SAN FRANCISCO CITY AND COUNTY EMPLOYEES' RETIREMENT SYSTEM

Basic Financial Statements and
Required Supplementary Information
(With Independent Auditor's Report Thereon)

Years Ended June 30, 2024 and 2023

MGO. | Certified Public Accountants

SAN FRANCISCO CITY AND COUNTY
EMPLOYEES' RETIREMENT SYSTEM
Years Ended June 30, 2024 and 2023

Table of Contents

	Page
Independent Auditor's Report	1
Management's Discussion and Analysis (Required Supplementary Information - Unaudited)	4
Basic Financial Statements:	
Statements of Fiduciary Net Position	13
Statements of Changes in Fiduciary Net Position	14
Notes to Financial Statements	15
Required Supplementary Information (Unaudited):	
Schedule of Changes in Collective Net Pension Liability/(Asset) and Related Ratios	76
Schedule of Employer Contributions	78
Schedule of Money-Weighted Rate of Return	78
Notes to Required Supplementary Information	79

Certified Public Accountants

Independent Auditor's Report

Retirement Board of
San Francisco City and County Employees' Retirement System
San Francisco, California

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the San Francisco City and County Employees' Retirement System (Retirement System), a pension trust fund of the City and County of San Francisco, California, as of and for the years ended June 30, 2024, and 2023, and the related notes to the financial statements, which collectively comprise the Retirement System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement System as of June 30, 2024, and 2023, and the changes in its fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Retirement System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Emphasis of Matter

As described in Note 1, the financial statements present only the Retirement System and do not purport to, and do not, present fairly the financial position of the City and County of San Francisco as of June 30, 2024 and 2023, 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. Our opinion is not modified with respect to this matter.

Macias Gini & O'Connell LLP
2121 N. California Boulevard, Suite 750
Walnut Creek, CA 94596

www.mgocpa.com

Responsibilities of Management for the Financial Statements

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

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Retirement System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Retirement System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Retirement System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control–related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of changes in collective net pension liability/(asset) and related ratios, the schedule of employer contributions, and the schedule of money-weighted rate of return, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 20, 2024, on our consideration of the Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Retirement System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Retirement System's internal control over financial reporting and compliance.

Macias Gini & O'Connell LLP

Walnut Creek, California
November 20, 2024

The management of the City and County of San Francisco Employees' Retirement System (Retirement System) is pleased to provide this overview and analysis of the financial activities of its cost-sharing multiple-employer defined benefit pension plan (Plan) for the years ended June 30, 2024, and 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

Fiscal Year 2024

- The assets and deferred outflows of resources of the Retirement System exceeded its liabilities and deferred inflows of resources at the close of the year ended June 30, 2024. The Plan held $35.42 billion 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, 2024, measurement date, the fiduciary net position was 89.9% of the total pension liability.

- For the year ended June 30, 2024, the Retirement System's net investment income of $2.59 billion represented a 7.7% increase to fiduciary net position as of the beginning of the year.

- Total fiduciary net position held in trust for pension benefits increased by $1,729.2 million, or 5.1%, 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 $427.5 million, an increase of $13.6 million or 3.3% from the prior year, primarily as a result of an increase in pensionable compensation offset by the decrease in employee contribution rates. Employee contribution rates ranged from 7.5% - 11.5% in fiscal year 2023-24 and 7.5% - 12.0% in fiscal year 2022-23.

- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled $672.6 million, a decrease of $33 thousand or 0.0% from the prior year. Although employer contribution rates decreased, this was almost completely offset by a higher pensionable payroll. Employer contribution rates ranged from 15.24% to 18.24% in fiscal year 2023-24 and 17.85% to 21.35% in fiscal year 2022-23.

- Total deductions from the Plan were $1.96 billion, an increase of 4.9% from the prior year, due primarily to an increase in benefits paid during the current fiscal year. The increase in benefits paid is attributable to an increase in the number of payees, higher average retirement benefits, and an increase in the cost of living adjustments (COLA).

Fiscal Year 2023

- The assets and deferred outflows of resources of the Retirement System exceeded its liabilities and deferred inflows of resources at the close of the year ended June 30, 2023. The Plan held $33.69 billion 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 $1.67 billion represents a 5.1% increase in fiduciary net position as of the beginning of the fiscal year.

- Total fiduciary net position held in trust for pension benefits increased by $889.9 million, 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 $413.9 million, a decrease of $9.6 million 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 $672.7 million, a decrease of $95.8 million 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 $1.87 billion, 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 basic 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, 2024, and 2023. 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, 2024, and 2023.

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, 2024, and 2023.

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, 2024 and 2023. 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, 2024, 2023, and 2022 are represented in the table below:

Fiduciary Net Position Summary – June 30, 2024, 2023, and 2022
Dollars in thousands

	2024	**2023**	**2022**
Other assets	$210,027	$180,313	$199,264
Investments at fair value	36,257,024	34,194,580	33,362,050
Total assets	36,467,051	34,374,893	33,561,314
Deferred outflows of resources	2,379	2,366	2,092
Total assets and deferred outflows of resources	36,469,430	34,377,259	33,563,406
Total liabilities	1,049,842	686,953	762,713
Deferred inflows of resources	1,922	1,878	2,169
Total liabilities and deferred inflows of resources	1,051,764	688,831	764,882
Fiduciary net position	$35,417,666	$33,688,428	$32,798,524

As of June 30, 2024, the Plan's total fiduciary net position held in trust for pension benefits increased by $1,729.2 million or 5.1% for the year, primarily due to positive investment returns. Payables to brokers increased by $90.9 million and payables to borrowers of securities increased by $281.0 million due to the timing of investments and lending activities.

As of June 30, 2023, the Plan's total fiduciary net position held in trust for pension benefits increased by $889.9 million or 2.7% for the year, primarily due to positive investment returns. Payables to brokers increased by $16.6 million and payables to borrowers of securities increased by $20.9 million 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, 2024, 2023, and 2022
Dollars in thousands

	2024	2023	2022
Additions:			
Member contributions	$427,512	$413,916	$423,471
Employer contributions	672,618	672,651	768,463
Interest	103,757	66,501	43,365
Dividends	96,293	94,883	106,986
Net appreciation (depreciation) in fair value of investments	2,441,921	1,560,025	(2,380,535)
Securities lending income	38,775	29,305	4,819
Investment expenses	(57,095)	(53,819)	(80,806)
Securities lending borrower rebates and expenses	(35,953)	(26,229)	(2,149)
Total additions	3,687,828	2,757,233	(1,116,386)
Deductions:			
Benefits	1,905,845	1,820,269	1,710,092
Refunds of contributions	26,201	24,096	27,658
Administrative expenses	25,447	23,687	21,364
Administrative expenses and offset - OPEB	1,097	(723)	(190)
Total deductions	1,958,590	1,867,329	1,758,924
Net increase (decrease) in fiduciary net position	1,729,238	889,904	(2,875,310)
Fiduciary net position – restricted for pension benefits:			
Beginning of year	33,688,428	32,798,524	35,673,834
End of the year	$35,417,666	$33,688,428	$32,798,524

Fiscal Year 2024

- Members' contributions to the Plan totaled $427.5 million, an increase of $13.6 million or 3.3% from the prior year, primarily as a result of an increase in pensionable compensation offset by the decrease in employee contribution rates. Employee contribution rates ranged from 7.5% - 11.5% in fiscal year 2023-24 and 7.5% - 12.0% in fiscal year 2022-23.

- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled $672.6 million, a decrease of $33 thousand or 0.0% from the prior year. Although employer contribution rates decreased, this was almost completely offset by a higher pensionable payroll. Employer contribution rates ranged from 15.24% to 18.24% in fiscal year 2023-24 and 17.85% to 21.35% in fiscal year 2022-23.

- Net investment income for the Retirement System increased by $917.0 million on a year over year basis. The majority of the increase is attributable to the $881.9 million increase in net appreciation of investments, primarily due to positive performance in the public markets, private credit, private equities and absolute return investments. Interest income increased by $37.3 million mainly due to the domestic fixed income markets.

- Benefit payments to Plan participants increased by $85.6 million or 4.7%, due to an increase in the number of payees, an increase in average retirement benefits and an increase in the COLA.

Fiscal Year 2023

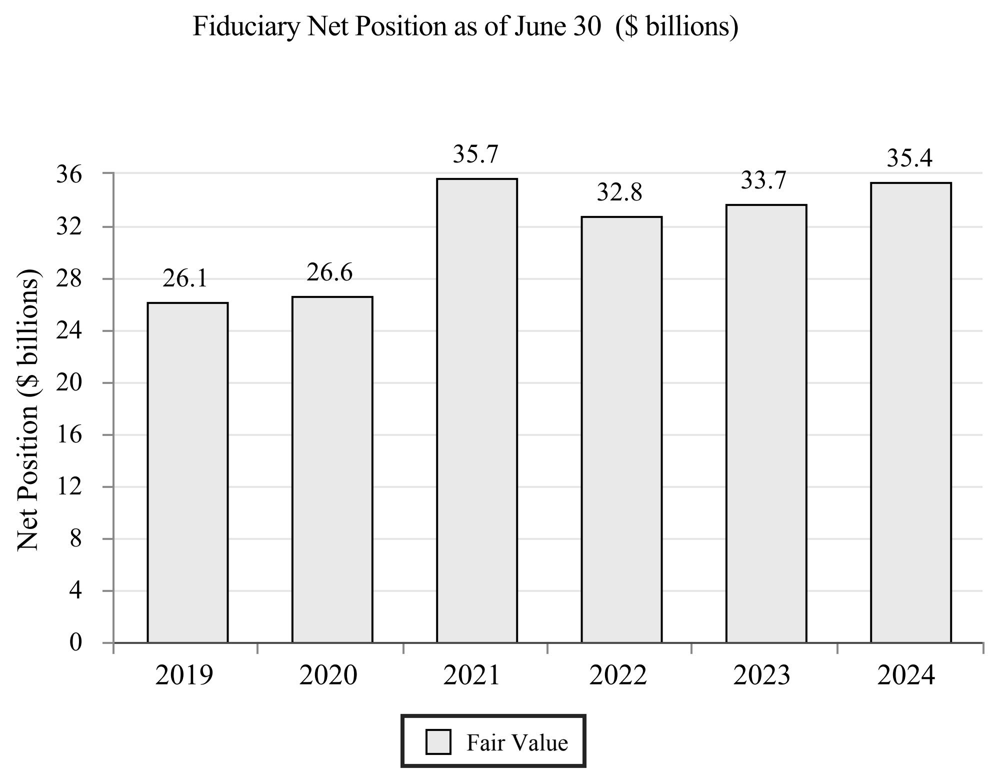
- Members' contributions to the Plan totaled $413.9 million, a decrease of $9.6 million or 2.3% from the prior year, primarily as a result of the decrease in employee contribution rates. Employee contribution rates ranged from 7.5% - 12.0% in fiscal year 2022-23 and 7.5% - 13.0% in fiscal year 2021-22.

- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled $672.7 million, a decrease of $95.8 million 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.

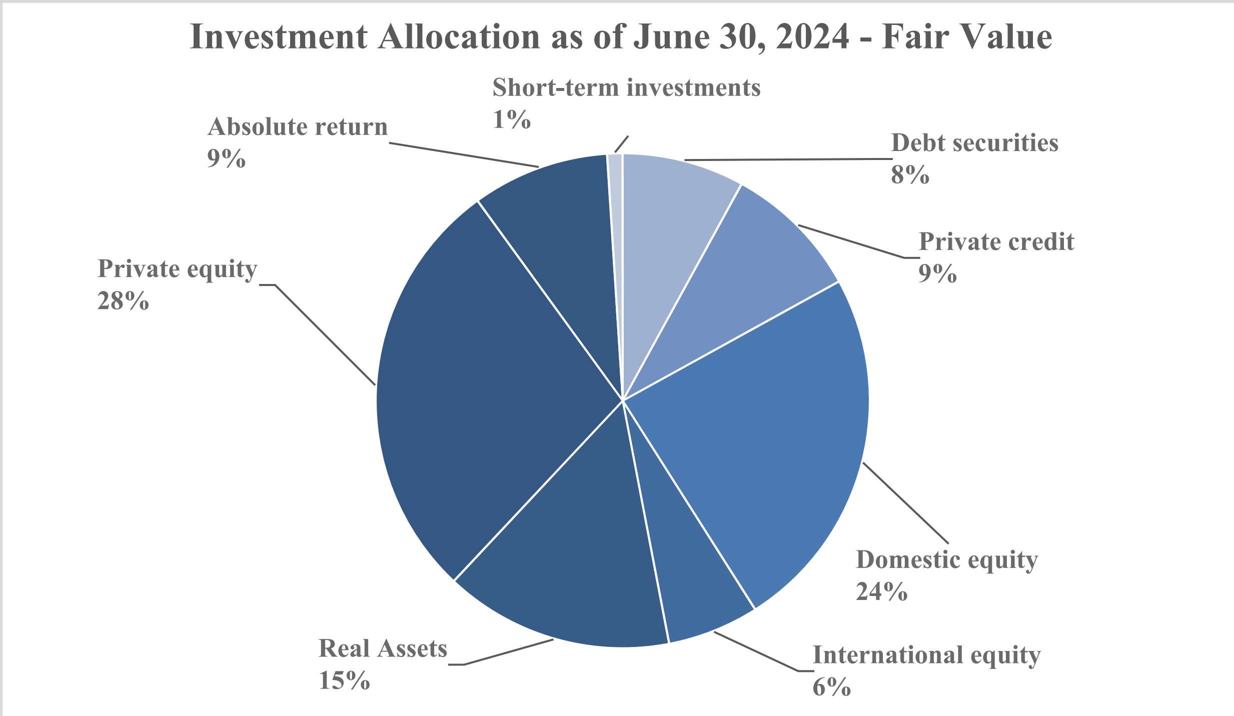
- Net investment income for the Retirement System increased by $3.98 billion on a year over year basis. The majority of the increase is attributable to the $3.94 billion increase in net appreciation of investments, primarily due to strong performance in the public markets. Interest income increased by $23.1 million mainly due to the domestic fixed income markets.

- Benefit payments to Plan participants increased by $110.2 million 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.

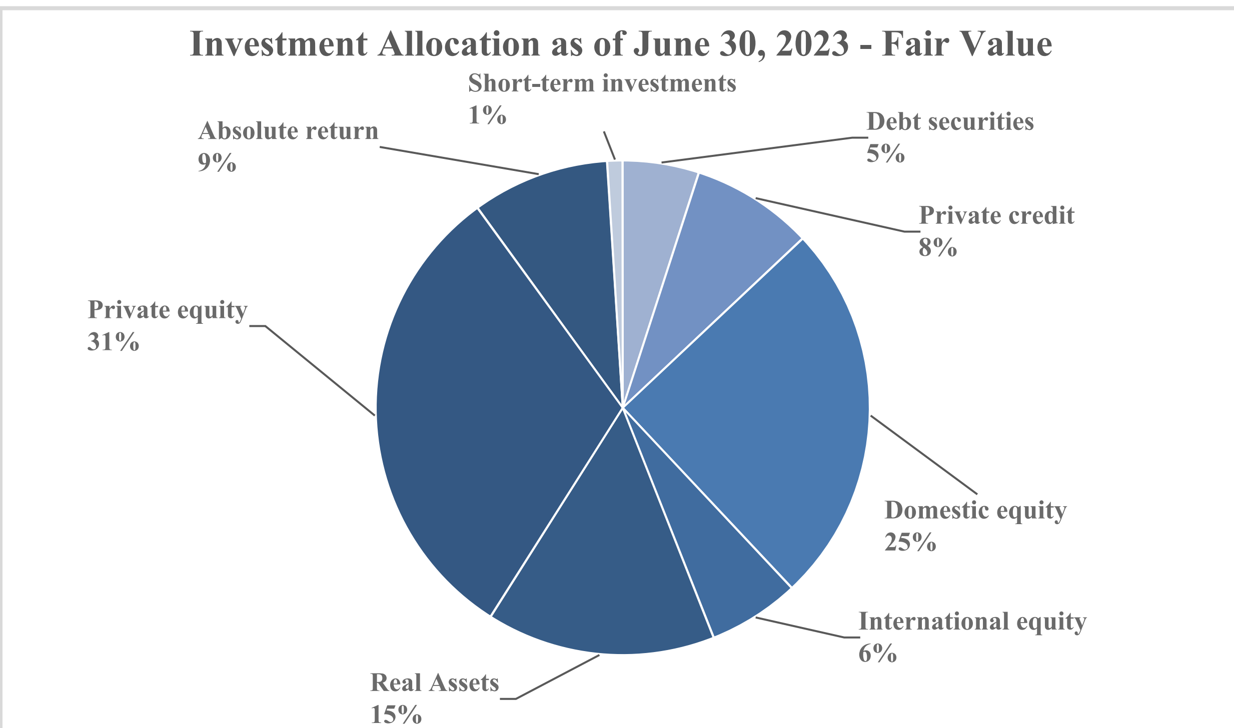
Fiduciary net position as of June 30, 2019 through 2024, expressed at fair value of investments are represented in the chart below:



The investment allocation at fair value based on investment category (excluding securities lending collateral and foreign currency contracts) as of June 30, 2024, is represented in the chart below:



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:



Economic and Financial Market Factors

For the fiscal year ended June 30, 2024, the economy and financial markets once again demonstrated resilience amidst ongoing challenges. After a year of aggressive interest rate hikes and persistent inflation concerns, the fiscal year began with signs of cooling inflation and a more cautious approach from the U.S. Federal Reserve (Fed). However, inflation remained a concern throughout the year, and the potential for further tightening kept investor uncertainty elevated, particularly in the early months. Despite this, both stock and bond markets showed improvement as inflation pressures eased and economic data continued to indicate underlying strength in the U.S. economy.

One of the most significant developments was the Fed's decision to pause rate hikes in mid-2023 after several increases earlier in the year. Over the fiscal year, the Fed raised rates only once, with a 25 bps hike taking place in July of 2023. The moderation of inflation combined with low unemployment contributed to the Fed's decision to pause rate hikes. Meanwhile, recession fears lingered due to the continued inversion of the yield curve and the impact of higher rates on consumer spending and corporate profitability. The banking sector stabilized after the failures of several U.S. regional banks in early 2023. Globally, the financial system saw fewer disruptions compared to the prior fiscal year. Geopolitical fears persisted throughout the fiscal year, yet did little to dampen performance, which was strong across equity and bond markets.

By the end of the fiscal year, U.S. markets posted sizable gains. The S&P 500 Index returned (+22.7%) over the fiscal year, with growth stocks and large-cap technology companies once again leading the way. Specifically, the "Magnificent Seven," a group of seven technology stocks contributed an outsized portion of the returns, driven by resilient revenue growth along with investor optimism about the potential for artificial intelligence (AI) technologies. International equities also performed well, despite lagging U.S. markets. The MSCI EAFE Index returned (+12.1%), as the European economy recovered from the mild recession that had begun in late 2022. Emerging markets also saw positive returns, with the MSCI Emerging Markets Index returning (+13.0%), reversing muted performance last fiscal year.

In the fixed income markets, returns improved as bond yields peaked and then began to stabilize. Over the fiscal year, U.S. fixed income returns turned positive, as measured by the Bloomberg U.S. Aggregate Bond Index (+2.6%). High Yield saw strong performance during the same period, with the Bloomberg High Yield Index returning (+10.4%), driven by improved credit conditions and declining recession fears. In contrast, Long-Term U.S. Treasuries detracted, returning (-5.6%).

In a reversal of the year prior, commodities saw positive gains, with the Bloomberg Commodity Index returning (+5.0%) 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 years ended June 30, 2024, and 2023. Questions regarding any of the information provided in this report or requests for additional financial information should be addressed to:

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

SAN FRANCISCO CITY AND COUNTY EMPLOYEES' RETIREMENT SYSTEM
Statements of Fiduciary Net Position
June 30, 2024 and 2023
Dollars in thousands

	2024	2023
Assets:		
Deposits	$20,032	$17,929
Contributions receivable - members	27,530	22,935
Contributions receivable - employers	4,799	—
Investment income receivable:		
Interest	22,703	13,996
Dividends	3,767	2,345
Securities Lending	225	254
Receivable from brokers, general partners, and others	130,971	122,854
Investments at fair value:		
Short-term investments	377,444	376,288
City investment pool	23,440	—
Debt securities:		
U.S. government and agency securities	1,953,414	812,141
Other debt securities	1,051,622	1,023,119
Equity securities:		
Domestic	8,592,515	8,397,002
International	1,978,958	2,051,694
Real assets	5,208,475	5,207,943
Private credit	3,152,084	2,606,909
Private equity	10,029,898	10,101,396
Absolute return	3,046,230	3,056,626
Foreign currency contracts, net	(447)	(1,029)
Invested securities lending collateral	843,391	562,491
Total investments	36,257,024	34,194,580
Total assets	36,467,051	34,374,893
Deferred outflows of resources:		
Other postemployment benefits (OPEB)	2,379	2,366
Total assets and deferred outflows of resources	36,469,430	34,377,259
Liabilities:		
Payable to brokers	144,760	53,813
Other	61,702	70,732
Payable to borrowers of securities	843,380	562,408
Total liabilities	1,049,842	686,953
Deferred inflows of resources:		
Other postemployment benefits (OPEB)	1,922	1,878
Total liabilities and deferred inflows of resources	1,051,764	688,831
Fiduciary net position – restricted for pension benefits	$35,417,666	$33,688,428

See accompanying notes to financial statements.

