# Annual Report

Recognizing 95 Years

Radiacontation

For Fiscal Year Ended June 30, 2016



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#### **LETTER OF TRANSMITTAL**

April 12, 2017

San Francisco Employees' Retirement System 1145 Market Street, 5th Floor San Francisco, CA 94103

On behalf of the Retirement Board and Retirement System staff, we are pleased to present the San Francisco Employees' Retirement System Annual Report for Fiscal Year 2015-16.

#### **ABOUT SFERS**

#### **The Retirement System**

Initially established by approval of City voters on November 2, 1920 and the California State Legislature on January 12, 1921, the San Francisco Employees' Retirement System ("Retirement System" or "SFERS") is deeply rooted in the history and culture of the City and County of San Francisco and is committed to serving the retirement needs of its members. Originally established as a fund to assist families and orphans of firefighters and police, today the Retirement System serves more than 68,000 active, vested and retired employees of the City and County of San Francisco and their survivors.

Under the direction of the Executive Director, the System's management team administers two employee benefit programs for eligible City and County employees:

- City and County of San Francisco Employees' Retirement System pension plan, a defined benefit plan.
- San Francisco Deferred Compensation Plan, an IRC §457(b) deferred compensation plan.

Specific San Francisco City Charter sections and/or Administrative Code provisions mandate each of these benefit plans.

#### **Our Mission**

The San Francisco City and County Employees' Retirement System is dedicated to securing, protecting and prudently investing the pension trust assets, administering mandated benefit programs, and providing promised benefits to the active and retired members of the City and County of San Francisco.



# Introductory Section

#### **The Pension Plan**

The SFERS Pension Plan is a tax-qualified defined benefit plan that provides for the following benefits upon separation: service and disability retirement, refund or vesting allowance, and pre and post-retirement death benefits to beneficiaries. Defined benefit plans are funded through employee and employer contributions and investment earnings.

SFERS has a reciprocity agreement with CalPERS, California county retirement systems covered by the 1937 Act Retirement Law, and certain other local, independent retirement systems that have a reciprocity contract with CalPERS (listed on the CalPERS website).

As of June 30, 2016, the Fund was valued at \$20.2 billion returning 1.29% for the fiscal year. Over the same time period, the median return for public pension plans with assets of \$1 billion or more was -0.46%. Thus, SFERS outperformed our peers by 1.75%. Annual benefit payments totaled \$1.243 billion paid to over 28,200 retirees and their beneficiaries.

#### The San Francisco 457(b) Deferred Compensation Plan

The San Francisco Deferred Compensation Plan (SFDCP), a voluntary IRC §457(b) plan, was adopted in 1976, and allows eligible City employees to elect to voluntarily defer receipt and taxation of a portion of their regular earnings until after they retire or separate from service. The SFDCP also offers a Roth after-tax contribution option. These options offer eligible employees an opportunity to supplement pension income during retirement.

The Retirement Board approved a new plan feature in fiscal year 2015-16. The SFDCP now permits participants to borrow money from their SFDCP accounts, up to \$50,000. With the exception of loans for the purchase of a home, borrowers must repay their loan with interest, within five years.

#### **Our Members**

SFERS members include eligible employees of the City and County of San Francisco, the San Francisco Unified School District, the San Francisco Community College District, and the San Francisco Trial Courts. Uniformed employees working for the City's Police and Fire Departments are covered by the SFERS Safety Plans. Eligible civilian (non-Safety) employees of the City are covered by the SFERS Miscellaneous Plans.

The Sheriff, Undersheriff, and deputized personnel of the Sheriff's Department hired after January 7, 2012 are covered by the SFERS Sheriff's Plan. Probation Officers, District Attorney Investigators and Juvenile Court Counselors hired after January 7, 2012 are covered by the SFERS Miscellaneous Safety Plan.

In Fiscal Year 2015-16, SFERS enrolled 4,796 new members and added 1,247 new retirees.

#### **SFERS Administration**

The Executive Director leads a team of senior managers who

oversee each of the functional areas in the department. The leadership team manages the day-to-day activities of the System including:

- Member services, communication and benefits administration
- Retirement Board administration, including preparation of meeting materials, minutes and public notice requirements for Board and committee meetings
- Responding to Public Records Requests in accordance with the City's Sunshine Act, State of California Public Records Act, and Federal Freedom of Information Act
- Accounting and financial reporting
- Actuarial services
- Investment activities
- Recruitment and personnel management
- Records management and systems administration

#### **The Retirement Board**

The Retirement System and its members benefit greatly from the leadership of an experienced and knowledgeable Retirement Board. Within the scope of its fiduciary duties, the Board establishes and follows policies governing the administration, management, and operation of the City's retirement plans; manages the investment of the Retirement System's assets; approves disability benefit determinations; and approves actuarial assumptions used to fund long-term benefit promises of the SFERS Pension Plan.

The Retirement Board generally meets once each month to review and to approve important elements of Retirement System business. The Retirement Board is composed of seven members: three members elected by the active and retired members of SFERS; three members appointed by the Mayor in accordance with §12.100, the San Francisco City Charter; and one member of the Board of Supervisors appointed by the President of the Board of Supervisors.

#### **FINANCE AND FUNDING**

#### **Financial Reporting**

The accounting policies followed in preparing the SFERS financial statements by the City's auditors Marcias, Gini & O'Connell, LLP, conform to standards prescribed by the Governmental Accounting Standards Board (GASB). The audited Statements of Plan Net Position and Statements of Changes in Plan Net Position provide a general overview of the City and County of San Francisco Employees' Retirement System's finances for the fiscal year ended June 30, 2016.

Financial highlights and analysis can be found in the SFERS Discussion and Analysis preceding the financial statements. This transmittal letter, when taken into consideration with the Financial Section of this report, provides an enhanced picture of the activities of the organization.

Readers who have questions regarding the financial information provided in this report are encouraged to visit the SFERS website at www.sfers.org to view the full set of audited Financial Statements and Required Supplemental Information as prepared by the City's independent auditors, Macias Gini & O'Connell, LLP.

#### **Actuarial Services and Funding**

The Retirement Board contracts with a consulting actuarial firm to produce and report to the Retirement Board and Retirement System staff, actuarial information related to the benefit structure and funding status of the Retirement System. The Retirement Board's current consulting actuarial firm is Cheiron. The Retirement Board also employs an Actuarial Services Coordinator to coordinate the work of the consulting actuary. participate in the presentation of actuarial reports to the Retirement Board, and provide other in-house actuarial services.

The consulting actuarial firm conducts annual actuarial valuations of the Retirement System's assets and liabilities in order to assess its funded status and to determine the appropriate level of employer contributions to the Fund. Each year, the Retirement Board looks to the consulting actuary and staff Actuarial Services Coordinator to recommend appropriate actuarial assumptions to provide the required funding for the promised benefits. The recommendations are based on results from economic experience analyses conducted each year, as well as demographic experience analyses conducted approximately every five vears. The actuarial assumptions are included in the Actuarial Section of this report.

Sponsoring employers of the Retirement System are required to contribute 100% of the actuarially determined contribution approved by the Retirement Board. A 10-year chart of employer contributions may be found in the Required Supplementary Information within the Financial Section of this report.

The consulting actuarial firm also calculates the total pension liability and net pension liability as required by GASB Statement No. 67. At the June 30, 2016 fiscal vear-end measurement date. the plan net position as a percentage of total pension liability is 77.6% based on total pension liability of \$26.0 billion and plan net position of \$20.2 billion. The net pension liability at June 30, 2016 is \$5.8 billion. Details may be found in Note 10 of the Notes to the Basic Financial Statements and also in the Required Supplementary Information.

#### **INVESTMENTS**

The Retirement System's investment objective is to maximize long-term rates of return on investments within prudent guidelines.

The professional Investment Staff, supported by a group of professional consulting firms hired by the Retirement Board, analyzes, develops and recommends asset allocation mixes, manages investment portfolios, and monitors the activities and performance of external investment managers. For Fiscal Year 2016, the investment portfolio returned 1.29%. Under the authorization of the Retirement Board, and in line with the 2016 Annual Investment Plan, the investment team committed a total of \$4.0 billion in new investments: \$1.34 billion in Private Equity, \$979 million in the Real Assets portfolio and \$1.68 billion in fixed income (see the Investment Section for a detailed schedule of these investments).

Beginning in fiscal year 2014-15 the Retirement Board approved a significant step up in resources. Over the past two years, the management team has been executing on the Board's approved actions. At June 30, 2016, the team consisted of 16 investment professionals and two administrative assistants. In the past year, we hired six investment professionals, and promoted two members of our existing staff including:

- Managing Director of Absolute Return
- Director of Asset Allocation, Risk Management, and Innovation
- Senior Portfolio Manager for Public Equity
- Senior Portfolio Manager for Real Assets
- Senior Portfolio Manager of Natural Resources
- Security Analyst of Fixed Income
- Director of Private Equity
- Senior Portfolio Manager of Venture Capital

The additions to the investment team were made to enhance our research, strategy, and diversification, with the objective of improving total returns, returns in down markets, and overall riskadjusted returns, in a challenging market environment.

Over the past two years we have made important changes to our investment strategy, for both asset allocation and each asset class. Regarding asset allocation, we have reduced our exposure to long-only public equity and fixed income, increased our allocation to private equity and real assets, and adopted an allocation to absolute return.

Regarding the asset classes, in fixed income, we reduced our exposure to credit and increased our exposure to high quality debt and private debt. In private equity, we have reduced our exposure to large cap buyout and increased our allocation to country, regional, and sector specialists. In real assets, we broadened our exposure from a real estate focus to include natural resources.

# Environmental, Social and Governance (ESG)

During the fiscal year, the Retirement Board took a number of steps to address climate change risk in the SFERS investment portfolio. (1) It approved a \$100 million investment in a passive exfossil fuel index fund. (2) The Retirement Board voted to divest its investments from certain thermal coal companies and directed SFERS staff, working with the Board's Environmental, Social and Governance (ESG) Committee, to develop a plan to complete the divestment process prudently, while continuing to meet its fiduciary obligations to the SFERS

membership. (3) SFERS joined the Investor Network for Climate Risk (INCR), now known as The Ceres Investor Network on Climate Risk and Sustainability, an organization of over 130 institutional investors committed to addressing climate change principally through engagement and encouraging lowcarbon investment opportunities. (4) The Retirement Board amended its Proxy Voting Policy to align SFERS' voting with [fossil fuel investment] proposals by INCR and its members. (5) The Board's ESG Committee refined the Board's long-standing ESG Policy to incorporate a values statement that clarifies the Retirement Board's commitment to ESG values, including addressing the investment risks inherent in climate change.

#### ACKNOWLEDGEMENTS

We would like to express our personal appreciation to the Retirement Board members who, without compensation, have provided the leadership, direction and support that have made all of our achievements possible. SFERS members and the citizens of the City and County have been wellserved by their leadership.

Finally, we would like to thank the SFERS staff for their hard work to support our mission.

Respectfully submitted,

Jay P. Huish Executive Director

Malia Chen

Malia Cohen President

#### THE RETIREMENT SYSTEM ORGANIZATION FOR FISCAL YEAR 2016

#### **The SFERS Retirement Board**



President Malia Cohen Member, Board of Supervisors Ex-Officio Member



#### **Vice President**

Herb Meiberger, CFA Retiree Elected Member Term Expires: 02/20/2017



Leona M. Bridges Former Managing Director BlackRock (formerly Barclays Global Investors) Appointed Member Term Expires: 02/20/2018



Wendy Paskin-Jordan Chief Executive Officer Paskin Capital Advisers, LLC Appointed Member Term Expires: 02/20/2019



Joseph D. Driscoll, CFA Captain, Fire Department Elected Member Term Expires: 02/20/2021





Victor Makras President Makras Real Estate Appointed Member Term Expires: 02/20/2019

#### **SFERS Leadership Team**

Jay P. Huish Executive Director

Caryn Bortnick Deputy Executive Director

William J. Coaker, Jr., CFA Chief Investment Officer



Janet Brazelton, FSA, EA Actuarial Services Coordinator

**Jim Burruel** Finance Manager

**Diane Chui Justen** Deferred Compensation Manager

**Chris Colandene** Retirement Services Administrator

**David Francl** Managing Director, Absolute Return

Alison Johnson Communications Manager Craig Lee Information Systems Director

Norm Nickens Board Secretary

**Dianne Owens-Lewis** Human Resources Manager

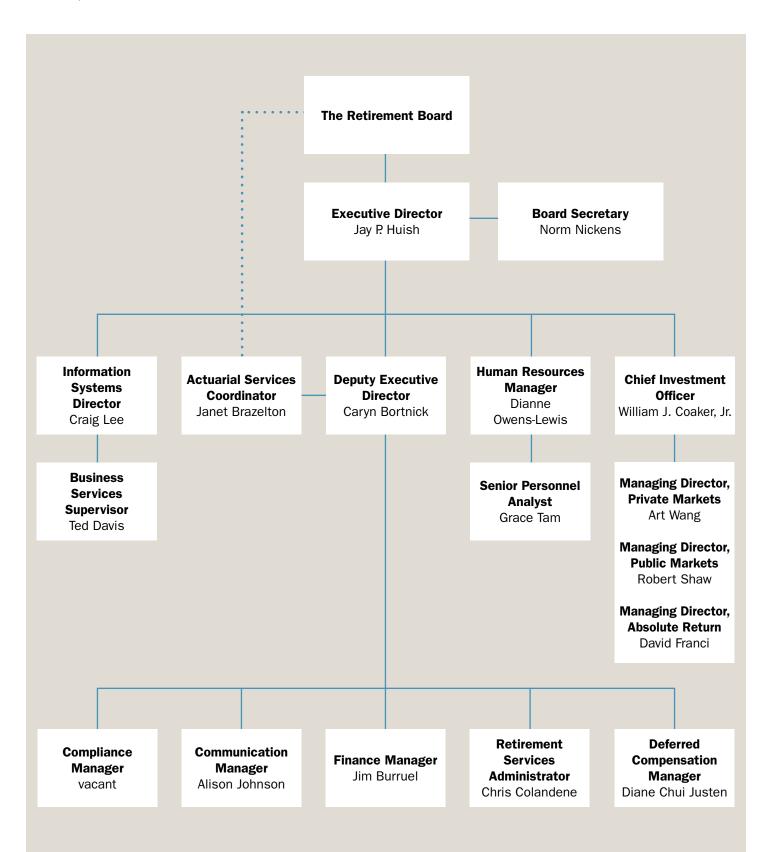
**Robert L. Shaw, CFA** Managing Director, Public Markets

Art Wang Managing Director, Private Markets

Vacant Compliance Manager

#### **SFERS Organizational Chart**

June 30, 2016



#### **PROFESSIONAL CONSULTANTS**

#### **Consulting Actuary**

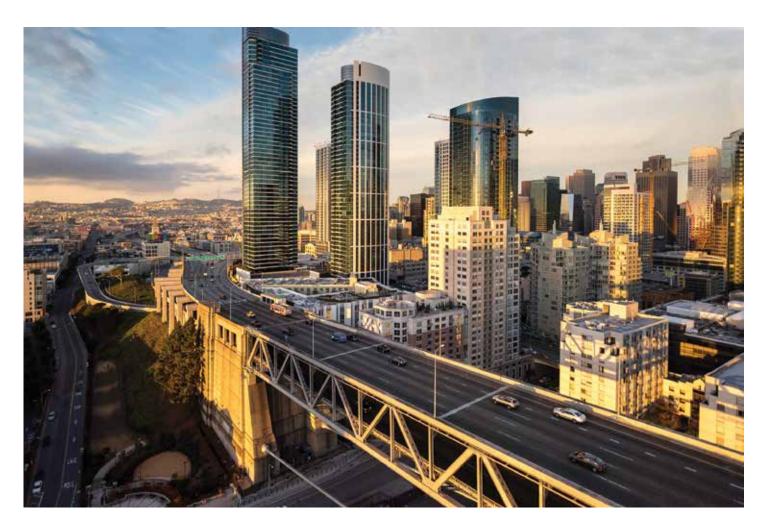
Cheiron, Inc.

#### **Investment Consultants**

- NEPC, LLC
- Angeles Investment Advisors
- Callan Associates, Inc.
- Cambridge Associates, LLC
- Torrey Cove Capital Partners, LLC

#### **Governance Consultants**

- Cortex Applied Research, Inc.
- Institutional Shareholder Services, Inc.
- Nossaman, LLP



#### **SFERS DISCUSSION AND ANALYSIS**

The management of the City and County of San Francisco Employees' Retirement System is pleased to provide this overview and analysis of the financial activities of its cost-sharing multiple-employer defined benefit pension plan (the "Plan") for the fiscal year ended June 30, 2016. We encourage readers to consider the information presented here in conjunction with the Basic Financial Statements and Required Supplementary Information which follow this discussion.

#### **Financial Highlights of Fiscal Year 2016**

- The Plan held \$20.2 billion of net position restricted for pension benefits. All of the net position is available to meet the Retirement System's ongoing obligations to plan participants and their beneficiaries.
- The Retirement System's funding objective is to meet long-term benefit obligations through contributions and investment income. The Retirement System's plan net position as a percentage of the total pension liability should be considered when evaluating the Retirement System's financial health. Based on the June 30, 2016 measurement date, the plan net position was 77.6% of the total pension liability.
- For the year ended June 30, 2016, the Retirement System's net investment income of \$150.2 million represents 0.7% of plan net position as of the beginning of the fiscal year. Specifically, net appreciation in fair value of investments declined by \$595.4 million as a result of lower returns in all asset classes relative to the prior fiscal year.

- Total net position held in trust for pension benefits decreased by \$273.6 million, or 1.3%, primarily as a result of market conditions and the net difference between contributions received by the Plan and increased benefit payments made from the Plan.
- Members' contributions to the Plan totaled \$322.8 million, an increase of \$21.1 million or 7.0% from the prior year. This increase is primarily a result of increases in the number of active employees contributing to the Plan. Employee contribution rates in fiscal year 2015-16 were unchanged from fiscal year 2014-15, ranging from 7.5% - 13.0%.
- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled \$526.8 million, a decrease of \$65.8 million or 11.1% from the prior year.
- Total deductions from the Plan were \$1,273.3 million, an increase of 10.7% from the prior year due to the increase in benefits paid during the current fiscal year.

