San Francisco City and County Employees' Retirement System

Annual Report

For the Fiscal Year Ended June 30, 2023

SFERS
San Francisco Employees' Retirement System

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Introductory Section

SFERS AT A GLANCE

As of June 30, 2023

Fiduciary Net Position:	$33.7 billion
Annualized Return on Total Fund:	4.25%
Total Benefits Paid *(during FY 2022-23):*	$1.820 billion
Employer Contribution Rate *(during FY 2022-23):*	21.35%
Average Member Contribution Rate[1]:	7.62%

MEMBERSHIP					
Total Membership:	**78,778**				
Active:	**34,017**	**Retired:**	**32,104**	**Inactive:**	**12,657**
Miscellaneous:	30,097	Miscellaneous:	26,851	Miscellaneous:	12,161
Police:	1,814	Police:	2,916	Police:	328
Fire:	1,699	Fire:	2,317	Fire:	98
Miscellaneous Safety	114	Miscellaneous Safety	14	Miscellaneous Safety	35
Sheriff	293	Sheriff	6	Sheriff	35
Retirements *(during fiscal year 2022-23)*					
Total Retirements:	**1,161**	**Average Service Credit at Service Retirement:**	**22.9 Years**	**Average Age at Service Retirement:**	**62.5 Years**
Miscellaneous:	993	Miscellaneous:	22.9 Years	Miscellaneous:	63.6 Years
Police:	89	Police:	22.4 Years	Police:	56.1 Years
Fire:	74	Fire:	24.8 Years	Fire:	56.9 Years
Miscellaneous Safety	4	Miscellaneous Safety	7.6 Years	Miscellaneous Safety	57.0 Years
Sheriff	1	Sheriff	N/A	Sheriff	N/A

STATISTICS	2022-23	2021-22
Responses to Email Inquiries	12,607	10,322
Calculator Visits	76,451	66,515
Retirement Estimates Requests (prepared)	105	289
Retirement Appointments Scheduled	2,268	1,783
Retirement Appointments Attended	2,069	1,783
Buyback Appointments Scheduled	662	719
New Members Added	4,111	3,368
Pre-retirement Webinars Presented	31	29
Pre-retirement Webinars Registered Attendees	8,604	6,014

1 Before cost sharing

LETTER OF TRANSMITTAL

March 13, 2024

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

To our members, retirees and other interested parties,

We are pleased to present the 2023 San Francisco Employees' Retirement System Annual Report for the fiscal year beginning July 1, 2022 and ending June 30, 2023.

The San Francisco Retirement System ("Retirement System" or "SFERS") is committed to serving the retirement needs of our members and today we assist more than 78,000 active, vested, and retired employees of the City and County of San Francisco and their survivors. Our members include teachers, firefighters, police officers, sheriffs, and many other civilian employees across the City and Country of San Francisco, the San Francisco Unified School District, the San Francisco Community College District, the San Francisco Trial Courts, the City's Police and Fire Departments, and the Sheriff's Department.

On behalf of these members, SFERS manages the System's pension plan, a defined benefit plan which as of June 30, 2023 held net assets of $33.7 billion, and administers the Deferred Compensation plan, with net assets of $4.8 billion. Together, these programs help provide retirement security.

FY2022-2023 Highlights

The SFERS team remained steadfast in its focus on mission in the face of ongoing investment market volatility, financial market uncertainty and a world transitioning from the depths of the Covid pandemic. With a long-term investment horizon, a prudent investment approach, and a commitment to serving members, SFERS continued to deliver successfully on its mission throughout the year. Here are some highlights:

Prudently Invest Trust Assets

Long term Total Fund returns continue to be solid. SFERS generated a 3-Year net return of 10.61% and a 5-Year net return of 8.43%. To provide context, SFERS invests with the goals of (1) meeting the assumed 7.2% actuarial rate of return on a net fee basis over a full market cycle and (2) exceeding the benchmark return based on SFERS' asset allocation policy over rolling five-year periods. The investment results have met both investment goals. Specifically, over 5, 10, and 20 years, SFERS met and exceeded the first goal. On the second goal, over 3, 5, 10, and 20-years, absolute performance net of fees has exceeded that of the policy benchmark.

The Pension Plan assets are invested across a diversified set of both public market and private assets. During shorter periods of sharp financial market swings, SFERS public market investments typically will also experience significant moves, while private market investments tend to demonstrate smoother performance and experience valuation lags. This pattern played out in FY2022 and FY2023. During FY2022, markets were quite challenged and the global public equity market as represented by the MSCI ACWI IMI index was down -16.5%. Because SFERS invests in private market investments and these assets did not experience the same downward pressure during the period, the SFERS Total Fund generated a -2.90% net of fees return, notably above the overall global public equity markets. This downside protection helps support long term returns. In FY2023, markets reversed. The public equity markets rebounded significantly, with the MSCI ACWI IMI returning 16.1%, while the lagged private equity market valuations declined as they began to catch up with the prior year's downturn. For SFERS in FY2023, the Total Fund generated a positive 4.25% return, net of fees.

See the Investment section for more detailed information on the performance of the Pension Plan portfolio.

Administer Mandated Benefits

We continue to enhance our platform in order to provide high-quality service to our members.

- The SFERS team responded to 12,607 email inquiries on the Sfersconnect platform, an increase of 18% from the prior year.
- Member Services conducted 2,069 retirement appointments and 662 service purchase appointments, collectively a 15% increase from the prior year.
- Through our member portal, we provided self-service capabilities including access to the annual member statement, the ability to manage beneficiaries, and calculators to estimate benefits
  - During the fiscal year, SFERS members logged into the secure member portal 273,685 instances.
  - Members visited the benefits calculator 76,451 instances, an increase of 22% from the prior year.
- We offered a seven-part webinar series to help miscellaneous members achieve their financial retirement goals
  - SFERS hosted 31 educational webinars, with a total of 8,604 attendees with an overall satisfaction rate of 4.5 out of 5.0.
- We launched our new and improved website for our members
  - During the fiscal year, there were more than 1.5 million visits to the mysfers.org website
- We implemented changes around voter approval of the supplement COLA, the Board of Supervisors' approval of Special Needs Trusts and initiated changes for the Board of Supervisors' approval enabling the purchase of service for time served in the military

Provide Promised Benefits

- During the fiscal year, SFERS paid $1.820 billion in benefits and processed 1,161 new retirements.

SFDCP

In addition to these accomplishments for the Pension Plan, we also continued to deliver on behalf of our Deferred Compensation participants. FY2023 was a busy year for the DC program. We hired a new target date funds provider, partnered to develop a refined line-up of target date funds specifically designed for our DC members and began transitioning participants to these new funds. SFDCP serves our members through multiple channels, providing both robust digital engagement online tools, with participants logging into the website over 457,800 times during the year, as well as well-received in-person educational events. In fact, the SFDCP team was honored with a Second Place Award by the Plan Sponsor Council of America, in recognition for its excellence in communication and financial education with respect to our National Retirement Savings Month campaign. In addition, the call center handled 22,783 calls, with an average monthly customer satisfaction level of 98%. Local counselors conducted 6,504 one-on-one meetings. Importantly, the outreach efforts translate to strong participation rates among City eligible employees. The percentage of City eligible employees who participate in the Deferred Compensation plan stands at 57%, representing 33,889 participants.

Report Content

The Financial Section provides a general overview of the finances and presents the financial statements and activities of the cost-sharing multiple employer defined benefit plan.

The Investment Section includes a discussion of asset allocation, overall investment performance, and performance by asset class, performance analysis, and investment strategy.

The Actuarial Section provides a review of the actuarial assumptions and methods, an analysis of the funding status, and an assessment of actuarial solvency. Actuarial valuation is a measure of the funding health of the pension plan.

The Statistical Section provides financial and operational information to assist readers in understanding the Financial Section.

Finally, the Deferred Compensation Plan Section provides a review of that program.

Actuarial Funding Status

SFERS contracts with a third-party actuarial consulting firm to conduct annual actuarial valuations. These valuations are used to determine the funding requirements of the Retirement System. Over the long term, defined benefit obligations will be met through both contributions and investment income.

The consulting actuarial firm calculates the total pension liability and net pension liability as required by GASB Statement No. 67. At the June 30, 2023 fiscal year-end measurement date, the fiduciary net position as a percentage of total pension liability is 90.2% based on total pension liability of $37.3 billion and fiduciary net position of $33.7 billion. The net pension liability at June 30, 2023 is $3.6 billion.

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 Fiduciary Net Position and Statements of Changes in Fiduciary 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, 2023.

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.mysfers.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.

Acknowledgements

Many thanks to all the individuals on the SFERS team who contributed to the development of this report. Each and every colleague plays an important role in ensuring we deliver on our mission. Finally, thank you to the Retirement Board whose dedication and leadership strengthen the SFERS organization and put it on a path for continued long-term success.

Respectfully submitted,

Alison Romano

Alison Romano, Chief Executive Officer and Chief Investment Officer

Scott R. Heldfond, Retirement Board President

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 78,000 active, vested and retired employees of the City and County of San Francisco and their survivors.

Under the direction of the Chief Executive Officer and Chief Investment Officer, 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.

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).

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 complement pension income during retirement.

OUR MEMBERS

During the fiscal year, SFERS enrolled 4,111 new members and added 1,161 new retirees.

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 Plan.

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.

SFERS ADMINISTRATION

The Chief Executive Officer & Chief Investment Officer 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
- Quality assurance
- 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; oversees 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 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.

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, Inc. 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 years. 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 found in the Financial Section.

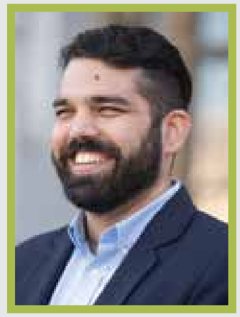
INVESTMENTS

The Retirement System's investment objective is to maximize long-term rates of return on investments within prudent guidelines. SFERS' Investment Staff plays a significant role in the management and oversight of the Trust's investment portfolio and is responsible for the timely implementation and administration of the Retirement Board's policy decisions.

THE RETIREMENT SYSTEM ORGANIZATION FOR FISCAL YEAR 2023

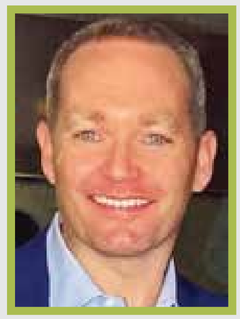
The SFERS Retirement Board

President
Scott Heldfond
Director, Aon Risk Services
Appointed Member
Term Expires: 02/20/2024



Vice President
AJ Thomas
Active Member
City and County of San Francisco
Elected Member
Term Expires: 02/20/2027

Leona M. Bridges
Former Managing Director Barclays
Global Investors Appointed Member
Term Expires: 02/20/2023



Tim O'Connor
Active Member
City and County of San Francisco
Elected Member
Term Expires: 02/20/2025

Joseph D. Driscoll, CFA
Captain, San Francisco Fire
Department
Elected Member
Term Expires: 02/20/2026

Ahsha Safai
Member, Board of Supervisors
Ex-Officio Member
Term Expires: 01/31/2024

Shruti Gandhi
Founder & Managing Partner
Array Ventures
Appointed Member
Term Expires: 02/20/2023

SFERS LEADERSHIP TEAM

Alison Romano
Chief Executive and Chief Investment Officer

Caryn Bortnick
Chief Operating Officer

Darlene Armanino
Commission Secretary

Janet Brazelton, FSA, EA
Actuarial Services Coordinator

Kurt Braitberg
Managing Director, Public Markets

Derwin Brown
Quality Assurance Manager

Diane Chui Justen
Deferred Compensation Director

Ba Do
Investment Operations Manager

David Francl
Managing Director, Absolute Return

Alison Johnson
Communications Manager

Tanya Kemp
Managing Director, Private Markets

Anna Langs
Managing Director, Asset Allocation,
Risk Management and Innovative Solutions

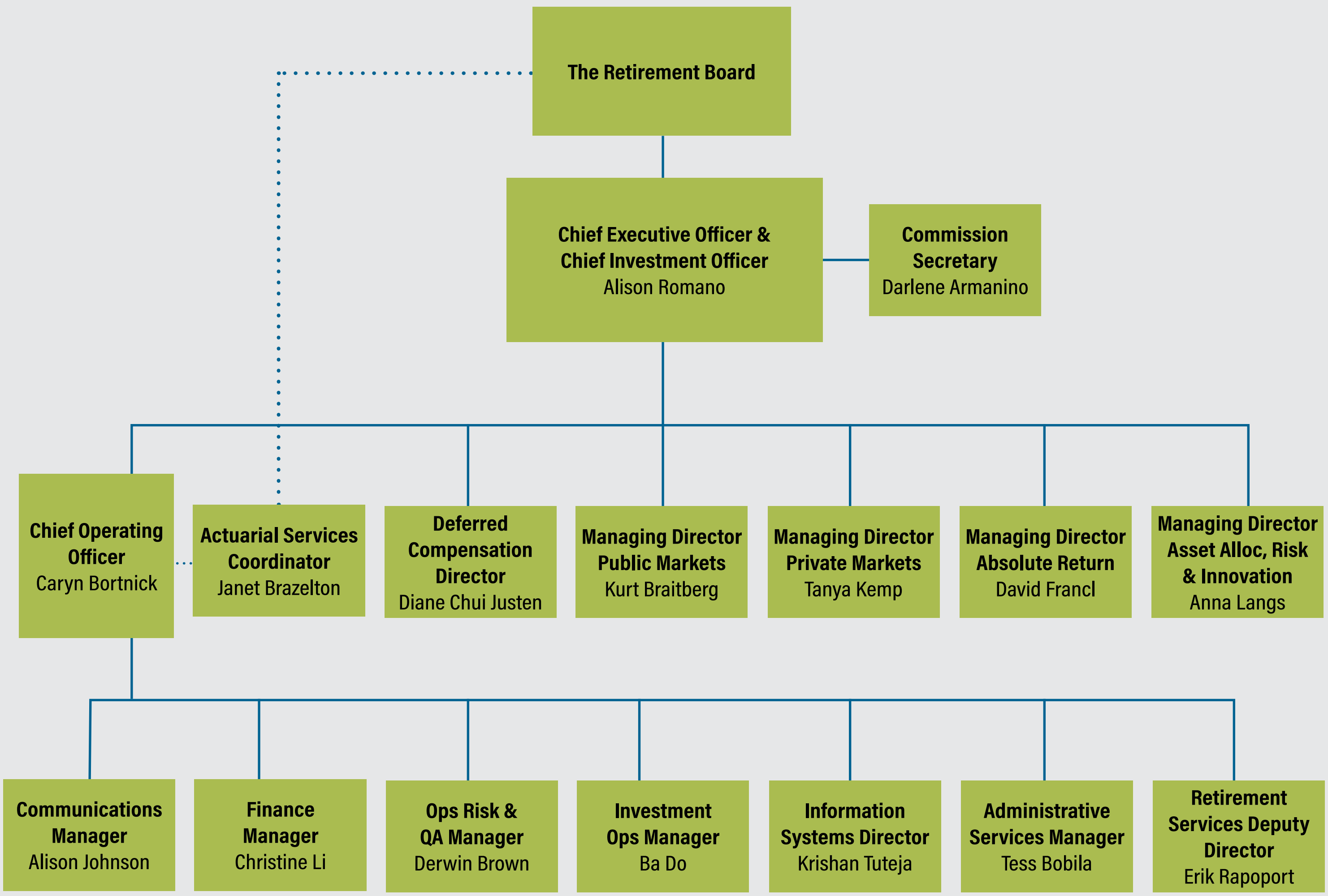
Krishan Tuteja
Information Systems Director

Christine Li
Finance Manager

Erik Rapoport
Deputy Director of Retirement Services

Tess Bobila
Administrative Services Manager

SFERS ORGANIZATIONAL CHART - JUNE 30, 2023



PROFESSIONAL CONSULTANTS

Consulting Actuary

- Cheiron, Inc.

Investment Consultants

- NEPC, LLC
- Callan Associates, Inc.
- Cambridge Associates, LLC
- Aksia LLC

Governance Consultants

- Glass Lewis & Co.
- Nossaman, LLP

Financial Section

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, 2023. 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 2023

- At the close of the year ended June 30, 2023. The Plan held $33,688,428,000 of net position restricted for pension benefits. All of the fiduciary 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 fiduciary 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, 2023, measurement date, the fiduciary net position was 90.2% of the total pension liability.

- For the year ended June 30, 2023, the Retirement System's net investment income of $1,670,666,000 represents a 5.1% appreciation in system assets for the fiscal year.

- Total fiduciary net position held in trust for pension benefits increased by $889,904,000, or 2.7%, primarily as a result of positive investment returns, which were reduced by the net difference between contributions to the Plan and benefits, refunds, and administrative expenses incurred by the Plan.

- Members' contributions to the Plan totaled $413,916,000, a decrease of $9,555,000 or 2.3% from the prior year, primarily as a result of the decrease in employee contribution rates. Employee contribution rates ranged from 7.5% - 12.0% in fiscal year 2022-23 and 7.5% - 13.0% in fiscal year 2021-22.
- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled $672,651,000, a decrease of $95,812,000 or 12.5% from the prior year, primarily due to decreased employer contribution rates. Employer contribution rates ranged from 17.85% to 21.35% in fiscal year 2022-23 and 19.91% to 24.41% in fiscal year 2021-22.
- Total deductions from the Plan were $1,867,329,000, an increase of 6.2% from the prior year due to an increase in benefits paid during the current fiscal year, as a result of an increase in the number of payees, higher average retirement benefits, a Charter amendment affecting members who retired before November 6, 1996, and an increase in the cost of living adjustments (COLA).

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 Fiduciary Net Position*** are snapshots of account balances as of the close of the years – June 30, 2023 and 2022. They indicate the total assets, deferred outflows of resources, total liabilities, deferred inflows of resources, and the net position restricted for future payment of retirement benefits and operating expenses as of June 30, 2023 and 2022.

2. ***Statements of Changes in Fiduciary Net Position*** provide a view of additions to and deductions from the Plan during the years ended June 30, 2023 and 2022.

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 fiduciary net position and the statements of changes in fiduciary 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. The fair values of the Retirement System's partnership interests, which include private equity, real assets, private credit, absolute return, and some public equity 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 is determined by quoted currency prices from national exchanges.

Additional information on the Retirement System's investments can be found in Notes 4, 5, 6 and 7 of this report.

FINANCIAL ANALYSIS

The Plan's net position may serve over time as a useful indication of the Plan's financial position. The assets and deferred outflows of resources of the Plan exceeded its liabilities and deferred inflows of resources at June 30, 2023 and 2022. All of the Plan's fiduciary net position is restricted to meet the Retirement System's ongoing obligation to Plan participants and their beneficiaries.

The Plan's fiduciary net position as of June 30, 2023, 2022, and 2021 are represented in the table below:
Dollar amounts in thousands

	2023	2022	2021
Other assets	$ 180,313	$ 199,264	$ 330,508
Investments at fair value	34,194,580	33,362,050	36,210,381
Total assets	34,374,893	33,561,314	36,540,889
Deferred outflows of resources	2,366	2,092	2,255
Total assets and deferred outflows of resources	34,377,259	33,563,406	36,543,144
Total liabilities	686,953	762,713	867,338
Deferred inflows of resources	1,878	2,169	1,972
Total liabilities and deferred inflows of resources	688,831	764,882	869,310
Fiduciary Net position	$ 33,688,428	$ 32,798,524	$ 35,673,834

As of June 30, 2023, the Plan's total fiduciary net position held in trust for pension benefits increased by $889,904,000 or 2.7% for the year, primarily due to positive investment returns. Payables to brokers increased by $16,563,000 and payables to borrowers of securities increased by $20,851,000 due to the timing of investments and lending activities.

As of June 30, 2022, the Plan's total fiduciary net position held in trust for pension benefits decreased by $2,875,310,000 or 8.1% for the year, primarily due to market declines. Payables to brokers decreased by $4,597,000 and payables to borrowers of securities decreased by $228,957,000 due to the timing of investments and lending activities.