SAN FRANCISCO CITY AND COUNTY EMPLOYEES' RETIREMENT SYSTEM
Statements of Changes in Fiduciary Net Position
Years Ended June 30, 2024 and 2023
Dollars in thousands

	2024	2023
Additions:		
Members contributions		
Miscellaneous	$356,880	$344,055
Police	40,220	40,242
Fire	30,412	29,619
Total member contributions	427,512	413,916
Employer contributions		
Miscellaneous	573,971	570,992
Police	55,920	60,248
Fire	42,727	41,411
Total employer contributions	672,618	672,651
Investment income (expenses)		
Interest	103,757	66,501
Dividends	96,293	94,883
Net appreciation in fair value of investments	2,441,921	1,560,025
Securities lending income	38,775	29,305
Investment expenses	(57,095)	(53,819)
Securities lending borrower rebates and expenses	(35,953)	(26,229)
Net investment income	2,587,698	1,670,666
Total additions	3,687,828	2,757,233
Deductions:		
Benefits	1,905,845	1,820,269
Refunds of contributions	26,201	24,096
Administrative expenses	25,447	23,687
Other administrative expenses and offset (OPEB)	1,097	(723)
Total deductions	1,958,590	1,867,329
Net increase in fiduciary net position	1,729,238	889,904
Fiduciary net position – restricted for pension benefits		
Beginning of year	33,688,428	32,798,524
End of year	$35,417,666	$33,688,428

See accompanying notes to financial statements.

(1) Plan Description

(a) General

The San Francisco City and County Employees' Retirement System (the Retirement System or SFERS) 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 Superior 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, 2024, and 2023, 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, or via https://www.sf.gov/annual-comprehensive-financial-reports-acfr.

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

Miscellaneous Non-Safety Members who became members prior to July 1, 2010, qualify for a service retirement benefit if they are at least 50 years old and have at least 20 years of credited service or if they are at least 60 years old and have at least 10 years of credited service or at age 65 regardless of service. The service retirement benefit is calculated using the member's final compensation (highest one-year average monthly compensation) multiplied by the member's years of credited service times the member's age factor up to a maximum of 75% of the member's final compensation.

Miscellaneous Non-Safety Members who became members on or after July 1, 2010, and prior to January 7, 2012, qualify for a service retirement benefit if they are at least 50 years old and have at least 20 years of credited service or if they are at least 60 years old and have at least 10 years of credited service or at age 65 regardless of service. The service retirement benefit is calculated using the member's final compensation (highest two-year average monthly compensation) multiplied by the member's years of credited service times the member's age factor up to a maximum of 75% of the member's final compensation.

Miscellaneous Non-Safety Members who became members on or after January 7, 2012, qualify for a service retirement benefit if they are at least 53 years old and have at least 20 years of credited service or if they are at least 60 years old and have at least 10 years of credited service or at age 65 regardless of service. The service retirement benefit is calculated using the member's final compensation (highest three-year average monthly compensation) multiplied by the member's years of credited service times the member's age factor up to a maximum of 75% of the member's final compensation.

Sheriff's Department Members and Miscellaneous Safety Members who were hired on or after January 7, 2012, qualify for a service retirement benefit if they are at least 50 years old and have at least 5 years of credited service. The service retirement benefit is calculated using the member's final compensation (highest three-year average monthly compensation) multiplied by the member's years of credited service times the member's age factor up to a maximum of 90% of the member's final compensation.

Firefighter Members and Police Members who became members of the Plan on or after November 2, 1976, and prior to July 1, 2010, qualify for a service retirement benefit if they are at least 50 years old and have at least 5 years of credited service. The service retirement benefit is calculated using the member's final compensation (highest one-year average monthly compensation) multiplied by the member's years of credited service times the member's age factor up to a maximum of 90% of the member's final compensation.

Firefighter Members and Police Members who became members of the Plan on or after July 1, 2010, and prior to January 7, 2012, qualify for a service retirement benefit if they are at least 50 years old and have at least 5 years of credited service. The service retirement benefit is calculated using the member's final compensation (highest two-year average monthly compensation) multiplied by the member's years of credited service times the member's age factor up to a maximum of 90% of the member's final compensation.

Firefighter Members and Police Members who became members of the Plan on or after January 7, 2012, qualify for a service retirement benefit if they are at least 50 years old and have at least 5 years of credited service. The service retirement benefit is calculated using the member's final compensation (highest three-year average monthly compensation) multiplied by the member's years of credited service times the member's age factor up to a maximum of 90% of the member's final compensation.

(c) Disability Retirement

Miscellaneous Non-Safety 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. The disability retirement benefit is calculated using the member's average final compensation (highest one, two, or three-year average monthly compensation depending on plan) multiplied by the member's years of credited service times the disability factor (1.8) up to a maximum of 75% of average final compensation.

Firefighter Members, Police Members, Sheriff Members, and Miscellaneous Safety Members are eligible to apply for an industrial disability retirement benefit from their first day on the job in firefighter or police service if their disability is caused by an illness or injury that they receive while performing their duties. The industrial disability retirement benefit is based on the member's average final compensation (defined by plan) multiplied by the permanent disability rating (from 50% to 90%) or the member's service retirement benefit if the member is eligible for a service retirement.

Firefighter Members, Police Members, Sheriff Members, and Miscellaneous Safety Members are eligible to apply for an ordinary disability retirement benefit, regardless of age, when they have 10 or more years of credited service and they sustain an injury or illness that is not caused by their work, but that prevents them from performing their duties. The disability retirement benefit is calculated using 1.5% of the member's average final compensation (defined by plan) multiplied by years of credited service subject to a minimum of 33.3% and a maximum of 75% to 90%.

(d) Separation and Death Benefits

Separation from Employment

Upon separation from City employment, **Miscellaneous Non-Safety Members** may either elect to withdraw their accumulated contributions from the Plan or, if they have 5 or more years of credited service, elect to leave their accumulated contributions in the Plan and 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 members hired on or after January 7, 2012.

Upon separation from City employment, **Firefighter Members, Police Members, Sheriff Members, and Miscellaneous Safety Members** may either elect to withdraw their accumulated contributions from the Plan or, if they have 5 or more years of credited service, elect to leave their accumulated contributions in the Plan and receive a deferred benefit that is first payable at or after age 50.

<u>Death Benefits Prior to Retirement</u>

Generally, upon the death of an active employee who is eligible for a service retirement, the Retirement System provides continuation benefits to a qualified surviving spouse or qualified domestic partner equal to 50% to 100% of the member's retirement allowance that the member would have received had he or she retired on the date of death.

For qualified surviving spouses and qualified domestic partners of **Firefighter Members, Police Members, Sheriff Members, and Miscellaneous Safety Members** who die prior to becoming eligible for service retirement and whose death is due to an injury received in or illness caused by the performance of duty, salary continuation is provided to the qualified survivor until such time as the member would have qualified for service retirement had he or she lived at which time a continuation benefit equal to 100% of the member's service retirement allowance is provided to the qualified survivor.

A lump sum death payment equal to 6 months' earnable salary plus the member's accumulated contributions is provided upon the death of an active employee not yet eligible for a service retirement to the member's named beneficiary or estate.

<u>Death Benefits after Retirement</u>

Generally, upon the death of a retired member, the Retirement System provides continuation benefits to a qualified surviving spouse or qualified domestic partner equal to 50% to 100% of the member's retirement allowance as of the date of death.

(e) Cost of Living Adjustments (COLA)

<u>Basic COLA</u>

Miscellaneous Non-Safety Members receive a benefit adjustment each July 1 equal to the percentage increase or decrease in the Consumer Price Index (CPI) rounded to the nearest 1%, to a maximum of 2% of the member's previous June 30 retirement benefit. If the CPI decreases in a particular year, however, the negative adjustment cannot reduce a member's monthly retirement benefit below the initial pension amount.

Firefighter Members and Police Members who became members of the Plan before November 2, 1976, receive a benefit adjustment each July 1 equal to 50% of the actual dollar or percentage increase or decrease 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.

Firefighter Members and Police Members who became members of the Plan on or after November 2, 1976, and Sheriff Members and Miscellaneous Safety Members receive a benefit adjustment each July 1 equal to the percentage increase or decrease in the CPI rounded to the nearest 1%, to a maximum of 2% of the member's previous June 30 retirement benefit. If the CPI decreases in a particular year, however, the negative adjustment cannot reduce a member's monthly retirement benefit below the initial pension amount.

Supplemental COLA

The Plan provides for a Supplemental COLA if in the previous fiscal year there were earnings in excess of the expected earnings on the actuarial value of the assets, subject to certain criteria. For some members, the Supplemental COLA is only payable if the System is also fully funded on a market value of assets basis.

On November 8, 2022, voters approved a Charter amendment, Proposition A, that adjusts retirement allowances for Retirement System members who retired before November 6, 1996, (including their qualified survivors and beneficiaries) to account for Supplemental COLAs not received in years 2013, 2014, 2017, 2018, and 2019. Proposition A also eliminated the full funding requirement for Supplemental COLA benefit payments to SFERS members who retired before November 6, 1996, subject to a monthly monetary cap in limited circumstances.

All Supplemental COLA retirement benefits paid to members hired before January 7, 2012, will continue into the future even when an additional Supplemental COLA is not payable in any given year. For members hired on and after January 7, 2012, Supplemental COLAs will not be permanent adjustments to retirement benefits. For this group only, all previously paid Supplemental COLAs will expire in years when a Supplemental COLA is not paid to these members.

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, 2024:

	Police[1]	Fire	Miscellaneous	Total
Retirees and beneficiaries currently receiving benefits	2,989	2,366	27,299	32,654
Active members	2,220	1,733	31,465	35,418
Terminated members entitled to but not yet receiving benefits	386	99	12,618	13,103
Total	5,595	4,198	71,382	81,175

[1]Police counts include Sheriff and Miscellaneous Safety.

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

[1]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 generally audited annually 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 value 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 generally 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.

The Retirement Board approved securities lending program is currently managed by the Retirement System's custodian bank, BNY Mellon. 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 the 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 the Retirement System's collateral account. If the proceeds are less than the repurchase price, BNY Mellon will credit the amount of such difference to the 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, 2024, BNY Mellon collected 102.52% for cash loans and 110.98% for non-cash loans, resulting in 106.69% over collateralization on extended loans. 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, 2024, and 2023 was 82 days and 87 days, respectively. 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 insured 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, 2024, and 2023, the weighted average maturity of the reinvested cash collateral account was 28 days and 7 days, respectively. 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) 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.

(e) 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.

(3) Deposits

Deposits are carried at cost, which approximates fair value. Deposits in bank accounts were $20.0 million and $17.9 million as of June 30, 2024, and 2023, respectively.