# Financial Section

#### **Overview of Financial Statements**

The following discussion and analysis are intended to serve as an introduction to the Retirement System's financial statements, which are comprised of the following components:

- 1. Statements of Plan Net Position are snapshots of account balances as of the close of the fiscal years – June 30, 2016 and 2015. They indicate the total assets, total liabilities, and the net position restricted for future payment of retirement benefits and operating expenses as of June 30, 2016 and 2015..
- 2. Statements of Changes in Plan Net Position provide a view of additions to and deductions from the Plan during the fiscal years ended June 30, 2016 and 2015.
- 3. **Notes to Financial Statements** provide additional information that is essential to a full understanding of the data provided in the financial statements.

The statements of plan net position and the statements of changes in plan net position report information about the Retirement System's financial activities, prepared using the accrual basis of accounting. Contributions to the Plan are recognized when due pursuant to legal requirements and benefits and refunds are recognized when currently due and payable in accordance with the terms of the Plan.

Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Securities that do not have an established market are reported at estimated fair value derived from third party pricing services. Purchases and sales of investments are recorded on a trade date basis. Private equity investments represent the Retirement System's interest in limited partnerships. The fair values of the Retirement System's partnership interests and real estate investments are based on net asset values provided by the general partners and investment managers.

Investments in forward currency contract investments are commitments to purchase and sell stated amounts of foreign currency. Changes in fair value of open contracts are immediately recognized as gains or losses. The fair value of forward currency contracts are determined by quoted currency prices from national exchanges.

Additional information on the Retirement System's investments can be found in Notes 4 and 5 of the Notes to the Basic Financial Statements of this report.

#### **Financial Analysis**

The Plan's net position may serve over time as a useful indication of the Plan's financial position. All of the Plan's net position is restricted to meet the Retirement System's ongoing obligation to Plan participants and their beneficiaries. The Plan's net positions as of June 30, 2016, 2015, and 2014 are represented in the table below:

### **Net Position Summary – June 30, 2016, 2015, and 2014** (Dollars in thousands)

	2016	2015	2014
Other assets	\$ 164,233	\$ 305,801	\$ 477,213
Investments at fair value	20,980,136	21,540,021	20,735,639
Total assets	\$ 21,144,369	\$ 21,845,822	\$ 21,212,852
Total liabilities	989,866	1,417,753	1,292,245
Net assets	\$ 20,154,503	\$ 20,428,069	\$ 19,920,607

As of June 30, 2016, the Plan's total net position held in trust for pension benefits decreased by \$273.6 million or 1.3% for the year, primarily due to investment returns that did not offset the net difference between contributions received by the Plan and benefit payments made from the Plan. Payables to brokers decreased by \$266.6 million and payables to borrowers of securities decreased by \$138.0 million due to the timing of investment trades and lending activities.

The Retirement Board believes that the Plan remains in a strong financial position to meet its obligations to the Plan members and beneficiaries. FY 2015-16 saw the arrival of a slowdown in the near record climb of U.S. Equities. The S&P advanced 4.0%, its lowest return since falling 26.2% in FY 2008-09. On a positive front, U.S. unemployment continued to fall, reaching 4.9% by fiscal year end – down from 10% in late 2009. At the same time, the U.S. labor force participation rate climbed – an optimistic sign that previously inactive workers are returning to the workforce. The U.S. also continued to see growth in hourly earnings, which climbed 2.6% during the 2015-16 fiscal year. U.S. consumer confidence remained near recent highs and spending levels continue to increase - even when adjusted for inflation. As a result of these and other factors, the Federal Reserve began to signal that the accommodative fiscal

policy is changing as the Open Market Committee increased the Federal Funds rate by 25 basis points in December 2015 - the first rate change since December 2008. Outside the United States, economic growth remained muted. In Western Europe, unemployment was over 10% while gross domestic product ("GDP") growth was flat. The economic bright spots were Germany and the United Kingdom - with unemployment rates more in-line with the U.S. The European Central Bank continued to provide a supportive fiscal policy (via quantitative easing). Also roiling the European market was the U.K. vote to exit ("BREXIT") the European Union in June 2016. Both policy and economic analysts continue to debate the long-run impact that BREXIT will have on U.K. and EU GDP. Emerging economies continued to struggle with low commodity prices (crude oil fell by more than 20%). China, the largest emerging economy, saw exports fall 4.1% on weak demand from developed markets (U.S. and EU). GDP growth rates in many emerging markets remain near recent lows.

As fiduciaries to the Plan members and beneficiaries, the Retirement Board, Retirement System staff, and our investment consultants continuously monitor the Plan's investment strategies, which comply with a "prudent expert" standard, to secure and maintain the sustainability of the Plan.

#### Highlights of Changes in Net Position – Years ended June 30, 2016, 2015, and 2014

(Dollars in thousands)

	2016	2015	2014
Additions:			
Member contributions	\$ 322,764	\$ 301,682	\$ 289,020
Employer contributions	526,805	592,643	532,882
Interest	188,292	209,520	177,425
Dividends	219,529	214,636	195,503
Net appreciation (depreciation) in fair value of investments	(216,852)	378,519	2,844,279
Securities lending income (loss)	7,562	4,869	4,871
Investment expenses	(47,026)	(44,911)	(47,599)
Securities lending borrower rebates and expenses	(1,315)	796	952
Total Additions	\$ 999,759	\$ 1,657,754	\$ 3,997,333
Deductions:			
Benefits	\$ 1,243,260	\$ 1,118,691	\$ 1,062,229
Refunds of contributions	12,886	12,339	10,297
Administrative expenses	16,079	18,108	14,550
Other Administrative Expenses-OPEB	1,100	1,154	1,195
Total Deductions	\$ 1,273,325	\$ 1,150,292	\$ 1,088,271
Change in net position	\$ (273,566)	\$ 507,462	\$ 2,909,062
Net position - beginning of the year	20,428,069	19,920,607	17,011,545
Net position - end of the year	\$ 20,154,503	\$ 20,428,069	\$ 19,920,607

#### **Highlights of Changes during Fiscal Year 2016**

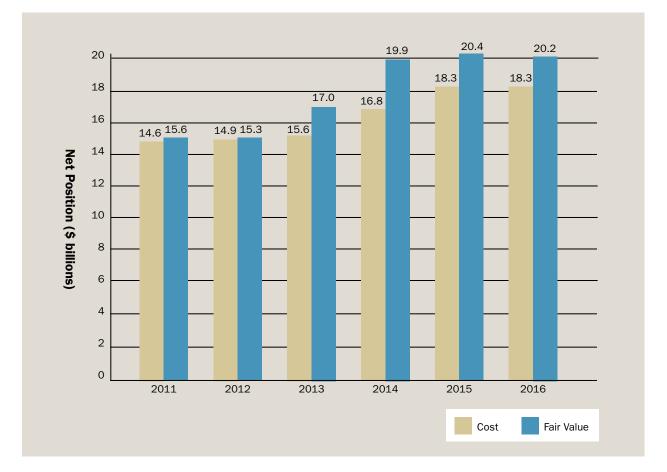
Member contributions for the year ended June 30, 2016 increased by \$21.1 million or 7.0% from the prior year. This increase is primarily a result of increases in the number of active employees contributing to the Plan. Employee contribution rates in fiscal year 2015-16 were unchanged from the prior fiscal year, ranging from 7.5% - 13.0%.

In order to maintain the fiscal soundness of the Plan, \$526.8 million in required employer contributions were made during the year ended June 30, 2016. The decrease of \$65.8 million in required employer contributions reflect a decrease in the employer contribution rates, which ranged from 18.30% to 22.80% in fiscal year 2015-16 and 22.26% to 26.76% in fiscal year 2014-15.

 Net investment income decreased by \$613.2 million from the prior year. The majority of the decrease is attributed to the \$595.4 million decline in net appreciation in fair value of investments primarily due to lower investment returns in all of the asset classes that the Retirement System invests in. Interest income decreased by \$21.2 million, due mainly to the domestic fixed income market. Benefit payments to Plan participants increased by \$124.6 million or 11.1%, primarily due to retroactive Supplemental COLAs paid as of a result of the Court decision that removed the "fully funded" requirement for SFERS members who retired after November 6, 1996 and were hired before January 7, 2012.

Accrued DROP retirement benefits decreased by \$0.9 million reflecting the wind down of the program as a result of the program being closed to new participants as of July 1, 2011.

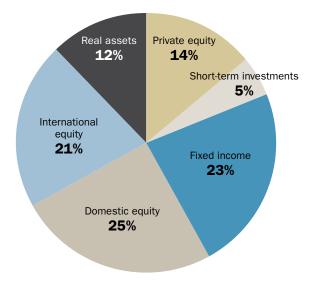
Plan net position as of June 30, 2011 through 2016 expressed at cost and fair value are represented in the chart below:



#### Plan Net Position as of June 30 (\$ billions)

The asset allocation at fair value based on holdings (excluding securities lending collateral and foreign currency contracts) as of June 30, 2016 is represented in the chart below:

#### Asset Allocation as of June 30, 2016 - Fair Value



#### **Currently Known Facts and Events Affecting Next Year**

The Retirement System's funding objective is to meet long-term benefit obligations through contributions and investment income. The Retirement Board believes that the Retirement System remains in a strong financial position to meet its obligations to Plan participants and beneficiaries.

#### **Requests for information**

This financial report is designed to provide a general overview of the Retirement System's finances for the year ended June 30, 2016. Questions regarding any of the information provided in this report or requests for additional financial information should be addressed to:

Jay Huish, Executive Director San Francisco City and County Employees' Retirement System 1145 Market Street – 5th floor San Francisco, CA 94103

#### **Basic Financial Statements**

#### **Statements of Plan Net Position**

## June 30, 2016 and 2015 (Dollars in thousands)

	2016	2015
Assets		
Deposits	\$ 43,521	\$ 31,969
Contributions Receivable – Members	\$ 10,908	\$ 8,078
Investment Income Receivable:		
Interest	\$ 21,831	\$ 25,582
Dividends	\$ 20,643	\$ 13,358
Securities Lending	\$ 641	\$ 613
Receivable from Brokers, General Partners, Others	\$ 66,689	\$ 226,201
Investments at Fair Value:		
Short-Term Investments	\$ 1,009,676	\$ 656,185
City Investment Pool	6,656	-
Debt Securities:		
U. S. Government And Agency Securities	1,648,271	1,074,204
Other Debt Securities	3,068,745	3,892,924
Equity Securities:		
Domestic	4,970,838	5,320,353
International	4,304,025	5,134,177
Real Assets	2,341,500	1,975,926
Private Equity	2,750,619	2,484,299
Foreign Currency Contracts, Net	14,125	722
Invested Securities Lending Collateral	865,681	1,001,231
Total Investments	\$ 20,980,136	\$ 21,540,021
Total Assets	\$ 21,144,369	\$ 21,845,822
Liabilities		
Payable to Brokers	\$ 107,444	\$ 374,001
DROP (Deferred Retirement Option Program)	613	1,491
Other	18,273	40,715
Payable to Borrowers of Securities	863,536	1,001,546
Total Liabilities	\$ 989,866	\$ 1,417,753
Plan Net Position – restricted for pension benefits	\$ 20,154,503	\$ 20,428,069

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

#### Statements of Changes in Plan Net Position

Years Ended June 30, 2016 and 2015 (Dollars in thousands)

	2016	2015
Additions:		
Member Contributions:		
Miscellaneous	\$ 266,929	\$ 248,084
Police	32,345	30,977
Firefighter	23,490	22,621
Total Member Contributions	\$ 322,764	\$ 301,682
Employer Contributions:		
Miscellaneous	\$ 442,184	\$ 494,353
Police	49,164	57,950
Firefighter	35,457	40,340
Total Employer Contributions	\$ 526,805	\$ 592,643
Investment Income (Expenses):		
Interest	\$ 188,292	\$ 209,520
Dividends	219,529	214,636
Net Appreciation (Depreciation) in Fair Value of Investments	(216,852)	378,519
Securities Lending Income	7,562	4,869
Investment Expenses	(47,026)	(44,911)
Securities Lending Borrower Rebates and Expenses	(1,315)	796
Net Investment Income	\$ 150,190	\$ 763,429
Total Additions	\$ 999,759	\$ 1,657,754
Deductions:		
Benefits	\$ 1,243,260	\$ 1,118,691
Refunds of Contributions	12,886	12,339
Administrative Expenses	16,079	18,108
Other Administrative Expenses - OPEB	1,100	1,154
Total Deductions	\$ 1,273,325	\$ 1,150,292
Net (Decrease)/Increase	\$ (273,566)	\$ 507,462
Plan Net Position – restricted for pension benefits:		
Beginning of Year	20,428,069	19,920,607
End of Year	\$ 20,154,503	\$ 20,428,069

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

#### NOTES TO THE BASIC FINANCIAL STATEMENTS

The Notes below provide a summary of the complete Notes found in SFERS' 2016 audited financial statements dated January 11, 2017.

#### (1) Plan Description

#### (a) General

The San Francisco City and County Employees' Retirement System (the Retirement System) administers a cost-sharing multiple employer defined benefit pension plan (the Plan) established to provide pension benefits for substantially all employees of the City and County of San Francisco (the City and County), certain classified and certificated employees of the Community College and Unified School Districts. and San Francisco Trial Court employees other than judges. The Retirement System provides service retirement, disability, and death benefits based on specified percentages of defined final average monthly salary and annual cost of living adjustments after retirement. While the Plan is not subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), it is a tax-qualified plan under Internal Revenue Code provisions. The City and County Charter (the Charter) and the Administrative Code are the authorities that establish and amend the benefit provisions and employer and member obligations to the Plan.

The Retirement System is considered to be a part of the City and County's financial reporting entity and is included in the City and County's basic financial statements as a pension trust fund. The financial statements of the Retirement System are intended to present only the plan net position and changes in plan net position of the Retirement System. They do not purport to, and do not, present fairly the financial position of the City and County as of June 30, 2016 and 2015, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America. The City and County's basic financial statements can be obtained from City Hall, Room 316, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.

The Retirement System is administered by the Executive Director, an employee of the City and County, in accordance with the provisions of the Charter and Administrative Code, and the policies and regulations of the Retirement Board. The Retirement Board is composed of seven members: three members elected by the active and retired members of the Retirement System; three members appointed by the Mayor in accordance with Section 12.100 of the San Francisco City Charter; and one member of the Board of Supervisors appointed by the President of the Board of Supervisors.

The Retirement System pays benefits according to the category of employment and the type of benefit coverage provided by the City and County. The four main categories of Plan membership are:

- Miscellaneous Non-Safety
   Members staff, operational, supervisory, and all other eligible employees who are not in special membership categories.
- Sheriff's Department and Miscellaneous Safety Members – sheriffs assuming office on and after January 7, 2012, and undersheriffs, deputized personnel of the sheriff's department, and miscellaneous safety employees hired on and after January 7, 2012.
- Firefighter Members

   firefighters and other
   employees whose principal
   duties are in fire prevention
   and suppression work or who
   occupy positions designated
   by law as firefighter member
   positions.
- Police Members police officers and other employees whose principal duties are in active law enforcement or who occupy positions designated by law as police member positions.

#### (b) Service Retirement

Membership Group	Service Retirement Benefit
Miscellaneous Old Plan A8.509 - Miscellaneous employees who became members before November 2, 1976	2.3% @ age 62; maximum benefit 75% of average monthly compensation (12 mo. avg.)
Miscellaneous New Plan Tier I A8.587 - Miscellaneous employees who became members on or after November 2, 1976	2.3% @ age 62; maximum benefit 75% of average monthly compensation (12 mo. avg.)
Miscellaneous New Plan Tier II Plan A8.600 - Miscellaneous employees who became members on or after July 1, 2010 and before January 7, 2012	2.3% @ age 62; maximum benefit 75% of average monthly compensation (24 mo. avg.)
Miscellaneous New Plan Tier III Plan A8.603 - Miscellaneous employees who became members on or after January 7, 2012	2.3% @ age 65; maximum benefit 75% of average monthly compensation (36 mo. avg.)
Police Old Plan A8.595 - Police officers who became members before November 2, 1976 and elected Proposition H benefits effective January 1, 2003	3.0% @ age 55; maximum benefit 90% of average monthly compensation (12 mo. avg.)
Police New Plan Tier I A8.597 - Police officers who became members on or after November 2, 1976 and were eligible for Proposition H benefits effective January 1, 2003	3.0% @ age 55; maximum benefit 90% of average monthly compensation (12 mo. avg.)
Police New Plan Tier II A8.602 - Police officers who became members on or after July 1, 2010 and before January 7, 2012	3.0% @ age 55; maximum benefit 90% of average monthly compensation (24 mo. avg.)
Police New Plan Tier III A8.605 - Police officers who became members on or after January 7, 2012	3.0% @ age 58; maximum benefit 90% of average monthly compensation (36 mo. avg.)
Firefighter Old Plan A8.588 - Firefighters who were members on January 1, 2003, who did not elect Proposition H	2.7% @ age 55; maximum benefit 75% of average monthly compensation (12 mo. avg.)
Firefighter Old Plan A8.596 - Firefighters who became members before November 2, 1976 and elected Proposition H benefits effective January 1, 2003	3.0% @ age 55; maximum benefit 90% of average monthly compensation (12 mo. avg.)
Firefighter New Plan Tier I A8.598 - Firefighters who became members on or after November 2, 1976 and were eligible for 2002 Proposition H benefits effective January 1, 2003	3.0% @ age 55; maximum benefit 90% of average monthly compensation (12 mo. avg.)
Firefighter New Plan Tier II A8.601 - Firefighters who became members on or after July 1, 2010 and before January 7, 2012	3.0% @ age 55; maximum benefit 90% of average monthly compensation (24 mo. avg.)
Firefighter New Plan Tier III A8.604 - Firefighters who became members on or after January 7, 2012	3.0% @ age 58; maximum benefit 90% of average monthly compensation (36 mo. avg.)
<ul> <li>Sheriffs Plan A8.608</li> <li>Sheriffs, undersheriffs and all deputized personnel of the Sheriff's Department hired on or after January 7, 2012</li> </ul>	3.0% @ age 58; maximum benefit 90% of average monthly compensation (36 mo. avg.)
Miscellaneous Safety Plan A8.610 - Probation Officers, District Attorney Investigators and Juvenile Court Counselors who hired on or after January 7, 2012	2.7% @ age 58; maximum benefit 90% of average monthly compensation (36 mo. avg.)

#### (c) Disability Retirement

All members are eligible to apply for a disability retirement benefit, regardless of age, when they have 10 or more years of credited service and they sustain an injury or illness that prevents them from performing their duties. Safety members are eligible to apply for an industrial disability retirement benefit from their first day on the job if their disability is caused by an illness or injury that they receive while performing their duties.