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 Fiduciary Net Position – Years ended June 30, 2023, 2022, and 2021
Dollar amounts in thousands

	2023	2022	2021
Additions:			
Member contributions	$ 413,916	$ 423,471	$ 409,398
Employer contributions	672,651	768,463	836,559
Interest	66,501	43,365	50,520
Dividends	94,883	106,986	84,514
Net appreciation (depreciation) in fair value of investments	1,560,025	(2,380,535)	9,372,334
Securities lending income	29,305	4,819	4,059
Investment expenses	(53,819)	(80,806)	(62,331)
Securities lending borrower rebates and expenses	(26,229)	(2,149)	(1,427)
Total additions	2,757,233	(1,116,386)	10,693,626
Deductions:			
Benefits	1,820,269	1,710,092	1,599,507
Refunds of contributions	24,096	27,658	20,254
Administrative expenses	23,687	21,364	20,995
Administrative expenses and offset - OPEB	(723)	(190)	(746)
Total deductions	1,867,329	1,758,924	1,640,010
Net increase (decrease) in fiduciary net position	889,904	(2,875,310)	9,053,616
Fiduciary net position – restricted for pension benefits:			
Beginning of year	32,798,524	35,673,834	26,620,218
End of the year	$ 33,688,428	$ 32,798,524	$ 35,673,834

FISCAL YEAR 2023

- Members' contributions to the Plan totaled $413,916,000, a decrease of $9,555,000 or 2.3% from the prior year, primarily as a result of the decrease in employee contribution rates. Employee contribution rates ranged from 7.5% - 12.0% in fiscal year 2022-23 and 7.5% - 13.0% in fiscal year 2021-22.

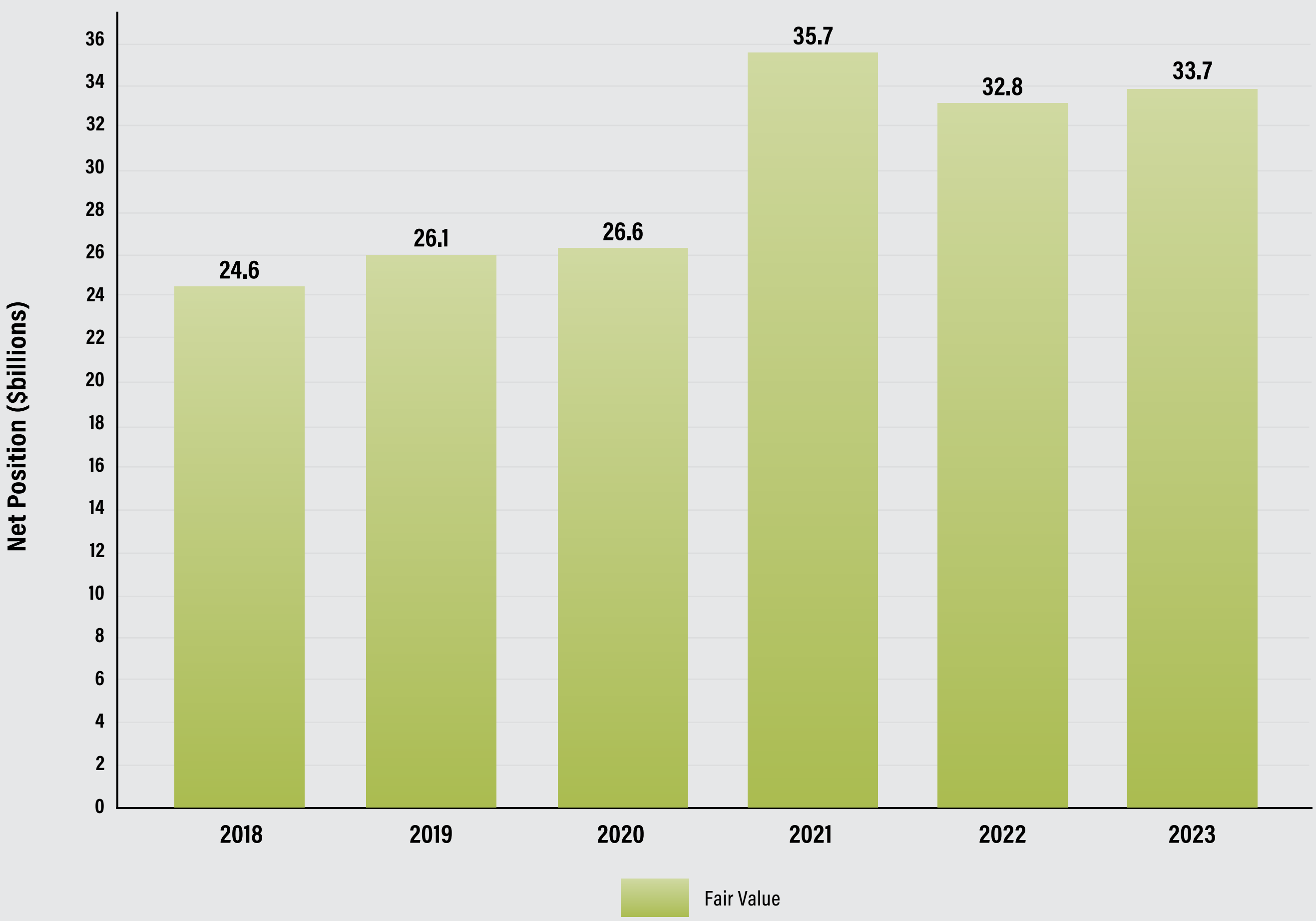
- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled $672,651,000, a decrease of $95,812,000 or 12.5% from the prior year, primarily due to decreased employer contribution rates. Employer contribution rates ranged from 17.85% to 21.35% in fiscal year 2022-23 and 19.91% to 24.41% in fiscal year 2021-22.

- Net investment income for the Retirement System increased by $3,978,986,000 on a year over year basis. The majority of the increase is attributable to the $3,940,560,000 increase in net appreciation of investments, primarily due to strong performance in the public markets. Interest income increased by $23,136,000, mainly due to the domestic fixed income markets.

- Benefit payments to Plan participants increased by $110,177,000 or 6.4%, due to an increase in the number of payees, a Charter amendment that increased benefits for members who retired prior to November 6, 1996, an increase in average retirement benefits and an increase in the COLA.

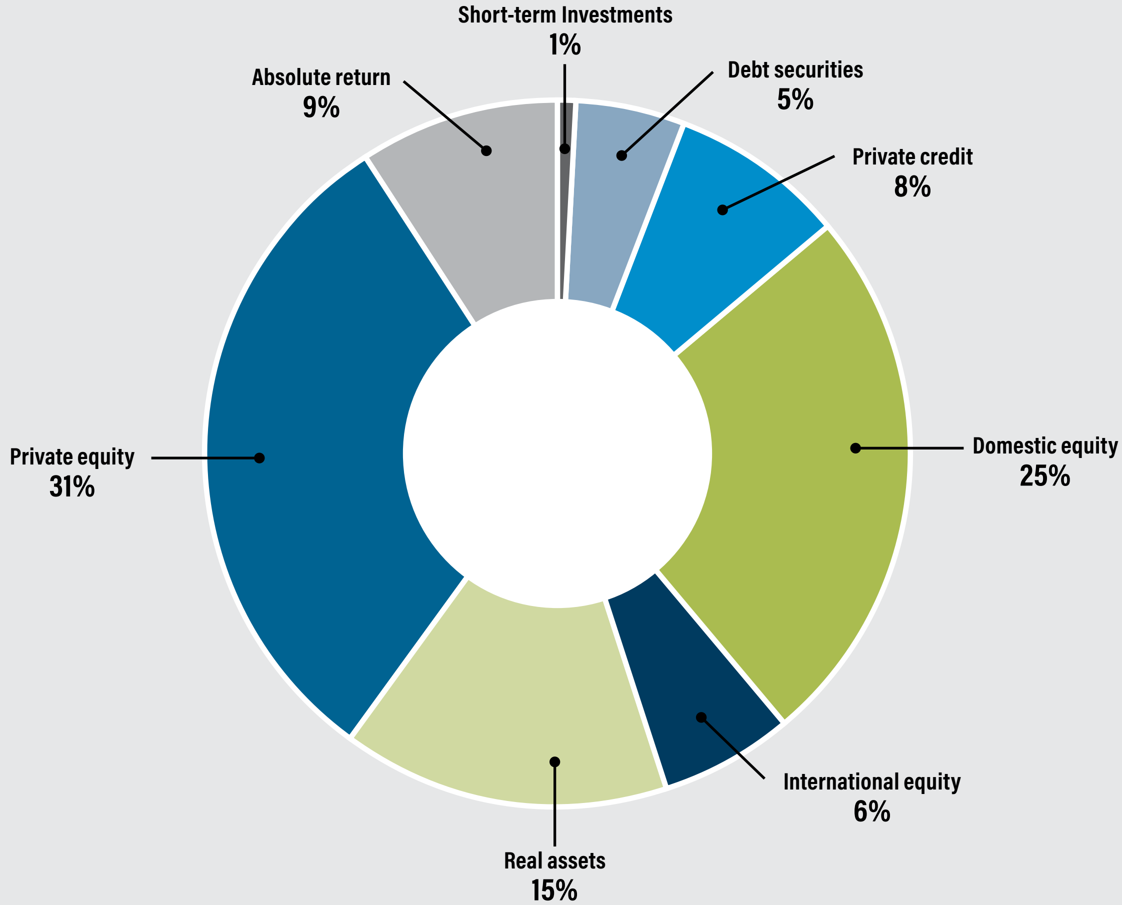
Fiduciary net position as of June 30, 2018 through 2023 expressed at fair value of investments are represented in the chart below:

FIDUCUARY NET POSITION AS OF JUNE 30 ($BILLIONS)



The investment allocation at fair value based on investment category (excluding securities lending collateral and foreign currency contracts) as of June 30, 2023, is represented in the chart below:

INVESTMENT ALLOCATION AS OF JUNE 30, 2023 - FAIR VALUE



ECONOMIC AND FINANCIAL MARKET FACTORS

The economy and financial markets demonstrated resilience in a year marked by significant challenges. After a major market decline in the fiscal year ending June 30, 2022, the new fiscal year began with steep inflation and the U.S. Federal Reserve (Fed) enacting quantitative tightening measures. The persistence of inflation coupled with continued strong economic data, resulted in investor uncertainty about the magnitude of future rate hikes and put pressure on both the stock and bond market. However, as the Fed took swift action and raised rates multiple times in the first half of the fiscal year, inflationary pressures began to ease, the pace of rate hikes began to slow and risk appetite increased. Nevertheless, other signs of risk loomed. The yield curve remained inverted throughout the year, often a signal of a potential recession. Rising rates put stress on various banks and contributed to the failure of several US regional banks, including Silicon Valley Bank (SVB) in March. US regulators stepped in to protect SVB depositors. Outside the US, Swiss authorities intervened to prevent the collapse of Credit Suisse. With intervention by regulators and central banks, fears of a systemic crisis were allayed.

Despite all these challenges, by year fiscal end, economic outlooks and company fundamentals remained relatively strong and inflation continued to fall, all of which supported a strong equity market. Over the fiscal year, the U.S. markets returned 19.6%, as measured by the S&P 500 Index. The outperformance was led by growth and large cap equities, with mega-cap technology companies demonstrating resilience in both revenue and profit growth. International equities also provided investors with positive returns over the fiscal year, with developed markets outperforming emerging markets, as measured by MSCI EAFE (+18.8%) and MSCI Emerging Markets (+1.75%). The Eurozone fell into a mild recession around the start of the new year as real GDP fell during the fourth and first quarters. Consumer spending was hampered by high inflation and rising interest rates while government spending fell sharply.

Outside of the equity markets, there were growing concerns around credit risk, with many seeking safety in high quality securities. Over the fiscal year, U.S. fixed income returns were modestly negative as yields continued to rise, as measured by the Bloomberg U.S. Aggregate Bond Index (-0.90%). Longer duration fixed income performed more favorably, with the Bloomberg Long Term Corporate Index returning (1.0%).

In a reversal of the year prior, commodities stood out as a detractor, with the Bloomberg Commodity Index returning (-9.6%) over the fiscal year.

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, 2023. Questions regarding any of the information provided in this report or requests for additional financial information should be addressed to:

Alison Romano, Chief Executive Officer &
Chief Investment Officer
San Francisco City and County Employees' Retirement System
1145 Market Street – 5th floor
San Francisco, CA 94103

Statements of Fiduciary Net Position

June 30, 2023 and 2022

Dollar amounts in thousands

	2023	2022
Assets:		
Deposits	$ 17,929	$ 131,252
Contributions receivable – members	22,935	21,690
Investment income receivable:		
Interest	13,996	9,434
Dividends	2,345	2,680
Securities lending	254	182
Receivable from brokers, general partners, others	122,854	34,026
Investments at fair value:		
Short-term investments	376,288	369,099
City investment pool	-	15,352
Debt securities:		
U. S. Government and agency securities	812,141	875,900
Other debt securities	1,023,119	846,696
Equity securities:		
Domestic*	8,397,002	7,485,899
International*	2,051,694	2,093,752
Real assets	5,207,943	5,113,451
Private credit	2,606,909	2,171,037
Private equity	10,101,396	10,338,629
Absolute return	3,056,626	3,511,019
Foreign currency contracts, net	(1,029)	(197)
Invested securities lending collateral	562,491	541,413
Total investments	34,194,580	33,362,050
Total assets	34,374,893	33,561,314
Deferred outflows of resources:		
Other postemployment benefits (OPEB)	2,366	2,092
Total assets and deferred outflows of resources	34,377,259	33,563,406
Liabilities:		
Payable to brokers	53,813	37,250
Custodian line of credit	-	120,000
Other	70,732	63,906
Payable to borrowers of securities	562,408	541,557
Total liabilities	686,953	762,713
Deferred inflows of resources:		
Other postemployment benefits (OPEB)	1,878	2,169
Total liabilities and deferred inflows of resources	688,831	764,882
Fiduciary net position – restricted for pension benefits	$ 33,688,428	$ 32,798,524

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

Statements of Changes in Fiduciary Net Position
Years Ended June 30, 2023 and 2022
Dollar amounts in thousands

	2023	2022
Additions:		
Member contributions		
Miscellaneous	$344,055	$ 352,731
Police	40,242	41,334
Fire	29,619	29,406
Total member contributions	413,916	423,471
Employer contributions:		
Miscellaneous	570,992	649,819
Police	60,248	70,116
Fire	41,411	48,528
Total employer contributions	672,651	768,463
Investment income (expenses)		
Interest	66,501	43,365
Dividends	94,883	106,986
Net appreciation (depreciation) in fair value of investments	1,560,025	(2,380,535)
Securities lending income	29,305	4,819
Investment expenses	(53,819)	(80,806)
Securities lending borrower rebates and expenses	(26,229)	(2,149)
Net investment income (loss)	1,670,666	(2,308,320)
Total additions	2,757,233	(1,116,386)
Deductions:		
Benefits	1,820,269	1,710,092
Refunds of contributions	24,096	27,658
Administrative expenses	23,687	21,364
Administrative expenses and offset - OPEB	(723)	(190)
Total deductions	1,867,329	1,758,924
Net increase (decrease) in fiduciary net position	889,904	(2,875,310)
Fiduciary net position – restricted for pension benefits		
Beginning of year	32,798,524	35,673,834
End of year	$ 33,688,428	$ 32,798,524

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

The Notes below provide a summary of the complete Notes found in SFERS' 2023 audited financial statements dated December 19, 2023.

(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 contributions 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 fiduciary net position and changes in fiduciary 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, 2023, and 2022, the changes in its financial position, or, where applicable, its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America. The City and County's Annual Comprehensive Financial Report 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 Chief Executive Officer and Chief Investment Officer, 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 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:

a. **Miscellaneous Non-Safety Members** – staff, operational, supervisory, and all other eligible employees who are not in special membership categories.

b. **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 or after January 7, 2012.

c. **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.

d. **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 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 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.)
Sheriffs Plan A8.608 - Sheriffs, undersheriffs and all deputized personnel of the Sheriff's Department hired on or after January 7, 2012	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 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. Safety members who so elect will receive a deferred benefit that is first payable at or after age 50. Miscellaneous members who so elect will receive a vesting benefit that is first payable at or after age 50 for members hired prior to January 7, 2012 or at or after age 53 for those hired on or after January 7, 2012.

Generally, upon the death of an active member who is eligible for a service retirement, qualified surviving spouses or qualified domestic partners receive death benefits based upon a percentage (50 – 100%) 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 at which time a continuation benefit equal to 100% of the member's service retirement allowance is provided to the qualified survivor.

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%. Police and Firefighter members who became members of the Plan before November 2, 1976 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 if in the previous year there were earnings in excess of the expected earnings on the actuarial value of the assets. The Supplemental COLA is capped at 3.5% less the Basic COLA.

In November 2011, voters approved a full funding requirement for all Supplemental COLAs granted on and after July 1, 2012. However, this provision was challenged in the courts on behalf of members hired before January 7, 2012. A decision by the California courts restricted this provision to members who had retired before November 6, 1996. In November 2022, a new proposition was passed by the voters which adjusted retirement allowances for members retired before November 6, 1996 to account for Supplemental COLAs not received in years 2013, 2014, 2017, 2018, and 2019. This new proposition also eliminated the full funding requirement for these members retired before November 6, 1996, subject to a monthly monetary cap in limited circumstances.

For members hired on and after January 7, 2012, there is no Supplemental COLA unless the Plan is also fully funded on a market value of assets basis. For this group only, all previously paid Supplemental COLAs expire in years when a Supplemental COLA is not paid to them.

Ad-hoc COLA: There is no authority for granting ad-hoc COLA increases.

(f) Membership

Membership of the Retirement System consisted of the following as of June 30, 2023:

	Police[1]	Fire	Miscellaneous	Total
Retirees and beneficiaries currently receiving benefits	2,936	2,317	26,851	32,104
Active members	2,221	1,699	30,097	34,017
Terminated members entitled to but not yet receiving benefits	398	98	12,161	12,657
Total	5,555	4,114	69,109	78,778

Police counts include Sheriff and Miscellaneous Safety.

(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 partnership interests, which include private equity, real assets, private credit, and some public equity investments, are based on net asset values (NAV) provided by the general partners and investment managers. Partnership financial statements are audited annually, generally as of December 31 and NAV is adjusted monthly or quarterly for cash flows to/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.

Fair valuation for commingled investments is reported as domestic or international based on the individual investment's classification, although funds may have exposure to both.

The Absolute Return Program invests in limited partnerships and other alternative investment vehicles. The most common investment strategies include, but are not limited to, equity, credit, macro, emerging markets, quantitative, multi-strategy, special situations/other, co-investments and commodities. These investments are valued using their respective NAV, and are audited annually. The most significant input into the NAV of such an entity is the fair value of its investment holdings. These holdings are typically valued on a monthly basis by each fund's independent administrator and for certain illiquid investments, where no market exists, the General Partner may provide pricing input. The management assumptions are based upon the nature of the investment and the underlying business. Investments have the potential to become illiquid under stressed market conditions and, in certain circumstances, investors may be subject to redemption restrictions which can impede the timely return of capital. The valuation techniques vary based upon underlying investment type, but are predominantly derived from observed market prices.

At its January 8, 2020, Board Meeting, the Retirement Board approved reinstating a securities lending program through the Retirement System's custodian bank. 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 guidelines allow for both cash or non-cash collateral; non-cash collateral includes equity security baskets, investment grade corporate bonds, and sovereign debt issued by Organization for Economic Co-operation and Development (OECD) member countries.

The Retirement System's custodian, BNY Mellon, is the agent in lending the Plan's securities for cash and non-cash collateral. Contracts with the lending agent 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 loan. BNY Mellon also indemnifies Retirement System from loss on all repurchase agreements held in the securities lending cash collateral account. If, with respect to investments of cash collateral in repurchase transactions, the counterparty fails to deliver the repurchase price upon termination, BNY Mellon will sell the purchased securities and deposit the proceeds to Retirement System's collateral account. If the proceeds are less than the repurchase price, BNY Mellon will credit the amount of such difference to Retirement System's collateral account.

To manage its counterparty risk, BNY Mellon requires additional collateral ranging between 102% and 110% depending on collateral type. As of June 30, 2023, BNY Mellon collected 102.03% for cash loans and 109.89% for non-cash loans, resulting in 106.41% over collateralization on extended loans.

