	Total	4,540	2,917 	7,457	3,628
6/30/2017	General	3,976	2,443	6,419	
	Safety	593	339	932	
	Total	4,569	2,782 	7,351	3,462
6/30/2016	General	4,009	2,369	6,378	
	Safety	597	323	920	
	Total	4,606	2,692 	7,298	3,316
6/30/2015	General	4,134	1,997	6,131	
	Safety	624	214	838	
	Total	4,758	2,211 	6,969	3,208
6/30/2014	General	4,417	1,674	6,091	
	Safety	641	192	833	
	Total	5,058	1,866 	6,924	1,401
6/30/2013	General	4,653	1,346	5,999	
	Safety	691	151	842	
	Total	5,344	1,497 	6,841	1,263
6/30/2012	General	4,605	1,259	5,864	
	Safety	709	71	780	
	Total	5,314	1,330 	6,644	1,415
6/30/2011	General	4,581	1,374	5,955	
	Safety	732	37	769	
	Total	5,313	1,411 	6,724	1,451
6/30/2010	General	4,536	1,568	6,104	
	Safety	733	79	812	
	Total	5,269	1,647 	6,916	1,515

Note: Effective with fiscal year ended June 30, 2015, Deferred Members include all terminated employees entitled to benefits with less than five years of service.

Participating Employers

Schedule of Principal Participating Employers

Current Year and Nine Years Ago

Participating Employers	2019		2010	
	Covered Employees	Percentage of Covered Employees	Covered Employees	Percentage of Covered Employees
County of Fresno	7,163	93.32%	6,871	99.35%
Superior Court of California-County of Fresno ¹	468	6.10%	-	-
Fresno-Madera Area Agency on Aging	25	0.32%	31	0.45%
Clovis Veterans Memorial District	10	0.13%	8	0.11%
Fresno Mosquito and Vector Control District	10	0.13%	6	0.09%
Total	7,676	100.00%	6,916	100.00%

¹ On December 11, 2011 the Superior Court of California-County of Fresno separated from the County of Fresno as a separate employer group.

Participating Employers and Active Members

Schedule of Participating Employers and Active Members

Last Ten Fiscal Years

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
County of Fresno										
General Members	6,165	6,038	5,907	5,864	5,704	5,641	5,533	5,376	5,912	6,059
Safety Members	998	938	932	920	837	833	842	780	769	812
Total	7,163	6,976	6,839	6,784	6,541	6,474	6,375	6,156	6,681	6,871
Participating Agencies (General Members)										
Clovis Veterans Memorial District	10	10	10	10	9	7	9	8	8	8
Fresno Mosquito and Vector Control District	10	10	7	7	5	6	5	5	5	6
Fresno-Madera Area Agency on Aging	25	23	22	22	24	25	26	28	30	31
Superior Court of California-County of Fresno ¹	468	438	473	475	390	412	426	447	-	-
Total	513	481	512	514	428	450	466	488	43	45
Total Active Members										
General Members	6,678	6,519	6,419	6,378	6,131	6,091	5,999	5,864	5,955	6,104
Safety Members	998	938	932	920	838	833	842	780	769	812
Total	7,676	7,457	7,351	7,298	6,969	6,924	6,841	6,644	6,724	6,916

¹ On December 11, 2011 the Superior Court of California-County of Fresno disassociated from the County of Fresno to become a separate employer group.

Employers' Contribution Rates

Schedule of Employers' Contribution Rates

Last Ten Fiscal Years

Effective Dates			General					Safety				Actuarial Report for Year Ended
			Tier 1	Tier 2	Tier 3	Tier 4 ¹	Tier 5 ²	Tier 1	Tier 2	Tier 4 ¹	Tier 5 ²	
July 1, 2018	to	June 30, 2019	56.32%	53.52%	53.11%	44.03%	42.42%	81.75%	81.86%	66.59%	64.23%	6/30/2017
July 1, 2017	to	June 30, 2018	56.56%	53.52%	53.06%	43.95%	42.45%	81.63%	81.80%	66.15%	63.99%	6/30/2016
July 1, 2016	to	June 30, 2017	51.43%	47.74%	47.35%	38.73%	36.96%	75.93%	75.11%	60.38%	57.99%	6/30/2015
July 1, 2015	to	June 30, 2016	50.80%	48.09%	47.38%	38.15%	37.36%	74.56%	74.20%	59.37%	57.87%	6/30/2014
July 1, 2014	to	June 30, 2015	51.07%	48.27%	47.33%	38.17%	37.48%	74.79%	74.26%	59.02%	57.41%	6/30/2013
July 1, 2013	to	June 30, 2014	44.99%	42.86%	41.64%	33.88%	32.70%	67.17%	67.21%	54.15%	51.76%	6/30/2012
July 1, 2012	to	June 30, 2013 ³	43.03%	41.15%	39.71%	31.87%	30.77%	65.06%	63.86%	51.42%	48.92%	6/30/2011
July 1, 2011	to	June 30, 2012	41.03%	38.78%	37.42%	N/A	N/A	61.25%	60.26%	N/A	N/A	6/30/2010
July 1, 2010	to	June 30, 2011	31.47%	29.48%	28.08%	N/A	N/A	47.40%	46.24%	N/A	N/A	6/30/2009
July 1, 2009	to	June 30, 2010	27.82%	25.64%	24.36%	N/A	N/A	42.19%	41.21%	N/A	N/A	6/30/2008

¹ New benefit tier effective June 2012.