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, 2024, and 2023, $10.9 million and $9.4 million, respectively, of the Retirement System's deposits in bank accounts were held by the System's custodian in the Retirement System's name and not exposed to custodial credit risk.

(4) Investments

The Retirement System's investments are invested pursuant to investment policy guidelines as established by the Retirement Board. The investment objective is to generate an annualized net-of-fee return that meets the assumed actuarial rate of return over a full market cycle, subject to liquidity needs and other risk considerations. 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, 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 years ended June 30, 2024, and 2023, are as follows:

Asset Class	Target Allocation from January 2021 - June 2024	Target Allocation effective as of July 2024
Global Equity	37.0%	32.0%
Treasuries	8.0%	8.0%
Liquid Credit	5.0%	12.0%
Private Credit	10.0%	10.0%
Private Equity	23.0%	20.0%
Real Assets	10.0%	10.0%
Absolute Return	10.0%	10.0%
Cash	0.0%	1.0%
Leverage	-3.0%	-3.0%
	100.0%	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, 2024, and 2023, $339.5 million (or 40.3% of reinvested cash collateral) consisted of tri-party repurchase agreements and $166.6 million (or 29.6% of reinvested cash collateral) consisted of repurchase agreements, respectively.

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 notes to the basic financial statements of the City and County provide more detailed information concerning deposit and investment risks associated with the City and County's pool of cash and investments at June 30, 2024. The Retirement System's operating fund cash balance in the City and County's investment pool was zero as of 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.

Below are tables depicting the segmented time distribution for fixed income investments based upon the expected maturity (in years) as of June 30, 2024, and 2023.

Investments at Fair Value as of June 30, 2024
Dollars in thousands

		Maturities			
Investment Type	**Fair Value**	**Less than 1 year**	**1-5 years**	**6-10 years**	**10+ years**
Asset-Backed Securities	$17,311	$—	$2,708	$1,799	$12,804
Bank Loans	152,837	2,551	100,577	49,709	—
City Investment Pool	23,440	12,661	10,779	—	—
Collateralized Bonds	11,435	—	—	6,834	4,601
Commercial Mortgage-Backed	76,007	330	5,120	4,791	65,766
Commingled and Other Fixed Income Funds	176,518	2,384	5,177	94,997	73,960
Corporate Bonds	370,774	9,137	152,441	153,921	55,275
Corporate Convertible Bonds	4,265	611	3,217	214	223
Government Bonds	2,021,260	382,410	985,662	547,559	105,629
Government Mortgage-Backed Securities	26,817	—	—	—	26,817
Municipal/Provincial Bonds	1,650	—	1,310	340	—
Non-Government Backed Collateralized Mortgage Obligations	145,850	—	—	—	145,850
Options	1	1	—	—	—
Short-Term Investment Funds	377,443	377,443	—	—	—
Swaps*	(46)	(205)	227	(16)	(52)
Total	$3,405,562	$787,323	$1,267,218	$860,148	$490,873

*$358 Credit default swaps are excluded because they are not subject to interest rate risk.

Investments at Fair Value as of June 30, 2023
Dollars 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	—
City Investment Pool	—	—	—	—	—
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, 2024. Investments issued or explicitly guaranteed by the U.S. government of $1,924.9 million as of June 30, 2024, are exempt from the credit rating disclosures and are excluded from the table below.

Credit Ratings of Fixed Income Investments as of June 30, 2024

Dollar in thousands

Credit Rating	Fair Value	Fair Value as a Percentage of Total
AAA	$ 389,246	26.3 %
AA	14,468	1.0 %
A	45,117	3.0 %
BBB	137,283	9.3 %
BB	157,347	10.6 %
B	247,993	16.8 %
CCC	33,567	2.3 %
CC	4,569	0.3 %
C	512	0.0 %
D	6,543	0.4 %
Not Rated	444,330	30.0 %
Total	$ 1,480,975	100.0 %

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 $807.7 million 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 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 6.3% for 2024 and 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, 2024, and 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, 2024, and 2023, $166.8 million and $146.1 million, respectively, 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 public equity and debt separate account managers with international mandates to enter into foreign exchange contracts in the course of implementing their investment mandates.

The Retirement System's direct net exposures to foreign currency risk as of June 30, 2024, are as follows:

Foreign Currency Risk Analysis as of June 30, 2024
Dollars in thousands

Currency	Cash	Equities	Fixed Income	Private Equities	Real Assets	Private Credit	Foreign Currency Contracts	Total
Argentina peso	$ -	$ -	$ (3)	$ -	$ -	$ -	$ -	$ (3)
Australian dollar	-	12,909	113	37,129	3,888	-	(743)	53,296
Brazil real	-	10,955	4,706	-	-	-	2,871	18,532
Canadian dollar	-	24,422	210	-	-	-	(1,132)	23,500
Chilean peso	-	1,988	581	-	-	-	129	2,698
Chinese yuan renminbi	219	8,969	5,761	-	-	-	(11,761)	3,188
Colombian peso	-	-	4,887	-	-	-	(3,209)	1,678
Czech koruna	-	-	(88)	-	-	-	2,400	2,312
Danish krone	-	65,037	-	-	-	-	-	65,037
Dominican Rep peso	-	-	1,910	-	-	-	(947)	963
Egyptian pound	1,462	-	-	-	-	-	-	1,462
Euro	-	436,402	56,723	99,019	394,856	153,490	(72,269)	1,068,221
Hong Kong dollar	-	41,846	-	-	-	-	(50)	41,796
Hungarian forint	-	4,228	904	-	-	-	282	5,414
Indian rupee	-	36,228	-	-	-	-	1,536	37,764
Indonesian rupiah	-	4,858	4,572	-	-	-	(999)	8,431
Israeli shekel	-	-	-	-	-	-	(69)	(69)
Japanese yen	-	87,100	3,997	-	36,616	-	8,158	135,871
Malaysian ringgit	-	-	3,660	-	-	-	133	3,793
Mexican peso	-	875	10,304	-	-	-	(1,615)	9,564
New Taiwan dollar	-	58,620	-	-	-	-	(1,889)	56,731
New Zealand dollar	-	-	-	-	-	-	378	378
Norwegian krone	-	1,163	-	-	-	-	40	1,203
Peruvian sol	-	-	2,377	-	-	-	(1,605)	772
Philippines peso	-	1,047	-	-	-	-	26	1,073
Polish zloty	-	2,680	(54)	-	-	-	4,695	7,321
Pound sterling	-	189,780	9,028	109,404	61,451	-	(8,440)	361,223
Romanian leu	-	-	1,325	-	-	-	316	1,641
Singapore dollar	-	3,602	-	-	-	-	(428)	3,174
South African rand	-	8,364	6,412	-	-	-	(3,769)	11,007
South Korean won	-	25,582	-	-	-	-	(1,523)	24,059
Swedish krona	-	47,432	-	-	-	-	3,500	50,932
Swiss franc	-	90,142	-	-	-	-	(1,782)	88,360
Thailand baht	-	3,442	2,799	-	-	-	1,415	7,656
Turkish lira	-	1,654	1,519	-	-	-	1,696	4,869
UAE dirham	-	9,584	-	-	-	-	-	9,584
Uruguayan peso	-	-	273	-	-	-	-	273
Total	$ 1,681	$ 1,178,909	$ 121,916	$ 245,552	$ 496,811	$ 153,490	$ (84,655)	$ 2,113,704

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

Foreign Currency Risk Analysis as of June 30, 2023
Dollars 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 $2.05 billion, private equity in the amount of $3.44 billion, private credit in the amount of $2.15 billion and absolute return in the amount of $129.0 million totaling $7.77 billion as of June 30, 2024.

(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, 2024, and 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 tables below present 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, 2024, and 2023.

As of and for the Year Ended June 30, 2024

Dollars in thousands

Derivative Type / Contracts	Notional Amount	Fair Value	Net Appreciation (Depreciation) in Fair Value
Forwards			
Foreign Exchange Contracts	$ 226,859	$ (447)	$ 582
Futures			
Bond Futures Long	23,968	201	294
Bond Futures Short	(2,243)	(21)	(21)
Equity Index Futures Long	552	(2)	(29)
Treasury Futures Long	58,303	195	323
Treasury Futures Short	(1,768)	(12)	(114)
Options			
Interest Rate Contracts	-	(8)	1,297
Foreign Exchange Contracts	200	9	-
Swaps			
Credit Contracts	11,432	358	215
Currency Contracts	110	109	(307)
Interest Rate Contracts	181,620	(172)	488
Total Return Contracts	9,995	17	(12,987)
Rights/Warrants			
Equity Contracts	73,347 shares	79,381	18,640
Total		$ 79,608	$ 8,381

As of and for the Year Ended June 30, 2023

Dollars 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 tables below present 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, 2024
Dollars in thousands

Credit Rating	Fair Value
AA	$ 127
A	1,919
BBB	472
Total	$ 2,518

Derivative Instruments Subject to Counterparty Credit Risk as of June 30, 2023
Dollars 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, 2024, and 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 tables below describe the maturity periods of the derivative instruments exposed to interest rate risk at June 30, 2024, and 2023.

Derivative Interest Rate Risk as of June 30, 2024
Dollars in thousands

		Maturities			
Derivative Type / Contracts	**Fair Value**	**Less than 1 year**	**1-5 years**	**6-10 years**	**10+ years**
Futures					
Treasury Futures Long	$ 195	$ 195	$ -	$ -	$ -
Treasury Futures Short	(12)	(12)	-	-	-
Options					
Interest Rate Contracts	(8)	(8)	-	-	-
Foreign Exchange Contracts	9	9	-	-	-
Swaps					
Currency Contracts	109	-	109	-	-
Interest Rate Contracts	(172)	(222)	118	(16)	(52)
Total Return Contracts	17	17	-	-	-
Total	$ 138	$ (21)	$ 227	$ (16)	$ (52)

Derivative Interest Rate Risk as of June 30, 2023
Dollars 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 tables detail 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, 2024, and 2023:

Derivative Instruments Highly Sensitive to Interest Rate Changes as of June 30, 2024
Dollars in thousands