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, 2023, was 87 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. The separately managed account for re-investing cash collateral ensured that SFERS is the sole beneficiary of any liquidity needs. In addition, SFERS adopted conservative cash collateral reinvestment guidelines that are consistent with those that govern money market funds (i.e., Rule 2a-7 of the Investment Company Act of 1940). As of June 30, 2023, the weighted average maturity of the reinvested cash collateral account was 7 days. The term to maturity of the loaned securities is generally not matched with the term to maturity of the investment of said collateral.

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 fiduciary 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 fiduciary 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, deferred outflows of resources, liabilities, and deferred inflows of resources, 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) Other Postemployment Benefits Other Than Pensions

The Retirement System adopted GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. As prescribed under GASB Statement No. 75, net other postemployment benefits (OPEB) liability, deferred outflows/inflows of resources related to OPEB, and OPEB expense are actuarially determined on a citywide basis. Net OPEB liability is measured as the portion of the present value of projected benefit payments to be provided to current active and inactive employees attributed to those employees' past service, less the amount of the Retiree Health Care Trust Fund investments measured at fair value.

(3) Deposits

Deposits are carried at cost, which approximates fair value. Deposits in bank accounts were $17,929,000 as of June 30, 2023.

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, 2023, $9,443,000, the Retirement System's deposits in bank accounts were not exposed to custodial credit risk because they were held in the Retirement System's name.

(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 retained by the Retirement System follow specific investment guidelines and are evaluated against specific market benchmarks that represent their investment style. 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, delinquencies 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, securities lending, foreign currency contracts, derivative instruments, private equity, real assets, private credit, and absolute return investments, which include investments in a variety of commingled partnership vehicles.

The Retirement Board's asset allocation policies for the year ended June 30, 2023 is as follows:

Asset Class	Target Allocation since November 2020
Global Equity	37.0%
Treasuries	8.0%
Liquid Credit	5.0%
Private Credit	10.0%
Private Equity	23.0%
Real Assets	10.0%
Absolute Return	10.0%
Leverage	-3.0%
	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, 2023, $166,626,000 (or 29.6% of 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 investment 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 Retirement System's operating fund cash balance in the City and County's investment pool is zero at June 30,2023.

(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 Retirement System employs a diversified asset allocation approach to manage interest rate (and other) risks. Assets with the highest sensitivity to interest rates are most commonly found in the Retirement System's Public Fixed Income portfolio which allocates to U.S. Treasuries and other long duration assets including corporate bonds and non-U.S. sovereign bonds. Other asset classes have varied, but more limited exposure to interest rates. With respect to interest rate (and other) risks, investment managers are required to follow investment guidelines. Investment managers in the Public Fixed Income portfolio manage portfolios to mandates that target either an interest rate exposure within a specific range or an interest rate exposure relative to a benchmark within a more limited, specific range.

The table below depicts the segmented time distribution for fixed income investments based upon the expected maturity (in years) as of June 30, 2023.

Investments at Fair Value as of June 30, 2023

Dollar amounts in thousands

		Maturities			
Investment Type	Fair Value	Less than 1 year	1-5 years	6-10 years	10+ years
Asset-Backed Securities	$ 12,625	$ -	$ 820	$ 1,114	$ 10,691
Bank Loans	131,153	1,533	82,751	46,869	-
Collateralized Bonds	11,502	-	-	3,526	7,976
Commercial Mortgage-Backed	73,494	1,027	2,120	2,227	68,120
Commingled and Other Fixed Income Funds	179,481	(6,375)	-	50,198	135,658
Corporate Bonds	345,818	4,867	140,757	129,106	71,088
Corporate Convertible Bonds	104,829	1,046	89,616	13,362	805
Government Bonds	885,862	3,663	503,161	327,642	51,396
Government Mortgage Backed Securities	3,456	-	-	-	3,456
Municipal/Provincial Bonds	946	-	607	339	-
Non-Government Backed Collateralized Mortgage Obligations	74,732	-	-	-	74,732
Options	10	-	10	-	-
Short-Term Investment Funds	376,288	376,288	-	-	-
Swaps*	10,962	12,795	(1,754)	(175)	96
Total	$ 2,211,158	$ 394,844	$ 818,088	$ 574,208	$ 424,018

* $391 Credit default swaps are excluded because they are not subject to interest rate risk.

(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 guidelines.

Investments are classified and rated using the lower of (1) S&P Global Ratings (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.

In 2011, S&P lowered the credit rating for U.S. long-term debt to AA+ from AAA and continues to maintain that posture. Through the end of the fiscal year, both Fitch and Moody's, the two other large credit agencies, maintained a AAA rating for U.S. long-term debt; however, in August 2023, Fitch downgraded the U.S. long-term debt to AA+. The rating downgrade reflects Fitch's view of expected fiscal deterioration over the next three years, a high and growing general government debt burden, and the erosion of relative governance to peers over the last two decades.

While several structural strengths underpin the U.S. ratings and the U.S. dollar remains the world's top reserve currency, additional ratings changes by the credit rating agencies would likely have a material 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, 2023. Investments issued or explicitly guaranteed by the U.S. government of $807,737,000 as of June 30, 2023, are exempt from the credit rating disclosures and are excluded from the table below.

Credit Ratings of Fixed Income Investments as of June 30, 2023
Dollar amounts in thousands

Credit Rating	Fair Value	Fair Value as a Percentage of Total
AAA	$ 14,240	1.0%
AA	9,573	0.7%
A	49,135	3.5%
BBB	128,182	9.1%
BB	145,855	10.4%
B	214,804	15.3%
CCC	28,942	2.1%
CC	3,504	0.2%
D	6,461	0.5%
Not Rated	803,115	57.2%
Total	$ 1,403,811	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 11.0% for 2023.

(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. Securities issued or guaranteed by the U.S. government or its agencies are exempt from this limit.

As of June 30, 2023, 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, 2023, $146,106,000 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.

(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, real assets, and private credit. 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.

The Retirement System's net exposures to foreign currency risk as of June 30, 2023, are as follows:

Foreign Currency Risk Analysis as of June 30, 2023
Dollar amounts in thousands

Currency	Cash	Equities	Fixed Income	Private Equities	Real Assets	Private Credit	Foreign Currency Contracts	Total
Argentina peso	$ -	$ -	$ 28	$ -	$ -	$ -	$ -	$ 28
Australian dollar	-	11,281	96	29,683	2,247	-	3,750	47,057
Brazil real	-	16,852	4,357	-	-	-	4,495	25,704
Canadian dollar	-	20,105	193	-	-	-	6,964	27,262
Chilean peso	-	1,699	2,282	-	-	-	67	4,048
Chinese r yuan HK	-	-	-	-	-	-	(5,494)	(5,494)
Chinese yuan renminbi	42,763	220,576	5,419	-	-	-	(13,784)	254,974
Colombian peso	-	-	5,877	-	-	-	(2,302)	3,575
Czech koruna	-	-	(220)	-	-	-	2,317	2,097
Danish krone	-	55,215	-	-	-	-	(64)	55,151
Dominican rep peso	-	-	1,355	-	-	-	(1,061)	294
Euro	-	516,428	44,790	100,233	436,236	122,022	(43,537)	1,176,172
Hong Kong dollar	-	62,255	-	-	-	-	(204)	62,051
Hungarian forint	-	1,865	1,940	-	-	-	1,107	4,912
Indian Rupee	-	28,079	-	-	-	-	367	28,446
Indonesian rupiah	-	5,707	5,564	-	-	-	553	11,824
Israeli shekel	-	1,027	-	-	-	-	-	1,027
Japanese yen	-	62,830	1,874	-	48,532	-	15,209	128,445
Malaysian ringgit	-	2,617	3,682	-	-	-	157	6,456
Mexican peso	-	2,017	7,627	-	-	-	798	10,442
New Taiwan dollar	-	31,319	-	-	-	-	-	31,319
Norwegian krone	-	1,713	-	-	-	-	-	1,713
Peruvian sol	-	-	1,094	-	-	-	(441)	653
Philippines peso	-	-	-	-	-	-	28	28
Polish zloty	-	-	1,360	-	-	-	3,108	4,468
Pound sterling	-	148,565	5,761	94,364	61,580	-	(9,958)	300,312
Romanian leu	-	-	562	-	-	-	763	1,325
Singapore dollar	-	4,864	-	-	-	-	(415)	4,449
South African rand	-	6,027	7,587	-	-	-	(2,542)	11,072
South Korean won	-	19,237	-	-	-	-	-	19,237
Swedish krona	-	39,222	-	-	-	-	-	39,222
Swiss franc	-	81,422	-	-	-	-	-	81,422
Thailand baht	-	5,574	2,226	-	-	-	1,457	9,257
Turkish lira	-	960	-	-	-	-	-	960
Uae dirham	-	9,380	-	-	-	-	-	9,380
Total	**$ 42,763**	**$ 1,356,836**	**$ 103,454**	**$ 224,280**	**$ 548,595**	**$ 122,022**	**$ (38,662)**	**$ 2,359,288**

(f) Unfunded Investments Commitments

The Retirement System has unfunded commitments to contribute capital for real assets in the amount of $1,871,190,000, private equity in the amount of $3,517,233,000, private credit in the amount of $2,408,911,000 and absolute return in the amount of $62,674,000 totaling $7,860,008,000 as of June 30, 2023.

(g) 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, 2023, 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 fiduciary 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 or by an external pricing service using various proprietary methods.

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, 2023:

As of and for the Year Ended June 30, 2023
Dollar amounts in thousands

Derivative Type / Contracts	Notional Amount	Fair Value	Net Appreciation (Depreciation) in Fair Value
Forwards			
Foreign Exchange Contracts	$ 196,874	$ (1,029)	$ (832)
Futures			
Bond Futures Long	9,493	(93)	(12)
Equity Index Futures Long	898	28	28
Treasury Futures Long	25,373	(129)	4,766
Treasury Futures Short	(8,038)	102	69
Options			
Credit Contracts	-	-	1
Foreign Exchange Contracts	200	10	(1)
Swaps			
Credit Contracts	23,853	391	116
Currency Contracts	440	416	106
Interest Rate Contracts	152,092	(2,458)	(260)
Total Return Contracts	227,227	13,004	9,803
Rights/Warrants			
Equity Contracts	61,328 shares	80,566	11,495
Total		$ 90,808	$ 25,279

All investment derivatives are reported as investments at fair value in the statements of fiduciary net position. Rights, warrants, and equity index futures 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 fiduciary net position.

Counterparty Credit Risk

The Retirement System is exposed to credit risk on non-exchange traded derivative instruments that are in asset positions. The table below presents those investments being classified and rated using the lower of (1) S&P Global Ratings (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.

Derivative Instruments Subject to Counterparty Credit Risk as of June 30, 2023

Dollar amounts in thousands

Credit Rating	Fair Value
AA	$ 202
A	16,278
BBB	1,563
Not Rated	31
Total	$ 18,074

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, 2023, 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, 2023.

Derivative Interest Rate Risk as of June 30,2023

Dollar amounts in thousands

		Maturities			
Derivative Type / Contracts	Fair Value	Less than 1 year	1-5 years	6-10 years	10+ years
Futures					
Treasury Futures Long	$ (129)	$ (129)	$ -	$ -	$ -
Treasury Futures Short	102	102	-	-	-
Options					
Foreign Exchange Contracts	10	-	10	-	-
Swaps					
Currency Contracts	416	307	109		-
Interest Rate Contracts	(2,458)	(516)	(1,863)	(175)	96
Total Return Contracts	13,004	13,004	-	-	-
Total	$ 10,945	$ 12,768	$ (1,744)	$ (175)	$ 96

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, 2023:

Derivative Instruments Highly Sensitive to Interest Rate Changes as of June 30, 2023
Dollar amounts in thousands

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 0.00%, Pay Variable 1-Day SOFR	$ 22,800	$ (178)
Interest Rate Swap	Receive Fixed 0.25%, Pay Variable 1-Day SOFR	46,800	(2,386)
Interest Rate Swap	Receive Fixed 0.48%, Pay Variable 6-Month PRIBOR	684	(65)
Interest Rate Swap	Receive Fixed 0.57%, Pay Variable 6-Month WIBOR	1,255	(124)
Interest Rate Swap	Receive Fixed 1.48%, Pay Variable 6-Month PRIBOR	1,221	(194)
Interest Rate Swap	Receive Fixed 2.00%, Pay Variable 1-Day BUBOR	1,002	(59)
Interest Rate Swap	Receive Fixed 2.56%, Pay Variable 1-Day BUBOR	2,041	(331)
Interest Rate Swap	Receive Fixed 3.34%, Pay Variable 3-Month KLIBOR	214	(5)
Interest Rate Swap	Receive Fixed 3.36%, Pay Variable 1-Day SOFR	11,230	(290)
Interest Rate Swap	Receive Fixed 4.68%, Pay Variable 6-Month PRIBOR	620	24
Interest Rate Swap	Receive Fixed 4.72%, Pay Variable 6-Month PRIBOR	726	6
Interest Rate Swap	Receive Fixed 4.74%, Pay Variable 6-Month PRIBOR	872	9
Interest Rate Swap	Receive Fixed 4.81%, Pay Variable 28-Day MXIBR	1,533	(102)
Interest Rate Swap	Receive Fixed 4.87%, Pay Variable 1-Day BIDOR	3,524	(454)
Interest Rate Swap	Receive Fixed 5.26%, Pay Variable 3-Month JIBAR	609	(36)
Interest Rate Swap	Receive Fixed 5.60%, Pay Variable 1-Day COOVIBR	81	(11)
Interest Rate Swap	Receive Fixed 7.13%, Pay Variable 28-Day MXIBR	204	(19)
Interest Rate Swap	Receive Fixed 9.06%, Pay Variable 28-Day MXIBR	991	16
Interest Rate Swap	Receive Fixed 11.91%, Pay Variable 1-Day BIDOR	1,244	50
Interest Rate Swap	Receive Fixed 11.98%, Pay Variable 1-Day BIDOR	4,436	16
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 1.20%	778	81
Interest Rate Swap	Receive Variable 1-Day SOFR, Pay Fixed 0.36%	22,800	1,305
Interest Rate Swap	Receive Variable 1-Day SOFR, Pay Fixed 2.94%	2,630	126
Interest Rate Swap	Receive Variable 3-Month BBA, Pay Fixed 0.00%	22,800	175
Interest Rate Swap	Receive Variable 3-Month CLICP, Pay Fixed 5.67%	997	(12)
Total Interest Rate Swaps		$ 152,092	$ (2,458)

Foreign Currency Risk

At June 30, 2023, the Retirement System is exposed to foreign currency risk on its derivative investments denominated in foreign currencies.

Derivative Instruments Foreign Currency Risk Analysis as of June 30, 2023

Dollar amounts in thousands

Currency	Forwards	Rights/ Warrants	Swaps	Futures	Total
Argentina peso	$ -	$ -	$ (27)	$ -	$ (27)
Australian Dollar	3,750	-	-	-	3,750
Brazil real	4,495	-	(388)	-	4,107
Canadian dollar	6,964	-	-	(11)	6,953
Chilean peso	67	-	(12)	-	55
Chinese R Yuan HK	(5,494)	-	-	-	(5,494)
Chinese yuan renminbi	(13,784)	-	-	-	(13,784)
Colombian peso	(2,302)	-	70	-	(2,232)
Czech koruna	2,317	-	(220)	-	2,097
Danish krone	(64)	-	-	-	(64)
Dominican Rep peso	(1,061)	-	-	-	(1,061)
Euro	(43,537)	82	35	(76)	(43,496)
Hong Kong dollar	(204)	-	-	-	(204)
Hungarian forint	1,107	-	(390)	-	717
Indian rupee	367	-	-	-	367
Indonesian rupiah	553	-	-	-	553
Japanese yen	15,209	-	-	-	15,209
Malaysian ringgit	157	-	(5)	-	152
Mexican peso	798	-	(105)	-	693
Peruvian sol	(441)	-	-	-	(441)
Philippines peso	28	-	-	-	28
Polish zloty	3,108	-	(124)	-	2,984
Pound sterling	(9,958)	-	-	(7)	(9,965)
Romanian leu	763	-	-	-	763
Singapore dollar	(415)	-	-	-	(415)
South African rand	(2,542)	-	(36)	-	(2,578)
Swiss franc	-	11	-	-	11
Thailand baht	1,457	-	-	-	1,457
Total	$ (38,662)	$ 93	$ (1,202)	$ (94)	$ (39,865)

Contingent Features
At June 30, 2023, the Retirement System held no positions in derivatives containing contingent features.

(5) Fair Value Measurement of Investments

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, 2023:
Dollar amounts in thousands

As of June 30, 2023	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Investments by fair value level				
Short-term investments	$ 345,487	$ 318,714	$ -	$ 26,773
Debt securities:				
U.S. government and agency securities	812,141	807,738	4,403	-
Other debt securities	928,542	90,798	704,431	133,313
Equity securities:				
Domestic	3,344,356	3,338,640	5,716	-
International	1,579,322	1,579,322	-	-
Foreign currency contracts, net	(1,029)	-	-	(1,029)
Invested securities lending collateral	562,491	-	562,500	(9)
Total investments by fair value level	$ 7,571,310	$ 6,135,212	$ 1,277,050	$ 159,048
Investments measured at the net asset value (NAV)				
Short-term investments	30,801			
Fixed income funds invested in:				
Other debt Securities	94,577			
Equity funds invested in:				
Domestic	5,052,646			
International	472,372			
Real assets	5,207,943			
Private Credit	2,606,909			
Private Equity	10,101,396			
Absolute return	3,056,626			
Total investments measured at the NAV	26,623,270			
Total investments measured at fair value	$ 34,194,580			

Investments, at Fair Value

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.

Debt and 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 quotes 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.

Investments, at Net Asset Value (NAV)

The equity and debt funds are commingled funds that are priced at net asset value by industry vendors and fund families. NAV is the fair 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.

The fair value of the Retirement System's investments in private equity, real assets, private credit, absolute return, and some public equity investments are based on NAV 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 generally audited annually as of December 31, and the NAV is 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.

Private credit investment strategies include capital preservation, return maximization, and opportunistic. Investments in the asset class are achieved through commingled funds and separate account partnerships. Private credit investments are mostly illiquid, and distributions are received over the life of the investments. These investments are not typically redeemed, nor do they have set redemption schedules. There are public equity investments held in commingled funds valued at NAV. These investments may be subject to varying lock-up provisions and redemption schedules.

The real asset holdings are illiquid. Distributions are received over the life of the investments, which could equal or exceed ten years. They are not redeemed, nor do they have set redemption schedules.

Private equity investment strategies include buyout, venture capital, growth capital, and special situations. Investments in the asset class are achieved primarily through commingled funds and separate account partnerships, but may also include direct and co-investment opportunities. Private equity investments are illiquid, and distributions are received over the life of the investments, which could equal or exceed ten years. These investments are not typically redeemed, nor do they have set redemption schedules.

Absolute return investment strategies include equity, credit, macro, emerging markets, quantitative, multi-strategy, special situations/other, co-investments and commodities. Investments are achieved through limited partnerships. Investments have the potential to become illiquid under stressed market conditions and, in certain circumstances, investors may be subject to redemption restrictions that differ from the standard terms and conditions summarized here, which can impede the return of capital according to those terms and conditions.

The table below provides a summary of the terms and conditions upon which the Retirement System may redeem its debt and equity funds, private equity, real assets, private credit, and absolute return investments as of June 30, 2023.