#### (d) Separation and Death Benefits

Upon separation from employment, members may either elect to withdraw their accumulated contributions from the Plan or, if they have 5 or more years of credited service, elect to leave their accumulated contribution in the Plan and receive a vesting benefit that is first payable at or after age 50 for Safety members or members hired prior to January 7, 2012 or at or after age 53 for non-Safety members hired on or after January 7, 2012.

Prior to retirement, qualified surviving spouses or qualified domestic partners receive death benefits based upon a percentage of the service retirement benefit. Prior to eligibility for service retirement, a lump sum death payment equal to 6 months' earnable salary plus the member's accumulated contributions is payable to the members' named beneficiary or estate. For Safety members whose death is due to injury or illness caused by performance of duty, salary continuance is provided until the date member would have been eligible for service retirement.

Death benefits after retirement are contingent upon the form of annuity payment selected by the member.

#### (e) Cost of Living Adjustments (COLA)

Basic COLA: All retired members receive a benefit adjustment each July 1. The majority of adjustments are determined by changes in CPI with increases capped at 2%. Old Plan Police and Firefighter members receive benefit adjustments based upon 50% of either the actual dollar or the percentage change in the salary of the rank or position on which the member's retirement benefit is based. Although decreases are possible in a given year, a negative adjustment cannot reduce a member's monthly benefit below the initial pension amount.

Supplemental COLA: The Plan provides for a Supplemental COLA in years when there are sufficient "excess" investment earnings in the Plan. Effective July 1, 2012, voters approved changes in the criteria for payment of the Supplemental COLA benefit. Certain provisions of the voter approved proposition were challenged in the Courts. A decision by the California Courts modified the interpretation of the proposition. Effective July 1, 2012, SFERS members who retired before November 6, 1996

will receive a Supplemental COLA when there are sufficient "excess" investment earnings in the Plan and the Plan is also fully funded on a market value of assets basis. The "full funding" requirement does not apply to SFERS members who retired on or after November 6, 1996 and were hired before January 7, 2012. For members who were hired before January 7, 2012, all Supplemental COLAs paid to them in retirement benefits will continue into the future even where an additional Supplemental COLA is not payable in any given vear. For members who are hired on and after January 7, 2012, a Supplemental COLA will be paid to retirees when there are sufficient "excess" investment earnings in the Plan and the Plan is also fully funded on a market value of assets basis. For this group, Supplemental COLAs will not be permanent adjustments to retirement benefits. In years when a Supplemental COLA is not paid. all previously paid Supplemental COLAs will expire.

#### (f) Deferred Retirement Option Program

In February 2008, the voters of the City and County approved a Charter amendment to provide a Deferred Retirement Option Program (DROP) for certain Police members of the Plan to be effective July 1, 2008. An eligible police officer could elect to participate in DROP for a specified period of time up to a maximum of three years depending on the rank of the police officer. While participating in DROP, the police officer continues to work and receive pay as a police officer and accrues monthly DROP distributions posted to a nominal account maintained by the Retirement System. The monthly DROP distribution is equal to the participant's monthly service retirement allowance calculated as of the participant's entry into DROP. Interest at an annual effective rate of 4% and applicable COLAs are posted to the participant's DROP account during participation in DROP. Upon exiting from DROP, the participant receives a lump sum distribution from his or her DROP account and begins to receive a monthly service retirement allowance calculated using age, covered compensation, and service frozen as of the date of his or her entry into DROP DROP was closed to new applicants on June 30, 2011.

The Retirement System held \$0.6 million pursuant to the DROP as of June 30, 2016.

#### (g) Membership

Total membership in the Retirement System as of July 1, 2016 is as follows:

	Police <sup>1</sup>	Fire	Miscellaneous	Total
Active members (including DROP)	2,223	1,560	28,623	32,406
Terminated members entitled to but not yet receiving benefits	156	74	7,415	7,645
Retirees and beneficiaries currently receiving benefits	2,637	2,066	23,583	28,286
Total	5,016	3,700	59,621	68,337

<sup>1</sup> Police counts include Miscellaneous Safety and Sheriffs.

#### (2) Summary of Significant Accounting Policies

#### (a) Basis of Presentation

The accompanying financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America as promulgated by the Governmental Accounting Standards Board (GASB). Member contributions are recognized in the period in which the contributions are due. Employer contributions and member contributions made by the employer to the Plan are recognized when due pursuant to legal requirements. Benefits and refunds are recognized when currently due and payable in accordance with the terms of the Plan.

#### (b) Investments

Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Securities that do not have an established market are reported at estimated fair value derived from third party pricing services. Purchases and sales of investments are recorded on a trade date basis.

The fair values of the Retirement System's real estate investments are based on net asset values provided by the investment managers. Partnership financial statements are audited annually as of December 31 and net asset values are adjusted monthly or quarterly for cash flows to/from the Retirement System, investment earnings and expenses, and changes in fair value. The Retirement System has established leverage limits for each investment style based on the risk/return profile of the underlying investments. The leverage limits for core and valueadded real estate investments are 40% and 65%, respectively. The leverage limits for high return real estate investments depend on each specific offering. Outstanding mortgages for the Retirement System's real estate investments were \$492.2 million, including \$26.7 million in recourse debt, as of June 30, 2016. The underlying real estate holdings are valued periodically based on appraisals performed by independent appraisers in accordance with Uniform Standards of Professional Appraisal Practice (USPAP), Such fair value estimates involve subjective judgments of unrealized gains and losses, and the actual market price of the real estate can only be determined by negotiation between independent third parties in a purchase and sale transaction.

Private equity investments represent the Retirement System's interest in limited partnerships. The fair values of private equity investments are based on net asset values provided by the

general partners. Partnership financial statements are audited annually as of December 31 and net asset values are adjusted monthly or quarterly for cash flows to or from the Retirement System, investment earnings and changes in fair value. Such fair value estimates involve subjective judgments of unrealized gains and losses, and the actual market price of the investments can only be determined by negotiation between independent third parties in a purchase and sale transaction.

The Charter and Retirement Board policies permit the Retirement System to use investments of the Plan to enter into securities lending transactions - loans of securities to broker dealers and other entities for collateral with a simultaneous agreement to return the collateral for the same securities in the future. The collateral may consist of cash or non-cash; non-cash collateral is generally U.S. Treasuries or other U.S. government obligations. The Retirement System's securities custodian is the agent in lending the Plan's domestic securities for collateral of 102% and international securities for collateral of 105%. Contracts with the lending agent require them to indemnify the Retirement System if the borrowers fail to return the securities (and if the collateral were inadequate to replace the securities lent) or fail to pay the Retirement System for income distributions by the securities' issuers while the securities are on Ioan. Non-cash collateral cannot be pledged or sold unless the borrower defaults, and therefore,

is not reported in the Retirement System's financial statements.

All securities loans can be terminated on demand by either the Retirement System or the borrower, although the average term of the loans as of June 30, 2016 was 78 days. All cash collateral received was invested in a separately managed account by the lending agent using investment guidelines developed and approved by the Retirement System. As of June 30, 2016, the weighted average maturity of the reinvested cash collateral account was 25 days. The term to maturity of the loaned securities is generally not matched with the term to maturity of the investment of the said collateral. Cash collateral may also be invested separately in term loans, in which case the maturity of the loaned securities matches the term of the loan.

Cash collateral invested in the separate account managed by the lending agent is reported at fair value. Payable to borrowers of securities in the statements of plan net position represents the cash collateral received from borrowers. Additionally, the income and costs of securities lending transactions, such as borrower rebates and fees, are recorded respectively as revenues and expenses in the statements of changes in plan net position.

#### (c) Administrative Expenses

All costs to administer the Retirement System are borne by the Retirement System.

#### (d) Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Actual results could differ from those estimates.

#### (e) Implementation of GASB Statement

The Retirement System adopted GASB Statement No. 72, Fair Value Measurement and Application. This Statement addresses accounting and financial reporting issues related to fair value measurements. GASB Statement No. 72 requires the Retirement System to use valuation techniques that are appropriate under the circumstances and for which sufficient data are available to measure fair value. The techniques should be consistent with one or more of the following approaches: the market approach, the cost approach, or the income approach. This Statement establishes a three-tier hierarchy of inputs to valuation techniques used to measure fair value:

 Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are all inputs that are unobservable.

The Retirement System's implementation of this Statement effective July 1, 2015 has no material impact on the financial statements. The additional disclosures and related notes are presented in Note 5.

#### (3) Deposits

Deposits are carried at cost, which approximates fair value. Deposits in bank accounts were \$43,521,000 as of June 30, 2016. Deposit and investment risk disclosures for the pooled funds with the City and County Treasurer are discussed in the City and County's basic financial statements.

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government may not be able to recover its deposits or may not be able to recover collateral securities that are in the possession of an outside party. The Retirement System does not have a specific policy addressing custodial credit risk for deposits. As of June 30, 2016, the Retirement System's deposits in bank accounts were not exposed to custodial credit risk.

#### (4) Investments

The Retirement System's investments are invested pursuant to investment policy guidelines as established by the Retirement Board. The objective of the policy is to maximize the expected return of the fund at an acceptable level of risk. The Retirement Board has established percentage guidelines for types of investments to ensure the portfolio is diversified.

Investment managers are required to diversify by issue, maturity, sector, coupon, and geography. Investment managers retained by the Retirement System follow specific investment guidelines and are evaluated against specific market benchmarks that represent their investment style. Any exemption from general guidelines requires approval from the Retirement Board. The Retirement System invests in securities with contractual cash flows. such as asset backed securities, commercial mortgage backed securities, and collateralized mortgage obligations. The value, liquidity, and related income of these securities are sensitive to changes in economic conditions, including real estate values, delinguencies or defaults, or both, and may be affected by shifts in the market's perception of the issuers and changes in interest rates.

The investment policy permits investments in domestic and international debt and equity securities, real estate, securities lending, foreign currency contracts, derivative instruments, and private equity investments, which include investments in a variety of commingled partnership vehicles. The Retirement Board's asset allocation policy for the year ended June 30, 2016 is as follows:

Asset Class	Target Allocation
Global Equity	40.0%
Fixed Income	20.0%
Private Equity	18.0%
Real Assets	17.0%
Hedge Funds/Absolute Returns	5.0%
	100.0%

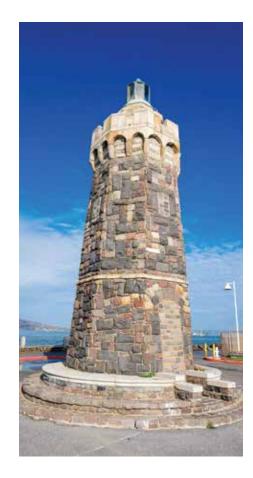
The Retirement System is not directly involved in repurchase or reverse repurchase agreements. However, external investment managers retained by the Retirement System may employ repurchase arrangements if the securities purchased or sold comply with the manager's investment guidelines. The **Retirement System monitors** the investment activity of its investment managers to ensure compliance with guidelines. In addition, the Retirement System's securities lending cash collateral separately managed account is authorized to use repurchase arrangements. As of June 30, 2016 \$419.0 million (or 48.4% of the reinvested cash collateral) consisted of such agreements.

The Retirement System maintains its operating fund cash in the City and County's investment pool. The City and County's pool is invested pursuant to investment policy guidelines established by the City Treasurer, subject to review by the Treasury Oversight Committee. The Treasury Oversight Committee, established under California Government Code Sections 27130 to 27137, is composed of various

City and County officials and representatives of agencies with large cash balances in the pool. The policy addresses soundness of financial institutions in which the City and County will deposit funds, types of investment instruments as permitted by the California Government Code, and the percentage of the portfolio which may be invested in certain instruments with longer terms to maturity. The provisions of the City and County's investment policy also address interest rate risk, credit risk, and concentration of credit risk and provide for additional restrictions related to investments. The notes to the basic financial statements of the City and County provide more detailed information concerning deposit and investment risks associated with the City and County's pool of cash and investments at June 30, 2016.

#### (a) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates may adversely affect the fair value of an investment. The Retirement System does not have a specific policy to manage interest rate risk.



The table below depicts the segmented time distribution for fixed income investments based upon the expected maturity (in years) as of June 30, 2016.

#### Fixed Income Investments at Fair Value as of June 30, 2016

		Maturities				
Investment Type	Fair Value	Less than 1 year	1-5 years	6-10 years	10+ years	
Asset Backed Securities	\$ 178,327	\$ -	\$ 57,102	\$ 11,880	\$ 109,345	
Bank Loans	139,680	1,240	106,587	31,853	-	
City Investment Pool	6,656	4,119	2,537	-	-	
Collateralized Bonds	167	-	-	-	167	
Commercial Mortgage-Backed	438,764	6,254	6,708	5,558	420,244	
Commingled and Other Fixed Income Funds	231,780	264,114	569	51	(32,954)	
Corporate Bonds	1,627,327	580,310	443,592	437,779	165,646	
Corporate Convertible Bonds	293,360	3,460	197,038	35,709	57,153	
Foreign Currencies and Cash Equivalents	144,456	144,456	-	-	-	
Government Agencies	971,329	952,962	368	-	17,999	
Government Bonds	589,416	150,467	278,583	43,497	116,869	
Government Mortgage Backed Securities	145,030	-	10,819	-	134,211	
Index Linked Government Bonds	1,359	-	-	1,243	116	
Mortgages	-	-	-	-	-	
Municipal/Provincial Bonds	40,049	-	9,182	1,628	29,239	
Non-Government Backed Collateralized Mortgage Obligations	59,543	-	2,376	2,033	55,134	
Options	(64)	(64)	-	-	-	
Short Term Investment Funds	865,219	865,219	-	-	-	
Swaps	950	(78)	831	197	-	
Total	\$ 5,733,348	\$ 2,972,459	\$ 1,116,292	\$ 571,428	\$ 1,073,169	

#### (b) Credit Risk – Investments

Credit risk is the risk that an issuer or other counterparty to an investment may not fulfill its obligations. Fixed income investment managers retained by the Retirement System follow specific investment guidelines and are evaluated against specific market benchmarks that represent their investment style. Fixed income managers typically are limited within their portfolios to no more than 5% exposure in any single security, with the exception of United States Treasury and government agency securities. The Retirement System's credit risk policy is embedded in the individual investment manager agreements as prescribed and approved by the Retirement Board.

Investments are classified and rated using the lower of (1) Standard & Poor's (S&P) rating or (2) Moody's Investors Service (Moody's) rating corresponding to the equivalent S&P rating. If only a Moody's rating is available, the rating equivalent to S&P is used for the purpose of this disclosure.

The credit rating of the United States remains a point of concern for investors. In 2011, S&P lowered the credit rating for U.S. long-term debt to AA+ from AAA and continues to maintain that posture. Moody's and Fitch, the other two large credit rating agencies, continue to maintain a AAA rating for U.S. long-term debt, although Fitch placed the U.S. on negative watch in October 2013 – indicating the potential for a credit downgrade. The ongoing concern by the credit rating agencies about the credit worthiness of U.S. government debt has an impact on the credit risk and value of the Retirement System's investments in U.S. government agency securities, U.S. government bonds, and U.S. government mortgage-backed securities.

The following table illustrates the Retirement System's exposure to credit risk as of June 30, 2016. Investments issued or explicitly guaranteed by the U.S. government of \$505.3 million as of June 30, 2016 are exempt from the credit rating disclosures and are excluded from the table below.

#### **Credit Ratings of Fixed Income Investments as of June 30, 2016** (Dollars in thousands)

Credit Rating	Fair Value	Fair Value as a Percentage of Total
AAA	\$ 164,327	3.1%
AA	72,743	1.4%
A	247,306	4.7%
BBB	683,951	13.1%
BB	322,941	6.2%
В	294,025	5.6%
CCC	79,658	1.5%
СС	1,956	0.0%
С	4,240	0.1%
D	4,159	0.1%
Not Rated	3,352,732	64.2%
Total	\$ 5,228,038	100.0%

The securities listed as "Not Rated" include short-term investment funds, government mortgage backed securities, and investments that invest primarily in rated securities, such as commingled funds and money market funds, but do not themselves have a specific credit rating. Excluding these investments, the "not rated" component of credit would be approximately 12.7% for 2016.

#### (c) Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the Retirement System's investment in a single issuer. Guidelines for investment managers typically restrict a position to become no more than 5% (at fair value) of the investment manager's portfolio. Securities issued or guaranteed by the U.S. government or its agencies are exempt from this limit.

As of June 30, 2016, the Retirement System had no investments of a single issuer that equaled or exceeded 5% of total Retirement System's investments or net position.

#### (d) Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government may not be able to recover the value of investment or collateral securities that are in the possession of an outside party. The Retirement System does not have a specific policy addressing custodial credit risk for investments, but investments are generally insured, registered, or held by the Retirement System or its agent in the Retirement System's name. As of June 30, 2016, \$153.6 million of the Retirement System's investments were exposed to custodial credit risk because they were not insured or registered in the name of the

Retirement System, and were held by the counterparty's trust department or agent but not in the Retirement System's name.

For fiscal year 2016, cash received as securities lending collateral is invested in a separate account managed by the lending agent using investment guidelines approved by the Retirement System and held by the custodial bank. Securities in this separately managed account are not exposed to custodial credit risk.

#### (e) Foreign Currency Risk

The Retirement System's exposure to foreign currency risk derives from its positions in foreign currency denominated cash, equity, fixed income, private equity investments, real assets, and swap investments. The Retirement System's investment policy allows international managers to enter into foreign exchange contracts. which are limited to hedging currency exposure existing in the portfolio. Derivatives are considered investments, rather than hedges, for accounting and financial reporting purposes.