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 0.25%, Pay Variable 1-Day SOFR	$ 22,200	$ (176)
Interest Rate Swap	Receive Fixed 0.48%, Pay Variable 6-Month PRIBOR	637	(23)
Interest Rate Swap	Receive Fixed 0.57%, Pay Variable 6-Month WIBOR	1,269	(69)
Interest Rate Swap	Receive Fixed 1.48%, Pay Variable 6-Month PRIBOR	1,138	(135)
Interest Rate Swap	Receive Fixed 2.56%, Pay Variable 6-Month BUBOR	1,894	(140)
Interest Rate Swap	Receive Fixed 2.75%, Pay Variable 6-Month EURIBOR	4,180	(12)
Interest Rate Swap	Receive Fixed 3.50%, Pay Variable 3-Month KLIBOR	231	(2)
Interest Rate Swap	Receive Fixed 3.75%, Pay Variable 6-Month CORRA	1,242	(7)
Interest Rate Swap	Receive Fixed 4.00%, Pay Variable 1-Day SOFR	70,000	82
Interest Rate Swap	Receive Fixed 4.00%, Pay Variable 1-Day SONIA	3,666	15
Interest Rate Swap	Receive Fixed 4.68%, Pay Variable 6-Month PRIBOR	578	32
Interest Rate Swap	Receive Fixed 4.72%, Pay Variable 6-Month PRIBOR	462	14
Interest Rate Swap	Receive Fixed 4.74%, Pay Variable 6-Month PRIBOR	813	25
Interest Rate Swap	Receive Fixed 4.75%, Pay Variable 6-Month BBSW	2,271	13
Interest Rate Swap	Receive Fixed 4.81%, Pay Variable 28-Day MXIBR	1,438	(17)
Interest Rate Swap	Receive Fixed 5.26%, Pay Variable 3-Month JIBAR	630	(17)
Interest Rate Swap	Receive Fixed 5.43%, Pay Variable 6-Month WIBOR	1,169	15
Interest Rate Swap	Receive Fixed 5.60%, Pay Variable 3-Month COOVIBR	82	(15)
Interest Rate Swap	Receive Fixed 7.13%, Pay Variable 28-Day MXIBR	191	(37)
Interest Rate Swap	Receive Fixed 9.03%, Pay Variable 3-Month COOVIBR	839	26
Interest Rate Swap	Receive Fixed 9.06%, Pay Variable 28-Day MXIBR	930	(20)
Interest Rate Swap	Receive Fixed 10.28%, Pay Variable 1-Day BIDOR	1,926	(54)
Interest Rate Swap	Receive Fixed 10.79%, Pay Variable 1-Day BIDOR	1,242	(27)
Interest Rate Swap	Receive Fixed 11.46%, Pay Variable 1-Day BIDOR	1,494	(9)
Interest Rate Swap	Receive Fixed 11.95%, Pay Variable 1-Day BIDOR	1,080	-
Interest Rate Swap	Receive Fixed 12.00%, Pay Variable 1-Day BIDOR	3,853	(18)
Interest Rate Swap	Receive Variable 1-Day SOFR, Pay Fixed 3.75%	4,100	54
Interest Rate Swap	Receive Variable 1-Day SOFR, Pay Fixed 3.75%	12,800	176
Interest Rate Swap	Receive Variable 1-Day SOFR, Pay Fixed 3.99%	200	(1)
Interest Rate Swap	Receive Variable 1-Day SOFR, Pay Fixed 4.00%	34,600	134
Interest Rate Swap	Receive Variable 1-Day SOFR, Pay Fixed 4.06%	100	(1)
Interest Rate Swap	Receive Variable 1-Day TONA, Pay Fixed 0.85%	1,554	18
Interest Rate Swap	Receive Variable 3-Month COOVIBR, Pay Fixed 1.20%	784	13
Interest Rate Swap	Receive Variable 6-Month CLICP, Pay Fixed 5.67%	848	(10)
Interest Rate Swap	Receive Variable 6-Month EURIBOR, Pay Fixed 2.50%	1,179	1
Total Interest Rate Swaps		$ 181,620	$ (172)

Derivative Instruments Highly Sensitive to Interest Rate Changes as of June 30, 2023
Dollars 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, 2024, 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, 2024
Dollars in thousands

Currency	Forwards	Rights/ Warrants	Swaps	Futures	Total
Argentina peso	$ -	$ -	$ (3)	$ -	$ (3)
Australian dollar	(743)	-	13	-	(730)
Brazil real	2,871	3	(107)	-	2,767
Canadian dollar	(1,132)	-	(7)	5	(1,134)
Chilean peso	129	-	(10)	-	119
Chinese yuan renminbi	(11,761)	-	-	-	(11,761)
Colombian peso	(3,209)	-	24	-	(3,185)
Czech koruna	2,400	-	(88)	-	2,312
Dominican Rep peso	(947)	-	-	-	(947)
Euro	(72,269)	81	37	176	(71,975)
Hong Kong dollar	(50)	-	-	-	(50)
Hungarian forint	282	-	(141)	-	141
Indian rupee	1,536	-	-	-	1,536
Indonesian rupiah	(999)	-	-	-	(999)
Israeli shekel	(69)	-	-	-	(69)
Japanese yen	8,158	-	18	-	8,176
Malaysian ringgit	133	-	(2)	-	131
Mexican peso	(1,615)	-	(74)	-	(1,689)
New Taiwan dollar	(1,889)	-	-	-	(1,889)
New Zealand dollar	378	-	-	-	378
Norwegian krone	40	-	-	-	40
Peruvian sol	(1,605)	-	-	-	(1,605)
Philippines peso	26	-	-	-	26
Polish zloty	4,695	-	(54)	-	4,641
Pound sterling	(8,440)	-	15	(1)	(8,426)
Romanian leu	316	-	-	-	316
Singapore dollar	(428)	-	-	-	(428)
South African rand	(3,769)	-	(17)	-	(3,786)
South Korean won	(1,523)	-	-	-	(1,523)
Swedish krona	3,500	-	-	-	3,500
Swiss franc	(1,782)	-	-	-	(1,782)
Thailand baht	1,415	-	-	-	1,415
Turkish lira	1,696	-	-	-	1,696
Total	$ (84,655)	$ 84	$ (396)	$ 180	$ (84,787)

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
Dollars 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, 2024, and 2023, the Retirement System held no positions in derivative instruments 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, 2024:

As of June 30, 2024 Dollars in thousands	**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	$ 370,394	$ 368,713	$ 1,462	$ 219
Debt securities:				
U.S. government and agency securities	1,953,414	1,924,945	28,469	-
Other debt securities	950,618	71,969	725,525	153,124
Equity securities:				
Domestic	3,251,381	3,250,361	1,020	-
International	1,445,935	1,445,935	-	-
Foreign currency contracts, net	(447)	-	-	(447)
Invested securities lending collateral*	842,981	-	503,965	339,016
Total investments by fair value level	8,814,276	$ 7,061,923	$ 1,260,441	$ 491,912
Investments measured at the net asset value (NAV)				
Short-term investments	7,050			
Fixed income funds invested in:				
Other debt securities	101,004			
Equity funds invested in:				
Domestic	5,341,134			
International	533,023			
Real assets	5,208,475			
Private credit	3,152,084			
Private equity	10,029,898			
Absolute return	3,046,230			
Total investments measured at the NAV	27,418,898			
Investments not subject to the fair value hierarchy				
City investment pool	23,440			
Total investments measured at fair value	$ 36,256,614			

*This figure excludes $410 cash collateral to be invested on July 1, 2024 due to timing of lending and investment activities.

The Retirement System has the following recurring fair value measurements as of June 30, 2023:

As of June 30, 2023 Dollars in thousands	**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 or 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 primarily through limited 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.

Real asset investments strategies include real estate, natural resources, and infrastructure. Investments in the asset class are achieved primarily through limited partnerships, but may also include direct and co-investment opportunities. Real asset investments are mostly 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.

Private equity investment strategies include buyout, venture capital, growth capital, and special situations. Investments in the asset class are achieved primarily through limited partnerships, but may also include direct and co-investment opportunities. Private equity investments are mostly 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, 2024.

Investment Type	NAV as of June 30, 2024 (Dollars in thousands)	Unfunded Commitment (Dollars in thousands)	Redemption Frequency	Redemption Notice Period	NAV Lock Up and Years (Dollars in thousands)
Debt securities	$ 44,274	N/A	Monthly	On a business day (BD) at least 15 days prior to the last BD of the month	
	50,722		Daily	1 business day	
	6,008		N/A	N/A	
Total:	**$ 101,004**				
Public equity	396,885	N/A	Semi-monthly	6 business days	
	989,352		Semi-monthly	9 business days	
	43,737		Semi-annually*	60 calendar days	
	821		Semi-annually*	90 calendar days	
	216,589		Semi-annually	60 calendar days	
	531,076		Semi-annually	90 calendar days	
	1,241,936		Monthly	30 calendar days	
	119,570		Quarterly	60 calendar days	
	393,289		Quarterly	30 calendar days	
	773,315		Quarterly	45 calendar days	
	948,062		Quarterly	90 calendar days	$288,545 / No lock up $178,000 / Lock up ends fiscal year 2025 $481,517 / Lock up ends fiscal year 2026
	219,526		Annually	60 calendar days	
Total:	**$ 5,874,158**				
Absolute return	1,582,516	128,956	Monthly	5-95 Days	No lock up
	930,823		Quarterly	45-180 Days	$905,066 / No lock up $25,757 / Less than 2 years
	512,664		Semi-annually	60-90 Days	No lock up
	20,227		N/A	N/A	No lock up
Total:	**$ 3,046,230**				
Real assets	672,726	2,054,771	Quarterly, subject to available liquidity	90 calendar days	N/A
	4,535,749		Illiquid	N/A	N/A
Total:	**$ 5,208,475**				
Private credit	121,686	2,151,246	Capital returned on a realized basis	90 days	One year hard lock followed by one year soft lock (both expired)
	289,115		Capital returned on a realized basis	90 days	One year hard lock (expired)
	476,627		Capital returned on a realized basis subject to 3-year maximum	180 days	N/A
	60,962		Quarterly, subject to 33% investor-level gate	30 days	One year hard lock (expired)
	2,203,694		Illiquid	N/A	N/A
Total:	**$ 3,152,084**				
Private equity	10,029,898	3,436,071	Illiquid	N/A	N/A

* The Retirement System has requested full redemption as of June 30, 2024. Proceeds are expected as remaining investments are sold.