Dollar amounts in thousands

Investment Type	NAV as of June 30, 2023	Unfunded Commitment	Redemption Frequency	Redemption Notice Period	NAV Lock Up and Years
Debt securities	$ 44,379	N/A	Monthly	On a business day (BD) at least 15 days prior to the last BD of the month	
	49,393		Daily	2 business days	
	805		N/A	N/A	
Total:	**$ 94,577**				
Domestic equity securities	328,459	N/A	Semi-monthly	6 business days	
	841,811		Semi-monthly	9 business days	
	165,704		Semi-annually*	60 calendar days	
	9,836		Semi-annually*	90 calendar days	
	184,470		Semi-annually	60 calendar days	
	596,971		Semi-annually	90 calendar days	
	325,636		Quarterly	30 calendar days	
	677,181		Quarterly	45 calendar days	
	80,171		Quarterly	60 calendar days	
	883,518		Quarterly	90 calendar days	
	621,425		Monthly	30 calendar days	
	337,463		Annually	60 calendar days	
Total:	**$ 5,052,645**				
International equity securities	472,372	N/A	Monthly	30 calendar days	
Absolute return	1,364,321	62,674	Monthly	5-95 Days	No Lock Up
	1,068,669		Quarterly	45-180 Days	$969,505 / No Lock Up $99,164 / Less than 1 Year
	566,070		Semi-annually	60-180 Days	No Lock Up
	57,566		N/A	N/A	No Lock Up
Total:	**$ 3,056,626**				
Real assets	52,039	1,871,190	Annually, subject to available liquidity	No later than June 30 of applicable fiscal year	N/A
	772,528		Quarterly, subject to available liquidity	90 calendar days	N/A
	4,383,376		Illiquid	N/A	N/A
Total:	**$5,207,943**				
Private credit	116,031	2,408,911	Capital returned on a realized basis	90 days	One year hard lock followed by one year soft lock (both expired)
	203,579		Capital returned on a realized basis	90 days	One year hard lock (expired)
	423,265		Capital returned on a realized basis subject to 3-year maximum	180 days	N/A
	61,142		Quarterly, subject to 33% investor-level gate	30 days	One year hard lock (expired)
	1,802,892		Illiquid	N/A	N/A
Total:	**$2,606,909**				
Private equity	10,101,396	3,517,233	Illiquid	N/A	N/A

* SFERS has requested full redemption as of June 30, 2023. Proceeds are expected in the fiscal year 2023-2024.

(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% to 110% depending on security type.

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 fiduciary net position. As of June 30, 2023, 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, 2023, the Retirement System has lent $1,243,298,000 in securities and received collateral of $562,409,000 and $760,562,000 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 $562,491,000. The net unrealized gain of $82,000 is presented as part of the net appreciation (depreciation) in fair value of investments in the statement of changes in fiduciary 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 cash collateral reinvestment 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, 2023 are summarized in the following table.

Dollar amounts in thousands

Investment Type	Fair Value of Loaned Securities	Cash Collateral	Fair Value of Non-Cash Collateral
Securities on Loan for Cash Collateral			
U.S. Corporate Fixed Income	$ 84,817	$ 86,851	$ -
U.S. Equities	228,462	231,649	-
U.S. Government Fixed Income	223,974	229,057	-
International Fixed Income	10,263	10,816	-
International Equities	3,685	4,036	-
Securities on Loan for Non-Cash Collateral			
U.S. Corporate Fixed Income	1,497	-	1,529
U.S. Equities	229,768	-	242,733
U.S. Government Fixed Income	297,101	-	332,691
International Fixed Income	3,234	-	3,387
International Equities	160,497	-	180,222
	$ 1,243,298	$ 562,409	$ 760,562

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, 2023.

Fair Value of Cash Collateral Account as of June 30, 2023
Dollar amounts in thousands

Investment Type	Fair Value	Maturity Less Than 1 Year
Floating Rate Notes	$ 379,128	$ 379,128
Money Market Funds	16,746	16,746
Repurchase Agreements	166,626	166,626
Payable/Receivable	(9)	(9)
Total	$ 562,491	$ 562,491

The Retirement System's exposure to credit risk in its reinvested cash collateral account as of June 30, 2023 is as follows:

Fair Value of Cash Collateral Account as of June 30, 2023
Dollar amounts in thousands

Credit Rating	Fair Value	Fair Value as a Percentage of Total
A-1	$ 59,289	10.5%
AA	128,026	22.8%
A	208,559	37.1%
Not Rated *	166,617	29.6%
Total	$ 562,491	100.0%

* This figure includes $166,626 in repurchase agreements.

(7) Investments in Real Assets

Real assets investments represent the Retirement System's interests in real assets limited partnerships and separate accounts. The changes in these investments during the year ended June 30, 2023 is summarized as follows:

Dollar amounts in thousands

Investments	2023
Beginning of the year	$ 5,113,451
Capital investments	593,518
Equity in net earnings	103,109
Net appreciation in fair value	(73,552)
Capital distributions	(528,583)
End of the year	$ 5,207,943

(8) Benefits

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

Dollar amounts in thousands

	2023
Service retirement benefits	$ 1,457,325
Disability retirement benefits	224,984
Death benefits	10,089
COLA benefit adjustments	127,871
Total	$ 1,820,269

(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, 2023 was as follows:

Dollar amounts in thousands

	June 30, 2023
Total pension liability	$ 37,332,835
Fiduciary net position	$ 33,688,428
Net pension liability/(asset)	$ 3,644,407
Fiduciary net position as a percentage of total pension liability	90.2%

(a) Actuarial Assumptions and Long-Term Expected Return Assumptions

The total pension liability as of June 30, 2023 was determined by an actuarial valuation as of July 1, 2022 which was rolled forward to June 30, 2023 using standard roll forward procedures.

The following is a summary of actuarial methods and assumptions used at the June 30, 2023 measurement date:

Inflation	2.50%
Salary increases	3.25% plus merit component based on employee classification and years of service
Investment rate of return	7.20%, net of pension plan investment expense, including inflation

Mortality rates for healthy Miscellaneous members were based upon adjusted PubG-2010 Employee and Retiree tables for non-annuitants and retirees, respectively. Mortality rates for Safety members were based upon adjusted PubS-2010 Employee and Retiree tables for non-annuitants and retirees, respectively. Mortality rates were then projected generationally from the base year using the MP-2019 projection scale.

The actuarial assumptions used at the June 30, 2023 measurement date are based upon the results of a demographic experience study for the period July 1, 2014 through June 30, 2019, and an economic experience study as of July 1, 2022.

The Supplemental COLA assumptions as of June 30, 2023, were developed based upon the probability and amount of Supplemental COLA expected for each future year and are shown below.

Assumed Future Supplemental COLAs
Hired Before Prop C

July 1	Old Police & Fire	Old Miscella-neous and all New Plans	Hired After Prop C
2023	0.00%	0.00%	0.00%
2024+	½ x (3.5% less assumed Basic COLA), not less than zero	0.75%	0.50%

The long-term expected rate of return on pension plan investments was 7.20%. 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 best-estimates of expected future nominal rates of return for each major asset class over 10 and 30-year horizons. These estimates were combined to produce the long-term expected rate of return by weighting the expected future nominal rates of return by the target asset allocation percentage.

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 as of June 30, 2023, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	37.0%	4.6%
Treasuries	8.0%	1.7%
Liquid Credit	5.0%	3.5%
Private Credit	10.0%	5.8%
Private Equity	23.0%	7.8%
Real Assets	10.0%	5.3%
Absolute Return	10.0%	4.4%
Leverage	-3.0%	1.4%
	100.0%	

(b) Discount Rate

The discount rate used to measure the total pension liability at June 30, 2023, was 7.20%. 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 of the City and County of San Francisco. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the July 1, 2022, actuarial valuation. While the contributions and measure of actuarial liability in the funding valuation do not anticipate any future Supplemental COLAs, the projected contributions for the determination of the discount rate include the anticipated future amortization payments on future Supplemental COLAs for current members when they are expected to be granted. The projection of benefit payments to current members for determining the discount rate includes the payment of anticipated future Supplemental COLAs.

As of June 30, 2023, the System's fiduciary net position was projected to be available to make all projected future benefit payments for current members. Projected benefit payments are discounted at the long-term expected return on assets of 7.20% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 3.65% to the extent that they are not available. The single equivalent percentage rate used to determine the total pension liability as of June 30, 2023, rounded to two decimals is 7.20%.

The municipal bond rate of 3.65% used to determine the above discount rate represents the yield available at June 30, 2023 on the Bond Buyer 20-Bond GO Index.

(c) Sensitivity of the Net Pension Liability/(Asset) to Changes in the Discount Rate

The following presents the net pension liability/(asset) as of June 30, 2023, calculated using the discount rate of 7.20%, as well as what the total net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the discount rate:

Dollar amounts in thousands

	Net Pension Liability/(Asset) June 30, 2023
1% Decrease	$ 8,548,071
Current Discount Rate	$ 3,644,407
1% Increase	$ (398,643)

(d) Money Weighted Rate of Return

For the year ended June 30, 2023, the annual money-weighted rate of return on pension plan investments, net of investment expenses, adjusted for the changing amounts actually invested, was 5.26%.

(1) Postemployment Healthcare Plan

(a) Other Postemployment Benefits (OPEB)

The Retirement System participates in the City's multiple-employer defined benefit other postemployment benefits plan (the OPEB Plan). The OPEB Plan is maintained by the City and is administered through the City's Health Service System. It provides postemployment medical, dental and vision insurance benefits to eligible employees, retired employees, surviving spouses, and domestic partners. Health benefit provisions are established and may be amended through negotiations between the City and the respective bargaining units. The City does not issue a separate report on its other postemployment benefit plan.

GASB Statement No. 75 requires that reported results must pertain to liability and asset information within certain defined timeframes. For the year ended June 30, 2023, the following timeframes are used.

San Francisco Health Service System Retiree Plan – Multiple-Employer	
Valuation Date (VD)	June 30, 2022
Measurement Date (MD)	June 30, 2022
Measurement Period (MP)	July 1, 2021 to June 30, 2022

The Retirement System's proportionate share percentage of the OPEB Plan was determined based on its percentage of citywide "pay-as-you-go" contributions for the year ended June 30, 2022. The Retirement System's net OPEB liability, deferred outflows/inflows of resources related to OPEB, amortization of deferred outflows/inflows and OPEB expense to each department is based on the Retirement System's allocated percentage. The Retirement System's proportionate share of the City's OPEB elements was 0.30% as of the measurement date.

For more information on OPEB, see the complete Notes found in SFERS' 2023 audited financial statements dated December 19, 2023.

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Collective Net Pension Liability

Dollar amounts in thousands

Year ended June 30	2023	2022	2021	2020	2019
Total pension liability					
Service cost	$ 813,901	$ 781,610	$ 718,771	$ 704,637	$ 675,065
Interest	2,518,802	2,471,994	2,302,075	2,230,441	2,131,847
Changes of benefit terms	59,080	-	-	-	-
Differences between expected and actual experience	295,778	98,920	136,097	205,869	12,484
Changes of assumptions	-	786,100	(479,435)	(117,141)	351,902
Benefit payments, including refunds of member contributions	(1,844,365)	(1,737,750)	(1,619,761)	(1,548,077)	(1,456,682)
Net change in total pension liability	**1,843,196**	**2,400,874**	**1,057,747**	**1,475,729**	**1,714,616**
Total pension liability—beginning	**35,489,639**	**33,088,765**	**32,031,018**	**30,555,289**	**28,840,673**
Total pension liability—ending, (a)	**37,332,835**	**35,489,639**	**33,088,765**	**32,031,018**	**30,555,289**
Plan fiduciary net position					
Contributions—member	413,916	423,471	409,398	400,649	380,980
Contributions—employer	672,651	768,463	836,559	742,985	645,056
Net investment income	1,670,666	(2,308,320)	9,447,669	966,282	1,970,312
Benefit payments, including refunds of member contributions	(1,844,365)	(1,737,750)	(1,619,761)	(1,548,077)	(1,456,682)
Administrative expenses	(22,964)	(21,174)	(20,249)	(20,270)	(18,983)
Net change in plan fiduciary net position	**889,904**	**(2,875,310)**	**9,053,616**	**541,569**	**1,520,683**
Plan fiduciary net position—beginning					
Beginning of year (as reported)	32,798,524	35,673,834	26,620,218	26,078,649	24,557,966
Restatement due to adoption of GASB 75	-	-	-	-	-
Beginning of year (as restated)	**32,798,524**	**35,673,834**	**26,620,218**	**26,078,649**	**24,557,966**
Plan fiduciary net position—ending, (b)	**33,688,428**	**32,798,524**	**35,673,834**	**26,620,218**	**26,078,649**
Net pension liability—ending, (a) - (b)	**$ 3,644,407**	**$ 2,691,115**	**$ (2,585,069)**	**$ 5,410,800**	**$ 4,476,640**

Schedule of Changes in Collective Net Pension Liability (continued)

Dollar amounts in thousands

Year ended June 30	2018	2017	2016	2015	2014
Total pension liability					
Service cost	$ 632,118	$ 644,277	$ 567,576	$ 523,644	$ 509,200
Interest	2,041,110	1,924,206	1,669,996	1,621,582	1,542,266
Changes of benefit terms	-	-	1,293,714	-	-
Differences between expected and actual experience	(42,382)	57,911	(119,270)	(197,981)	0
Changes of assumptions	170,699	88,180	1,087,309	216,845	(73,315)
Benefit payments, including refunds of member contributions	(1,364,587)	(1,278,140)	(1,256,146)	(1,131,030)	(1,072,526)
Net change in total pension liability	**1,436,958**	**1,436,434**	**3,243,179**	**1,033,060**	**905,625**
Total pension liability—beginning	**27,403,715**	**25,967,281**	**22,724,102**	**21,691,042**	**20,785,417**
Total pension liability—ending, (a)	**28,840,673**	**27,403,715**	**25,967,281**	**22,724,102**	**21,691,042**
Plan fiduciary net position					
Contributions—member	364,696	316,844	322,764	301,682	289,020
Contributions—employer	619,067	551,809	526,805	592,643	532,882
Net investment income	2,549,674	2,683,468	150,190	763,429	3,175,431
Benefit payments, including refunds of member contributions	(1,364,587)	(1,278,140)	(1,256,146)	(1,131,030)	(1,072,526)
Administrative expenses	(18,238)	(18,134)	(17,179)	(19,262)	(15,745)
Net change in plan fiduciary net position	**2,150,612**	**2,255,847**	**(273,566)**	**507,462**	**2,909,062**
Plan fiduciary net position—beginning					
Beginning of year (as reported)	22,410,350	20,154,503	20,428,069	19,920,607	17,011,545
Restatement due to adoption of GASB 75	(2,996)	-	-	-	-
Beginning of year (as restated)	**22,407,354**	**20,154,503**	**20,428,069**	**19,920,607**	**17,011,545**
Plan fiduciary net position—ending, (b)	**24,557,966**	**22,410,350**	**20,154,503**	**20,428,069**	**19,920,607**
Net pension liability—ending, (a) - (b)	**$ 4,282,707**	**$ 4,993,365**	**$ 5,812,778**	**$ 2,296,033**	**$ 1,770,435**

Schedule of Collective Net Pension Liability

Dollar amounts in thousands

	6/30/2023	6/30/2022	6/30/2021	6/30/2020	6/30/2019
Total pension liability	$ 37,332,835	$ 35,489,639	$ 33,088,765	$ 32,031,018	$ 30,555,289
Plan fiduciary net position	(33,688,428)	(32,798,524)	(35,673,834)	(26,620,218)	(26,078,649)
Net pension liability	$ 3,644,407	$ 2,691,115	$ (2,585,069)	$ 5,410,800	$ 4,476,640
Plan fiduciary net position as a percentage of the total pension liability	90.2%	92.4%	107.8%	83.1%	85.3%
Covered employee payroll	$ 3,994,117	$ 3,742,459	$ 3,623,898	$ 3,566,991	$ 3,375,447
Net pension liability as a percentage of covered-employee payroll	91.2%	71.9%	-71.3%	151.7%	132.6%
	6/30/2018	**6/30/2017**	**6/30/2016**	**6/30/2015**	**6/30/2014**
Total pension liability	$ 28,840,673	$ 27,403,715	$ 25,967,281	$ 22,724,102	$ 21,691,042
Plan fiduciary net position	(24,557,966)	(22,410,350)	(20,154,503)	(20,428,069)	(19,920,607)
Net pension liability	$ 4,282,707	$ 4,993,365	$ 5,812,778	$ 2,296,033	$ 1,770,435
Plan fiduciary net position as a percentage of the total pension liability	85.2%	81.8%	77.6%	89.9%	91.8%
Covered employee payroll	$ 3,221,544	$ 3,041,818	$ 2,836,498	$ 2,642,752	$ 2,507,162
Net pension liability as a percentage of covered-employee payroll	132.9%	164.2%	204.9%	86.9%	70.6%

Schedule of Employer Contributions

Dollar amounts in thousands

Year Ended June 30	Actuarially Determined Contribution (ADC)	Contributions in Relation to the ADC	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
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%
2017	551,809	551,809	-	3,041,818	18.1%
2018	619,067	619,067	-	3,221,544	19.2%
2019	645,056	645,056	-	3,375,447	19.1%
2020	742,985	742,985	-	3,566,991	20.8%
2021	836,559	836,559	-	3,623,898	23.1%
2022	768,463	768,463	-	3,742,459	20.5%
2023	672,651	672,651	-	3,994,117	16.8%

* Covered compensation from actuarial projection.

Schedule of Money-Weighted Rate of Return

Year Ended June 30	Money-Weighted Rate of Return
2014	19.10%
2015	4.03%
2016	0.96%
2017	13.52%
2018	11.55%
2019	8.19%
2020	3.86%
2021	35.45%
2022	-6.24%
2023	5.26%

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

Note to Schedules of Changes in Collective Net Pension Liability and Schedules of Collective Net Pension Liability

The total pension liability contained in the schedules was determined by the Retirement System's actuary, Cheiron, Inc. The collective net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the Retirement System.

A summary of assumptions may be found in 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. The discount rates were as follows:

Year Ended June 30	Discount Rate for Total Pension Liability
2023	7.20%
2022	7.20%
2021	7.40%
2020	7.40%
2019	7.40%
2018	7.50%
2017	7.50%
2016	7.50%
2015	7.46%
2014	7.58%

NOTE TO SCHEDULE OF EMPLOYER CONTRIBUTIONS

Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the fiscal year in which contributions are reported. Assumptions used to determine contribution rates are:

Year Ended June 30	Valuation Date	Investment return	Salary Increase/ Amortization Growth	Mortality	Change in Funding Methods or Assumption from Prior Year
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
2017	7/1/2015	7.50%	3.75%	Adj. 2009 CalPERS Mortality Tables projected generationally with mod. MP-2015	Demographic assumptions including rates of retirement, termination, refund, disability and mortality and salary merit based upon experience study
2018	7/1/2016	7.50%	3.75%	Adj. 2009 CalPERS Mortality Tables projected generationally with mod. MP-2015	None
2019	7/1/2017	7.50%	3.50%	Adj. 2009 CalPERS Mortality Tables projected generationally with mod. MP-2015	Wage inflation assumption
2020	7/1/2018	7.40%	3.50%	Adj. 2009 CalPERS Mortality Tables projected generationally with mod. MP-2015	Discount rate
2021	7/1/2019	7.40%	3.50%	Adj. 2009 CalPERS Mortality Tables projected generationally with mod. MP-2015	None
2022	7/1/2020	7.40%	3.25%	Adj. Pub-2010 General and Safety Mortality Tables projected generationally with MP-2019	Wage inflation and demographic assumptions including rates of retirement, termination, refund, disability and mortality and salary merit based upon experience study
2023	7/1/2021	7.20%	3.25%	Adj. Pub-2010 General and Safety Mortality Tables projected generationally with MP-2019	Discount rate

Complete descriptions of the methods and assumptions used to determine contribution rates can be found in the corresponding actuarial valuation reports.