#### The Retirement System's net exposures to foreign currency risk as of June 30, 2016 are as follows:

Foreign Currency Risk Analysis as of June 30, 2016

Currency	Cash	Equities	Fixed Income	Private Equities	Real Assets	Foreign Currency Contracts	Total
Australian dollar	\$ 1,044	\$ 103,293	\$ -	\$ 10,641	\$ -	\$ 2,650	\$ 117,628
Brazilian real	(581)	26,060	19,870	-	-	(5,475)	39,874
British pound sterling	717	533,900	12,635	-	18,874	(45,288)	520,838
Canadian dollar	1,027	69,596	6,851	-	-	30,932	108,406
Chilean peso	-	2,012	-	-	-	94	2,106
Chinese yuan renminbi	-	-	-	-	-	(1,582)	(1,582)
Colombian peso	324	-	5,451	-	-	1,872	7,386
Czech koruna	101	337	-	-	-	(101)	337
Danish krone	273	39,118	-	-	-	(1,423)	37,968
Euro	(4,323)	745,341	108,816	148,583	39,685	(66,038)	972,064
Offshore Chinese yuan renminbi	-	-	-	-	-	(1,052)	(1,052)
Hong Kong dollar	567	162,696	-	-	-	3,862	167,125
Hungarian forint	137	327	-	-	-	2,515	2,979
Indian rupee	-	-	-	-	-	564	564
Indonesian rupiah	16	11,124	10,163	-	-	1,100	22,403
Japanese yen	4,587	532,091	-	-	23,343	98,308	658,329
Malaysian ringgit	315	20,649	6,628	-	-	4,087	31,679
Mexican peso	260	34,581	9,098	-	-	4,764	48,703
New Israeli shekel	73	9,685	-	-	-	5,513	15,271
New Romanian leu	21	-	2,138	-	-	(740)	1,419
New Taiwan dollar	1,851	66,010	-	-	-	(2,758)	65,103
New Zealand dollar	47	3,174	-	-	-	53,079	56,300
Norwegian krone	360	11,966	-	-	-	(1,661)	10,665
Peruvian nuevo sol	-	-	2,398	-	-	(319)	2,079
Philippine peso	(253)	2,641	811	-	-	(272)	2,927
Polish zloty	6	-	9,510	-	-	2,280	11,796
Qatari rial	-	5,448	-	-	-	-	5,448
Russian ruble	(571)	-	5,857	-	-	721	6,007
Singapore dollar	332	14,748	-	-	-	3,074	18,154
South African rand	(948)	24,765	8,183	-	-	2,250	34,250
South Korean won	1,361	98,501	-	-	-	(75)	99,787
Swedish krona	1,230	65,241	-	-	-	9,961	76,432
Swiss franc	279	192,496	147	-	-	(33,363)	159,559
Thai baht	(14)	7,354	2,198	-	-	6,696	76,432
Turkish lira	1,056	10,286	17,013	-	-	(7,381)	20,974
United Arab Emirates dirham	-	5,893	-	-	-	-	5,893
Total	\$ 9,061	\$ 2,799,333	\$ 227,767	\$ 159,224	\$ 81,902	\$ 66,794	\$ 3,344,081

#### (f) Derivative Instruments

The Retirement System reports its derivative instruments under the provisions of GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments.* Pursuant to the requirements of this statement, the Retirement System has provided a summary of derivative instrument activities during the reporting periods presented and the related risks.

As of June 30, 2016, the derivative instruments held by the Retirement System are considered investments and not hedges for accounting purposes. The gains and losses arising from this activity are recognized as incurred in the statement of changes in plan net position. All investment derivatives discussed below are included within the investment risk schedules, which precede this subsection. Investment derivative instruments are disclosed separately to provide a comprehensive and distinct view of this activity and its impact on the overall investment portfolio.

Valuation methods used by the Retirement System are described in more detail in Note 2(b). The fair value of the exchange traded derivative instruments, such as futures, options, rights, and warrants are based on quoted market prices. The fair values of forward foreign currency contracts are determined using a pricing service, which uses published foreign exchange rates as the primary source. The fair values of swaps are determined by the Retirement System's investment managers based on quoted market prices of the underlying investment instruments.

The table below presents the notional amounts, the fair values, and the related net appreciation (depreciation) in the fair value of derivative instruments that were outstanding at June 30, 2016:

#### Derivative Instruments during the Year Ended June 30, 2016

Derivative Type / Contracts	Notional Amount	Fair Value	Net Appreciation (Depreciation) in Fair Value
Forwards			
Foreign Exchange Contracts	(a)	\$ 14,144	\$ 14,144
Other Contracts	(a)	(114)	(114)
Options			
Foreign Exchange Contracts	\$ 8,426	(64)	4
Swaps			
Credit Contracts	2,300	(18)	12
Interest Rate Contracts	45,514	968	766
Rights/Warrants			
Equity Contracts	23,123 shares	1,857	(6,406)
Total		\$ 16,773	\$ 8,406

(a) SFERS' investment managers enter into a wide variety of forward foreign exchange and other contracts, which frequently do not involve the US dollar. As a result, a US dollar-based notional value is not included.

All investment derivatives are reported as investments at fair value in the statement of plan net position. Rights and warrants are reported in equity securities. Foreign exchange contracts are reported in foreign currency contracts, which also include spot contracts that are not derivatives. All other derivative contracts are reported in other debt securities. All changes in fair value are reported as net appreciation (depreciation) in fair value of investments in the statements of changes in plan net position.

#### **Counterparty Credit Risk**

The Retirement System is exposed to credit risk on non-exchange traded derivative instruments that are in asset positions. As of June 30, 2016, the fair value of forward currency contracts in asset positions (including foreign exchange contract options) to purchase and sell international currencies were \$14.872.000 and \$793,000, respectively. The Retirement System's counterparties to these contract held credit ratings of A or better on 99.6% of the positions as assigned by one or more of the major credit rating organizations (S&P, Moody's and/or Fitch), while 0.4% was not rated.

#### **Custodial Credit Risk**

The custodial credit risk disclosure for exchange traded derivative instruments is made in accordance with the custodial credit risk disclosure requirements of GASB Statement No. 40. At June 30, 2016, all of the Retirement System's investments in derivative instruments are held in the Retirement System's name and are not exposed to custodial credit risk.

#### Interest Rate Risk

The table below describes the maturity periods of the derivative instruments exposed to interest rate risk at June 30, 2016.

Derivative	Interest	Rate	Risk	as	of	June	30,	2016
(Dollars in the	ousands)							

		Maturities			
Derivative Type / Contracts	Fair Value	Less than 1 year	1-5 years	6-10 years	
Forwards					
Foreign Exchange Contracts	\$ 14,144	\$ 14,053	\$ 91	\$ -	
Options					
Foreign Exchange Contracts	(64)	(64)			
Swaps					
Credit Contracts	(18)	2	(20)	-	
Interest Rate Contracts	968	(80)	851	197	
Total	\$ 15,030	\$ 13,911	\$ 922	\$ 197	

The following table details the reference rate, notional amount, and fair value of interest rate swaps that are highly sensitive to changes in interest rates as of June 30, 2016:

# **Derivative Instruments Highly Sensitive to Interest Rate Changes as of June 30, 2016** (Dollars in thousands)

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 1.50%, Pay Variable 6-Month WIBOR	606	(1)
Interest Rate Swap	Receive Fixed 1.93%, Pay Variable 6-Month THB	301	4
Interest Rate Swap	Receive Fixed 12.055%, Pay Variable 1-Day BIDOR	252	(2)
Interest Rate Swap	Receive Fixed 12.20%, Pay Variable 1-Day BIDOR	1,108	13
Interest Rate Swap	Receive Fixed 12.23%, Pay Variable 1-Day BIDOR	203	(1)
Interest Rate Swap	Receive Fixed 12.255%, Pay Variable 1-Day BIDOR	5,381	(71)
Interest Rate Swap	Receive Fixed 12.85%, Pay Variable 1-Day BIDOR	298	19
Interest Rate Swap	Receive Fixed 13.73%, Pay Variable 1-Day BIDOR	528	5
Interest Rate Swap	Receive Fixed 15.44%, Pay Variable 1-Day BIDOR	588	104
Interest Rate Swap	Receive Fixed 15.96%, Pay Variable 1-Day BIDOR	5,287	534
Interest Rate Swap	Receive Fixed 16.15%, Pay Variable 1-Day BIDOR	824	172
Interest Rate Swap	Receive Fixed 16.395%, Pay Variable 1-Day BIDOR	102	23
Interest Rate Swap	Receive Fixed 16.40%, Pay Variable 1-Day BIDOR	127	30
Interest Rate Swap	Receive Fixed 16.95%, Pay Variable 1-Day BIDOR	82	22
Interest Rate Swap	Receive Fixed 2.015%, Pay Variable 6-Month THB	569	10
Interest Rate Swap	Receive Fixed 2.12%, Pay Variable 6-Month THB	683	14
Interest Rate Swap	Receive Fixed 2.175%, Pay Variable 6-Month THB	643	16
Interest Rate Swap	Receive Fixed 2.19%, Pay Variable 6-Month THB	199	5
Interest Rate Swap	Receive Fixed 2.22%, Pay Variable 6-Month THB	398	10
Interest Rate Swap	Receive Fixed 2.58%, Pay Variable 6-Month THB	771	45
Interest Rate Swap	Receive Fixed 2.625%, Pay Variable 6-Month THB	1,190	75
Interest Rate Swap	Receive Fixed 2.78%, Pay Variable 6-Month THB	26	2
Interest Rate Swap	Receive Fixed 5.21%, Pay Variable 1-Day MXIBR	596	(6)
Interest Rate Swap	Receive Fixed 5.23%, Pay Variable 3-Month CIBR	124	(5)
Interest Rate Swap	Receive Fixed 5.31%, Pay Variable 3-Month CIBR	48	(2)
Interest Rate Swap	Receive Fixed 5.32%, Pay Variable 3-Month CIBR	567	(20)

#### Derivative Instruments Highly Sensitive to Interest Rate Changes as of June 30, 2016 (cont)

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 5.33%, Pay Variable 3-Month CIBR	574	(40)
Interest Rate Swap	Receive Fixed 5.61%, Pay Variable 28-Day MXIBR	1,724	6
Interest Rate Swap	Receive Fixed 5.63%, Pay Variable 28-Day MXIBR	1,008	3
Interest Rate Swap	Receive Fixed 5.84%, Pay Variable 28-Day MXIBR	341	4
Interest Rate Swap	Receive Fixed 6.12%, Pay Variable 3-Month CIBR	112	(5)
Interest Rate Swap	Receive Fixed 6.20%, Pay Variable 3-Month CIBR	144	(5)
Interest Rate Swap	Receive Fixed 6.22%, Pay Variable 3-Month CIBR	151	(6)
Total Interest Rate Swaps	Receive Fixed 6.24%, Pay Variable 28-Day MXIBR	136	4
Interest Rate Swap	Receive Fixed 7.50%, Pay Variable 3-Month JIBAR	868	(22)
Interest Rate Swap	Receive Fixed 8.00%, Pay Variable 3-Month JIBAR	901	4
Interest Rate Swap	Receive Fixed 8.50%, Pay Variable 3-Month JIBAR	1,831	36
Interest Rate Swap	Receive Fixed 8.75%, Pay Variable 3-Month JIBAR	1,072	37
Interest Rate Swap	Receive Fixed 9.00%, Pay Variable 3-Month JIBAR	205	9
Interest Rate Swap	Receive Fixed 9.50%, Pay Variable 3-Month JIBAR	498	38
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 11.16%	96	7
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 12.86%	651	7
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 14.205%	5,133	(9)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 15.50%	1,125	(56)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 15.77%	1,635	(92)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 4.65%	423	2
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 5.66%	721	14
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.08%	1,241	(3)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.32%	363	(8)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.50%	244	(1)
Interest Rate Swap	Receive Variable 3-Month CIBR, Pay Fixed 6.42%	223	6
Interest Rate Swap	Receive Variable 3-Month CIBR, Pay Fixed 6.43%	69	2
Interest Rate Swap	Receive Fixed 2.81%, Pay Return THB	524	41
Total Interest Rate Swaps		\$ 43,514	\$ 968

#### Foreign Currency Risk

At June 30, 2016, the Retirement System is exposed to foreign currency risk on its investments in forwards, rights, warrants, and swaps denominated in foreign currencies.

#### Derivative Instruments Foreign Currency Risk Analysis as of June 30, 2016

Currency	Forwards	Rights/ Warrants	Swaps	Total
Australian dollar	\$ 2,650	\$ -	\$ -	\$ 2,650
Brazilian real	(5,349)	-	703	(4,646)
British pound sterling	(43,351)	-	-	(43,351)
Canadian dollar	31,384	-	-	31,384
Chilean peso	94	-	-	94
Chinese yuan renminbi	(1,582)	-	-	(1,582)
Colombian peso	1,872	-	(74)	1,798
Czech koruna	(45)	-	-	(45)
Danish krone	(1,423)	-	-	(1,423)
Euro	(67,878)	75	-	(67,803)
HK offshore Chinese yuan renminbi	(1,052)	-	-	(1,052)
Hong Kong dollar	3,569	-	-	3,569
Hungarian forint	2,652	-	-	2,652
Indian rupee	564	-	-	564
Indonesian rupiah	1,100	-	-	1,100
Japanese yen	100,599	-	-	100,599
Malaysian ringgit	4,087	-	-	4,087
Mexican peso	3,471	-	16	3,487
New Israeli shekel	5,513	-	-	5,513
New Romanian Leu	(740)	-	-	(740)
New Russian ruble	150	-	-	150
New Taiwan dollar	(2,758)	-	-	(2,758)
New Zealand dollar	53,079	-	-	53,079
Norwegian krone	(1,656)	87	-	(1,569)

#### Derivative Instruments Foreign Currency Risk Analysis as of June 30, 2016 (cont)

Currency	Forwards	Rights/ Warrants	Swaps	Total
Peruvian nuevo sol	(319)	-	-	(319)
Philippine peso	(272)	-	-	(272)
Polish zloty	1,865	-	(1)	1,864
Singapore dollar	3,074	-	-	3,074
South African rand	2,689	-	101	2,790
South Korean won	(75)	-	-	(75)
Swedish krona	10,958	-	-	10,958
Swiss franc	(33,477)	-	-	(33,477)
Thai baht	6,696	-	222	6,918
Turkish lira	(6,647)	-	-	(6,647)
Total	\$ 69,442	\$ 162	\$ 967	\$ 70,571



#### **Contingent Features**

At June 30, 2016 the Retirement System held no positions in derivatives containing contingent features.

#### (5) Fair Value Measurement of Investments

In Fiscal Year 2016, the Retirement System adopted GASB Statement No. 72, Fair Value Measurement and Application. The Retirement System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Retirement System has the following recurring fair value measurements as of June 30, 2016:

#### **Recurring Fair Value Measurements**

(Dollars in thousands)

As of June 30, 2016	Total	Quoted Prices in Active Markets for Identical Assets (Level One)	Significant Other Observable Inputs (Level Two)	Unobservable Inputs (Level Three)
Investments by fair value level				
Short-term investments	\$ 1,009,676	\$ -	\$ -	\$ 1,009,676
Debt securities:				
U.S. government and agency securities	695,309	-	695,309	-
Other debt securities	2,246,680	-	2,134,644	112,036
Equity securities:				
Domestic	4,296,051	4,198,957	7,508	89,586
International	3,087,999	3,077,546	7,961	2,492
Foreign currency contracts, net	14,125	-	-	14,125
Invested securities lending collateral	865,681	-	389,095	476,586
Total investments by fair value level	\$ 12,215,521	\$ 7,276,503	\$ 3,234,517	\$ 1,704,501
Investments measured at the net asset value	ue (NAV)			
Fixed income funds invested in:				
U.S. government and agency securities	952,962			
Other debt Securities	822,065			
Equity funds invested in:				
Domestic	674,787			
International	1,216,026			
Real assets	2,341,500			
Private equity	2,750,619			
Total investments measured at the NAV	8,757,959			
Investments not subject to the fair value hi	erarchy			
City investment pool	6,656			
Total investments measured at fair value	\$ 20,980,136			

#### Investments, at Fair Value

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using prices determined by the use of matrix pricing techniques maintained by the various pricing vendors for these securities. Debt securities including short-term instruments are priced based on evaluated prices. Such evaluated prices may be determined by factors which include, but are not limited to, market quotations, yields, maturities, call features, ratings, institutional size trading in similar groups of securities and developments related to specific securities. For equity securities not traded on an active exchange, or if the closing price is not available, corroborated indicative guotes obtained from pricing vendors are generally used. Debt and equity securities classified in Level 3 of the fair value hierarchy are securities whose stated market prices are unobservable by the market place. Many of these securities are priced using uncorroborated indicative quotes, adjusted prices based on inputs from different sources, or evaluated prices using unobservable inputs, such as extrapolated data, proprietary models, and indicative quotes from pricing vendors.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at

the measurement date. In some cases, a valuation technique may have multiple inputs used to measure fair value, and each input might fall into a different level of the fair value hierarchy. The level in the fair value hierarchy within which a fair value measurement falls in its entirety is determined based on the lowest level input that is significant to the measurement. The prices used in determining the fair value hierarchy are obtained from various pricing sources by the Retirement System's custodian bank.

## Investments, at Net Asset Value (NAV)

#### (a) Equity and Debt Funds

The equity and debt funds are commingled funds that are priced at net asset value by industry vendors and fund families. NAV is the market value of all securities owned by a fund, minus its total liabilities, divided by the number of shares issued and outstanding. The NAV of an open-end fund is its price.

#### (b) Real Assets, Private Equity, and Opportunistic Fixed Income Investments

The fair value of the Retirement System's investments in real assets, private equity, and opportunistic fixed income investments are based on net asset values provided by the investment managers and general partners (hereinafter collectively referred to as the "General Partners"). Such value generally represents the Retirement System's proportionate share of the net assets of the limited partnerships. The partnership financial statements are audited annually as of December 31 and the net asset value are adjusted by additional contributions to and distributions from the partnership, the Retirement System's share of net earnings and losses, and unrealized gains and losses resulting from changes in fair value, as determined by the General Partners.

The General Partners may use one or more valuation methodologies outlined in FASB ASC 820, Fair Value Measurement. For some investments, little market activity may exist. The General Partners' determination of fair value is then based on the best information available in the circumstances and may involve subjective assumptions and estimates, including the General Partners' assessment of the information that market participants would use in valuing the investments. The General Partners may take into consideration a combination of internal and external factors. including but not limit to, appropriate risk adjustments for nonperformance and liquidity. Such fair value estimates involve subjective judgments of unrealized gains and losses.

The values provided by the General Partners may differ significantly from the values that would have been used had a ready market existed for these investments

#### (6) Securities Lending

The Retirement System lends U.S. government obligations, domestic and international bonds, and equities to various brokers with a simultaneous agreement to return collateral for the same securities plus a fee in the future. The securities lending agent manages the securities lending program and receives securities and cash as collateral. Cash and non-cash collateral is pledged at 102% and 105% of the fair value of domestic securities and international securities lent, respectively. There are no restrictions on the number of securities that can be lent at one time. However, starting in the year ended June 30, 2009, the Retirement System engaged in a systematic reduction of the value of securities on loan with a target of no more than ten percent (10%) of total fund assets on loan at any time. The term to maturity of the loaned securities is generally not matched with the term to maturity of the investment of the corresponding collateral.