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

<table>
<tr><th>Investment Type</th><th>NAV as of June 30, 2023 (Dollars in thousands)</th><th>Unfunded Commitment (Dollars in thousands)</th><th>Redemption Frequency</th><th>Redemption Notice Period</th><th>NAV Lock Up and Years (Dollars in thousands)</th></tr>
<tr><td rowspan="3">Debt securities</td><td>$ 44,379</td><td rowspan="4">N/A</td><td>Monthly</td><td>On a business day (BD) at least 15 days prior to the last BD of the month</td><td></td></tr>
<tr><td>49,393</td><td>Daily</td><td>2 business days</td><td></td></tr>
<tr><td>805</td><td></td><td>N/A</td><td></td></tr>
<tr><td>Total:</td><td>**$ 94,577**</td><td></td><td></td><td></td></tr>
<tr><td rowspan="12">Public equity</td><td>328,459</td><td rowspan="13">N/A</td><td>Semi-monthly</td><td>6 business days</td><td></td></tr>
<tr><td>841,811</td><td>Semi-monthly</td><td>9 business days</td><td></td></tr>
<tr><td>165,704</td><td>Semi-annually*</td><td>60 calendar days</td><td></td></tr>
<tr><td>9,836</td><td>Semi-annually*</td><td>90 calendar days</td><td></td></tr>
<tr><td>184,470</td><td>Semi-annually</td><td>60 calendar days</td><td></td></tr>
<tr><td>596,971</td><td>Semi-annually</td><td>90 calendar days</td><td></td></tr>
<tr><td>325,636</td><td>Quarterly</td><td>30 calendar days</td><td></td></tr>
<tr><td>677,181</td><td>Quarterly</td><td>45 calendar days</td><td></td></tr>
<tr><td>80,171</td><td>Quarterly</td><td>60 calendar days</td><td></td></tr>
<tr><td>883,518</td><td>Quarterly</td><td>90 calendar days</td><td>$264,832 / No lock up
$194,080 / Lock up ends fiscal year 2025
$424,606 / Lock up ends fiscal year 2026</td></tr>
<tr><td>1,093,797</td><td>Monthly</td><td>30 calendar days</td><td></td></tr>
<tr><td>337,464</td><td>Annually</td><td>60 calendar days</td><td></td></tr>
<tr><td>Total:</td><td>**$ 5,525,018**</td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">Absolute return</td><td>1,364,321</td><td rowspan="5">62,674</td><td>Monthly</td><td>5-95 Days</td><td>No lock up</td></tr>
<tr><td>1,068,669</td><td>Quarterly</td><td>45-180 Days</td><td>$969,505 / No lock up
$99,164 / Less than 1 year</td></tr>
<tr><td>566,070</td><td>Semi-annually</td><td>60-90 Days</td><td>No lock up</td></tr>
<tr><td>57,566</td><td>N/A</td><td>N/A</td><td>No lock up</td></tr>
<tr><td>Total:</td><td>**$ 3,056,626**</td><td></td><td></td><td></td></tr>
<tr><td rowspan="3">Real assets</td><td>52,039</td><td rowspan="4">1,871,190</td><td>Annually, subject to available liquidity</td><td>No later than June 30 of applicable fiscal year</td><td>N/A</td></tr>
<tr><td>772,528</td><td>Quarterly, subject to available liquidity</td><td>90 calendar days</td><td>N/A</td></tr>
<tr><td>4,383,376</td><td>Illiquid</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Total:</td><td>**$ 5,207,943**</td><td></td><td></td><td></td></tr>
<tr><td rowspan="5">Private credit</td><td>116,031</td><td rowspan="6">2,408,911</td><td>Capital returned on a realized basis</td><td>90 days</td><td>One year hard lock followed by one year soft lock (both expired)</td></tr>
<tr><td>203,579</td><td>Capital returned on a realized basis</td><td>90 days</td><td>One year hard lock (expired)</td></tr>
<tr><td>423,265</td><td>Capital returned on a realized basis subject to 3-year maximum</td><td>180 days</td><td>N/A</td></tr>
<tr><td>61,142</td><td>Quarterly, subject to 33% investor-level gate</td><td>30 days</td><td>One year hard lock (expired)</td></tr>
<tr><td>1,802,892</td><td>Illiquid</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Total:</td><td>**$ 2,606,909**</td><td></td><td></td><td></td></tr>
<tr><td>Private equity</td><td>10,101,396</td><td>3,517,233</td><td>Illiquid</td><td>N/A</td><td>N/A</td></tr>
</table>

* The Retirement System requested full redemption as of June 30, 2023. Residual funds are expected in the fiscal year 2024-2025.

(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, 2024, and 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, 2024, the Retirement System has lent $1.62 billion in securities and received collateral of $843.4 million and $885.5 million in cash and securities, respectively, from borrowers. The cash collateral is invested in a separate account managed by the lending agent using investment guidelines approved by the Retirement Board. Due to the increase in the fair value of assets held in the separately managed account, the Retirement System's invested cash collateral was valued at $843.0 million. The net unrealized gain of $11 thousand is presented as part of the net appreciation 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, 2024, are summarized in the following table.

Securities Lending as of June 30, 2024
Dollars 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	$ 102,125	$ 104,912	$ -
U.S. Equities	183,571	187,135	-
U.S. Government Fixed Income	490,340	501,316	-
International Fixed Income	4,058	4,256	-
International Equities	42,523	45,761	-
Securities on Loan for Non-Cash Collateral			
U.S. Corporate Fixed Income	6,523	-	7,044
U.S. Equities	106,320	-	114,569
U.S. Government Fixed Income	647,446	-	722,056
International Fixed Income	5,515	-	5,731
International Equities	32,063	-	36,104
	$ 1,620,484	$ 843,380	$ 885,504

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, 2024.

Fair Value of Cash Collateral Account as of June 30, 2024
Dollars in thousands

		Maturities	
Investment Type	**Fair Value**	**Less Than 1 Year**	**1-5 Years**
Certificate of Deposit	$ 165,600	$ 165,600	$ -
Commercial Paper	295,433	287,645	7,788
Corporate Bonds	42,933	42,933	-
Tri-party Repo	339,468	339,468	-
Cash	(453)	(453)	-
Total *	$ 842,981	$ 835,193	$ 7,788

* This figure excludes $410 cash collateral to be invested on July 1, 2024 due to timing of lending and investment activities.

The Retirement System's exposure to credit risk in its reinvested cash collateral account as of June 30, 2024, is as follows:

Credit Rating of Cash Collateral Account as of June 30, 2024
Dollars in thousands

Credit Rating		Fair Value	Fair Value as a Percentage of Total
A-1	$	205,808	24.4 %
AA		26,815	3.2 %
A		271,343	32.2 %
Not Rated *		339,015	40.2 %
Total	$	842,981	100.0 %

* This figure includes $339,468 in tri-party repurchase agreements and $452 in payable.

As of June 30, 2023, the Retirement System has lent $1.24 billion in securities and received collateral of $562.4 million and $760.6 million in cash and securities, respectively, from borrowers. The cash collateral is invested in a separate account managed by the lending agent using investment guidelines approved by the Retirement Board. Due to the increase in the fair value of assets held in the separately managed account, the Retirement System's invested cash collateral was valued at $562.5 million. The net unrealized gain of $82 thousand 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.

Securities Lending as of June 30, 2023

Dollars 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

Dollars in thousands

Investment Type	Fair Value	Maturities Less Than 1 Year
Floating Rate Notes	$ 379,128	379,128
Commercial Paper	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:

Credit Rating of Cash Collateral Account as of June 30, 2023
Dollars 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 and $9 in payable.

(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 years ended June 30, 2024, and 2023, are summarized as follows:

Investments:	2024	2023
Dollars in thousands		
Beginning of the year	$ 5,207,943	$ 5,113,451
Capital investments	515,731	593,518
Equity in net earnings	(7,235)	103,109
Net depreciation in fair value	(105,059)	(73,552)
Capital distributions	(402,905)	(528,583)
End of the year	$ 5,208,475	$ 5,207,943

(8) Benefits

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

Allowances and benefits:	2024	2023
Dollars in thousands		
Service retirement and vesting benefits	$ 1,533,951	$ 1,457,325
Disability retirement benefits	236,365	224,984
Death benefits	11,302	10,089
COLA benefit adjustments	124,227	127,871
Total	$ 1,905,845	$ 1,820,269

(9) Funding Policy

Contributions are made to the Plan by both the employers and the participating employees. The basic employer contributions are the amounts deemed necessary on an actuarial basis using the entry age normal cost method to provide the Retirement System with assets sufficient to pay the basic benefits that are not provided for by employees' contributions. Contribution rates used in fiscal years 2023-2024 and 2022-2023 are based on a schedule of rates determined from actuarial studies by the consulting actuary as of July 1, 2022, and 2021, respectively.

Required and actual employer contribution rates for the years ended June 30, 2024, and 2023 as a percentage of covered payrolls were as follows:

	Fiscal Year 2023-24	Fiscal Year 2022-23
Police members	15.24% - 16.24%	17.85% - 18.85%
Fire members	15.24% - 16.24%	17.85% - 18.85%
Miscellaneous Non-Safety members	15.74% - 18.24%	18.35% - 21.35%
Sheriff and Miscellaneous Safety members	15.74% - 16.24%	18.35% - 18.85%

Employee contributions are mandatory as required by the Charter. Employee contribution rates for the years ended June 30, 2024, and 2023 as a percentage of gross covered salary were as follows:

	Fiscal Year 2023-24	Fiscal Year 2022-23
Participants entering the Retirement System prior to November 2, 1976		
Police and fire	10.0%	10.5%
Miscellaneous	8.0% - 10.5%	8.0% - 11.0%
Participants entering the Retirement System after November 2, 1976 and prior to July 1, 2010		
Police and fire	10.5%	11.0%
Miscellaneous	7.5% - 10.0%	7.5% - 10.5%
Participants entering the Retirement System on or after July 1, 2010		
Police and fire	11.0% - 11.5%	11.5% - 12.0%
Miscellaneous	7.5% - 10.0%	7.5% - 10.5%
Sheriff and Miscellaneous Safety hired on or after January 7, 2012	11.0% - 11.5%	11.5% - 12.0%

Beginning in the year ended June 30, 2006, most employee groups agreed through collective bargaining for employees to contribute all or a portion of the employee contributions, per memorandums of understanding (MOU's), on a pretax basis. As of July 1, 2011, substantially all employee groups have agreed through collective bargaining for employees to contribute all employee contributions on a pre-tax basis.

In the early 1950s, the City and County agreed to exclude uniformed police officers and firefighters from Social Security coverage. Prior to 1990, miscellaneous members covered by Social Security were able to elect to reduce the above stated rate of employee contributions in consideration of their anticipated Social Security benefit payments. All participants who elected such reduction must repay the amount of unpaid employee contributions with interest or there will be an appropriate actuarial reduction in benefits.

Participants terminating service with the employers may withdraw employee contributions plus interest. The Retirement Board reviews and sets the crediting interest rate for the Plan on an annual basis subject to the requirement that the crediting interest rate is at least four percent (4%) per annum and does not exceed the actuarial assumption for return on assets. Interest for the years ended June 30, 2024, and 2023, accumulated at 4.00%.

(10) Net Pension Liability of Employers

The components of the employers' net pension liability at June 30, 2024, and 2023, were as follows (dollars in thousands):

	June 30, 2024	June 30, 2023
Total pension liability	$39,404,561	$37,332,835
Fiduciary net position	$35,417,666	$33,688,428
Net pension liability	$3,986,895	$3,644,407
Fiduciary net position as a percentage of total pension liability	89.9 %	90.2 %

(a) Actuarial Assumptions and Long Term Expected Return Assumptions

The total pension liabilities as of June 30, 2024, and 2023, were determined by actuarial valuations as of July 1, 2023, and 2022, respectively, which were rolled forward to June 30, 2024, and 2023, using standard roll forward procedures.