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

COMPARISON OF CONTRIBUTIONS

Employer Contributions

Dollar amounts in thousands

Member Plan	Plan Year 2022-23	Plan Year 2021-22	Plan Year 2020-21
Miscellaneous Plans	$ 570,992	$ 649,819	$ 709,918
Police Plans	60,248	70,116	73,398
Firefighter Plans	41,411	48,528	53,243
Total	**$ 672,651**	**$ 768,463**	**$ 836,559**

Employee Contributions

Dollar amounts in thousands

Member Plan	Plan Year 2022-23	Plan Year 2021-22	Plan Year 2020-21
Miscellaneous Plans	$ 344,055	$ 352,731	$ 338,135
Police Plans	40,242	41,334	42,304
Firefighter Plans	29,619	29,406	28,959
Total	**$ 413,916**	**$ 423,471**	**$ 409,398**

PENSION FUND NET INVESTMENT INCOME

Fiscal Year 2022-23

Dollar amounts in thousands

	Income[1]	Realized Gain/Loss	Unrealized Gain/Loss	Total
Interest Earned	$ 66,501	$ -	$ -	$ 66,501
Dividends Earned	94,883	-	-	94,883
Net Appreciation in Fair Value of Investments:				
Recaptured Commission Income	12	-	-	12
Short-term Securities	-	(794)	1,049	255
Equities	-	(119,266)	1,690,481	1,571,215
Debt Securities	-	(53,032)	34,636	(18,396)
Real Assets	103,109	157,182	(230,656)	29,635
Private Credit	138,448	27,380	2,351	168,179
Private Equities	(149,015)	463,518	(588,411)	(273,908)
Absolute Returns	-	-	65,145	65,145
Other Assets	-	(27,332)	44,992	17,660
Securities Lending Income - Net	3,076	-	228	3,304
Investment Expenses	(53,819)	-	-	(53,819)
Total Net Investment Income (including Net Appreciation)	**$ 203,195**	**$ 447,656**	**$ 1,019,815**	**$ 1,670,666**

1 Total investment income excludes employee and employer contributions.

PENSION FUND DISBURSEMENTS

Fiscal Year 2022-23

Dollar amounts in thousands

Payments/Expenses	Amount
Service Retirement Payments	$ 1,457,325
Disability Retirement Payments	224,984
Cost of Living Adjustments	127,871
Death Allowance Payments	5,508
Death Benefits	3,047
Retired Annuitant Rolls (Option 1 Death Benefit)	1,534
Refunds of Contributions – Death Benefits	4,681
Refunds of Contributions – Other than Death Benefits	19,415
Administrative Expenses: Retirement Services/Administration	22,964
Total Payments & Expenses, FY2022-23	$ 1,867,329
Total Payments & Expenses, FY2021-22	$ 1,758,924
Increase from FY 2021-22	$ 108,405

COMPARISON OF ACTUAL ADMINISTRATIVE EXPENDITURES

Retirement Services & Administration Divisions

Dollar amounts in thousands

Description of Expenditures	2022-23	2021-22	2020-21
Personnel Services	$ 16,027	$ 14,655	$ 14,277
Equipment Purchase	0	18	0
Materials and Supplies	196	119	127
Services of Other Departments	4,740	3,935	3,999
Other Services	2,001	2,447	1,846
Total	**$ 22,964**	**$ 21,174**	**$ 20,249**

Investment Division

Dollar amounts in thousands

Description of Expenditures	2022-23	2021-22	2020-21
Personnel Services	$ 9,483	$ 8,260	$ 8,235
Equipment Purchase	0	0	0
Materials and Supplies	9	5	9
Services of Other Departments	2,851	2,333	2,618
Recaptured Commission Expense	2,000	1,927	1,577
Other Services	39,476	68,281	49,892
Total	**$ 53,819**	**$ 80,806**	**$ 62,331**

Investment Section

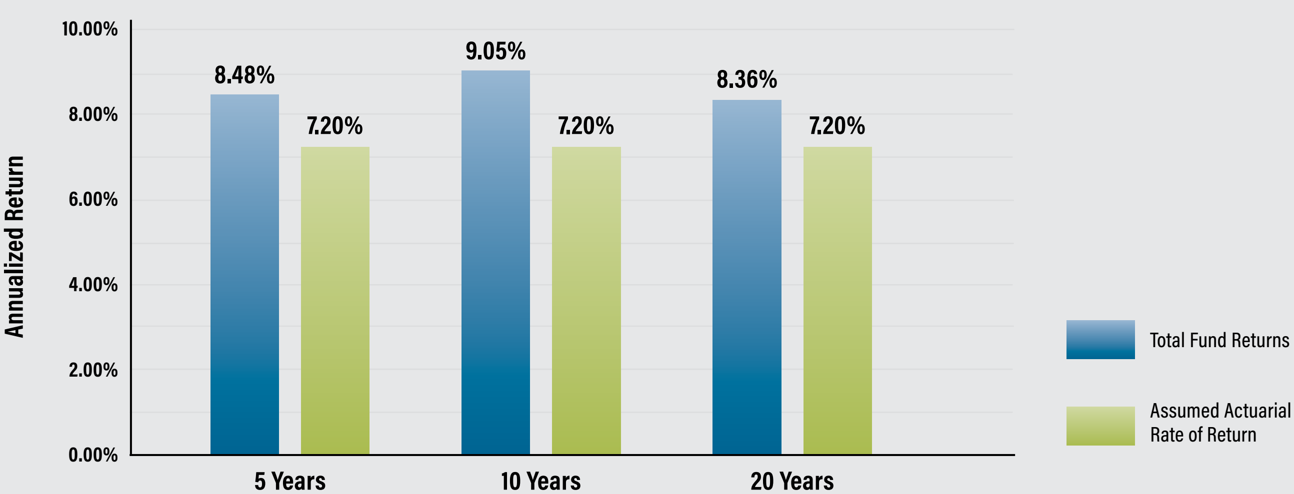
STATEMENT FROM THE CHIEF INVESTMENT OFFICER

1 - Overview

The investment policy objective for the Pension Plan portfolio is to generate long-term investment returns with prudent levels of risk in order to secure benefit payments for current and future retirees. To meet this objective, SFERS invests with the goals of (1) meeting the assumed actuarial rate of return on a net fee basis over a full market cycle and (2) exceeding the return of SFERS' policy benchmark over rolling five-year periods. The long-term assumed actuarial rate of return is currently 7.2%. The Board conducts an Asset-Liability Study (ALS) at least every three years and sets strategic asset allocation that considers the long-term return, liquidity needs, the structure of SFERS liabilities and risk tolerance. Both the actuarial return and the strategic asset allocation are established with a long-term investment horizon, taking into account that over shorter periods markets may outperform or underperform.

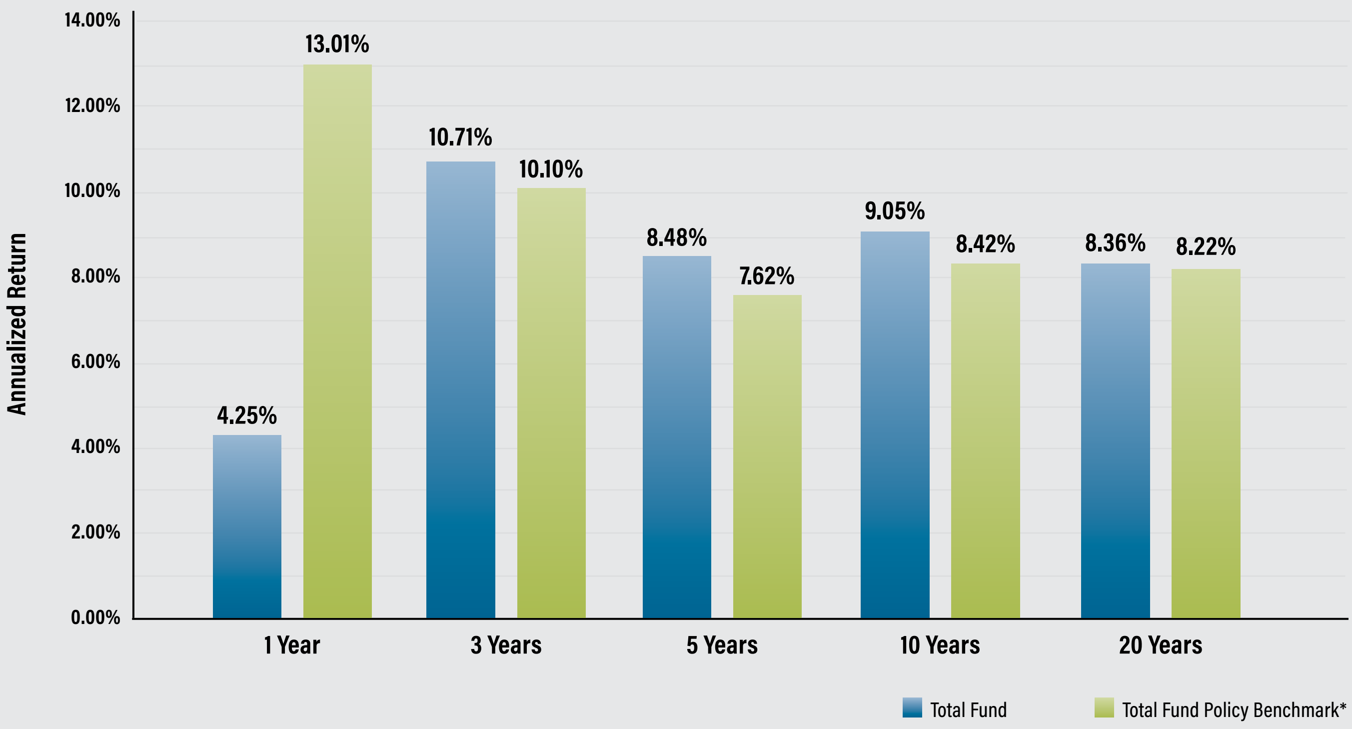
As of June 30, 2023, SFERS met the first return goal over 5, 10, and 20 years, as shown in Chart 1.

Chart 1: Total Fund Performance vs. Current Long-Term Assumed Rate of Return



The total fund investment returns over the medium and long term have also exceeded the policy benchmark, the second return goal, as shown in Chart 2. For the fiscal year, the total Fund underperformed the benchmark as a result of portfolio sector and style positioning, allocation to private equity and the lag effect of private market valuations. The policy benchmark is based primarily on public market indices, which are valued daily and may be volatile. Private equity valuations lag public market valuations. Therefore, if public markets decline/increase significantly over one year, private equity valuations may not decline/increase very much at all. As a result, given SFERS exposure to private markets, over short time periods (e.g., one year), the total fund realized performance may differ notably from the policy benchmark as was the case in FY2023.

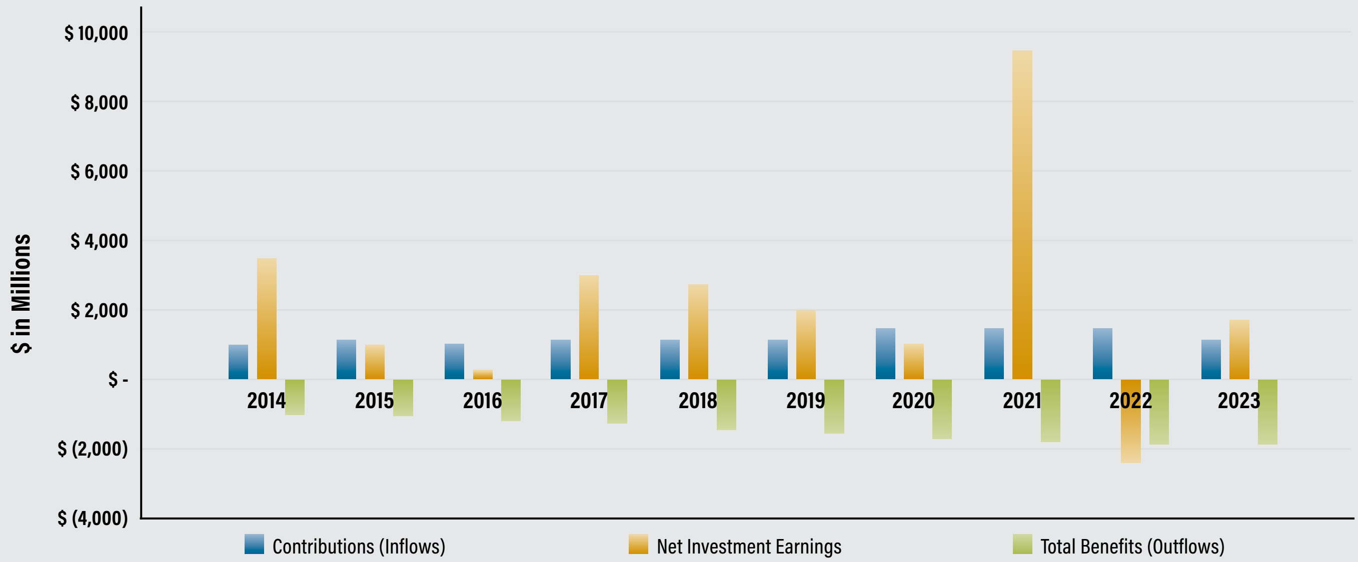
Chart 2: Total Fund Performance vs Total Fund Policy Benchmark



* The current SFERS policy benchmark (starting 10/1/2022) consists of 37% Public Equity Policy, 6% Bloomberg Barclays Intermediate US Treasury, 5% Liquid Credit Policy Benchmark, 7% Private Credit Policy, 12% Real Assets Policy, 23% Private Equity Policy and 10% Absolute Return Policy.

Long-term investment returns combined with employee and employer contributions support the fund and enable the Plan to meet current and future beneficiary payments, as shown in Chart 3.

Chart 3: Annual Contributions, Investment Earnings and Benefit Payments



2 - Asset Allocation

One of the key elements of SFERS' investment approach is to set strategic asset allocation policy in a manner that incorporates a long-term perspective of the capital markets, the nature and structure of SFERS' liabilities and future cash flows and liquidity needs. SFERS recognizes that a strategic long-term asset allocation implemented in a consistent and disciplined manner is a primary determinant of the Trust's risk and return. SFERS, in collaboration with Retirement Board's investment consultant, conducts an extensive Asset-Liability Study (ALS) every three years.

In November 2020, the Retirement Board approved a strategic asset allocation policy summarized in Table 1.

Table 1 - Strategic Asset Allocation					
Public Equity	37%	Real Assets	10%	Private Credit	10%
Private Equity	23%	Absolute Return	10%	Fixed Income	13%
Growth Assets	**60%**	**Diversifying Assets**	**20%**	**Income Assets**	**23%**

The asset allocation policy reflects the Retirements Board's return objective, risk tolerance, time horizon, and the expected liquidity demands from the Trust. Notably, the asset allocation policy shown above includes a meaningful exposure to Growth Assets (Public and Private Equity) coupled with Diversifying Assets (Real Assets and Absolute Return) and provides the ability to apply modest Plan-level leverage (3%) to manage liquidity and rebalancing.

From time to time, actual asset allocation may deviate from the long-term strategic asset allocation targets given public market values may shift quickly, and private market asset values are updated with a time lag and have less liquidity. Re-investing the portfolio to meet updated strategic asset allocation targets takes time in private market investments. Chart 4 shows current asset allocation relative to the strategic asset allocation targets.

Chart 4: Strategic and Current Asset Allocation

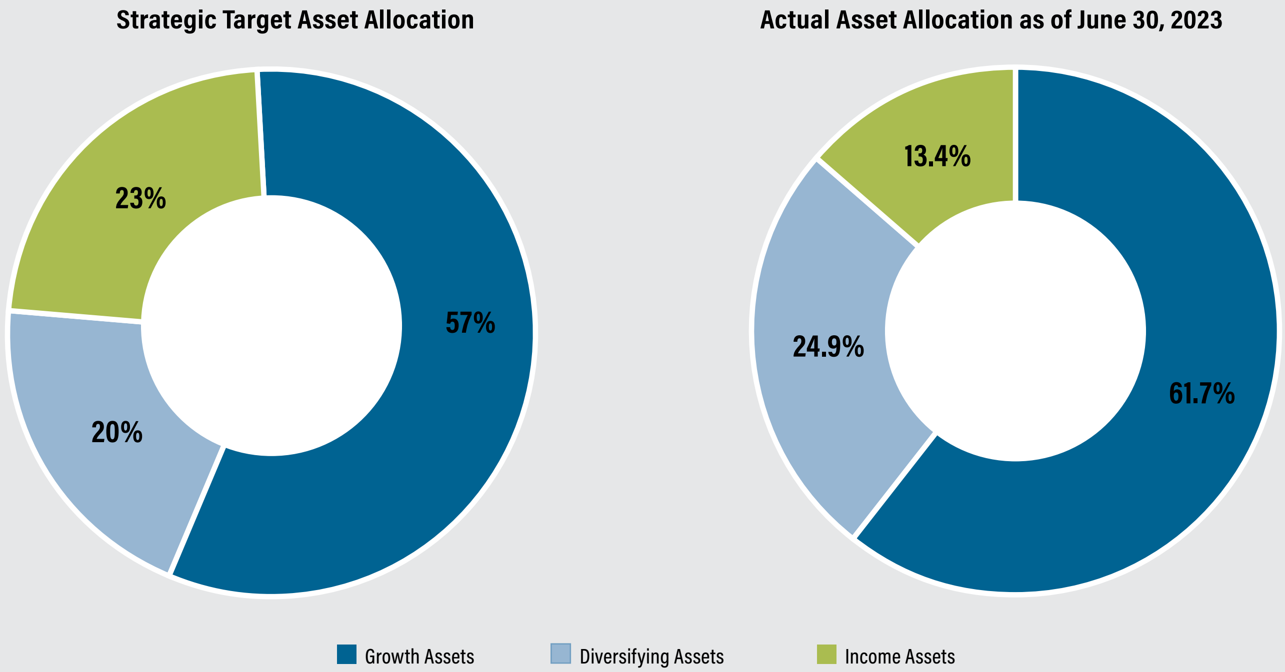


Table 2 shows the asset allocation as of June 30, 2023 versus June 30, 2022. Increased exposure to Public Equity over the year was driven primarily by strong returns relative to the other asset classes. The increase in Private Credit exposure was a result of both returns and funding additional strategies to work toward the long-term target allocation of 10%.

Table 2 - Asset Allocation as of June 30, 2023 and June 30, 2022

	2023		2022	
	Market Value ($ thousands)	Weight (%)	Market Value ($ thousands)	Weight (%)
Public Equity	10,732,035	31.9	9,923,302	29.9
Private Equity	10,032,254	29.8	10,811,985	32.6
GROWTH ASSETS	20,764,289	61.7	20,735,288	62.5
Real Assets	5,253,239	15.6	5,009,496	15.1
Absolute Return	3,123,227	9.3	3,510,514	10.6
DIVERSIFYING ASSETS	8,376,466	24.9	8,520,010	25.7
Fixed Income	1,796,842	5.3	2,363,533	7.1
Private Credit	2,571,611	7.6	2,175,105	6.6
INCOME GENERATING ASSETS	4,368,453	13.0	4,538,638	13.7
Cash*	138,904	0.4	-625,699	-1.9
TOTAL INVESTMENT PORTFOLIO	33,648,112	100.0	33,168,237	100.0

* Includes Leverage exposure:

Notes: Investment portfolio asset values shown here are net of management fees and expenses and based on valuation data available at the end of the fiscal year. This may differ from the SFERS audited financial statements, which takes into account information on Level 2 and Level 3 assets that becomes available during the audit.

3 – Performance Overview

During the 2022-2023 fiscal year, the economy and financial markets demonstrated resilience in a period marked by significant challenges. After a major market decline in the fiscal year ending June 30, 2022, the new fiscal year began with steep inflation and the U.S. Federal Reserve (Fed) enacting quantitative tightening measures. The persistence of inflation coupled with continued strong economic data, resulted in investor uncertainty about the magnitude of future rate hikes and put pressure on both the stock and bond market. However, as the Fed took swift action and raised rates multiple times in the first half of the fiscal year, inflationary pressures began to ease, the pace of rate hikes began to slow and risk appetite increased. Nevertheless, other signs of risk loomed. The yield curve remained inverted throughout the year, often a signal of a potential recession.

Despite all these challenges, by year fiscal end, economic outlooks and company fundamentals remained relatively strong and inflation continued to fall, all of which supported a strong equity market. Over the fiscal year, the U.S. markets returned 19.6%, as measured by the S&P 500 Index. The outperformance was led by growth and large cap equities, with mega-cap technology companies demonstrating resilience in both revenue and profit growth. International equities also provided investors with positive returns over the fiscal year, with developed markets outperforming emerging markets, as measured by MSCI EAFE (+18.8%) and MSCI Emerging Markets (+1.75%). The Eurozone fell into a mild recession around the start of the new year as real GDP fell during the fourth and first quarters. Consumer spending was hampered by high inflation and rising interest rates while government spending fell sharply.

Outside of the equity markets, there were growing concerns around credit risk, with many seeking safety in high quality securities. Over the fiscal year, U.S. fixed income returns were modestly negative as yields continued to rise, as measured by the Bloomberg U.S. Aggregate Bond Index (-0.90%). Longer duration fixed income performed more favorably, with the Bloomberg Long Term Corporate Index returning (1.0%).

During this period, SFERS investments returned positive 4.25%, led by strong public equity investment returns, accompanied by positive returns in real assets, private credit and absolute return investments. Private equity performance that lagged public equity markets was a headwind. Longer-term, returns remain positive. SFERS ended the fiscal year with assets of $33.6 billion, up $0.5 billion from the previous fiscal year.