The Retirement System does not have the ability to pledge or sell collateral securities unless a borrower defaults. The securities collateral is not reported on the statements of plan net position. As of June 30, 2016, the Retirement System has no credit risk exposure to borrowers because the amounts the Retirement System owes them exceed the amounts they owe the Retirement System. As with other extensions of credit, the Retirement System may bear the risk of delay in recovery or of rights in the collateral should the borrower of securities fail financially. However, the lending agent indemnifies the Retirement System against all borrower defaults.

As of June 30, 2016, the Retirement System has lent \$1,196.4 million in securities and received collateral of \$863.5 million and \$368.3 million in cash and securities, respectively, from borrowers. The cash collateral is invested in a separate account managed by the lending agent

using investment guidelines approved by the Retirement Board. Due to the increase in the fair value of assets held in the separately managed account, the Retirement System's invested cash collateral was valued at \$865.7 million. The net unrealized gain of \$2.1 million is presented as part of the net appreciation (depreciation) in fair value of investments in the statement of changes in plan net position in the year in which the unrealized gains and losses occur. The Retirement System is exposed to investment risk including the possible loss of principal value in the separately managed securities lending account due to the fluctuation in the fair value of the assets held in the account.

The Retirement System's securities lending transactions as of June 30, 2016 are summarized in the following table.

#### Securities Lending as of June 30, 2016

(Dollars in thousands)

Investment Type	Fair Value of Loaned Securities	Cash Collateral	Fair Value of Non-Cash Collateral
Securities on Loan for Cash Collateral			
International Corporate Fixed Income	\$ 5,600	\$ 5,842	\$ -
International Equities	40,741	42,797	-
International Government Fixed	1,105	1,153	-
U.S. Government Agencies	204	208	-
U.S. Corporate Fixed Income	114,536	116,353	-
U.S. Equities	439,182	445,863	-
U.S. Government Fixed Income	247,020	251,320	-
Securities on Loan for Non-Cash Collateral			
International Corporate Fixed Income			
International Equities	8,736	-	9,163
International Government Fixed	295,913	-	315,144
U.S. Corporate Fixed Income	105	-	110
U.S. Equities	6,132	-	6,225
U.S. Government Fixed Income	37,080	_	37,609
	\$ 1,196,354	\$ 863,536	\$ 368,251

The following table presents the segmented time distribution for the reinvested cash collateral account based upon the expected maturity (in years) as of June 30, 2016.

#### Fair Value of Cash Collateral Account as of June 30, 2016

(Dollars in thousands)

Investment Type	Fair Value	Maturity Less Than 1 Year
Commercial Paper	\$ 44,260	\$ 44,260
Negotiable Certificates of Deposit	345,116	345,116
Repurchase Agreements	419,000	419,000
Short Term Investment Funds	57,305	57,305
Total	\$ 865,681	\$ 865,681

The Retirement System's exposure to credit risk in its reinvested cash collateral account as of June 30, 2016 is as follows:

#### Credit Rating of Cash Collateral Account as of June 30, 2016

(Dollars in thousands)

Credit Rating	Fair Value	Fair Value as a Percentage of Total
AA	\$ 153,323	17.7%
A	337,078	38.9%
Not Rated *	375,280	43.4%
Total	\$ 865,681	100.0%

\* Repurchase agreements of \$270.0 million are not rated, but are held by counterparties with S&P ratings of A or AA.

#### (7) Investments in Real Assets

Real assets investments represent the Retirement System's interests in real assets limited partnerships and separate accounts. The change in these investments during the year ended June 30, 2016 is summarized as follows:

(Dollars in thousands)

	2015-16
Investments:	
Beginning of the year	\$ 1,975,926
Capital investments	1,318,111
Equity in net earnings	48,492
Net appreciation in fair value	168,196
Capital distributions	(1,169,225)
End of the year	\$ 2,341,500

#### (8) Benefits

Allowances and benefits incurred during the year are summarized as follows:

(Dollars in thousands)

	2015-16
Service retirement benefits	\$ 937,388
Disability retirement benefits	179,056
Death benefits	8,990
COLA benefit adjustments	118,012
DROP accrued retirement benefits	(186)
Total	\$ 1,243,260

#### (9) Funding Policy

Employer and employee (member) contributions are mandated by the Charter. The Charter specifies that employer contributions are determined as normal cost plus an amortization of the unfunded liability over a period not to exceed 20 years. Retirement Board policy determines the actual amortization period subject to the Charter limitation. Schedules of both employer and employee contribution rates may be found in the Statistical Section of this report. A ten-year schedule of funding progress may be found in the Actuarial Section, while a ten-year schedule of actuarially determined employer contributions is in the Required Supplemental Information subsection of this Financial Section.

#### (10) Net Pension Liability of Employers

The components of the employers' net pension liability at June 30, 2016 were as follows: (Dollars in thousands)

Total pension liability (see table below)

Total pension liability	\$ 25,967,281
Plan fiduciary net position	\$ 20,154,503
Net pension liability	\$ 5,812,778
Plan fiduciary net position as a percentage of total pension liability	77.6%

#### (a) Actuarial Assumptions

The total pension liabilities as of June 30, 2016 were determined by an actuarial valuation as of June 30, 2015 rolled forward to June 30, 2016 using standard roll forward procedures. The June 30, 2016 total pension liabilities include an adjustment for the October 2015 State Appeals Court determination that the "full funding" requirement for Supplemental COLAs of Proposition C does not apply to members who retired on or after November 6, 1996 and were hired prior to January 7, 2012. Retroactive lump sums were paid during fiscal year 2015-16 for the restoration of 2013 and 2014 Supplemental COLAs

to this subgroup of members. The updated adjustment procedures also include the increased expectation of future Supplemental COLAs for these members.

The following is a summary of the actuarial assumptions used at the June 30, 2016 measurement date.

Inflation	3.25%
Salary Increases	3.75% plus merit component based on employee classification and years of service
Investment rate of return	7.50%, net of pension plan investment expense, including inflation

Mortality rates for active members and healthy annuitants were based upon adjusted Employee and Healthy Annuitant CalPERS mortality tables projected generationally from the 2009 base year using a modified version of the MP-2015 projection scale. The actuarial assumptions used at the June 30, 2016 measurement date were based upon the results of a demographic experience study for the period July 1, 2009 through June 30, 2014 and an economic experience study as of July 1, 2015. The probability of a Supplemental COLA as of June 30, 2016 was developed based upon the probability and amount of Supplemental COLA for each future year. The table below shows the net assumed Supplemental COLA for members with a 2.00% basic COLA for sample years.

July 1	11/6/96 – Prop C	Before 11/6/96 or After Prop C
2018	0.750%	0.000%
2023	0.750%	0.220%
2028	0.750%	0.322%
2033	0.750%	0.370%
2038+	0.750%	0.375%

#### Assumed Supplemental COLA for Members with a 2.00% Basic COLA

The long-term expected rate of return on pension plan investments was 7.50%. It was set by the Retirement Board after consideration of both expected future returns and historical returns experienced by the Retirement System. Expected future returns were determined by using a building-block method

in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of geometric long-term expected real rates of return (expected returns, net of pension plan investment expense and inflation) for each major asset class are summarized in the following table as of June 30, 2016:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	40.0%	5.1%
Fixed Income	20.0%	1.1%
Private Equity	18.0%	6.3%
Real Assets	17.0%	4.3%
Hedge Funds/Absolute Return	5.0%	3.3%
	100.0%	

#### (b) Discount Rate

The discount rate used to measure the total pension liability at June 30, 2016 was 7.50%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the rates specified in the Charter. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the July 1, 2015 actuarial valuation. Based on these assumptions, the System's fiduciary net position was projected to be available to make projected future benefit payments for current members

until FY 2092-93 when only a portion of the projected benefit payments are expected to be made from the projected fiduciary net position. Projected benefit payments are discounted at the long-term expected return on assets of 7.50% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 2.85% to the extent that they are not available. The single equivalent rate used to determine the total pension liability as of June 30. 2016 is 7.50%.

The municipal bond rate of 2.85% used for the determination of the above discount rate represents

the yield available at June 30, 2016 on the Bond Buyer 20-Bond GO Index.

#### (c) Sensitivity of the net pension liability to changes in the discount rate

The following presents the net pension liability as of June 30, 2016, calculated using the discount rate of 7.50%, as well as what the total net pension liability would be if it were calculated using a discount rate that is one percentage-point lower (6.50%) or one -percentage-point higher (8.50%) than the current rate:

Sensitivity of the net pension liability to changes in the discount	rate
(Dollars in thousands)	

Sensitivity of the Net Pension Liability to Changes in the Discount Rate	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net pension liability	\$ 9,211,449	\$ 5,812,778	\$ 3,001,677

#### (d) Money Weighted Rate of Return

For the year ended June 30, 2016, the annual money-weighted rate of return on pension plan investments, net of investment expenses, adjusted for the changing amounts actually invested, was 0.96%.

#### (11) Postemployment Healthcare Plan

#### (a) Health Care Benefits

Health care benefits of the Retirement System's employees, retired employees and their beneficiaries are financed by the City and County through the City and County of San Francisco Health Service System (Health Service System). OPEB expense for these Retirement System employees is included in other administrative expenses. The City and County issues a publicly available financial report that includes the complete note disclosures and required supplementary information related to the City and County's postemployment health care obligations. The report may be obtained by writing to the City and County of San Francisco. Office of the Controller, 1 Dr. Carlton B. Goodlett Place, Room 316, San Francisco, California 94102, or by calling (415) 554-7500.

## (12) Commitments and Contingencies

#### (a) Unfunded Investments Commitments

The Retirement System has unfunded commitments to contribute capital for real assets in the amount of \$1,929.9 million, private equities in the amount of \$2,532.9 million, and opportunistic fixed income in the amount of \$271.4 million totaling \$4,734.2 million as of June 30, 2016.

#### (b) Legal

Proposition C, a pension reform Charter amendment approved by voters in November 2011, included changes in the calculation of certain supplemental cost of living adjustments and was intended to reduce pension costs. These Proposition C changes in the calculation of certain supplemental cost of living adjustments were the subject of litigation and a decision of the California Court of Appeals. The California Court of Appeals held that the changes to the supplemental cost of living adjustments in Proposition C could not be applied to retirees who retired after November 1996. That decision was appealed to the California Supreme Court. On June 17, 2015, the California Supreme Court denied review of the Court of Appeals decision. On October 25, 2015, the San Francisco Superior Court entered an amended judgment consistent with the Court of Appeals decision.

After due consideration and in consultation with Board legal counsel, at its July 2016 regular Board meeting, the Retirement Board determined, in light of the conclusions recited in the Court of Appeals decision, Proposition C should be interpreted to provide payment of the supplemental cost of living adjustments to pre-1996 retirees without a "fully funded" precondition to payment. On September 19, 2016, the City and County of San Francisco and the Controller filed an action against the SFERS Retirement Board and

SFERS' Executive Director, seeking to prevent the Retirement System from paying supplemental COLA benefits to pre-1996 retirees on the same basis that those benefits have been paid to the post-1996 retirees in accordance with the Court's decision in Protect Our Benefits v. City and County of San Francisco. On October 5, 2016, the San Francisco Superior Court granted the City's motion for preliminary injunction, thus preventing SFERS from making retroactive supplemental cost of living adjustments to the pre-1996 retirees. The Citv's motion for a permanent injunction to prevent SFERS from paying the supplemental cost of living adjustments to the pre-1996 retirees is under review by the San Francisco Superior Court. The amount of the retroactive cost of living adjustments to be paid to eligible retirees and beneficiaries cannot be reasonably estimated at this time.

Subsequent to issuance of the Financial Statements, the San Francisco Superior Court granted the City's motion to prevent SFERS from paying the supplemental cost of living adjustments to the pre-1996 retirees, and entered judgment in favor of the City. SFERS has filed an appeal, which is pending.

#### **REQUIRED SUPPLEMENTARY INFORMATION**

#### Schedule of Changes in Net Pension Liability

(Dollars in thousands)

Year ended June 30	2016	2015	2014
Total pension liability			
Service cost	\$ 567,576	\$ 523,644	\$ 509,200
Interest	1,669,996	1,621,582	1,542,266
Changes of benefit terms	1,293,714	0	0
Differences between expected and actual experience	(119,270)	(197,981)	0
Changes of assumptions	1,087,309	216,845	(73,315)
Benefit payments, including refunds of member contributions	(1,256,146)	(1,131,030)	(1,072,526)
Net change in total pension liability	\$ 3,243,179	\$ 1,033,060	\$ 905,625
Total pension liability—beginning	22,724,102	21,691,042	20,785,417
Total pension liability—ending, (a)	\$ 25,967,281	\$ 22,724,102	\$ 21,691,042
Plan fiduciary net position			
Contributions—employer	\$ 526,805	\$ 592,643	\$ 532,882
Contributions—employee	322,764	301,682	289,020
Net investment income	150,190	763,429	3,175,431
Benefit payments, including refunds of member contributions	(1,256,146)	(1,131,030)	(1,072,526)
Administrative expenses	(17,179)	(19,262)	(15,745)
Net change in plan fiduciary net position	\$ (273,566)	\$ 507,462	\$ 2,909,062
Plan fiduciary net position—beginning	20,428,069	19,920,607	17,011,545
Plan fiduciary net position—ending, (b)	\$ 20,154,503	\$ 20,428,069	\$ 19,920,607
Net pension liability—ending, (a) – (b)	\$ 5,812,778	\$ 2,296,033	\$ 1,770,435

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

#### Schedule of Net Pension Liability

(Dollars in thousands)

Year ended June 30	6/30/2016	6/30/2015	6/30/2014
Total pension liability	\$25,967,281	\$ 22,724,102	\$ 21,691,042
Plan fiduciary net position	(20,154,503)	(20,428,069)	(19,920,607)
Net pension liability	\$5,812,778	\$ 2,296,033	\$ 1,770,435
Plan fiduciary net position as a percentage of the total pension liability	77.6%	89.9%	91.8%
Covered-employee payroll	\$2,836,498	\$2,642,752	\$2,507,162
Net pension liability as a percentage of covered-employee payroll	204.9%	86.9%	70.6%

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

#### Schedule of Employer Contributions

(Dollars in thousands)

Year Ended June 30	Actuarially Determined Contribution (ADC)	Contributions in Relation to the ADC	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2007	132,601	132,601	-	2,161,261 *	6.1%
2008	134,060	134,060	-	2,376,221 *	5.6%
2009	119,751	119,751	-	2,457,196 *	4.9%
2010	223,614	223,614	-	2,544,939 *	8.8%
2011	308,823	308,823	-	2,398,823 *	12.9%
2012	410,797	410,797	-	2,360,413 *	17.4%
2013	442,870	442,870	-	2,448,734	18.1%
2014	532,882	532,882	-	2,507,162	21.3%
2015	592,643	592,643	-	2,642,752	22.4%
2016	526,805	526,805	-	2,836,498	18.6%

\*Covered compensation from actuarial projection.

#### Schedule of Money-Weighted Rates of Return

Money-Weighted Rate of Return
19.81%
(4.09)%
(22.28)%
14.53%
22.65%
0.81%
13.91%
19.10%
4.03%
0.96%

#### NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

#### Note to Schedule of Changes in Net Pension Liability and Schedule of Net Pension Liability

The total pension liability contained in the schedule was determined by the Retirement System's actuary, Cheiron, Inc. The net pension liability is measured as the total pension liability less the amount of the plan net position of the Retirement System. The discount rate was 7.50% as of June 30, 2016, 7.46% as of June 30, 2015, and 7.58% as of June 30, 2014. The June 30, 2016 total pension liabilities include an adjustment for the October 2015 State Appeals Court determination that the "full funding" requirement for Supplemental COLAs of Proposition C does not apply to members who retired on or after November 6, 1996 and were hired prior to January 7, 2012. The restoration of and the resulting increased expectation of future Supplemental COLAs are accounted for as a change in benefits in the measurement of the total pension liability as of June 30, 2016. A summary of assumptions may be found in the Note 10 to the financial statements. A complete description of methods and assumptions may be found in the Retirement System's GASB 67/68 *Report* for the corresponding fiscal years.

#### Note to Schedule of Employer Contributions

A summary of the methods and assumptions used to determine the FY 2015-16 contribution is as follows:

Valuation date	July 1, 2014
Timing	Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year
Actuarial cost method	Entry age normal
Asset valuation method	5-year recognition of the difference between the actual investment earnings and the expected return on the actuarial value of assets
Amortization method	Unfunded actuarial accrued liabilities due to net actuarial gains and losses and assumption changes are amortized as a level percentage of payroll over a 20-year closed periods. Additional liabilities due to Charter amendments are amortized as a level percentage of payroll over closed 15-year periods, while Supplemental COLAs are amortized over closed 5-year periods.
Discount rate	7.50%
Salary increases	3.75% plus merit component based on employee classification and years of service
Amortization payment growth rate	3.75%
Price inflation	3.25%
Mortality	Active members: Sex distinct RP-2000 Employee Mortality projected using Scale AA to 2030 for females and 2005 for males. Healthy Annuitants: Sex distinct RP-2000 Annuitant Mortality projected using Scale AA to 2020.

A complete description of the methods and assumptions used to determine contribution rates for the fiscal year ending June 30, 2016 can be found in the July 1, 2014 actuarial valuation report.

#### Table of Key Assumptions for Schedule of Employer Contributions

Year Ended June 30	Valuation Date	Investment return	Salary Increase/ Amortization Growth	Mortality	Change in Funding Methods or Assumption from Prior Year
2007	7/1/2005	8.00%	4.50%	1994 GAM	Asset smoothing method, disability mortality assumption and other assumption and valuation methodology changes
2008	7/1/2006	8.00%	4.50%	1994 GAM	None
2009	7/1/2007	8.00%	4.50%	1994 GAM	None
2010	7/1/2008	7.75%	4.50%	1994 GAM	Investment return and other minor changes in valuation upon change in actuary
2011	7/1/2009	7.75%	4.50%	1994 GAM	None
2012	7/1/2010	7.75%	4.00%	RP2000 Mortality projected with Scale AA	Wage inflation and demographic assumptions including salary merit increases based upon experience study
2013	7/1/2011	7.66%	3.91%	RP2000 Mortality projected with Scale AA	Investment return and wage inflation assumptions
2014	7/1/2012	7.58%	3.83%	RP2000 Mortality projected with Scale AA	Investment return and wage inflation assumptions
2015	7/1/2013	7.58%	3.83%	RP2000 Mortality projected with Scale AA	None
2016	7/1/2014	7.50%	3.75%	RP2000 Mortality projected with Scale AA	Investment return and wage inflation assumptions

Complete descriptions of the methods and assumptions used to determine contribution rates can be found in each applicable actuarial valuation report.