² New benefit tier effective January 1, 2013.

³ Includes a correction to the rates reported at June 30, 2013.

Retired Members by Type of Benefit

Schedule of Retired Members by Type of Benefit

As of June 30, 2019

Monthly Benefit Amount	Members Receiving a Benefit	Type of Retirement ¹										Option Selected ²					
		1	2	3	4	5	6	7	8	9	10	U	1	2	3	4	D
\$1 - 500	403	287	3	4	60	3	0	0	7	38	1	276	17	87	7	13	3
501 - 1,000	821	592	17	2	114	12	0	0	30	50	4	601	38	146	18	12	6
1,001 - 1,500	977	746	30	27	102	12	1	1	25	31	2	772	53	110	33	5	4
1,501 - 2,000	855	668	31	26	80	5	5	1	10	24	5	650	68	108	16	12	1
2,001 - 3,000	1,450	1,166	21	82	133	9	9	4	8	18	0	1,171	111	120	33	15	0
3,001 - 4,000	1,077	843	4	110	91	1	12	3	4	9	0	899	77	70	18	10	3
4,001 - 5,000	685	610	0	35	30	0	3	3	4	0	0	555	54	52	13	9	2
5,001 - 6,000	492	461	0	10	19	0	1	1	0	0	0	411	23	45	5	8	0
Over 6,000	896	858	0	13	22	0	3	0	0	0	0	789	34	59	5	9	0
Totals	7,656	6,231	106	309	651	42	34	13	88	170	12	6,124	475	797	148	93	19

Notes:

¹ Type of Retirement

- 1 = Normal retirement
- 2 = Non-service connected disability
- 3 = Service connected disability
- 4 = Beneficiary - Normal retirement
- 5 = Beneficiary – Non-Service Disability
- 6 = Beneficiary – Service Disability
- 7 = Survivor – Service Death
- 8 = Survivor – Non-Service Death
- 9 = Alternate Payee - Normal Retirement
- 10 = Alternate Payee - Service Disability

² Option Selected:

- U = Unmodified: Eligible Surviving Spouse receives 60% continuance.
- The following options reduce the retired member's monthly benefit:
- 1 = Beneficiary receives funds remaining in member's account.
- 2 = Beneficiary receives 100% continuance of member's reduced monthly benefit.
- 3 = Beneficiary receives 50% continuance of member's reduced monthly benefit.
- 4 = Multiple beneficiaries receive a continuance calculated by Retirement Board's actuary.
- D = Beneficiary receives disability retirement continuance for eligible active member death.

Benefits and Refund Deductions

Schedule of Benefits and Refund Deductions from Fiduciary Net Position by Type

Last Ten Fiscal Years

(Dollars in Thousands)

Type of Benefit	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Service Benefits										
General	\$ 220,173	\$ 207,672	\$ 198,137	\$ 185,490	\$ 179,054	\$ 173,829	\$ 165,066	\$ 151,022	\$ 139,412	\$ 131,465
Safety	39,011	35,617	33,063	36,201	34,516	33,021	31,343	28,698	26,584	24,759
Service Connected Disability										
General	4,912	4,799	4,233	3,385	3,164	3,214	3,208	2,787	3,321	2,746
Safety	6,728	6,604	5,794	7,067	6,340	6,718	6,016	6,138	6,309	6,211
Non-Service Connected Disability										
General	1,832	1,809	1,737	1,845	2,150	2,197	2,033	2,096	2,334	2,269
Safety	456	260	93	110	167	107	114	154	152	148
Non-Service Connected Disability Continuance										
General	1,840	1,802	1,772	1,764	1,705	1,421	1,383	1,276	1,188	1,118
Safety	290	288	239	236	248	162	155	139	138	139
Service Connected Disability Continuance										
General	754	768	764	734	593	583	496	408	183	126
Safety	1,296	1,172	1,159	1,118	1,117	903	839	602	442	357
Active Death Benefits	125	32	500	78	61	134	92	215	300	188
Total Benefits	\$277,417	\$260,823	\$247,491	\$238,028	\$229,115	\$222,289	\$210,745	\$193,535	\$180,363	\$169,526
Type of Refund										
Death	\$ 257	\$ 80	\$ 174	\$ 111	\$ 133	\$ 134	\$ 135	\$ 425	\$ 339	\$ 338
Miscellaneous - UAAL ¹	-	-	-	-	-	-	-	-	-	1
Separation	2,358	2,328	2,182	2,092	2,149	1,969	2,076	1,361	1,705	1,576
Total refunds	\$ 2,615	\$ 2,408	\$ 2,356	\$ 2,203	\$ 2,282	\$ 2,103	\$ 2,211	\$ 1,786	\$ 2,044	\$ 1,915

¹ UAAL means Unfunded Actuarial Accrued Liability.