Table 3 shows 1-, 3-, 5-, 10- and 20-year absolute performance.

Table 3 - Total Fund Returns for Periods Ending June 30, 2023

	SFERS (%)
1 Year	4.25
3 Years	10.71
5 Years	8.48
10 Years	9.05
20 Years	8.36

4 – Performance Analysis

SFERS investments are managed to meet the 7.2% long term return objective within prudent risk guidelines. Generally, investment performance is driven by three factors, including (1) market returns, (2) asset allocation which is established based on risk tolerances, return objectives and liquidity needs, and (3) selection of investment strategies. This Performance Analysis section highlights SFERS investment returns, net of fees, compared to a standard passive 60% Public Equity / 40% Fixed Income portfolio (60/40 Portfolio) and to the SFERS policy benchmark.

The 60/40 Portfolio represents a passive investment implementation in liquid public markets. This is a measure of general market return assuming a classic portfolio asset allocation. The SFERS policy benchmark represents a passive investment implementation based on the Board's established asset allocation. Passive investing seeks to approximate the return of market indices. Active management seeks to construct portfolios that will exceed the benchmark market index. SFERS invests in active management strategies in segments of the market where there is greater probability of generating returns, net of fees, in excess of a passive portfolio.

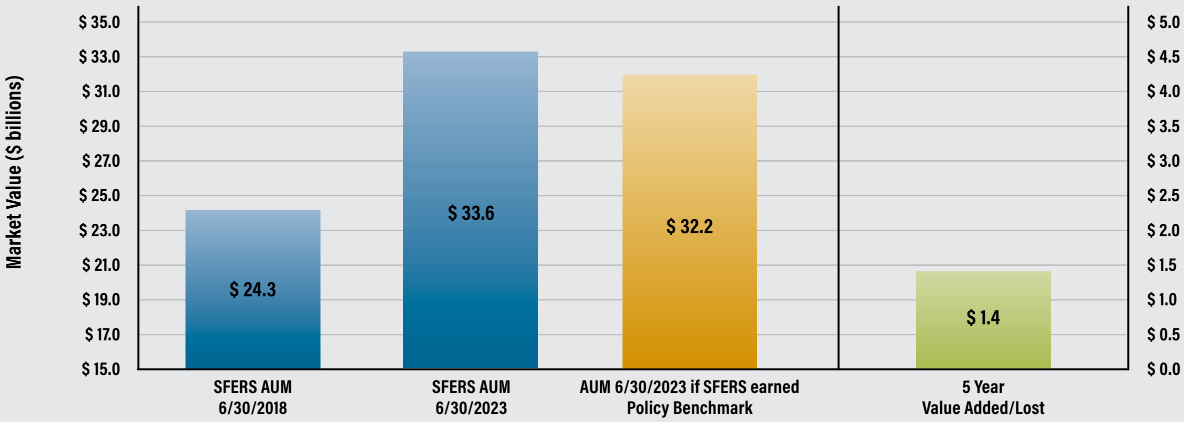
Fiscal Year 2022 – 2023

For the fiscal year, SFERS investment returns lagged that of a 60/40 Portfolio of 8.51% and the policy benchmark of 13.01%. Underperformance was primarily the result of the lag effect of private market valuations. Returns for the period were led Public Equity which returned 17.28%, followed by Private Credit and Absolute Return, which returned 5.20% and 4.19%, respectively.

The Past Five Years

Over the past five years, SFERS has generated annualized returns of 8.48% while a 60/40 portfolio returned 4.00% and the policy benchmark returned 7.62%. In terms of dollars, returns generated through the selection and sizing of actively managed strategies the past five years have added $1.4 billion in value compared to if SFERS had earned the return of the policy benchmark. In other words, if SFERS had earned the benchmark return over the past five years, assets under management (AUM) at fiscal year-end would have totaled just $32.2 billion.

Chart 5: Assets Generated in Excess of Policy Benchmark Return



* Includes leverage exposure:

Notes: Investment portfolio asset values shown here are net of management fees and expenses and based on valuation data available at the end of the fiscal year. This may differ from the SFERS audited financial statements, which takes into account information on Level 2 and Level 3 assets that becomes available during the audit.

Longer Term Performance Relative to a 60/40 Portfolio

As shown in Table 4, over the past ten and twenty years SFERS has outperformed a 60/40 Portfolio by 3.92% and 2.28% annualized and net of fees, respectively. A primary driver of the outperformance relative to the 60/40 Portfolio is the asset allocation established by the Board, which provides for more diversified exposures and significant exposure to private market asset classes.

Table 4 - SFERS Value Added vs. 60% Stock and 40% Bonds

	1 Year	3 Years	5 Years	10 Years	20 Years
SFERS Total Fund	4.25	10.71	8.48	9.05	8.36
60/40 Portfolio*	8.51	3.85	4.00	5.13	6.08
Excess Returns	-4.26	6.86	4.48	3.92	2.28

*60/40 portfolio comprises 60% MSCI ACWI IMI (Net) and 40% FTSE WGBI. Prior to February 1997, S&P 500 is used instead of MSCI ACWI IMI.

Longer Term Performance Relative to Policy Benchmark

Table 5 shows 1-, 3-, 5-, 10- and 20-year absolute performance, net of fees, relative to the policy benchmark. The primary driver of the value added over the longer term is the selection and allocation to investment strategies.

Table 5 - Total Fund Returns Compared to Policy Benchmark for Periods Ending June 30, 2023

	SFERS (%)	Policy Benchmark	Value Added (%)
1 Year	4.25	13.01	-8.76
3 Years	10.71	10.10	0.61
5 Years	8.48	7.62	0.86
10 Years	9.05	8.42	0.63
20 Years	8.36	8.22	0.14

Source: BNY Mellon for SFERS returns; Wilshire for benchmark returns. The current SFERS policy benchmark (starting 10/1/2022) consists of 37% Public Equity Policy, 6% Bloomberg Barclays Intermediate US Treasury, 7% Liquid Credit Policy Benchmark, 5% Private Credit Policy, 12% Real Assets Policy, 23% Private Equity Policy and 10% 90-day Treasury Bill plus 500 bps.

PERFORMANCE BY ASSET CLASS

SFERS manages and monitors the overall portfolio by asset class. Table 6 summarizes asset class return performance and the relevant benchmark and is followed by a discussion of each asset class.

Table 6 - Investment Performance vs. Benchmarks for periods ending June 30, 2023

	1 Year	3 Years	5 Years	10 Years	20 Years
Public Equity	17.28	8.24	7.65	8.89	8.29
Public Equity Policy Benchmark[1]	*16.14*	*10.97*	*7.65*	*8.62*	*8.28*
Private Equity	-7.68	20.75	17.21	16.44	15.01
Private Equity Policy Benchmark[2]	*20.95*	*15.61*	*12.71*	*15.58*	*14.10*
Real Assets	3.58	13.53	8.60	11.37	8.78
Real Assets Policy Benchmark[3]	*0.88*	*14.86*	*6.26*	*7.21*	*8.21*
Absolute Return	4.19	5.42	3.16		
Absolute Return Policy Benchmark[4]	*8.92*	*6.39*	*6.64*		
Fixed Income	0.81	-2.67	0.61	1.94	3.73
Fixed Income Policy Benchmark[5]	*2.17*	*-2.36*	*1.45*	*2.06*	*3.41*
Private Credit	5.20	11.20	8.67	9.51	
Private Credit Policy Benchmark[6]	*11.10*	*6.04*	*5.33*	*5.83*	
Total Fund	**4.25**	**10.71**	**8.48**	**9.05**	**8.36**
Total Fund Policy Benchmark[7]	***13.01***	***10.10***	***7.62***	***8.42***	***8.22***

1 The current Public Equity Policy (starting 10/1/2012) consists of 100% MSCI ACWI IMI (ND).

2 The current Private Equity Policy (starting 1/1/2023) consists of 25% MSCI ACWI Ex-US IMI (ND) and 75% Russell 3000 plus 300 bps.

3 The current Real Assets Policy (starting 7/1/2022) consists of 18.16% NCREIF NFI-ODCE Value Weighted Index, 37.56% Cambridge Associates Real Estate, 35.87% Cambridge Associates Natural Resource Index, 8.41% Cambridge Associates Infrastructure Index.

4 The Absolute Return Policy consists of the 90-day Treasury Bill plus 500 bps.

5 The current Fixed Income Policy (starting 7/1/2022) consists of 45.45% of Liquid Credit Policy and 54.55% of Bloomberg Barclays Intermediate US Treasuries Index. Liquid Credit Policy is 33.34% Bloomberg Barclays US Corporate Bond Index, 33.33% US Corporate High Yield Index and 33.33% J.P. Morgan EMBI Global Diversified Index.

6 The Private Credit Policy consists of 50% Bank of America Merrill Lynch US High Yield BB/B Constrained Index and 50% Credit Suisse Leveraged Loan Index plus 150bps.

7 The current SFERS policy benchmark (starting 10/1/2022) consists of 37% Public Equity Policy, 6% Bloomberg Barclays Intermediate US Treasury, 5% Liquid Credit Policy Benchmark, 7% Private Credit Policy, 12% Real Assets Policy, 23% Private Equity Policy and 10% Absolute Return Policy Index.

Public Equity

The objectives of SFERS' Public Equity Portfolio are to provide long-term growth and capital appreciation and to be a source of liquidity for the Trust. SFERS seeks excess returns in the Public Equity portfolio and emphasizes strategies that focus on companies which are anticipated to grow at a rate above the average growth of the market. As expectations for slower growth and higher inflation weighed on sentiment, exposure to these strategies detracted from performance during the first half of the fiscal year. These concerns abated in the second half of the fiscal year, however, and markets, led by the Technology sector, staged a strong rebound. For the fiscal year ended June 30, 2023, SFERS Public Equity Portfolio returned 17.28%, outperforming the benchmark's return by 1.14%. For the 10 years ended June 30, 2023, SFERS Public Equity Portfolio returned 8.89%, while the benchmark returned 8.62%.

Private Equity

The role of Private Equity is to provide long-term, risk-adjusted returns superior to those of Public Equity strategies. Private Equity primarily consists of buyouts, venture capital, and growth capital. Additional strategies include special situations, co-investments and secondary transactions.

The Private Equity portfolio has meaningful tilts to Venture/Growth, Technology, and Asia. In the fiscal year ended June 30, 2023, SFERS' Private Equity Portfolio returned -7.68% underperforming the policy benchmark's return of 20.95%. Similar to other growth assets, the portfolio was impacted by negative investor sentiment towards risk, as well as expectations for higher inflation and interest rates. However, given the illiquid nature of private equity investments and associated valuation lag, returns are best evaluated over longer time periods. For the 10 years ended June 30, 2023, SFERS' Private Equity Portfolio returned 16.44%, exceeding the policy benchmark return of 15.58%.

Real Assets

The role of Real Assets is to provide diversification, current income, and inflation protection through alpha generating, higher returning private investment strategies. SFERS' Real Assets portfolio consists of three distinct sub-components, Real Estate, Natural Resources, and Infrastructure.

For the fiscal year ended June 30, 2023, the Real Assets Portfolio returned 3.58%, outperforming the policy benchmark's return of 0.88%. While all Real Assets strategies were negatively impacted by the higher cost of capital and inflation pressures, relatively stronger fundamentals in Natural Resources and Infrastructure drove positive annual portfolio performance. Like Private Equity, given the illiquid nature of the assets, performance is best evaluated over longer time periods. For the 10 years ended June 30, 2023, SFERS' Real Asset Portfolio returned 11.37% versus the policy benchmark of 7.21%.

Absolute Return

The role of Absolute Return is to enhance the risk-adjusted returns of the SFERS Plan through exposure to sources of return and risk that differ meaningfully from traditional equity, fixed income and private markets. In addition, Absolute Return is a secondary source of liquidity for SFERS Plan cash needs.

For the fiscal year ended June 30, 2023, SFERS' Absolute Return portfolio returns were 4.19%, underperforming the policy benchmark of 8.92%. SFERS has been evolving the portfolio to reduce exposure to equity and credit and increase exposure to assets with sources of returns different from that of other asset classes. During the fiscal year, the equity-oriented strategies in the portfolio detracted from performance. However, consistent with the Absolute Return portfolio objective, returns exceeded that of bonds and provided some protection when both Equity and Fixed Income markets experienced losses.

Private Credit

The objectives of SFERS' Private Credit portfolio are to generate returns that are superior to Liquid Credit while providing both downside protection and diversification to the Trust. The portfolio emphasizes current income over capital appreciation with a focus on senior debt strategies complemented by allocations to subordinated debt, specialty finance, credit opportunities, distressed, and, and other opportunistic strategies. For the fiscal year ended June 30, 2023, SFERS Private Credit portfolio returned 5.20%, underperforming the policy benchmark's return of 11.05%. The strong results from the public high yield and leveraged loan markets drove the portfolio's benchmark. As an illiquid asset class, the near-term results for private credit tend to lag the public markets, thus the relative underperformance during the fiscal year. For the 10 years ended June 30, 2023, SFERS Private Credit portfolio returned 9.51%, outperforming the policy benchmark by 3.68%.

Fixed Income

The objectives of SFERS' Fixed Income portfolio are to provide liquidity, diversification, capital preservation, and income. In 2018, SFERS' Public Fixed Income portfolio was divided between two sub-components, Treasuries and Liquid Credit. As of June 30, 2023, these two sub-components represented 41% and 59% of the Fixed Income portfolio, respectively.

The Treasuries allocation is viewed as the primary source of liquidity for the Trust in the event of a market dislocation. This portfolio is passively managed thus not a source of outperformance. For the fiscal year, returns kept pace with the benchmark.

The Liquid Credit portfolio is viewed as a secondary source of liquidity for the Trust with a dual mandate of seeking excess returns. For the fiscal year ended June 30, 2023, SFERS Liquid Credit portfolio returned 5.14%, underperforming the policy benchmark's return of 6.02%. Relative results were impacted by the portfolio's exposure to the investment grade segment of the liquid credit markets which materially underperformed lower quality sectors including high yield and leveraged loans.

5- Investment Strategy

To meet the return objectives and manage risk, including the impact caused by a potential large short-term market decline, SFERS has established a holistic investment strategy that includes a framework for asset allocation, risk management, manager selection and ESG.

Asset Allocation and Risk Management

SFERS' asset allocation and risk management framework consist of three elements:

Asset Allocation

- *Asset-Liability Studies to set Strategic Asset Allocation*
- *Tactical Asset Allocation, Rebalancing, and Exposure Management*
- *Risk and Illiquidity Allocation*
- *Contingency Plans and Risk Mitigation Actions for Stressed Markets*

Risk Management

- *Continuous Exposure Management and Monitoring including Geography, Sector, Industry, Style, Factors*
- *Risk and Performance Attribution*
- *Annual Risk and Strategy Reviews for Each Asset Class*
- *Market Factor Sensitivities, Historical Stress Tests, Scenario Analysis*
- *Underwriting and Monitoring Managers' Risk Management and Portfolio Construction*

Liquidity Management

- *Pacing, Cash Flow, Liquidity Measures Forecasting for Base and Stress Scenarios*
- *Contingency Plans for Stressed Markets*
- *Total Plan Leverage*
- *Credit Facilities*
- *Collateral Management and Financing, including Leverage and Securities Lending*

Analytical Framework

Over two dozen analytic providers, partners, consultants, research platforms

Risk Management

SFERS' Staff continuously monitors and manages the Trust's risks, including geographic, sector, industry, and factor exposures. Each asset class undergoes a rigorous risk and strategy review at least annually, covering diverse investment analytics from multiple sources and portfolio construction techniques. Risk management is an integral part of the selection and monitoring of external investment managers. Additionally, a thorough Trust-level risk review is discussed with the Investment Board each year focusing on key risks and performance attribution, as well as sensitivities to various market factors, historical stress tests, and forward-looking scenario analyses.

Liquidity Management

SFERS' asset allocation and risk management framework includes a focus on liquidity management. As a long-term investor, SFERS relies heavily on harvesting illiquidity risk premium to enhance returns, and targets a 43% allocation to illiquid asset classes such as private equity, private credit, and real assets. Staff reviews pacing schedules, cash flow projections, and proprietary liquidity measures to plan for the base case and multiple stressed liquidity scenarios. Asset classes that are considered potential sources of liquidity – Public Fixed Income, Public Equities, and Absolute Return – develop plans to raise cash under stressed markets and liquidity. To further support liquidity, SFERS has put into place a credit facility with SFERS' custodian and allows for modest Trust-level leverage as part of SFERS' strategic asset allocation.

Manager Selection

SFERS seeks higher excess returns through manager selection by emphasizing managers with unique or niche strategies and specialist skill. The focus on seeking higher excess returns than traditional index approaches provides an additional return source beyond market returns.

Environmental, Social and Governance (ESG) Platform

SFERS believes that ESG factors can have a material impact on the value of companies and securities, as well as affect the macroeconomic environment more broadly. The consideration of these factors alongside traditional financial factors provides a better understanding of the risk and return characteristics of investments. SFERS, therefore, incorporates ESG factors into its management of the Trust. At all times, ESG factors are considered in a manner that is consistent with the Retirement Board and Staff's fiduciary responsibilities to act in the best interests of the active members, retirees, and beneficiaries of the Retirement System and consistent with SFERS' role as a prudent, long-term investor.

SFERS acknowledges that the relevance of ESG issues may differ and vary in degree across companies, sectors, regions, asset classes and over time. Therefore, SFERS takes a differentiated and materiality-based approach to integrating ESG considerations into its investment process. SFERS does so by implementing a three-pillar ESG Platform that consists of:

Active Ownership

1. Engagement – Engaging directly with companies in SFERS' underlying portfolio to encourage them to incorporate ESG considerations into their strategy, governance, and operational management.
2. Proxy Voting – Executing proxy votes according to SFERS' Proxy Voting Guidelines and supporting shareholder proposals on material environmental and social topics.

ESG Investment Management

- Manager Due Diligence & Monitoring – Engaging with existing and potential external managers across asset classes to understand their process for incorporating ESG considerations into their investment process.
- Investment – Investing in sustainability focused strategies across asset classes that meet SFERS' risk and return expectations.
- Divestment – Restricting investment in companies and/or industries that have high, unmitigated investment risks due to ESG factors.
- Analytics, Metrics, and Modeling – Utilizing quantitative and qualitative tools to assess ESG risks and opportunities across the SFERS portfolio.

ESG Collaboration & Communication

- Partnerships – Actively participating in ESG-related investor initiatives such as Principles for Responsible Investment, Ceres Investor Network, Council of Institutional Investors, Thirty Percent Coalition, , and the Principles for a Responsible Civilian Firearms Industry.
- Reporting – Annually responding to the PRI Framework, providing regular updates to the SFERS Board, and responding to stakeholder inquiries around ESG matters.

In support of its ESG efforts, SFERS maintains a formal set of Environmental, Social, and Governance Investment Policies and Procedures and Proxy Voting Guidelines.

Alison Romano

Alison Romano
Chief Executive Officer & Chief Investment Officer

Actuarial Section

Actuarial valuations are conducted annually to determine the funding requirements of the Retirement System. San Francisco City Charter specifies that the Retirement Board determines the employer contribution as a normal cost rate plus an amortization of the unfunded actuarial liability over a period not to exceed 20 years. Sponsoring employers are required to contribute 100% of the Board-approved actuarially determined contribution. Member contribution rates are also specified in City Charter.

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, 2022 actuarial funding report dated February 2023.

The pension plan is a cost-sharing multiple-employer defined benefit pension plan as the plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan. Here the term "cost-sharing" refers to the sharing of costs between the employers: plan assets are pooled and individual employer contributions are not segregated from each other. The Introductory Section contains more details of the Retirement System, the Board, and its members.

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

July 1, 2022 Actuarial Valuation

Actuarial assumptions and methods are adopted by the Retirement Board with input from the consulting actuary.

Key economic assumptions are reviewed annually, while demographic assumptions are studied every five years. The current demographic assumptions were adopted at the December 9, 2020 Board meeting for the July 1, 2020 actuarial valuation and are based upon the August 2020 Demographic Experience Study for the period covering July 1, 2014 through June 30, 2019. The study covered rates of retirement, termination, refund, disability, and mortality in addition to merit salary increases, final year salary increases, administrative expenses, and family composition. The current price and wage inflation assumptions were adopted at the December 9, 2020 Board meeting, while the current discount rate was adopted at the November 10, 2021 Board meeting.