The following is a summary of actuarial methods and assumptions used at the June 30, 2024, 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, 2024 measurement date are based upon the results of a demographic experience study for the period July 1, 2014, through June 30, 2019, and a review of economic assumptions as of July 1, 2023.

The Supplemental COLA assumptions as of June 30, 2024, were developed based upon the probability and amount of Supplemental COLA expected for each future year and are shown below.

Assumed Future Supplemental COLAs

	Assumed Future Supplemental COLAs Hired Before Prop C		
July 1,	**Old Police & Fire**	**Old Miscellaneous and all New Plans**	**Hired After Prop C**
2024	0.0% to 1.0%	0.50%	0.00%
2025+	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, 2024, are summarized in the following table:

Asset Class	Target Allocation from January 2021 - June 2024	Target Allocation effective as of July 2024	Long-Term Expected Real Rate of Return
Global Equity	37.0%	32.0%	4.2%
Treasuries	8.0%	8.0%	1.8%
Liquid Credit	5.0%	12.0%	3.9%
Private Credit	10.0%	10.0%	5.9%
Private Equity	23.0%	20.0%	7.2%
Real Assets	10.0%	10.0%	5.5%
Absolute Return	10.0%	10.0%	4.4%
Cash	0.0%	1.0%	1.2%
Leverage	-3.0%	-3.0%	1.6%
	100.0%	100.0%	

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 a review of economic assumptions 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

Assumed Future Supplemental COLAs

	Hired Before Prop C		
July 1,	**Old Police & Fire**	**Old Miscellaneous 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, 2024, was 7.20%. The projection of cash flows used to determine the discount rate assumed that plan member and employer 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, 2023, 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, 2024, the System's fiduciary net position was projected to be available to make future benefit payments for current members through 2106. 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 3.93% to the extent that they are not available. The single equivalent percentage rate used to determine the total pension liability as of June 30, 2024, rounded to two decimals is 7.20%.

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 and employer 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 rates of 3.93% and 3.65% used to determine the above discount rates represent the yields available on June 30, 2024, and June 30, 2023, respectively, 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, 2024, and 2023 calculated using the discount rates of 7.20% and 7.20%, respectively, 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 rates:

	Net Pension Liability/(Asset) Dollars in Thousands	
	June 30, 2024	June 30, 2023
1% Decrease	$9,177,708	$8,548,071
Current Discount Rate	$3,986,895	$3,644,407
1% Increase	($290,271)	($398,643)

(d) Money Weighted Rate of Returns

For the years ended June 30, 2024, and 2023, the annual money-weighted rates of return on pension plan investments, net of investment expenses, adjusted for the changing amounts actually invested, were 7.87% and 5.26%, respectively.

(11) 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, 2024, the following timeframes are used.

San Francisco Health Service System Retiree Plan – Multiple-Employer

Valuation Date (VD)	June 30, 2022 updated to June 30, 2023
Measurement Date (MD)	June 30, 2023
Measurement Period (MP)	July 1, 2022 to June 30, 2023

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, 2023. 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 0.3% as of the measurement date.

(b) Benefits

Permanent full-time and elected employees are eligible to retire and receive postretirement health insurance benefits when they are eligible for retirement benefits from the Retirement System. The eligibility requirements are as follows:

Normal Retirement	Miscellaneous	Age 50 with 20 years of credited service[1]
		Age 60 with 10 years of credited service
	Safety	Age 50 with 5 years of credited service
Disabled Retirement[2]	Any age with 10 years of credited service	
Terminated Vested	5 years of credited service at separation	

1. Age 53 with 20 years of credited service, age 60 with 10 years of credited service, or age 65 for Miscellaneous members hired on or after January 7, 2012, under Charter Section 8.603.
2. No service requirement for Safety members retiring under the industrial disability benefit or for surviving spouses / domestic partners of those killed in the line of duty.

Retiree healthcare benefits are administered by the San Francisco Health Service System and include the following:

Medical:	PPO – Blue Shield (self-insured) and UHC Medicare Advantage (fully-insured)
	HMO – Kaiser (fully-insured), Blue Shield (flex-funded) and Health Net (flex-funded)
Dental:	Delta Dental, DeltaCare USA and United Healthcare Dental
Vision:	Vision benefits are provided under the medical insurance plans and are administered by Vision Service Plan.

Projections of the sharing of benefit related costs are based on an established pattern of practice.

(c) Contributions

Benefits provided under the Plan are currently paid through "pay-as-you-go" funding. Additionally, under the City Charter, active officers and employees of the City who commenced employment on or after January 10, 2009, shall contribute to the Retiree Health Care Trust Fund (Trust Fund) a percentage of compensation not to exceed 2% of pre-tax compensation. The City shall contribute 1% of compensation for officers and employees who commenced employment on or after January 10, 2009, until the City's GASB Actuary has determined that the City's portion of the Trust Fund is fully funded. At that time, the City's 1% contribution shall cease, and officers and employees will each contribute 50% of the maximum 2% of pre-tax compensation.

Starting July 1, 2016, active officers and employees of the City who commenced employment on or before January 9, 2009, shall contribute 0.25% of pre-tax compensation into the Trust Fund. Beginning on July 1st of each subsequent year, the active officers and employees of the City who commenced employment on or before January 9, 2009, shall contribute an additional 0.25% of pre-tax compensation up to a maximum of 1%. Starting July 1, 2016, the City shall contribute 0.25% of compensation into the Trust Fund for each officer and employee who commenced employment on or before January 9, 2009. Beginning on July 1st of each subsequent year, the City shall contribute an additional 0.25% of compensation, up to a maximum of 1% for each officer and employee who commenced employment on or before January 9, 2009. When the City's GASB Actuary has determined that the City's portion of the Trust Fund is fully funded, the City's 1% contribution shall cease, and officers and employees will each contribute 50% of the maximum 1% of pre-tax compensation.

Additional or existing contribution requirements may be established or modified by amendment to the City's Charter.

For the year ended June 30, 2024, the City's funding was based on "pay as you go" plus a contribution of $48.8 million to the Retiree Healthcare Trust Fund. The "pay as you go" portion paid by the City was $229.9 million for a total contribution of $278.7 million for the year ended June 30, 2024. The Retirement System's proportionate share of the City's contributions for fiscal year ended 2024 was $877 thousand.

(d) Net OPEB Liability, OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB

As of June 30, 2024, the City reported a net OPEB liability related to the Plan of $3.92 billion. The Retirement System's proportionate share of the City's net OPEB liability as of June 30, 2024 was $12.3 million.

For the year ended June 30, 2024, the City's recognized OPEB expense was $261.2 million. Amortization of the City's deferred outflows and inflows is included as a component of OPEB expense. The Retirement System's proportionate share of the City's OPEB expense was $2.0 million.

As of June 30, 2024, the Retirement System reported its proportionate share of the City's deferred outflows and inflows of resources related to OPEB from the following sources:

Retirement System		**Deferred Outflows of Resources**		**Deferred Inflows of Resources**
Contributions subsequent to measurement date	$	877,000	$	—
Differences between expected and actual experience		530,000		1,431,000
Changes in assumptions		359,000		—
Net difference between projected and actual earnings on plan investments		94,000		—
Change in proportion		519,000		491,000
Total	$	2,379,000	$	1,922,000

Contributions made after the measurement date will reduce the net OPEB liability in the subsequent year. Remaining amounts reported as deferred outflows and deferred inflows of resources will be amortized annually and recognized in OPEB expense as follows:

Year ending June 30:		
2025	$	(208,000)
2026		(26,000)
2027		(58,000)
2028		(114,000)
Thereafter		(14,000)

(e) Actuarial Assumptions

A summary of the actuarial assumptions and methods used to calculate the total OPEB liability as of June 30, 2023 (measurement date), is provided below:

Key Actuarial Assumptions

Valuation Date	June 30, 2022 updated to June 30, 2023
Measurement Date	June 30, 2023
Actuarial Cost Method	The Entry Age Actuarial Cost Method is used to measure the Plan's Total OPEB Liability
Healthcare Cost Trend Rates	Pre-Medicare trend starts at 7.24% trending down to ultimate rate of 3.94% in 2075
	Medicare trend starts at 7.24% trending down to ultimate rate of 3.94% in 2075
	10-County average trend starts at 5.00% trending down to ultimate rate of 3.94% in 2075
	Vision and expenses trend remains a flat 3.00% for all years
Expected Rate of Return on Plan Assets	7.00%
Salary Increase Rate	Wage Inflation Component: 3.25%
	Additional Merit Component (dependent on years of service):
	Police: 0.50% - 7.50%
	Fire: 0.50% - 14.00%
	Muni Drivers: 0.00% - 16.00%
	Craft: 0.50% - 3.75%
	Misc: 0.30% - 5.50%
Inflation Rate	Wage Inflation: 3.25% compounded annually
	Consumer Price Inflation: 2.50% compounded annually
Mortality Tables	Base mortality tables are developed by multiplying a published table by an adjustment factor developed in SFERS experience study for the period ended June 30, 2019.

Non-Annuitants		**Adjustment Factor**	
	Published Table	**Male**	**Female**
Miscellaneous	PubG-2010 Employee	0.834	0.866
Safety	PubS-2010 Employee	1.011	0.979

Healthy Retirees		**Adjustment Factor**	
	Published Table	**Male**	**Female**
Miscellaneous	PubG-2010 Employee	1.031	0.977
Safety	PubS-2010 Employee	0.947	1.044

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

Beneficiaries		**Adjustment Factor**	
	Published Table	**Male**	**Female**
Miscellaneous	PubG-2010 Employee	1.031	0.977
Safety	PubG-2010 Employee	1.031	0.977

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

(f) Sensitivity of Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

The following presents the Retirement System's proportionate share of the City's net OPEB liability calculated using the healthcare cost trend rate, as well as what the Retirement System's allocation of the City's net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1% lower or 1% higher than the current rate:

1% Decrease	Healthcare Cost Trend	1% Increase
$ 10,499,000	$ 12,346,000	$ 14,638,000

(g) Discount Rate

The discount rate used to measure the total OPEB liability as of June 30, 2023 was 7.0%. Based on the assumption that plan member and employer contributions will continue to be made at the rates specified in the Charter, it was determined that the Plan's projected fiduciary net position will be greater than or equal to the benefit payments projected for each future period. As such, the long-term expected rate of return on plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

The long-term expected rate of return on OPEB plan investments was 7.0% based on expected future returns and historical returns experienced by the Trust Fund. Expected future returns were determined based on 10-year and 20-year capital market assumptions for the Trust Fund's asset allocation. Target allocation for each major asset class and best estimates of geometric real rates of return are summarized in the following table:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Equities		
U.S. Large Cap	25.0%	6.1%
U.S. Small Cap	2.0%	6.7%
Developed Market Equity (non-U.S.)	13.0%	7.2%
Emerging Market Equity	10.0%	7.4%
Credit		
Bank Loans	3.0%	4.4%
High Yield Bonds	3.0%	4.7%
Rate Securities		
Investment Grade Bonds	7.0%	2.8%
Short-term Treasury Inflation Protected Securities (TIPS)	5.0%	1.0%
Private Markets		
Private Equity	10.0%	8.4%
Private Debt	5.0%	6.4%
Core Private Real Estate	5.0%	3.9%
Infrastructure (Core Private)	2.0%	5.2%
Risk Mitigating Strategies		
Global Macro	10.0%	3.1%
Total	100.0%	

The following presents the Retirement System's proportionate share of the City's net OPEB liability calculated using the discount rate, as well as what the Retirement System's proportionate share of the City's net OPEB liability would be if it were calculated using a discount rate that is 1% lower or 1% higher than the current rate:

1% Decrease 6.0%	Discount Rate 7.0%	1% Increase 8.0%
$14,450,000	$12,346,000	$10,621,000

City issues a publicly available Annual Comprehensive Financial Report that includes the complete note disclosures and required supplementary information related to the City's postemployment health care obligations. The report may be obtained by writing to the City and County of San Francisco, Office of the Controller, 1 Dr. Carlton B. Goodlett Place, Room 316, San Francisco, California 94102, or by calling (415) 554-7500, or via https://www.sf.gov/annual-comprehensive-financial-reports-acfr.