Salary increase assumptions in above table are shown before the addition of merit components based upon employee classification and years of service.

Summaries of plan provisions used in each valuation can be found in each applicable actuarial valuation report.

#### **OTHER SUPPLEMENTARY INFORMATION**

#### Pension Fund Net Investment Income

#### Fiscal Year 2015-16

(Dollars in thousands)

	Realized Gain/Loss	Unrealized Gain/Loss	Total
Income			
Interest Earned			\$188,292
Dividends Earned			219,529
Securities Lending Income-Net			6,247
Recaptured Commission Income			58
Real Assets Income			49,720
Private Equities Income			(30,692)
Investment Expenses			(47,026)
Total Income <sup>1</sup>			\$ 386,128
Net Appreciation in Fair Values			
Short-Term Securities	\$(102,671)	\$89,769	\$(12,902)
Equities	309,017	(897,046)	(588,029)
Debt Securities	(70,446)	88,950	18,504
Real Assets	72,082	321,313	393,395
Private Equities	203,157	147,032	350,189
Other Assets	(37,011)	(360,084)	(397,095)
Total Net Appreciation	\$ 374,128	\$(610,066)	\$ (235,938)
Total Net Investment Income (including Net Appreciation)			\$ 150,190

 $^{\scriptscriptstyle 1}$  Total investment income excludes employee and employer contributions.

#### **Pension Fund Disbursements**

Fiscal Year 2015-16 (Dollars in thousands)

Payments/Expenses	Amount
Service Retirement Payments	\$ 937,388
Disability Retirement Payments	179,056
Cost of Living Adjustments	118,012
Death Allowance Payments	4,218
Death Benefits	3,766
Retired Annuitant Rolls (Option 1 Death Benefit)	1,006
DROP Program Accrued Retirement Benefits	(186)
Refunds of Contributions – Death Benefits	4,617
Refunds of Contributions – Other than Death Benefits	8,269
Administrative Expenses: Retirement Services/Administration	17,179
Total Payments & Expenses, FY2015-16	\$ 1,273,325
Total Payments & Expenses, FY2014-15	\$ 1,150,292
Increase From FY 2014-15:	\$ 123,033

#### **Comparison of Contributions**

**Employer Contributions** 

(Dollars in thousands)

Member Plan	2015-16	2014-15	2013-14
Miscellaneous Plans	\$ 442,184	\$ 494,353	\$ 443,773
Firefighter Plans	35,457	40,340	36,890
Police Plans	49,164	57,950	52,219
Total	\$ 526,805	\$ 592,643	\$ 532,882

#### **Employee Contributions**

(Dollars in thousands)

Member Plan	2015-16	2014-15	2013-14
Miscellaneous Plans	\$ 266,929	\$ 248,084	\$ 235,797
Firefighter Plans	23,490	22,621	21,985
Police Plans	32,345	30,977	31,238
Total	\$ 322,764	\$ 301,682	\$ 289,020

#### **Comparison of Actual Administrative Expenditures**

## Retirement Services & Administration Divisions (Dollars in thousands)

Description of Expenditures	2015-16	2014-15	2013-14
Personnel Services	\$ 10,954	\$ 10,879	\$ 10,636
Equipment Purchase	96	344	81
Materials and Supplies	135	228	179
Services of Other Departments	3,495	5,494	2,023
Other Services	2,499	2,317	2,826
Total	\$ 17,179	\$ 19,262	\$ 15,745

#### **Investment Division**

(Dollars in thousands)

Description of Expenditures	2015-16	2014-15	2013-14
Personnel Services	\$ 3,756	\$ 2,442	\$ 2,724
Equipment Purchase	169	400	2
Materials and Supplies	9	9	3
Services of Other Departments	2,733	1,587	1,184
Other Services	40,359	40,473	43,676
Total	\$ 47,026	\$ 44,911	\$ 47,599

#### STATEMENT FROM THE CHIEF INVESTMENT OFFICER

The Retirement System's investment strategies and the composition of its aggregate portfolio have changed considerably over the years since its inception. However, the Retirement System's investment objective has essentially remained the same: to maximize long-term rates of return on investments within prudent guidelines.

## We are 100% focused on achieving our investment objective year after year. To that end, the Retirement Board approved an asset allocation policy in February 2015, as outlined below:

Asset Class	Policy Target
Public Equity	40.0%
Fixed Income	20.0%
Private Equity	18.0%
Real Assets	17.0%
Absolute Return	5.0%
Cash	0.0%

Our record of investment performance confirms our commitment to achieving long-term rates of return. For Fiscal Year 2016, and nearly every time period for the last 20 years, we have outperformed our peers at the Plan and the individual asset class levels. For added perspective, I have included a discussion of our returns within the context of the current global market environment.

#### Investment Performance for Fiscal Year Ended June 30, 2016

#### **Total Plan**

For the fiscal year ended June 30, 2016, SFERS returned 1.29%. Comparatively, the median public pension with \$1 billion or more in assets returned -0.46%. Hence, over the past year we outperformed our peers by 1.75%. We also ranked in the 16th percentile versus our peers, meaning over the past year we outperformed 84% of all public pension plans with \$1 billion or more.

The table below also shows that compared to our peers SFERS' ranked in the top 8% over the past 5 years, in the top 24% over the past 10 years, and in the top 1% over the past 20 years.

## Investment Section

#### Investment Returns – June 30, 2016

(Net of fees and expenses)

Description		1-Year		Į	5-Years	5	1	.0-Year	S	2	0-Year	S
	Returns	Peer Rank	Quartile Rank	Returns	Peer Rank	Quartile Rank	Returns	Peer Rank	Quartile Rank	Returns	Peer Rank	Quartile Rank
Total Plan	<b>1.29</b> %	16	1	7.53%	8	1	5.85%	24	1	7.66%	1	1
Median Peers	-0.46%			5.97%			5.33%			6.64%		
Over (Under) vs. Peers	1.75%			1.56%			0.52%			1.02%		
Public Equity	-4.14%	47	2	6.36%	46	2	4.61%	64	3	6.72%	34	2
Median Peers	-4.26%			6.20%			4.99%			6.44%		
Over (Under) vs. Peers	0.12%			0.16%			-0.38%			0.28%		
Fixed Income	4.39%	30	2	5.18%	11	1	5.44%	53	3	6.50%	13	1
Median Peers	3.57%			3.92%			5.49%			5.85%		
Over (Under) vs. Peers	0.82%			1.26%			-0.05%			0.65%		
Private Equity	8.63%	10	1	12.94%	5	1	12.36%	1	1	15.58%	1	1
Median Peers	3.92%			9.36%			7.87%			14.16%		
Over (Under) vs. Peers	4.71%			3.58%			4.49%			1.42%		
Real Assets	12.95%	24	1	<b>14.00</b> %	1	1	6.00%	32	1	8.81%	45	2
Median Peers	11.50%			8.37%			5.30%			8.58%		
Over (Under) vs. Peers	1.45%			5.63%			0.70%			0.23%		

Source: Northern Trust for SFERS returns; NEPC for Median Peers Returns and Rank by Peer Group and Quartile Group

#### **ASSET CLASSES**

#### **Public Equity**

The public equity portfolio consists primarily of investments in publicly traded stocks in the U.S., international developed markets, and emerging markets. Public equity investments provide longterm capital appreciation as well as liquidity.

Over the past year our public equity portfolio declined by 4.14%. While our returns were negative, they were slightly better than the median public pension plan which returned -4.26%. Over the past year our public equity portfolio ranked in the 47th percentile compared to our peers. Over the past ten years our public equity portfolio has gained just 4.61%, due primarily to the large decline stocks incurred in the Global Financial Crisis and the low returns earned from stocks the past two years.

#### **Fixed Income**

The fixed income portfolio consists primarily of investments in publicly traded and privately held bonds. Fixed income investments provide regular income, protection of capital in down markets, and liquidity.

In the fiscal year ended June 30, 2016 our fixed income portfolio returned 4.39%, outperforming the median public pension return of 3.57% and ranking in the 30th percentile over the past year.

For the past five years, our fixed income portfolio returned 5.18% annualized, strongly outperforming the median large public pension plan which returned 3.92%, ranking in the 11th percentile versus our peers. Over the past ten years, the portfolio has gained 5.44% annualized, ranking in the 53rd percentile compared to other large pension plans.

#### **Private Equity**

Core private equity strategies include buyouts, venture capital, growth capital and special situations. Other investment strategies that can be pursued on an opportunistic basis include co-investments, secondary transactions, and other creditbased strategies such as mezzanine financing. Private equity provides long-term capital appreciation.

In the fiscal year ended June 30, 2016, our private equity portfolio returned 8.63%, significantly outperforming the median public pension plan which returned 3.92%. Over the past year our private equity portfolio ranked in the 10th percentile compared to our peers.

In the past five years, the private equity portfolio returned 12.94% annualized, solidly outperforming our public plan peers return of 9.36%. Over the past five years our private equity portfolio ranked in the 5th percentile compared to our peers.

For the past ten years, we have earned 12.36% annualized on our private equity investments. We also significantly outperformed our peers, who returned 7.87% annualized over the same period. Over the past ten years, SFERS' private equity portfolio ranks in the top 1% compared to our peers.

SFERS private equity program consistently places in the top ten nationally of an annual ranking by the American Investment Council (AIC), a communication and research organization established to analyze and distribute information about the private equity industry and its contributions to the national and global economy. In the AIC's 2016 Public Pension Fund Analysis, SFERS ten-year private equity performance ranked second in the country out of 155 U.S. public pension plans.

#### **Real Assets**

The real assets portfolio consists primarily of private real estate and natural resources investment partnerships. Real assets investments provide income from property lease payments or the extraction / harvesting of commodities, long-term capital appreciation from rising property, land and asset values, and inflation protection.

For the fiscal year ended June 30, 2016 our real assets portfolio gained 12.90%, outperforming our peers whose median return was 11.50%.

For the past five years, our real assets portfolio has also posted very strong returns, earning 14.00% annualized. The portfolio has also significantly outperformed our peers, ranking in the top 1% in the universe of large public pension plans.

For the past ten years, our real assets portfolio has gained 6.00%, solidly above the median return of other large pension plans which returned 5.30% annualized and ranking in the 32nd percentile compared to our peers.

#### **Discussion of Returns**

This past year investment returns were held down by negative returns in international equities and low returns in U.S. stocks and bonds.

In the U.S., low economic growth and flat corporate profit growth led to modest returns on domestic stocks. Valuations, which are about 25% more expensive than their historical averages, also constrained U.S. equity returns.

International stocks were down nearly 10% this past year primarily due to negative currency returns. Foreign currencies declined due to weak economic growth in Europe and Japan, the U.K.'s vote to leave the European Union, which led investors to worry about economic prospects for the entire region, lower economic growth in China, a political crisis and deep recession in Brazil, and a stronger U.S. dollar as investors began to expect interest rates in the U.S. would rise.

Bond returns were low due to record low bond yields in the U.S. Since the Global Financial Crisis, the Federal Reserve has kept interest rates at historic lows in an effort to boost lending, consumer demand, and business investment. As a result of the Fed's efforts to boost growth through lower interest rates, our bond returns in recent years have been low.

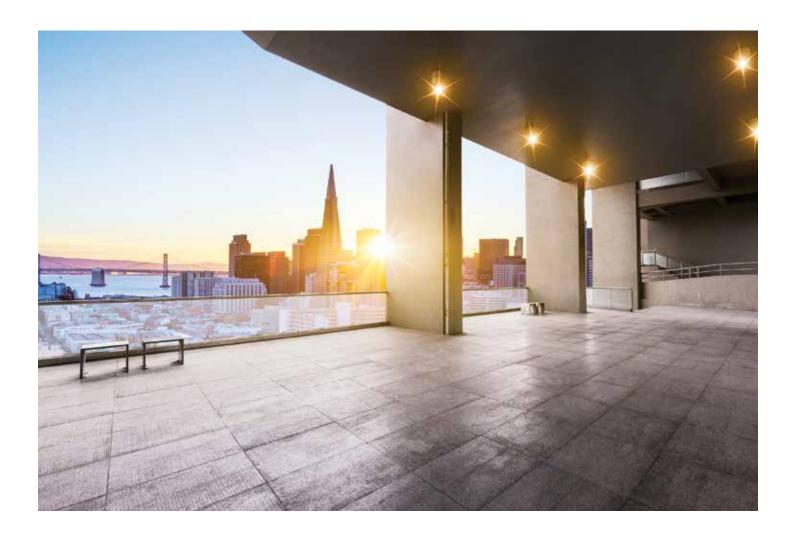
While the overall environment this year was very challenging, there were pockets of strong investment returns. Our real assets portfolio returned 12.95% due to rising real estate prices. A strong recovery in oil and gas prices in the last quarter also helped boost our real assets returns. Further, our private equity portfolio returned 8.63% this year on good manager selection. We remain committed to an investment strategy that takes advantage of long-term, secular themes. Leveraging a deep and experienced staff, we continue to diversify the portfolio by reducing exposure to public equity and increasing allocations to private equity, natural resources, and absolute return. We are pleased to have recorded a positive

investment return for the year, and going forward, we believe we are well positioned for the challenges and opportunities that the markets may present.

Regards,

W*MM Canker* William J. Coaker, Jr.

**Chief Investment Officer** 



#### **SUMMARY OF INVESTMENTS**

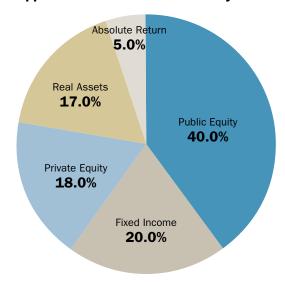
As of June 30, 2016, approximately 7.3% of SFERS' trust assets were managed internally. This consisted of \$1.2 billion in domestic equities and \$239 million in domestic bonds. The balance of the portfolio was managed by external investment management firms that specialized in specific asset classes – including global equities, global fixed-income, private equity and real assets.

The Investment portfolio totals below do not track the pension net assets reported in the prior section detailing SFERS audited financial statements because the totals are net of management fees and expenses.

	2016		20	15
Asset Class	Market Value (\$thousands)	% of Portfolio	Market Value (\$thousands)	% of Portfolio
Public Equity	9,486,642	47.6%	10,649,781	<b>52.4</b> %
Fixed Income	4,654,925	23.3%	4,934,837	24.3%
Private Equity				
Buyout	802,455	4.0%	1,031,209	5.1%
Venture	1,100,973	5.5%	1,045,336	5.1%
Special Situations	791,620	4.0%	313,749	1.5%
Total Private Equity	2,695,048	13.5%	2,390,295	<b>11.8</b> %
Real Assets	2,344,822	11.8%	2,149,841	10.6%
Cash	760,536	3.8%	193,907	1.0%
Total Investment Portfolio	19,941,973	100.0%	20,318,661	100.0%

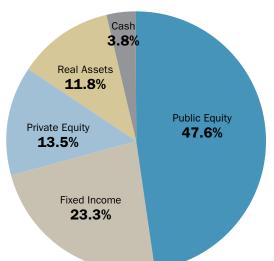
#### **Asset Allocation**

The Retirement Board has approved the asset allocation policy as noted below. The charts also show the plan's actual asset allocation at June 30, 2016:



**Approved Asset Allocation Policy** 

#### Asset Allocation – June 30 2016



#### **INVESTMENT PERFORMANCE**

For the Fiscal Year ended June 30, 2016, the investment portfolio of the Retirement System returned 1.29%. Real Assets (+12.95%) continued its historically solid performance followed by Private Equity (+8.63%). In an environment of slow growth, Public Markets essentially finished flat as Fixed Income returned +4.39% while Global Equities declined 4.14%.

#### **Investment Portfolio Performance**

#### Annualized Returns for the Periods ending 6/30/2016

(Net of fees and expenses)

Description	1-Year	3-Years	5-Years	10-Years	20-Years
<b>Global Equity</b>	<b>-4.14%</b>	<b>6.29%</b>	<b>6.36%</b>	<b>4.61%</b>	<b>6.72%</b>
Benchmark: Global Equity Policy <sup>1</sup>	-3.87%	6.13%	5.73%	4.79%	6.45%
<b>Global Fixed Income</b>	<b>4.39%</b>	<b>4.64%</b>	<b>5.18%</b>	<b>5.44%</b>	<b>6.50%</b>
Benchmark: Fixed Income Policy <sup>2</sup>	5.82%	4.20%	4.01%	5.26%	5.80%
<b>Private Equity</b>	<b>8.63%</b>	<b>16.40%</b>	<b>12.94%</b>	<b>12.36%</b>	<b>15.58%</b>
Benchmark: Private Equity Policy <sup>3</sup>	9.18%	17.19%	17.65%	12.77%	13.58%
<b>Real Assets</b>	<b>12.95%</b>	<b>13.73%</b>	<b>14.00%</b>	<b>6.00%</b>	<b>8.81%</b>
Benchmark: Real Assets Policy <sup>4</sup>	8.00%	8.00%	8.50%	6.70%	9.93%
<b>Total Fund</b>	<b>1.29%</b>	<b>7.75%</b>	<b>7.53%</b>	<b>5.85%</b>	<b>7.66%</b>
Weighted Policy Benchmark⁵	2.17%	7.74%	7.67%	6.60%	7.16%

Source: The Northern Trust Company

1. Global Equity Policy consists of 100% MSCI ACWI IMI (ND) from 09/30/08 through current, 100% MSCI ACWI Ex-US (ND) from 01/31/2001 through 09/30/2008, 100% MSCI ACWI Ex-US (GD) previous to 01/31/2001.

2. Total Fixed Income Policy consists of 100% BC Universal from 6/30/07 through current, 75% BC Universal/25% BC Global Aggregate from 9/30/05 to 6/30/07, 80%/20% from 9/30/02 to 9/30/05, 100% BC Universal 9/30/00 to 9/30/02, and 100% BC Aggregate previous to 9/30/00.

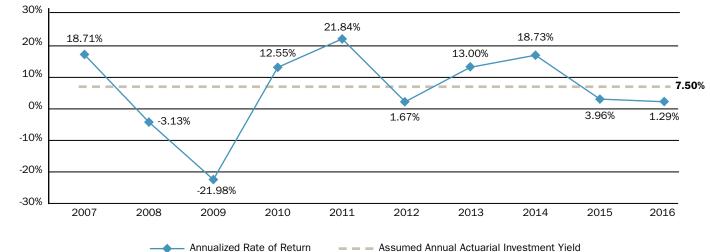
3. Private Equity Policy consists of the S&P500 + 500 bps 1/1/03 through current; + 600 bps through 12/31/02.