Actuarial Asset Valuation Method for Funding Policy

The actuarial value of assets is used to determine the employers' contribution to SFERS. The asset adjustment method dampens the volatility in asset values that occur due to fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

The actuarial value is calculated by recognizing 20% of each of the past five years of actual investment returns compared to the expected return (7.20% for the year ending 2022, 7.40% for the years ending 2019-2021 and 7.50% for the year ending 2018) on the actuarial asset value. The expected return on actuarial value of assets is determined using actual cash flows and the assumed 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. The Retirement Board adopted the method upon recommendation from the actuarial audit of 2005.

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 normal costs calculated relate only to current member payroll. 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 Retirement Board's funding policy specifies the various periods over which different components of the unfunded actuarial liability must be amortized subject to the Charter requirement that amortization periods not exceed 20 years.

The Retirement Board adopted the following amortization methods beginning with the July 1, 2014 actuarial funding valuation:

- 20-year closed periods for net actuarial gains and losses
- 20-year closed periods for assumption or method changes
- 15-year closed periods for Charter amendments (five-year closed periods for retirement incentive programs and amendments for inactive members)
- 5-year closed periods for supplemental COLAs
- The portion of the unfunded actuarial liability not attributable to Charter amendments as of July 1, 2013 was re-amortized over a closed 19-year period as of July 1, 2014.

If the System becomes 100% funded based on the Actuarial Value of Assets, any subsequent unexpected changes in the UAL are amortized over a rolling 20-year period until the System is no longer 100% funded.

Effective with the July 1, 2021 valuation, the remaining amortization periods for assumption changes prior to July 1, 2021 and all prior actuarial gains and losses (including the gain for 2021) were reduced to 5 years.

The November 2022 voter-approved Charter Amendment to adjust retirement allowances for SFERS members who retired before November 6, 1996 was recognized in the July 1, 2022 actuarial valuation. The Board approved a ten-year amortization period for this Charter amendment at its July 14, 2022 meeting.

Any Charter amendment prior to July 1, 2014 has been amortized over 20 years from the date it was first recognized in the valuation. Prior to July 1, 2014, the portion of the unfunded actuarial liability not attributable to Charter amendments was amortized over a rolling 15-year period.

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

Investment Return Assumption

SFERS' assets are assumed to earn 7.20% net of investment expenses. This assumption was adopted beginning with the July 1, 2021 valuation. For funding purposes, the discount rate used to calculate the actuarial liabilities and normal costs is set equal to the assumed investment return.

Inflation

Wage inflation is assumed to be 3.25% compounded annually. This assumption was adopted effective July 1, 2020. Consumer price inflation is assumed to be 2.50% compounded annually effective July 1, 2020.

Cost-of-Living Increase in Benefits

The following cost-of-living assumptions were adopted at the July 1, 2020 actuarial valuation:

Old Plans - Police and Fire, Charters 8.559 and 8.585	3.6% per year
Old Plans - Police and Fire, Charters 8.595 and 8.596	2.5% per year
Old Plans - Police and Fire, pre-7/1/75 retirement	1.9% per year
Old Plans - Miscellaneous	2.00% per year
New Plans - Police, Fire and Miscellaneous	2.00% per year

Supplemental Cost-of-Living Increases

Future supplemental COLAs are assumed to be 0% in the actuarial funding valuation. An assumption for future supplemental COLAs is included in the financial reporting valuation; see Note 10 to the financial statements.

Salary Increase Rate

- Wage inflation component: Bargained increases through July 1, 2022 for Safety members and through January 6, 2024 for Miscellaneous members, followed by 3.25% compounded annually thereafter (adopted July 1, 2020)
- The additional merit component at selected years of service:

Years of Service	Police	Fire	Muni Drivers	Craft	Other Misc.
0	7.50%	14.00%	16.00%	3.75%	5.50%
5	3.75	4.00	1.25	1.20	2.25
10	1.50	1.50	0.30	0.50	1.10
15	0.50	0.50	0.00	0.50	0.55

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

Safety	3.0% per year
Muni Drivers	4.5% per year
Craft Workers	3.0% per year
Other Miscellaneous	2.0% per year

401(a) Maximum Compensation Limit

The compensation limit is assumed to increase with price inflation. In the valuation, compensation limits are only applied to members of the New Plan Tier III plans for whom compensation is limited to a percentage of the 401(a)(17) compensation limit.

415(b) Maximum Benefit Limit

The 415(b) limits have been applied to active members' current and future benefits. The 415(b) limit is assumed to increase with price inflation. The 415(b) limit has also been applied to the retiree members who were in excess of the 415(b) limit in the prior year. The projected increase in the 415(b) limit for retirees is the same increase as their Basic COLA which depends on their Charter.

Future Interest Crediting Rate on Member Contributions

4.50% compounded annually.

Administrative Expense Assumption

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

Member Refunds

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

	Rates of Refund for Vested Terminated Members	
Service	Police & Fire	Misc.
5	24.0%	20.0%
7	16.0	12.0
10	4.0	8.5
15	0.0	6.0

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 below. Spouses of male members are assumed to be three years younger than the member and spouses of female members are assumed to be two years older than the member.

	Percentage Married
Safety Males	80%
Safety Females	60
Miscellaneous Males	75
Miscellaneous Females	55

Rates of Termination of Employment

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

Service	Age Under 30	Age 30 to 39	Age 40 & over
0	38.00%	24.00%	20.00%
5	6.75	6.00	4.40
10	3.75	3.75	3.75
15	2.25	2.25	2.25
20+	1.00	1.00	1.00

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

Service	Police	Fire	Muni Drivers	Craft
0	8.00%	2.50%	12.00%	9.50%
5	1.00	1.00	3.00	3.25
10	0.75	0.50	2.50	1.75
15	0.50	0.25	2.50	1.75
20+	0.50	0.25	2.50	1.75

Termination rates are zero when members are eligible to retire. 20% of Miscellaneous and 40% of Safety 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	Other Misc. Females	Other Misc. Males
30	0.05%	0.04%	0.01%	0.01%	0.01%	0.01%
40	0.35	0.24	0.11	0.11	0.07	0.08
50	0.90	0.84	0.45	0.40	0.40	0.28
60	5.75	7.30	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 in the following two tables:

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	0.00%	4.00%	5.00%
60	10.00%	10.00%	20.00%
65	27.50%	30.00%	35.00%
Craft			
55	0.00%	2.50%	5.00%
60	7.50%	12.00%	32.50%
65	25.00%	27.50%	30.00%
Other Misc.			
55	0.00%	4.00%	5.50%
60	9.00%	11.50%	30.00%
65	20.00%	30.00%	30.00%
Police			
55	7.50%	35.00%	50.00%
60	20.00%	34.00%	45.00%
65	100.00%	100.00%	100.00%
Fire			
55	7.50%	25.00%	35.00%
60	15.00%	25.00%	35.00%
65	100.00%	100.00%	100.00%

Tier III Plans (includes Sheriffs Plan and Miscellaneous Safety Plan)

	Years of Service		
Age	19 or less (24 or less for Safety)	20-29 (25-29 for Safety)	30 or more
Muni Drivers			
55	0.00%	1.00%	5.00%
60	5.00%	10.00%	15.00%
65	27.50%	30.00%	40.00%
Craft			
55	0.00%	1.50%	2.50%
60	5.00%	7.50%	15.00%
65	25.00%	30.00%	40.00%
Other Misc.			
55	0.00%	4.00%	4.00%
60	7.50%	10.00%	12.50%
65	25.00%	40.00%	40.00%
Police			
55	7.50%	20.00%	35.00%
60	20.00%	34.00%	45.00%
65	100.00%	100.00%	100.00%
Fire			
55	7.50%	15.00%	25.00%
60	15.00%	25.00%	35.00%
65	100.00%	100.00%	100.00%

The assumed retirement age for inactive terminated vested members and actives who are expected to terminate is shown below:

	Tier I and II Plans	Tier III Plans
Safety	51	55
	Non-Reciprocal	**Reciprocal**
Miscellaneous	55	60

Rates of Mortality for Healthy Lives

Mortality rates used in the valuation are developed from a base table that is projected generationally from the base year of that table using the mortality projection scale described below. Base mortality tables are developed by multiplying a published table by an adjustment factor that was developed in the experience study for the period ending June 30, 2019. The base mortality tables for healthy lives are as follows:

	Published Table	Adjustment Factor Male	Adjustment Factor Female
Non-Annuitants			
Miscellaneous	PubG-2010 Employee	0.834	0.866
Safety	PubS-2010 Employee	1.011	0.979
Retirees			
Miscellaneous	PubG-2010 Retiree	1.031	0.977
Safety	PubS-2010 Retiree	0.947	1.044
Beneficiaries			
Miscellaneous	PubG-2010 Retiree	1.031	0.977
Safety	PubS-2010 Retiree	1.031	0.977

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

For disabled annuitant mortality, separate base tables are developed for males and females and for Miscellaneous and Safety members by multiplying a published table by an adjustment factor that was developed in the experience study for the period ending June 30, 2019. The base mortality tables for disabled lives are as follows:

Disabled Annuitants	Published Table	Adjustment Factor Male	Adjustment Factor Female
Disabled Annuitants			
Miscellaneous	PubG-2010 Disabled	1.045	1.003
Safety	PubS-2010 Disabled	0.916	0.995

Mortality Projection Scale

The mortality rates shown in the base tables above are projected generationally from the base year using the MP-2019 projection scale.

Recent Changes

There have been no changes in actuarial assumptions and methods since the July 1, 2021 valuation.

The voter-approved November 2022 Charter Amendment adjusting the retirement allowances for SFERS members who retired before November 6, 1996 was first reflected in the July 1, 2022 actuarial valuation.

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

Contribution Information

The funding policy of the Retirement System is described in this Actuarial Section and also in Note 9 of the financial statements. 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.

Total Pension Liability for GASB 67 Financial Reporting

The Actuarial Accrued Liability (AAL) of this Actuarial Section is calculated using the same actuarial cost method as the Total Pension Liability (TPL) found in Note 10 of the financial statements. However, the AAL differs from the Total Pension Liability in three ways:

- The AAL developed for the funding valuation does not include an assumption of future supplemental COLAs. The AAL does include all liabilities for supplemental COLAs that have already occurred as of the valuation date. Total Pension Liability incorporates the probability that future supplemental COLAs may occur in years after the valuation date.
- The census date of the AAL is the same as the valuation date of July 1. The census date for the June 30 fiscal year-end Total Pension Liability is as of previous July 1 valuation date. The Total Pension Liability is a roll-forward liability using standard roll-forward procedures, adjusted for significant changes during the fiscal year.
- The AAL is valued at a discount rate equal to the assumed investment return, while the Total Pension Liability is valued at a discount rate that could be equal to or lower than the assumed investment return.

Note 10 contains further information about the assumed probabilities of future supplemental COLAs, the roll-forward of liabilities, and the assumed discount rate for GASB 67 financial reporting. Other than these differences, the actuarial assumptions used for funding purposes are the same assumptions used for financial reporting purposes.

ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE

The analysis of financial experience is a gain/loss analysis of changes in the unfunded actuarial accrued liability (UAAL) that considers variances between actual experience and assumed experience. The net expected changes in the UAAL from one year to the next include the sum of the additional benefits accrued during the year (the normal cost) and the interest accrual on the UAAL reduced by the payment of employer contributions.

The analysis also shows the impact on the UAAL due to changes in benefits due to supplemental COLAs and voter-approved propositions and also due to changes in assumptions such as mortality, investment return, or salary merit scale. Changes in the UAAL due to asset returns include the impacts of the five-year smoothing of investment returns inherent in the actuarial asset valuation method.

Dollar amounts in thousands

As of July 1	2022	2021	2020	2019	2018
Prior Valuation Unfunded Actuarial Accrued Liability	$ 1,862.1	$ 2,804.1	$ 3,551.0	$ 3,469.4	$ 3,520.8
Expected change from Prior Valuation	(249.9)	(314.4)	(311.2)	(232.4)	(157.7)
Expected Unfunded Actuarial Liability as of Valuation Date	1,612.2	2,489.7	3,239.8	3,237.0	3,363.1
Changes in Benefits due to Propositions and/or Supplemental COLAs	48.0	264.1	0.0	141.0	200.8
Changes in Assumptions	0.0	701.6	(591.4)	0.0	297.7
Salary Increases Greater/(Less) than Expected	240.6	169.8	114.5	46.0	(53.7)
Asset Return Less/(Greater) than Expected	(628.0)	(1,750.1)	6.4	(58.6)	(408.9)
All Other Experience	43.3	(13.0)	34.8	185.6	70.4
Unfunded Actuarial Accrued Liability as of Valuation Date	**$ 1,316.1**	**$ 1,862.1**	**$ 2,804.1**	**$ 3,551.0**	**$ 3,469.4**

SCHEDULE OF FUNDING PROGRESS

The schedule below presents valuation results for the last 10 years based upon actuarial methods and assumptions used for funding purposes.

Dollar amounts 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[1]	UAAL as a % of Covered Payroll
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	3,117,553	85.6%	2,820,968	110.5%
7/01/2016	20,654,703	24,403,882	3,749,179	84.6%	3,062,422	122.4%
7/01/2017	22,185,244	25,706,090	3,520,846	86.3%	3,242,468	108.6%
7/01/2018	23,866,028	27,335,417	3,469,389	87.3%	3,385,517	102.5%
7/01/2019	25,247,549	28,798,581	3,551,032	87.7%	3,549,936	100.0%
7/01/2020	26,695,844	29,499,918	2,804,074	90.5%	3,703,103	75.7%
7/01/2021	30,043,222	31,905,275	1,862,053	94.2%	3,828,797	48.6%
7/01/2022	32,275,474	33,591,565	1,316,091	96.1%	3,984,150	33.3%

1 Covered payroll based upon actuarial projection of annualized pay for the year beginning on the valuation date.

SCHEDULE OF FUNDED LIABILITIES BY TYPE

This schedule compares aggregate actuarial liabilities by various categories with the plan's present assets. Category (A), active member contributions, includes both employee contributions and earned interest. Category (B) includes all liabilities for members no longer working, both retirees and beneficiaries who are receiving payments and also other inactives entitled to future payments. Category (C) includes the actuarial accrued liability for active members in excess of the active member contributions.

The table below shows a 100% funded status over the last ten years for employee contributions with interest (Category A) and for members who have terminated service with rights to future payments (Category B). The liabilities for service already rendered by active members (Category C) has not been fully funded since the July 1, 2008 actuarial valuation. The low funding percentages for Category C in 2013 and following reflects both the 2008-2009 financial crisis (phased-in over five years in the actuarial value of assets) and the lowering of the discount rate over the last fifteen years. The assumption just before the 2008-2009 financial crisis was 7.75%. At July 1, 2013 the discount rate had been lowered to 7.58% and it has been lowered several times since to the current assumption of 7.20% at the July 1, 2021 valuation date.

Category C funding percentages also reflect changes in benefits and revisions in actuarial assumptions other than discount rate. Significant changes include the adoption of generational projection of mortality improvements at July 1, 2015 and retroactive supplemental COLAs recognized at July 1, 2016. The jump in funding percentage at July 1, 2021 reflects the large increase in actuarial value of assets stemming from the first year of the five-year phase-in of the 34% return on investments at year-end 2021. Similarly, the funding percentage increased at July 1, 2022 due to the continued impact of the 2021 investment return phase-in.

Dollar amounts in millions

	Actuarial Accrued Liability (AAL)				Percentage of AAL Covered by Assets		
Valuation Date	Active Member Contributions (A)	Retirees, Beneficiaries, and Inactives (B)	Employer Financed Portion of Active Members (C)	Actuarial Value of Assets	(A)	(B)	(C)
7/1/2013	2,633	12,257	5,335	16,303	100%	100%	26%
7/1/2014	2,825	12,901	5,397	18,012	100%	100%	42%
7/1/2015	2,995	13,931	6,045	19,653	100%	100%	45%
7/1/2016	3,175	14,941	6,288	20,655	100%	100%	40%
7/1/2017	3,325	15,847	6,535	22,185	100%	100%	46%
7/1/2018	3,496	17,024	6,816	23,866	100%	100%	49%
7/1/2019	3,675	18,074	7,050	25,248	100%	100%	50%
7/1/2020	3,916	18,621	6,963	26,696	100%	100%	60%
7/1/2021	4,104	20,228	7,573	30,043	100%	100%	75%
7/1/2022	4,232	21,512	7,847	32,275	100%	100%	83%

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Plan Type	Count[1]	Annual Covered Pay[1]	Average Annual Covered Pay	% Increase in Average Covered Pay
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)%
7/1/2016	General	28,623	2,439,969,498	85,245	2.8%
	Safety	3,783	462,752,871	122,324	(0.1)%
7/1/2017	General	29,545	2,621,632,438	88,734	4.1%
	Safety	3,902	481,039,920	123,280	0.8%
7/1/2018	General	29,910	2,733,626,773	91,395	3.0%
	Safety	4,036	502,353,057	124,468	1.0%
7/1/2019	General	30,056	2,843,589,575	94,610	3.5%
	Safety	4,146	535,124,687	129,070	3.7%
7/1/2020	General	30,327	3,015,795,127	99,443	5.1%
	Safety	4,194	567,471,231	135,305	4.8%
7/1/2021	General	29,570	3,025,807,035	102,327	2.9%
	Safety	4,074	560,725,153	137,635	1.7%
7/1/2022	General	29,266	3,155,403,164	107,818	5.4%
	Safety	3,933	553,494,056	140,731	2.2%

1 Annual Covered Pay represents the sum of the annualized valuation salary for the prior fiscal year for each active member as of the July 1 valuation date.

SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM RETIREMENT PAYROLL

	Added to Rolls		Removed from Rolls		Rolls at End of Year			
Fiscal Year	Member Count[1]	Annual Allowance	Member Count	Annual Allowance	Member Count[1]	Annual Allowance	% Increase in Annual Allowance	Average Annual Allowance
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
2015-16	1,657	72,049,646	856	30,384,191	28,286	1,247,230,245	4.7%	44,094
2016-17	1,769	80,214,008	928	35,082,179	29,127	1,332,430,263	6.8%	45,746
2017-18	1,797	84,574,963	959	36,284,323	29,965	1,424,324,641	6.9%	47,533
2018-19	1,770	83,661,179	957	36,959,870	30,778	1,513,436,081	6.3%	49,173
2019-20	1,470	74,777,425	816	34,764,875	30,128	1,587,981,080	4.9%	52,708
2020-21	1,722	97,495,262	996	43,909,238	30,854	1,691,633,291	6.5%	54,827
2021-22	1,872	103,981,941	1,007	45,948,001	31,719	1,795,472,441	6.1%	56,606

1 Member Count as of FYE 2020 reflects combining records for members who have both a Safety and Miscellaneous benefit.

Statistical Section

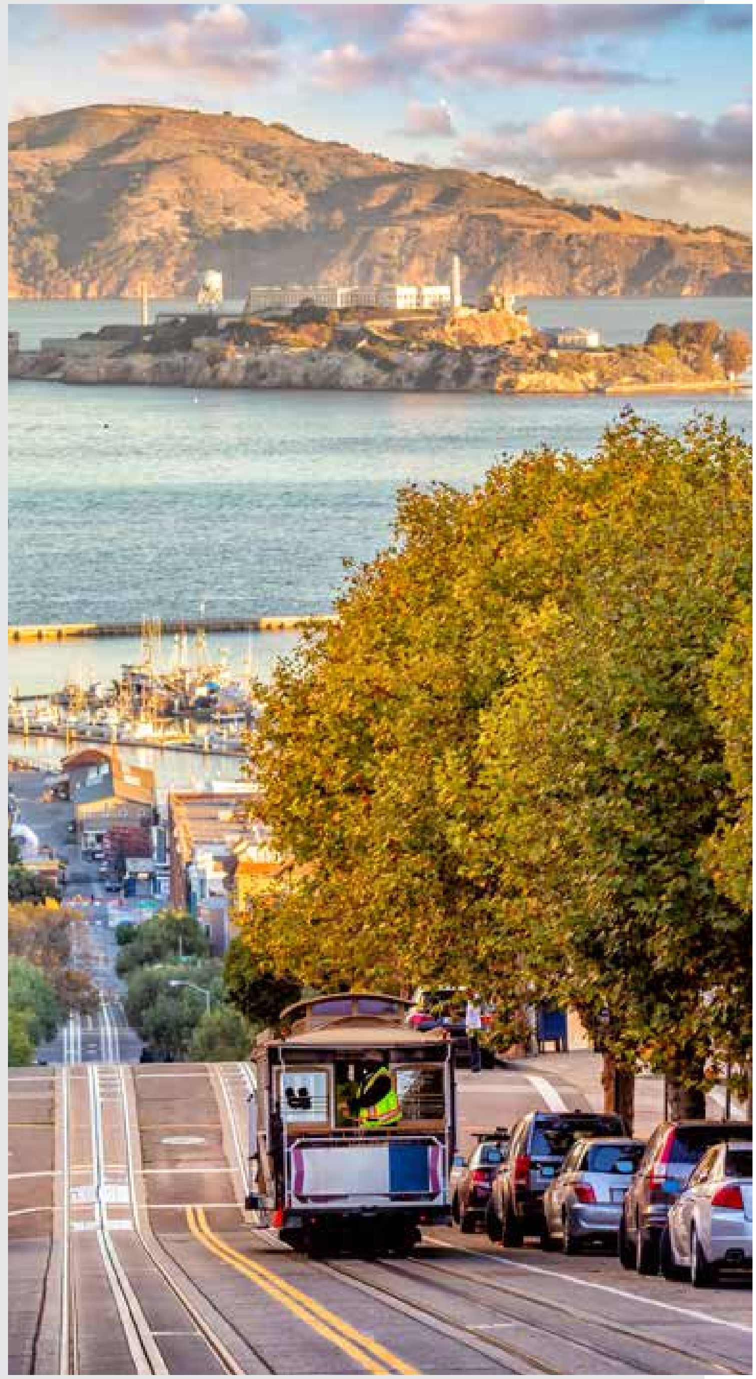
The Statistical Section provides financial and operational information in further detail to assist users in understanding trends in the Basic Financial Statements, Notes to Basic Financial Statements, and Required Supplemental Information.

Financial Information

- ***Additions to Pension Plan by Source*** reflects the various sources of income to SFERS
- ***Deductions to Pension Plan by Type*** displays the major expenses to SFERS which are benefits paid to members, refunds of employee contributions to members, and administrative expenses
- ***Changes in Fiduciary Net Position*** shows the changes in net position during each of the last 10 fiscal years
- ***Benefit Expenses 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

Operational Information

- ***Average Pension Benefit Payments*** highlights benefit levels paid to newly retired and disabled members with differing amounts of credited service
- ***Active Members by Employer*** compares the current active member counts for each SFERS cost-sharing employer to counts from 10 years ago
- ***Employer Contribution Rates*** details the components that comprise the last ten years of employer contribution rates
- ***Employer and Employee Contribution Rates for Fiscal Year 2022-23*** shows the contribution rates for various member classes after application of the cost-sharing provisions of 2011 Proposition C



ADDITIONS TO PENSION PLAN BY SOURCE

Dollar amounts in thousands

Fiscal Year Ending June 30	Member Contributions	Employer Contributions	Gross Return on Investments	Investment Expenses	Total
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
2017	316,844	551,809	2,730,863	(47,395)	3,552,121
2018	364,696	619,067	2,599,555	(49,881)	3,533,437
2019	380,980	645,056	2,018,752	(48,440)	2,996,348
2020	400,649	742,985	1,012,953	(46,671)	2,109,916
2021	409,398	836,559	9,510,000	(62,331)	10,693,626
2022	423,471	768,463	(2,227,514)	(80,806)	(1,116,386)
2023	413,916	672,651	1,724,485	(53,819)	2,757,233

DEDUCTIONS TO PENSION PLAN BY TYPE

Dollar amounts in thousands

Fiscal Year Ending June 30	Benefits Paid	Refunds of Contributions	Administrative Expenses	Total
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
2017	1,264,633	13,507	18,134	1,296,274
2018	1,350,009	14,578	18,238	1,382,825
2019	1,438,935	17,747	18,983	1,475,665
2020	1,531,041	17,036	20,270	1,568,347
2021	1,599,507	20,254	20,249	1,640,010
2022	1,710,092	27,658	21,174	1,758,924
2023	1,820,269	24,096	22,964	1,867,329

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

CHANGES IN FIDUCIARY NET POSITION

Dollar amounts in thousands

Fiscal Year Ending June 30	Additions	Deductions	Net Change	Fiduciary Net Position Beginning of Year	Fiduciary Net Position End of Year
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
2017	3,552,121	1,296,274	2,255,847	21,154,503	22,410,350
2018	3,533,437	1,382,825	2,150,612	22,407,354	24,557,966
2019	2,996,348	1,475,665	1,520,683	24,557,966	26,078,649
2020	2,109,916	1,568,347	541,569	26,078,649	26,620,218
2021	10,693,626	1,640,010	9,053,616	26,620,218	35,673,834
2022	(1,116,386)	1,758,924	(2,875,310)	35,673,834	32,798,524
2023	2,757,233	1,867,329	889,904	32,798,524	33,688,428

Note that 2018 fiscal year fiduciary net position at beginning of year was restated due to adoption of GASB No. 75.

BENEFIT PAYMENTS OF PENSION PLAN BY TYPE

Dollar amounts in thousands

Fiscal Year	Retirement Benefits	Disability Benefits	Death Benefits	COLA Benefit Adjustments	DROP Accrued Retirement	Total
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
2017	994,408	184,376	11,163	74,980	(294)	1,264,633
2018	1,063,184	187,365	10,224	89,236	0	1,350,009
2019	1,131,334	193,016	8,908	105,945	(268)	1,438,935
2020	1,209,024	199,655	8,667	113,695	0	1,531,041
2021	1,272,492	204,831	11,538	110,646	0	1,599,507
2022	1,356,728	211,292	10,705	131,367	0	1,710,092
2023	1,457,325	224,984	10,089	127,871	0	1,820,269

Fiscal year 2016 COLA benefits include retroactive supplemental COLA benefits for 2013 and 2014 paid after the October 2015 Superior Court judgment. Benefit payments and refunds of contributions 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

Retirement Effective Dates	Years of Credited Service					
	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
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
7/1/16 to 6/30/17						
Average Mo. Benefit	$ 1,113	$ 2,057	$ 3,184	$ 4,657	$ 6,138	$ 7,275
Average Final Comp.	$ 8,182	$ 7,989	$ 8,106	$ 9,205	$ 9,455	$ 9,651
Number	129	197	211	167	199	263
7/1/17 to 6/30/18						
Average Mo. Benefit	$ 1,150	$ 2,139	$ 3,293	$ 4,294	$ 6,762	$ 7,249
Average Final Comp.	$ 7,949	$ 8,229	$ 8,369	$ 8,647	$ 10,158	$ 9,590
Number	98	210	289	251	244	429
7/1/18 to 6/30/19						
Average Mo. Benefit	$ 1,212	$ 2,204	$ 3,372	$ 4,474	$ 6,827	$ 7,114
Average Final Comp.	$ 7,656	$ 8,688	$ 8,579	$ 9,243	$ 10,307	$ 9,978
Number	135	188	224	241	227	304

AVERAGE PENSION BENEFIT PAYMENT FOR RETIRED AND DISABLED MEMBERS (CONTINUE)

	Years of Credited Service					
Retirement Effective Dates	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
7/1/19 to 6/30/20						
Miscellaneous Members						
Average Mo. Benefit	$ 1,121	$ 2,424	$ 3,143	$ 4,174	$ 5,286	$ 6,880
Average Final Comp.	$ 8,500	$ 9,585	$ 8,553	$ 9,136	$ 9,362	$ 9,743
Number	102	132	147	178	111	183
Safety Members						
Average Mo. Benefit	$ 4,065	$ 4,133	$ 7,228	$ 7,740	$ 11,979	$ 12,950
Average Final Comp.	$ 10,871	$ 11,814	$ 13,224	$ 13,171	$ 15,164	$ 15,210
Number	5	3	14	18	34	28
7/1/20 to 6/30/21						
Miscellaneous Members						
Average Mo. Benefit	$ 1,153	$ 2,226	$ 3,594	$ 4,597	$ 5,837	$ 7,182
Average Final Comp.	$ 5,687	$ 7,040	$ 8,975	$ 10,201	$ 9,668	$ 9,927
Number	100	156	158	219	144	245
Safety Members						
Average Mo. Benefit	$ 1,605	$ 4,198	$ 6,648	$ 8,193	$ 11,043	$ 13,811
Average Final Comp.	$ 10,752	$ 11,432	$ 13,086	$ 12,871	$ 14,087	$ 15,672
Number	3	8	7	33	67	39
7/1/21 to 6/30/22						
Miscellaneous Members						
Average Mo. Benefit	$ 1,198	$ 2,613	$ 3,751	$ 4,489	$ 6,102	$ 7,706
Average Final Comp.	$ 9,047	$ 9,998	$ 10,157	$ 9,414	$ 10,920	$ 10,501
Number	107	192	174	311	161	243
Safety Members						
Average Mo. Benefit	$ 2,415	$ 4,370	$ 5,979	$ 8,254	$ 11,572	$ 14,481
Average Final Comp.	$ 11,577	$ 12,020	$ 12,632	$ 13,385	$ 14,749	$ 16,504
Number	13	12	9	55	89	54
7/1/22 to 6/30/23						
Miscellaneous Members						
Average Mo. Benefit	$ 1,218	$ 2,563	$ 3,545	$ 4,625	$ 6,075	$ 7,884
Average Final Comp.	$ 8,896	$ 9,890	$ 10,092	$ 9,666	$ 10,326	$ 10,844
Number	94	154	133	241	112	207
Safety Members						
Average Mo. Benefit	$ 2,232	$ 4,563	$ 5,563	$ 9,412	$ 11,822	$ 14,157
Average Final Comp.	$ 11,000	$ 12,464	$ 12,803	$ 18,945	$ 15,567	$ 16,268
Number	14	10	9	34	46	31

ACTIVE MEMBERS BY EMPLOYER

Employer	July 1, 2023	Percentage of System	July 1, 2013	Percentage of System
City and County of San Francisco[1]	31,884	93.7%	26,461	92.1%
San Francisco Unified School District	1,246	3.7%	1,205	4.2%
San Francisco Community College District	499	1.5%	628	2.2%
San Francisco Trial Courts	388	1.1%	423	1.5%
Total	**34,017**	**100.0%**	**28,717**	**100.0%**

1 Excludes active DROP

EMPLOYER CONTRIBUTION RATES

Before Adjustment for Cost-Sharing Provisions[1]

Fiscal Year	Normal Cost	Remaining Cost of Propositions	Other UAL	Employee Contributions	Administrative Expenses	Total
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%
2017	18.65%	5.69%	4.02%	(7.56%)	0.60%	21.40%
2018	18.56%	5.12%	6.75%	(7.57%)	0.60%	23.46%
2019	17.25%	5.07%	7.97%	(7.58%)	0.60%	23.31%
2020	17.71%	4.80%	9.67%	(7.59%)	0.60%	25.19%
2021	17.72%	4.74%	11.45%	(7.61%)	0.60%	26.90%
2022	17.29%	3.56%	10.58%	(7.62%)	0.60%	24.41%
2023	18.31%	3.54%	6.52%	(7.62%)	0.60%	21.35%

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

FISCAL YEAR 2022-2023 EMPLOYER AND EMPLOYEE CONTRIBUTION RATES

Employer and employee contribution rates are shown below after adjustment for the Proposition C cost-sharing provisions. Proposition C was passed by voters in the November 2011 election and established cost-sharing provisions between employee-members and employers. When the unadjusted employer contribution rates are higher than 12.00%, a portion of the employer contribution (up to 6.00%) is transferred to the member contribution rate. When unadjusted employer contribution rates are lower than 11.01%, a portion of the member contribution rate (up to 6.00%) would be transferred to the employer. Contribution rates are adjusted once a year based on the unadjusted employer contribution rate adopted by the Retirement Board and the member's hourly base rate of pay as of the June 30 prior to the effective date of the contribution rate.

FISCAL YEAR 2022-2023 EMPLOYER CONTRIBUTION RATES

After Cost-Sharing Provisions

Member Group	Base Rate of Pay Less than $32 per hour	Base Rate of Pay At or above $32 but less than $65 per hour	Base Rate of Pay At or above $65 per hour
Miscellaneous Non-Safety Plans	21.35%	18.85%	18.35%
Police and Firefighter Old Plans	17.85%	17.85%	17.85%
Police and Firefighter New Plans Tier I	17.85%	17.85%	17.85%
Police and Firefighter New Plans Tiers II and III	18.85%	18.85%	18.35%
Miscellaneous Safety and Sheriffs Plans	18.85%	18.85%	18.35%

FISCAL YEAR 2022-2023 EMPLOYEE CONTRIBUTION RATES

After Cost-Sharing Provisions

Member Group	Base Rate of Pay Less than $32 per hour	Base Rate of Pay At or above $32 but less than $65 per hour	Base Rate of Pay At or above $65 per hour
Miscellaneous Old Plans	8.0%	10.5%	11.0%
Miscellaneous New Plans	7.5%	10.0%	10.5%
Police and Firefighter Old Plans	10.5%	10.5%	10.5%
Police and Firefighter New Plans Tier I	11.0%	11.0%	11.0%
Police and Firefighter New Plans Tiers II and III	11.5%	11.5%	12.0%
Miscellaneous Safety and Sheriffs Plans	11.5%	11.5%	12.0%

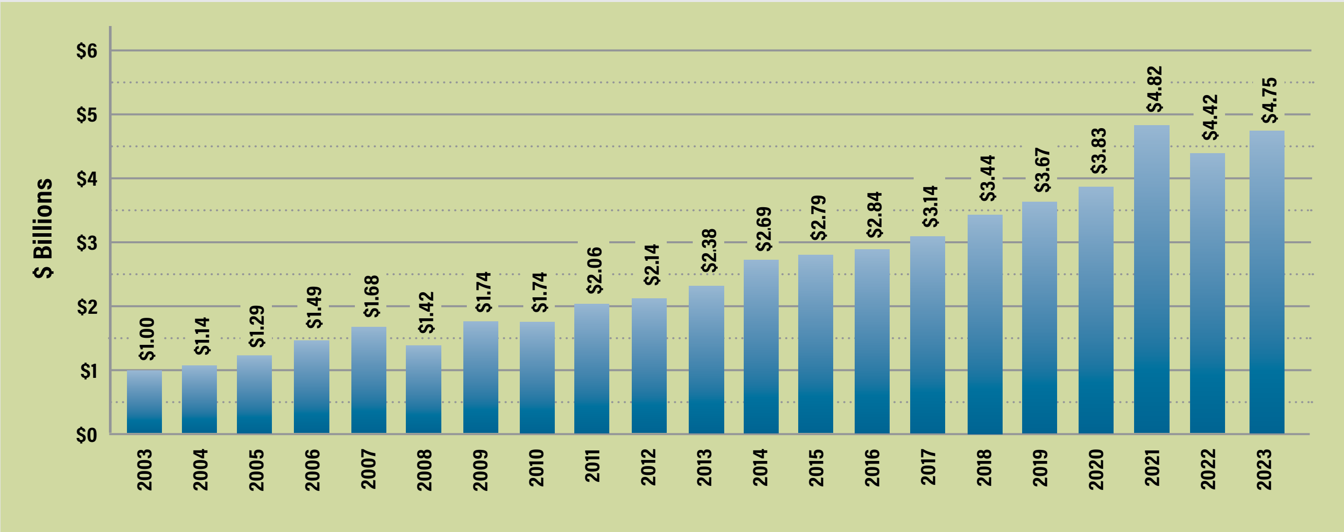
Deferred Compensation Plan (SFDCP)

The San Francisco 457(b) Deferred Compensation Plan (SFDCP) was adopted in 1976 to offer active members an opportunity to acquire additional retirement savings intended to complement pension benefits. The SFDCP allows City employees to voluntarily defer a portion of their regular earnings until after they retire or separate from service. This method of tax deferral has become increasingly popular, and the Plan also offers Roth after-tax contributions. During the past fiscal year, plan assets for the SFDCP increased by approximately 12%, and the average account balance per participant was $141,440.

The Plan provides a diverse selection of thirteen core investment funds, a suite of Target Date Funds, risk-based model portfolios, a discretionary managed account service, and access to a self-directed brokerage platform. In addition to this enhanced lineup of investment options, the SFDCP offers participants exceptionally low fees, a customized website, financial education, online transactions, and dedicated retirement counselors available in person at the SFDCP office, around the City, or virtually. Voya Financial currently serves as the recordkeeper for the SFDCP.

As of June 30, 2023, there were 33,889 participants in the SFDCP with Plan assets valued at $4.75 Billion in assets under management. 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 customer service and participation activity for the Fiscal Year 2022-23.

SFDCP Assets under Management



SFDCP Values as of June 30, 2023

Funds	Total Assets *	Percent Of Total Assets	Annual Performance
SFDCP Stable Value Fund	$ 997,259,641	21.01%	2.44%
SFDCP Core Bond Fund	$ 147,761,537	3.11%	0.48%
SFDCP Bond Index Fund	$ 225,088,699	4.74%	-0.90%
SFDCP Retirement Fund	$ 33,279,531	0.70%	5.26%
SFDCP Target Date 2015 Fund	$ 54,550,227	1.15%	4.16%
SFDCP Target Date 2020 Fund	$ 86,883,772	1.83%	4.20%
SFDCP Target Date 2025 Fund	$ 127,723,118	2.69%	5.55%
SFDCP Target Date 2030 Fund	$ 153,842,233	3.24%	6.58%
SFDCP Target Date 2035 Fund	$ 153,397,643	3.23%	8.28%
SFDCP Target Date 2040 Fund	$ 108,159,353	2.28%	10.69%
SFDCP Target Date 2045 Fund	$ 93,921,138	1.98%	12.03%
SFDCP Target Date 2050 Fund	$ 61,878,806	1.30%	12.02%
SFDCP Target Date 2055 Fund	$ 26,032,788	0.55%	12.03%
SFDCP Target Date 2060 Fund	$ 5,204,583	0.11%	12.03%
SFDCP Target Date 2065 Fund	$ 257,955	0.01%	12.03%
SFDCP Large Cap Value Equity Fund	$ 85,483,464	1.80%	4.53%
SFDCP Large Cap Equity - S&P 500 Index Fund	$ 763,686,407	16.09%	19.57%
SFDCP Large Cap Social Equity Fund	$ 133,080,739	2.80%	20.32%
SFDCP Large Cap Growth Equity Fund	$ 619,968,071	13.06%	33.11%
SFDCP Active Equity Fund	$ 126,508,659	2.67%	4.14%
SFDCP Small-Mid Cap Equity Index Fund	$ 276,362,064	5.82%	12.51%
SFDCP Small-Mid Cap Equity Fund	$ 13,801,887	0.29%	8.47%
SFDCP International Equity Fund	$ 175,843,141	3.71%	10.01%
SFDCP International Equity Index Fund	$ 198,375,647	4.18%	11.55%
SFDCP Real Estate Fund	$ 28,376,789	0.60%	5.09%
Self Directed Brokerage	$ 48,797,770	1.03%	N/A
TOTAL Plan Assets	**$ 4,745,525,662**	**100.00%**	

* Assets are rounded up to the nearest dollar

SFDCP Statistics Summary

Plan Year Ended June 30, 2023

Asset Summary	
Beginning Assets July 1, 2022[1]	$ 4,262,379,542
Contributions	$ 228,045,951
Roll-ins	$ 12,418,455
Less Distributions	$ 191,935,788
Outstanding Loans	$ 47,539,068
Ending Assets June 30, 2023[1]	**$ 4,794,306,331**
Participant Summary	
Beginning Participants July 1, 2022	33,064
New Participants during the Fiscal Year	1,741
Actively Contributing Participants	20,303
Ending Participants June 30, 2023	33,889
Service Summary	
Group Meetings	473
Field and Office Individual Counseling Sessions	6,504
Customer Service Calls (IVR and Representatives)	22,783
Web Logins	457,807

1 Includes miscellaneous transactions, loan repayments and net appreciation (earnings).