4. The Real Assets Policy consists of NPI (NCREIF Property Index) +1.5% from inception to 09/30/2011 and a flat 8% thereafter.

5. The current SFERS weighted policy consists of 47% MSCI ACWI IMI (ND), 25% BC US Universal, 12% SFERS Real Estate Benchmark and 16% SFERS Alternative Investment Benchmark.

#### **Annual Rates of Return Last Ten Years**

Periods ending June 30



## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

#### July 1, 2015 Actuarial Valuation

Actuarial assumptions and methods are adopted by the Retirement Board with input from the consulting actuary. Key economic assumptions are reviewed annually. Demographic assumptions are based upon the June 2015 Demographic Experience Study for the period covering July 1, 2009 through June 30, 2014. The study covered rates of retirement, termination, refund, disability, and mortality in addition to merit salary increases, final year salary increase, administrative expenses, and family composition.

## Actuarial Asset Valuation Method for Funding Policy

The assets were valued using a 5-year phase-in of investment return greater than or less than the assumed investment return. This actuarial value is calculated by recognizing 20% of each of the past five years of actual investment experience relative to the expected return on the actuarial asset value. The expected return on actuarial value of assets is determined using actual cash flows and the assumed investment return. The balance of the actual investment experience is recognized in a similar fashion in future years. This asset smoothing method started with the market value as of July 1, 2004.

#### **Actuarial Cost Method**

The individual Entry Age Normal actuarial cost method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each member's date of hire and assumed termination of employment. The actuarial liability is the difference between the present value of future benefits and the present value of future normal costs. Actuarial gains or losses which arise from the deviation of actual experience from expected experience lead to decreases or increases in the unfunded actuarial liability.

This cost method meets the Charter requirement that normal cost be determined as a level percent of pay.

## Amortization Method for Funding Policy

The Charter specifies that the amortization period shall not exceed 20 years. The Retirement Board's funding policy specifies the period over which different components of the unfunded actuarial liability must be amortized.

Beginning with the July 1, 2014 actuarial funding valuation, net actuarial gains and losses and assumption changes are amortized over 20-year closed periods. Charter amendments are amortized over 15-year closed periods, while Supplemental COLAs are amortized over closed 5-year periods. The amortization payment on the July 1, 2015

## Actuarial Section

assumption changes is being phased in over a five-year period.

Charter amendments prior to July 1, 2014 are amortized over 20 years from the date they were first recognized in the valuation. The portion of the UAL not attributable to Charter amendments as of July 1, 2013 was re-amortized over a closed 19-year period as of July 1, 2014.

All amortization schedules are determined on a level percent of pay basis which means that for the duration of the amortization schedule, payments increase each year at the assumed wage inflation rate.

#### **Investment Return Assumption**

SFERS' assets are assumed to earn 7.50% net of investment expenses. This assumption was adopted beginning with the July 1, 2014 valuation.

#### **Cost-of-Living Increase in Benefits**

# Old Plans - Police and Fire, Charters 8.559 and 8.5854.40% per yearOld Plans - Police and Fire, Charters 8.595 and 8.5963.30% per yearOld Plans - Police and Fire, pre-7/1/75 DOR2.70% per yearOld Plans - Miscellaneous2.00% per yearNew Plans - Police, Fire and Miscellaneous2.00% per year

#### Supplemental Cost-of-Living Increases

No future supplemental COLAs are assumed in the actuarial funding valuation. The July 1, 2015 valuation does not reflect changes to the Supplemental COLAs resulting from the October 25, 2015 San Francisco Superior Court judgment. This judgment affirmed that the voterapproved Proposition C Charter amendments from November 2011 could not be applied to certain retirees.

#### Future Interest Crediting Rate on Member Contributions

4.5% compounded annually.

#### Administrative Expense Assumption

There is a 0.60% of Payroll assumption included in the normal cost rates for administrative expenses.

#### **Salary Increase Rate**

- Wage inflation component: 3.75%
- The additional merit component at selected years of service:

Years of Service	Police	Fire	Muni Drivers	Craft	Misc.
0	8.00%	15.00%	15.00%	3.50%	5.25%
5	3.50	2.25	0.00	0.55	1.25
10	1.80	1.60	0.00	0.15	0.50
15	1.50	1.50	0.00	0.00	0.25

Extra covered wages in the last year before service retirement are assumed to be as follows:

Safety	3.5% per year
Muni Drivers	4.5% per year
Craft Workers	4.5% per year
Other Miscellaneous	2.5% per year

#### **Member Refunds**

Non-vested terminated members are assumed to receive a refund of their contributions with interest. The rates of refund for terminated vested members in the year of termination are shown below at selected ages.

	Rates of Refund for Vested Terminated Members				
Age	Police & Fire	Misc.			
Under 25	50.0%	60.0%			
30	30.0	37.5			
40	15.0	22.5			
50	0.0	5.0			

In estimating refund amounts, it is assumed that employee contribution rates are, on average, not changed by the cost-sharing provisions of the November 2011 Proposition C.

#### **Family Composition**

The percentage assumed to be married (including assumption for Domestic Partners, 1994 Proposition H) is shown in the table at the top of the next column. Spouses of male members are assumed to be four years younger than the member and spouses of female members are assumed to be two years older than the member.

	Percentage Married
Safety Males	85%
Safety Females	55
Miscellaneous Males	75
Miscellaneous Females	52

#### **Rates of Termination of Employment**

Sample rates of termination by age and service for Miscellaneous (excluding Muni drivers and Craft) members are shown below:

	Years of Service				
Age	0	3	5+		
20	37.5%	12.0%	6.5%		
30	24.0	9.0	5.5		
40	17.5	6.0	3.0		
50	15.0	4.5	2.6		
60	15.0	4.5	5.0		

Sample rates of termination by service for Police, Fire, Muni Drivers and Craft members are shown below:

Service	Police	Fire	Muni Drivers	Craft
0	10.00%	4.00%	12.00%	10.00%
5	0.75	1.50	3.25	3.25
10	0.75	0.75	3.00	1.75
15	0.50	0.50	3.00	1.75
20	0.50	0.50	3.00	1.75

20% of terminating employees are assumed to subsequently work for a reciprocal employer and receive pay increases equal to the wage inflation assumption.

In estimating termination benefits for Miscellaneous members, it is assumed that employee contribution rates are, on average, not changed by the cost-sharing provisions of the November 2011 Proposition C.

#### **Rates of Disability**

Sample disability rates of active participants are provided below:

Age	Police	Fire	Muni Drivers	Craft	Misc. Females	Misc. Males
30	0.05%	0.06%	0.01%	0.01%	0.01%	0.01%
40	0.16	0.38	0.11	0.12	0.10	0.08
50	0.79	1.20	0.75	0.44	0.55	0.30
60	6.10	12.75	0.00	0.00	0.00	0.00

100% of safety and 0% of miscellaneous disabilities are assumed to be duty related. If projected disability occurs prior to service retirement eligibility, the level of duty disability is assumed to 55% of pay for Police and 55% of pay for Fire.



#### **Rates of Retirement**

Rates of retirement are based upon years of service and age. Members hired on or after January 7, 2012 (Tier III Plans) reach the highest benefit multiplier at later ages than the other members and have separate assumed rates of retirement. Sample retirement rates for active participants are provided below:

#### Old Plans and New Plans' Tiers I and II

	Years of Service					
Age	19 or less (24 or less for Safety)	20-29 (25-29 for Safety)	30 or more			
Muni Drivers						
55	0.0000	0.0500	0.1500			
60	0.1000	0.1000	0.2000			
65	0.2750	0.3500	0.4500			
Craft						
55	0.0000	0.0400	0.0750			
60	0.1000	0.1000	0.3750			
65	0.1500	0.2750	0.3000			
Other Misc.						
55	0.0000	0.0400	0.0550			
60	0.1050	0.1150	0.3750			
65	0.2375	0.3000	0.3250			
Police						
55	0.0700	0.2400	0.4000			
60	0.0900	0.3400	0.5000			
65	1.0000	1.0000	1.0000			
Fire						
55	0.0750	0.2250	0.3500			
60	0.2000	0.3500	0.3500			
65	1.0000	1.0000	1.0000			

Tier III Plans (includes Sheriffs Plan and Miscellaneous Safe	ty Plan)
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Years of Service						
19 or less (24 or less for Safety)	20-29 (25-29 for Safety)	30 or more				
0.0000	0.0300	0.1000				
0.0500	0.1000	0.1500				
0.2500	0.3000	0.5000				
0.0000	0.0300	0.0500				
0.0500	0.0750	0.2000				
0.2000	0.3250	0.4000				
0.0000	0.0400	0.0400				
0.0750	0.1000	0.1500				
0.3000	0.4000	0.4000				
0.0700	0.2000	0.3500				
0.0900	0.3400	0.5000				
1.0000	1.0000	1.0000				
0.0750	0.1750	0.2500				
0.2000	0.3500	0.3500				
1.0000	1.0000	1.0000				
	(24 or less for Safety) 0.0000 0.0500 0.2500 0.2500 0.0000 0.2000 0.2000 0.0750 0.3000 0.0750 0.0900 1.0000	19 or less (24 or less for Safety)         20-29 (25-29 for Safety)           0.0000         0.0300           0.00500         0.1000           0.2500         0.3000           0.0000         0.0300           0.02500         0.3000           0.0000         0.0300           0.0000         0.0300           0.0000         0.0300           0.0000         0.0300           0.0000         0.0750           0.0000         0.0400           0.0000         0.1000           0.0000         0.1000           0.0000         0.1000           0.0000         0.4000           0.00750         0.2000           0.00700         0.2000           0.00700         0.2000           0.00700         0.2000           0.00700         0.3400           1.0000         1.0000           0.00750         0.1750           0.00750         0.33500				

The assumed retirement age is 55 for Safety Tier III and Miscellaneous inactive terminated vested members and also for Miscellaneous actives expected to terminate. It is age 51 for other Safety inactive terminated vested members and also for Safety actives expected to terminate.

#### **Rates of Mortality for Healthy Lives**

Mortality rates for non-disabled members are based upon adjusted Employee and Healthy Annuitant CalPERS mortality tables projected generationally from the 2009 base year using a modified version of the MP-2015 projection scale as described below.

	Rates of Mortality - Actives			Rates of Morta	lity - Annuitants
Age	Male	Female	Age	Male	Female
25	0.04%	0.02%	55	0.58%	0.47%
35	0.06	0.03	65	0.96	0.76
45	0.11	0.07	75	2.71	2.22
55	0.23	0.14	85	8.57	6.77
65	0.48	0.30	95	23.01	21.14

The table below provides a sample of these rates prior to any projection for mortality improvements.

For active members, 25% of Safety deaths and 0% of Miscellaneous deaths are assumed to be duty related.

#### **Rates of Mortality for Retired Disabled Lives**

Mortality rates for disabled Safety members are based upon adjusted CalPERS' Industrial Disability mortality tables projected generationally from the 2009 base year. Rates for disabled Miscellaneous members are based upon the RP-2014 Disabled Retiree Tables projected generationally from the 2006 base year. The projection scale is the same as used for healthy mortality and is described below.

The table below provides a sample of these rates prior to any projection for mortality improvements.

#### **Rates of Mortality for Disabled Lives at Selected Ages**

	Police a	and Fire	All Misce	ellaneous
Age	Male	Female	Male	Female
55	0.58%	0.45%	2.34%	1.60%
65	1.30	1.05	3.42	2.70
75	3.49	2.90	6.31	5.24
85	9.44	7.82	12.92	11.57
95	23.01	20.50	26.34	24.16

#### **Mortality Projection Scale**

The mortality rates shown in the base tables above are projected generationally from the base year using a modified version of the MP-2015 projection scale. The scale was modified using the Society of Actuaries' model implementation tool with rates converging to the ultimate rate in 2017 (instead of 2029) and an ultimate rate of improvement of 0.85% (instead of 1.0%) up to age 85 decreasing to 0.70% (instead of 0.85%) at age 95.

Sample rates of improvement are shown in the table below.

		Females			Males	
Age	2009	2013	2017+	2009	2013	2017+
30	-0.0064	0.0031	0.0085	0.0066	0.0132	0.0085
50	0.0036	0.0101	0.0085	0.0167	0.0170	0.0085
70	0.0211	0.0146	0.0085	0.0227	0.0140	0.0085
90	0.0145	0.0113	0.0078	0.0158	0.0120	0.0078

#### **Mortality Projection Scale at Selected Ages**

#### **Recent Changes**

As of July 1, 2015, the assumptions were updated as a result of the June 2015 demographic study which covered the period from July 1, 2009 through June 30, 2014. Changes included:

- Rates of retirement, termination, and refund of employee contributions;
- Rates of mortality for healthy annuitants and disabled annuitants including a change in the assumed mortality projection scales;
- Merit salary increases, final year salary increases and Old Plan Safety COLA increases;
- Administrative expenses;
- Family Composition.

There have been no significant changes in actuarial methods or in the plan provisions reflected since the July 1, 2014 valuation.

There have been no changes in retained actuary or actuarial firm.

## Plan Provisions and Contribution Information

A brief summary of the plan provisions may be found in the Notes to the Basic Financial Statements found in the Financial Section. A detailed summary of plan provisions may be found in the July 1, 2015 actuarial funding report issued in February 2016. A discussion of the funding policy may also be found in the Notes. A ten-year schedule of employer contributions may be found in the Required Supplementary Information of the Financial Section. Information on rates of employer and member contributions based on covered payroll may be found in the Statistical Section.

#### **ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE**

(Dollars in millions)

As of July 1	2015	2014	2013	2012	2011
Prior Valuation Unfunded Actuarial Accrued Liability	\$ 3,110.5	\$ 3,921.4	\$ 3,366.2	\$ 2,285.6	\$ 1,574.3
Expected Increase/(Decrease) from Prior Valuation	(70.7)	(98.6)	(80.1)	(58.3)	(51.9)
Salary Increases Greater/(Less) than Expected	(79.9)	(214.6)	(a)	(173.7)	(314.2)
Changes in Assumptions	1,048.4	153.1	0.0	135.5	148.8
Proposition Changes/Supplemental COLA	0.0	0.0	0.0	0.0	112.6
Asset Return Less/(Greater) than Expected	(545.5)	(749.2)	579.6	1,135.0	559.6
All Other Experience	(145.2)	98.4	55.7	42.1	256.4
Unfunded Actuarial Accrued Liability as of Valuation Date	\$ 3,317.6	\$ 3,110.5	\$ 3,921.4	\$ 3,366.2	\$ 2,285.6

(a) Salary experience included with all other experience

#### **SCHEDULE OF FUNDING PROGRESS**

(Dollars in thousands)

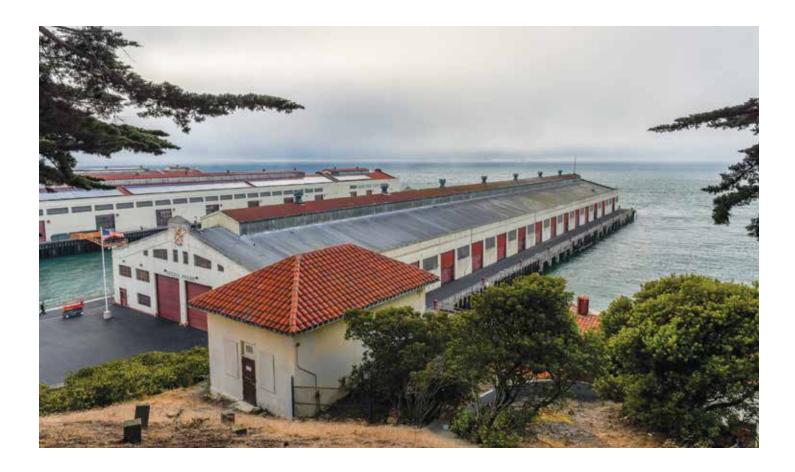
Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll <sup>1</sup>	UAAL as a % of Covered Payroll
7/01/2006	\$ 13,597,646	\$ 12,515,463	\$ (1,082,183)	108.7%	\$ 2,161,261	(50.1)%
7/01/2007	14,929,287	13,541,388	(1,387,899)	110.3%	2,376,221	(58.4)%
7/01/2008	15,941,390	15,358,824	(582,566)	103.8%	2,457,196	-23.7%
7/01/2009	16,004,730	16,498,649	493,919	97.0%	2,544,939	19.5%
7/01/2010	16,069,058	17,643,394	1,574,336	91.1%	2,398,823	65.6%
7/01/2011	16,313,120	18,598,728	2,285,608	87.7%	2,360,413	96.8%
7/01/2012	16,027,683	19,393,854	3,366,171	82.6%	2,393,842	140.6%
7/01/2013	16,303,397	20,224,777	3,921,380	80.6%	2,535,963	154.6%
7/01/2014	18,012,088	21,122,567	3,110,479	85.3%	2,640,153	117.8%
7/01/2015	19,653,339	22,970,892	3,317,553	85.6%	2,820,968	117.6%

1 Covered payroll based upon actuarial projection at the valuation date.

#### **ACTUARIAL SOLVENCY TEST**

(Dollars in millions)

	Actuaria	Accrued Liabil	ity (AAL)	Percentage	of AAL Covere	d by Assets	
Valuation Date	Active Member Contributions (1)	Retirees and Beneficiaries (2)	Other Employer Financed Portion (3)	Actuarial Value of Assets	(1)	(2)	(3)
7/1/2007	\$2,252	\$7,424	\$3,866	\$14,929	100%	100%	100%
7/1/2008	2,411	8,013	4,934	15,941	100%	100%	100%
7/1/2009	2,529	8,720	5,250	16,005	100%	100%	91%
7/1/2010	2,593	9,761	5,289	16,069	100%	100%	70%
7/1/2011	2,664	10,616	5,319	16,313	100%	100%	57%
7/1/2012	2,687	11,262	5,445	16,028	100%	100%	38%
7/1/2013	2,828	11,878	5,518	16,303	100%	100%	29%
7/1/2014	3,008	12,506	5,609	18,012	100%	100%	45%
7/1/2015	3,201	13,510	6,259	19,653	100%	100%	47%



#### SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Plan Type	Count <sup>1</sup>	Annual Covered Pay <sup>1</sup>	Average Annual Covered Pay	% Increase in Average Covered Pay
7/1/2007	General	26,608	2,008,192,000	75,473	_
	Safety	3,582	361,846,000	101,018	_
7/1/2008	General	26,878	2,059,587,819	76,627	1.5%
	Safety	3,772	397,608,369	105,410	2.6%
7/1/2009	General	26,205	1,981,788,543	75,626	(1.3)%
	Safety	3,714	402,975,857	108,502	2.9%
7/1/2010	General	24,689	1,915,169,605	77,572	2.6%
	Safety	3,533	400,262,779	113,293	4.4%
7/1/2011	General	24,701	1,883,122,340	76,237	-1.7%
	Safety	3,255	380,458,039	116,884	3.2%
7/1/2012	General	24,878	1,928,148,586	77,504	1.7%
	Safety	3,219	395,842,540	122,971	5.2%
7/1/2013	General	25,392	2,031,987,811	80,025	3.3%
	Safety	3,325	417,543,208	125,577	2.1%
7/1/2014	General	26,053	2,109,100,013	80,954	1.2%
	Safety	3,463	429,618,756	124,060	(1.2)%
7/1/2015	General	27,233	2,259,320,255	82,963	2.5%
	Safety	3,604	441,419,658	122,480	(1.3)%

1 July 1, 2007 through July 1, 2010 include DROP members. DROP members are excluded from July 1, 2011 forward.

#### **RETIREES AND BENEFICIARIES IN PAYEE STATUS**

	Addec	Added to Rolls		d from Rolls	Rolls at	End of Year		
Fiscal Year	Member Count	Annual Allowance	Member Count	Annual Allowance	Member Count	Annual Allowance	% Increase in Retiree Allowance	Average
2006-07	N/A	N/A	N/A	N/A	21,116	683,909,608	-	32,388
2007-08	1,269	44,225,244	881	23,553,431	21,514	691,842,055	1.2%	32,158
2008-09	1,545	60,356,100	765	20,550,523	22,294	755,029,081	9.1%	33,867
2009-10	2,004	85,601,938	798	22,483,938	23,500	834,425,915	10.5%	35,507
2010-11	1,672	66,575,560	880	24,641,442	24,292	905,053,471	8.5%	37,257
2011-12	1,769	70,868,367	871	26,958,609	25,190	982,250,287	8.5%	38,994
2012-13	1,577	66,437,220	733	22,406,077	26,034	1,045,547,799	6.4%	40,161
2013-14	1,588	65,923,470	770	25,170,856	26,852	1,103,959,803	5.6%	41,113
2014-15	1,564	63,136,134	931	29,314,643	27,485	1,157,081,680	4.8%	42,099

The following schedules provide statistical, financial, and operational information:

- Additions to Pension Plan by Source reflects the various sources of income to SFERS
- Deductions to Pension Plan by Type reflects the major expenses to SFERS which are benefits paid to members, refunds of employee contributions to members, and administrative expenses
- Changes in Plan Net Position shows the changes in net position during each of the last 10 fiscal years
- Benefit Payments of Pension Plan by Type details the benefits paid during the fiscal year due to retirements, disability, death, newly granted COLAs, and accruals for DROP
- Average Pension Benefit Payments highlights benefit levels paid to newly retired and disabled members with differing amounts of credited service
- Active Members by Employer shows the active member counts for each SFERS cost-sharing employer
- Employer Contribution Rates details the components that comprise the employer contribution rates
- Employer Contribution Rates for Fiscal Year 2015-16 details the contribution rates for various member classes after cost-sharing provisions of 2011 Proposition C
- Employee Contribution Rates for Fiscal Year 2015-16 shows the contribution rates for various member classes with the cost-sharing provisions of 2011 Proposition C



## **Statistical** Section

#### **ADDITIONS TO PENSION PLAN BY SOURCE**

(Dollars in thousands)

Fiscal Year Ending June 30	Member Contributions	Employer Contributions	Gross Return on Investments	Investment Expenses	Total
2007	\$ 175,747	\$ 132,601	\$ 2,840,848	\$ (44,009)	\$ 3,105,187
2008	185,123	134,060	(684,353)	(51,079)	(416,249)
2009	192,964	126,101 <sup>1</sup>	(3,475,740)	(37,110)	(3,193,785)
2010	189,948	223,614	1,699,307	(44,206)	2,068,663
2011	181,755	308,823	2,932,154	(44,579)	3,378,153
2012	198,160	410,797	124,942	(44,540)	689,359
2013	258,726	442,870	2,106,204	(41,654)	2,766,146
2014	289,020	532,882	3,223,030	(47,599)	3,997,333
2015	301,682	592,643	808,340	(44,911)	1,657,754
2016	322,764	526,805	197,216	(47,026)	999,759

1 Includes \$6,350,000 transfer from CalPERS

#### **DEDUCTIONS TO PENSION PLAN BY TYPE**

(Dollars in thousands)

Fiscal Year Ending June 30	Benefits Paid	Refunds of Contributions	Administrative Expenses	Total
2007	\$ 631,159	\$ 7,645	\$ 11,362	\$ 650,166
2008	682,230	8,449	12,594	703,273
2009	732,342	6,714	12,951	752,007
2010	792,776	11,997	13,833	818,606
2011	889,744	11,548	14,808	916,100
2012	968,528	11,030	14,916	994,474
2013	1,023,354	9,453	15,518	1,048,325
2014	1,062,229	10,297	15,745	1,088,271
2015	1,118,691	12,339	19,262	1,150,292
2016	1,243,260	12,886	17,179	1,273,325

Together, the above two tables present the changes in plan net position during each of the last 10 fiscal years. Total additions less total deductions equal the net increase or decrease in plan net position.

#### **CHANGES IN PLAN NET POSITION**

(Dollars in thousands)

		Plan Net	Position		
Fiscal Year Ending June 30	Additions	Deductions	Net Change	Beginning of Year	End of Year
2007	\$ 3,105,187	\$ 650,166	\$ 2,455,021	\$ 14,497,022	\$ 16,952,043
2008	(416,249)	703,273	(1,119,522)	16,952,043	15,832,521
2009	(3,193,785)	752,007	(3,945,792)	15,832,521	11,886,729
2010	2,068,663	818,606	1,250,057	11,886,729	13,136,786
2011	3,378,153	916,100	2,462,053	13,136,786	15,598,839
2012	689,359	994,474	(305,115)	15,598,839	15,293,724
2013	2,766,146	1,048,325	1,717,821	15,293,724	17,011,545
2014	3,997,333	1,088,271	2,909,062	17,011,545	19,920,607
2015	1,657,754	1,150,292	507,462	19,920,607	20,428,069
2016	999,759	1,273,325	(273,566)	20,428,069	20,154,503

#### **BENEFIT PAYMENTS OF PENSION PLAN BY TYPE**

(Dollars in thousands)

Fiscal Year	Retirement Benefits	Disability Benefits	Death Benefits	COLA Benefit Adjustments	DROP Accrued Retirement	Total
2007	\$ 463,232	\$ 122,881	\$ 11,405	\$ 33,641	\$ O	\$ 631,159
2008	500,398	132,134	11,721	37,977	0	682,230
2009	539,917	140,804	11,031	36,447	4,143	732,342
2010	593,048	149,122	8,325	35,287	6,994	792,776
2011	662,277	154,631	8,234	48,514	16,088	889,744
2012	716,744	161,782	8,198	57,234	24,570	968,528
2013	770,521	168,365	8,387	54,816	21,265	1,023,354
2014	827,311	172,619	7,998	53,098	1,203	1,062,229
2015	878,834	175,620	7,492	51,447	5,298	1,118,691
2016	937,388	179,056	8,990	118,012	(186)	1,243,260

Benefit payments for the most recent fiscal year are provided in further detail in the Financial Section under Other Supplementary Information.

#### AVERAGE PENSION BENEFIT PAYMENT FOR RETIRED AND DISABLED MEMBERS

	Years of Credited Service					
Retirement Effective Dates	5 – 9	10 - 14	15 – 19	20 – 24	25 – 29	30+
07/1/11 to 6/30/12						
Average Mo. Benefit	\$ 899	\$ 1,769	\$ 2,675	\$ 3,373	\$ 5,084	\$ 7,308
Average Final Comp.	\$ 7,543	\$ 7,050	\$ 7,044	\$ 7,099	\$ 8,258	\$ 9,405
Number	138	228	179	207	235	331
07/1/12 to 6/30/13	07/1/12 to 6/30/13					
Average Mo. Benefit	\$ 909	\$ 1,776	\$ 2,792	\$ 3,579	\$ 5,720	\$ 7,340
Average Final Comp.	\$ 7,225	\$ 6,982	\$ 7,409	\$ 7,564	\$ 8,699	\$ 9,758
Number	116	195	120	193	253	275
07/1/13 to 6/30/14						
Average Mo. Benefit	\$ 980	\$ 1,971	\$ 2,812	\$ 3,826	\$ 5,720	\$ 6,927
Average Final Comp.	\$ 7,866	\$ 7,214	\$ 7,530	\$ 7,905	\$ 8,656	\$ 9,143
Number	138	181	170	155	212	257
7/1/14 to 6/30/15						
Average Mo. Benefit	\$ 969	\$ 1,817	\$ 2,930	\$ 4,321	\$ 5,237	\$ 6,654
Average Final Comp.	\$ 6,627	\$ 6,844	\$ 7,759	\$ 8,267	\$ 7,977	\$ 8,827
Number	109	177	163	165	187	245
7/1/15 to 6/30/16						
Average Mo. Benefit	\$ 1,051	\$ 2,077	\$ 2,906	\$ 4,071	\$ 5,716	\$ 6,514
Average Final Comp.	\$ 7,363	\$ 8,266	\$ 7,485	\$ 8,404	\$ 9,534	\$ 9,016
Number	110	184	196	175	211	291

#### **ACTIVE MEMBERS BY EMPLOYER**

Employer	July 1, 2016	July 1, 2015	July 1, 2014
City and County of San Francisco <sup>1</sup>	30,059	28,533	27,245
San Francisco Unified School District	1,289	1,252	1,265
San Francisco Community College District	615	616	605
San Francisco Trial Courts	443	438	411
Total	32,406	30,839	29,526

1 Includes active DROP

#### **EMPLOYER CONTRIBUTION RATES**

Before Cost-Sharing Provisions<sup>1</sup>

Fiscal Year	Normal Cost	Remaining Cost of Propositions	Other UAL	Employee Contributions	Administrative Expenses	Total
2007	16.56%	3.53%	(6.78%)	(7.52%)	0.45%	6.24%
2008	16.60%	3.52%	(7.15%)	(7.51%)	0.45%	5.91%
2009	16.19%	3.42%	(7.55%)	(7.52%)	0.45%	4.99%
2010	18.16%	5.41%	(7.03%)	(7.50%)	0.45%	9.49%
2011	18.18%	5.53%	(3.09%)	(7.51%)	0.45%	13.56%
2012	17.90%	6.51%	0.73%	(7.50%)	0.45%	18.09%
2013	17.90%	6.21%	3.66%	(7.51%)	0.45%	20.71%
2014	17.91%	6.11%	7.88%	(7.53%)	0.45%	24.82%
2015	18.26%	5.99%	9.60%	(7.54%)	0.45%	26.76%
2016	18.38%	5.86%	5.65%	(7.54%)	0.45%	22.80%

1 Cost sharing provisions effective July 1, 2012 following passage of Proposition C in November of 2011

#### FISCAL YEAR 2015-2016 EMPLOYER CONTRIBUTION RATES

After Cost-Sharing Provisions

Member Group	Base Rate of Pay less than \$26 per hour	Base Rate of Pay at or above \$26 but less than \$50 per hour	Base Rate of Pay at or above \$50 per hour
Miscellaneous Non-Safety Plans	22.80%	19.30%	18.80%
Police and Firefighter Old Plans	18.30%	18.30%	18.30%
Police and Firefighter New Plans Tier I	18.30%	18.30%	18.30%
Police and Firefighter New Plans Tiers II and III	19.30%	19.30%	18.80%
Miscellaneous Safety and Sheriffs Plans	19.30%	19.30%	18.80%

#### FISCAL YEAR 2015-2016 EMPLOYEE CONTRIBUTION RATES

After Cost-Sharing Provisions

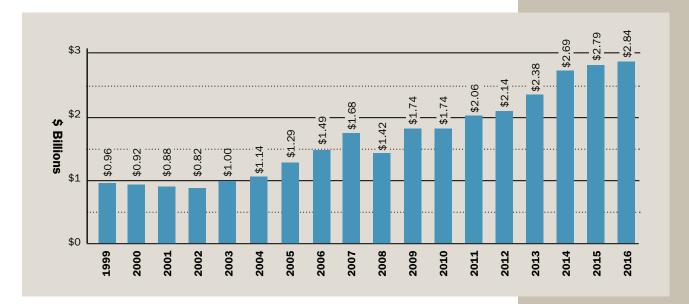
Member Group	Base Rate of Pay less than \$26 per hour	Base Rate of Pay at or above \$26 but less than \$50 per hour	Base Rate of Pay at or above \$50 per hour
Miscellaneous Old Plans	8.0%	11.5%	12.0%
Miscellaneous New Plans	7.5%	11.0%	11.5%
Police and Firefighter Old Plans	11.5%	11.5%	11.5%
Police and Firefighter New Plans Tier I	12.0%	12.0%	12.0%
Police and Firefighter New Plans Tiers II and III	12.5%	12.5%	13.0%
Miscellaneous Safety and Sheriffs Plans	12.5%	12.5%	13.0%

The San Francisco 457(b) Deferred Compensation Plan (SFDCP) was adopted in 1976 to offer eligible active employees an opportunity to acquire additional retirement savings intended to supplement pension benefits. The SFDCP allows eligible City employees to voluntarily defer a portion of their pre-tax regular earnings until after they retire or separate from service. This method of tax deferral has become increasingly popular. The Plan also offers a Roth after-tax contribution option. During the past fiscal year, total assets for the SFDCP grew at approximately 1.75%, and the average account balance per participant was \$104,480.

The Plan provides a diverse selection of thirteen core investment funds, a suite of nine Target Date Funds, and access to a self-directed brokerage account. In addition to an enhanced line up of investment options, the SFDCP offers participants low fees, a customized website, client communications, online transactions, and dedicated retirement counselors available daily at the SFDCP office. Prudential Retirement currently serves as the Plan's third party administrator.

As of June 30, 2016, there were 27,156 participants in the SFDCP with Plan assets valued at \$2.835 billion. The following chart and table provide detailed information about the investments that make up the City's 457(b) Deferred Compensation Plan, as well as service and participation activity for the Fiscal Year 2015-16.

## **Deferred Compensation Plan** (SFDCP)



#### SFDCP VALUES AS OF JUNE 30, 2016

Funds	Total Assets	Percent Of Total Assets	Annual Performance
SFDCP Stable Value Portfolio	\$ 952,455,447	33.59%	1.36%
SFDCP Core Bond Portfolio	\$ 135,542,812	4.78%	6.03%
SFDCP Retirement Fund	\$ 134,638,580	4.75%	2.53 %
SFDCP Target Date 2020 Fund <sup>1</sup>	\$ 97,752,010	3.45%	2.04%
SFDCP Target Date 2025 Fund <sup>1</sup>	\$ 109,577,848	3.86%	1.21%
SFDCP Target Date 2030 Fund <sup>1</sup>	\$ 90,018,315	3.17%	-0.24%
SFDCP Target Date 2035 Fund <sup>1</sup>	\$ 64,367,092	2.27%	-2.35%
SFDCP Target Date 2040 Fund <sup>1</sup>	\$ 40,809,526	1.44%	2.31%
SFDCP Target Date 2045 Fund <sup>1</sup>	\$ 23,102,260	0.81%	-2.31%
SFDCP Target Date 2050 Fund <sup>1</sup>	\$ 5,162,789	0.18%	-2.31%
SFDCP Target Date 2055 Fund <sup>1</sup>	\$ 3,160,409	0.11%	-2.31%
SFDCP Large Cap Core Equity - Active Portfolio	\$ 41,081,135	1.45%	0.08%
SFDCP Large Cap Core Equity - S&P 500 Index	\$ 209,018,615	7.37%	3.99%
SFDCP Large Cap Growth Equity Portfolio	\$ 336,502,235	11.87%	-0.56%
SFDCP Large Cap Social Equity Portfolio	\$ 31,726,711	1.12%	-0.20%
SFDCP Large Cap Value Equity Portfolio	\$ 72,921,413	2.57%	-1.64%
SFDCP Mid Cap Core Equity Portfolio <sup>2</sup>	\$ 114,856,201	4.05%	-4.25%
SFDCP Small Cap Core Equity Portfolio	\$ 17,243,073	0.61%	-3.12%
SFDCP Small Cap Growth Equity Portfolio	\$ 50,770,977	1.79%	-6.39%
SFDCP Small Cap Value Equity Portfolio	\$ 72,030,953	2.54%	0.17%
SFDCP International Equity	\$ 163,876,340	5.78%	-9.57%
SFDCP Real Estate Portfolio	\$ 55,618,425	1.96%	19.33%
Self Directed Brokerage Account	\$ 13,105,689	0.46%	N/A
TOTAL PLAN ASSETS	\$ 2,835,338,858	100.00%	

\* Assets are rounded up to the nearest dollar

1 Target Date Funds consist of a series of funds with professionally managed allocations designed to meet the needs of different age groups. Each of the 9 Target Date funds has a different performance and profile.

2 Mid Cap Growth Equity and Mid Cap Value Equity Portfolios migrated to Mid Cap Core Equity Portfolio on 4/6/2015.

#### SFDCP STATISTICS SUMMARY

Plan Year Ended June 30, 2016

ASSET SUMMARY				
<sup>1</sup> Beginning Assets July 1, 2015	\$ 2,786,521,942			
Contributions	144,084,228			
Roll-ins	10,559,885			
Earnings	11,333,787			
Less Distributions	120,459,775			
Ending Assets June 30, 2016	\$ 2,835,338,858			
PARTICIPANT SUMMARY	(			
<sup>2</sup> Beginning Participants July 1, 2015	25,756			
New Participants	2,209			
Less Full Distributions	809			
<sup>3</sup> Ending Participants June 30, 2016	27,156			
SERVICE SUMMARY				
Group Meetings	734			
Field and Office Individual Counseling Sessions	8,613			
Total Phone Calls	17,033			
IVR (Interactive Voice Response) Calls	1,474			
Customer Service Calls	15,559			
Web Logins	323,296			

1 Equals Ending Assets June 30, 2016 as reported on 6/30/2016 Fiscal Year Report

2 Equals Ending Participants June 30, 2016 as calculated on 06/30/2016 Fiscal Year Report

3 Includes 19,162 active participants and 7,944 retired participants