Fiscal Year 2023 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 0.3% as of the measurement date.

(b) Benefits

Permanent full-time and elected employees are eligible to retire and receive postretirement health insurance benefits when they are eligible for retirement benefits from the Retirement System. The eligibility requirements are as follows:

Normal Retirement	Miscellaneous	Age 50 with 20 years of credited service[1]
		Age 60 with 10 years of credited service
	Safety	Age 50 with 5 years of credited service
Disabled Retirement[2]	Any age with 10 years of credited service	
Terminated Vested	5 years of credited service at separation	

1. Age 53 with 20 years of credited service, age 60 with 10 years of credited service, or age 65 for Miscellaneous members hired on or after January 7, 2012, under Charter Section 8.603.
2. No service requirement for Safety members retiring under the industrial disability benefit or for surviving spouses / domestic partners of those killed in the line of duty.

Retiree healthcare benefits are administered by the San Francisco Health Service System and include the following:

Medical:	PPO – Blue Shield (self-insured) and UHC Medicare Advantage (fully-insured)
	HMO – Kaiser (fully-insured), Blue Shield (flex-funded) and Health Net (flex-funded)
Dental:	Delta Dental, DeltaCare USA and United Healthcare Dental
Vision:	Vision benefits are provided under the medical insurance plans and are administered by Vision Service Plan.

Projections of the sharing of benefit related costs are based on an established pattern of practice.

(c) Contributions

Benefits provided under the Plan are currently paid through "pay-as-you-go" funding. Additionally, under the City Charter, active officers and employees of the City who commenced employment on or after January 10, 2009, shall contribute to the Retiree Health Care Trust Fund (Trust Fund) a percentage of compensation not to exceed 2% of pre-tax compensation. The City shall contribute 1% of compensation for officers and employees who commenced employment on or after January 10, 2009, until the City's GASB Actuary has determined that the City's portion of the Trust Fund is fully funded. At that time, the City's 1% contribution shall cease, and officers and employees will each contribute 50% of the maximum 2% of pre-tax compensation.

Starting July 1, 2016, active officers and employees of the City who commenced employment on or before January 9, 2009, shall contribute 0.25% of pre-tax compensation into the Trust Fund. Beginning on July 1st of each subsequent year, the active officers and employees of the City who commenced employment on or before January 9, 2009, shall contribute an additional 0.25% of pre-tax compensation up to a maximum of 1%. Starting July 1, 2016, the City shall contribute 0.25% of compensation into the Trust Fund for each officer and employee who commenced employment on or before January 9, 2009. Beginning on July 1st of each subsequent year, the City shall contribute an additional 0.25% of compensation, up to a maximum of 1% for each officer and employee who commenced employment on or before January 9, 2009. When the City's GASB Actuary has determined that the City's portion of the Trust Fund is fully funded, the City's 1% contribution shall cease, and officers and employees will each contribute 50% of the maximum 1% of pre-tax compensation.

Additional or existing contribution requirements may be established or modified by amendment to the City's Charter.

For the year ended June 30, 2023, the City's funding was based on "pay as you go" plus a contribution of $45.2 million to the Retiree Healthcare Trust Fund. The "pay as you go" portion paid by the City was $215.4 million for a total contribution of $260.6 million for the year ended June 30, 2023. The Retirement System's proportionate share of the City's contributions for fiscal year 2022-23 was $785 thousand

(d) Net OPEB Liability, OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB

As of June 30, 2023, the City reported a net OPEB liability related to the Plan of $3.75 billion. The Retirement System's proportionate share of the City's net OPEB liability as of June 30, 2023 was $11.3 million.

For the year ended June 30, 2023, the City's recognized OPEB expense was $257.0 million. Amortization of the City's deferred outflows and inflows is included as a component of OPEB expense. The Retirement System's proportionate share of the City's OPEB expense was $62 thousand.

As of June 30, 2023, the Retirement System reported its proportionate share of the City's deferred outflows and inflows of resources related to OPEB from the following sources:

Retirement System	**Deferred Outflows of Resources**	**Deferred Inflows of Resources**
Contributions subsequent to measurement date	$ 785,000	$ —
Differences between expected and actual experience	250,000	1,878,000
Changes in assumptions	482,000	—
Net difference between projected and actual earnings on plan investments	182,000	—
Change in proportion	667,000	—
Total	$ 2,366,000	$ 1,878,000

Contributions made after to the measurement date will reduce the net OPEB liability in the subsequent year. Remaining amounts reported as deferred outflows and deferred inflows of resources will be amortized annually and recognized in OPEB expense as follows:

Year ending June 30:	
2024	$ (106,000)
2025	(103,000)
2026	10,000
2027	(21,000)
2028	(77,000)

(e) Actuarial Assumptions

A summary of the actuarial assumptions and methods used to calculate the total OPEB liability as of June 30, 2022 (measurement date), is provided below:

Key Actuarial Assumptions

Valuation Date	June 30, 2022
Measurement Date	June 30, 2022
Actuarial Cost Method	The Entry Age Actuarial Cost Method is used to measure the Plan's Total OPEB Liability
Healthcare Cost Trend Rates	Pre-Medicare trend starts at 7.74% trending down to ultimate rate of 3.93% in 2076
	Medicare trend starts at 7.74% trending down to ultimate rate of 3.94% in 2076
	10-County average trend starts at 5.00% trending down to ultimate rate of 3.94% in 2076
	Vision and expenses trend remains a flat 3.00% for all years
Expected Rate of Return on Plan Assets	7.00%
Salary Increase Rate	Wage Inflation Component: 3.25%
	Additional Merit Component (dependent on years of service):
	Police: 0.50% - 7.50%
	Fire: 0.50% - 14.00%
	Muni Drivers: 0.00% - 16.00%
	Craft: 0.50% - 3.75%
	Misc: 0.30% - 5.50%
Inflation Rate	Wage Inflation: 3.25% compounded annually
	Consumer Price Inflation: 2.50% compounded annually
Mortality Tables	Base mortality tables are developed by multiplying a published table by an adjustment factor developed in SFERS experience study for the period ended June 30, 2019.

Non-Annuitants

	Published Table	Adjustment Factor Male	Adjustment Factor Female
Miscellaneous	PubG-2010 Employee	0.834	0.866
Safety	PubS-2010 Employee	1.011	0.979

Healthy Retirees

	Published Table	Adjustment Factor Male	Adjustment Factor Female
Miscellaneous	PubG-2010 Employee	1.031	0.977
Safety	PubS-2010 Employee	0.947	1.044

Disabled Retirees

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

Beneficiaries

	Published Table	Adjustment Factor Male	Adjustment Factor Female
Miscellaneous	PubG-2010 Employee	1.031	0.977
Safety	PubG-2010 Employee	1.031	0.977

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

(f) Sensitivity of Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

The following presents the Retirement System's proportionate share of the City's net OPEB liability calculated using the healthcare cost trend rate, as well as what the Retirement System's allocation of the City's net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1% lower or 1% higher than the current rate:

1% Decrease	Healthcare Cost Trend	1% Increase
$ 9,649,000	$ 11,279,000	$ 13,301,000

(g) Discount Rate

The discount rate used to measure the total OPEB liability as of June 30, 2022 was 7.0%. Based on the assumption that plan member and employer contributions will continue to be made at the rates specified in the Charter, it was determined that the Plan's projected fiduciary net position will be greater than or equal to the benefit payments projected for each future period. As such, the long-term expected rate of return on plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

The long-term expected rate of return on OPEB plan investments was 7.0% based on expected future returns and historical returns experienced by the Trust Fund. Expected future returns were determined based on 10-year and 20-year capital market assumptions for the Trust Fund's asset allocation. Target allocation for each major asset class and best estimates of geometric real rates of return are summarized in the following table:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Equities		
U.S. Large Cap	28.0%	6.8%
U.S. Small Cap	3.0%	7.4%
Developed Market Equity (non-U.S.)	15.0%	7.5%
Emerging Market Equity	13.0%	8.4%
Credit		
Bank Loans	3.0%	4.0%
High Yield Bonds	3.0%	4.4%
Emerging Market Bonds	3.0%	4.2%
Rate Securities		
Investment Grade Bonds	9.0%	2.4%
Long-term Government Bonds	4.0%	2.8%
Short-term Treasury Inflation Protected Securities (TIPS)	4.0%	1.9%
Private Markets		
Private Equity	5.0%	10.0%
Core Private Real Estate	5.0%	6.1%
Risk Mitigating Strategies		
Global Macro	5.0%	5.0%
Total	100.0%	

The following presents the Retirement System's proportionate share of the City's net OPEB liability calculated using the discount rate, as well as what the Retirement System's proportionate share of the City's net OPEB liability would be if it were calculated using a discount rate that is 1% lower or 1% higher than the current rate:

1% Decrease 6.0%	Discount Rate 7.0%	1% Increase 8.0%
$13,131,000	$11,279,000	$9,760,000

City issues a publicly available Annual Comprehensive Financial Report that includes the complete note disclosures and required supplementary information related to the City's postemployment health care obligations. The report may be obtained by writing to the City and County of San Francisco, Office of the Controller, 1 Dr. Carlton B. Goodlett Place, Room 316, San Francisco, California 94102, or by calling (415) 554-7500, or via https://www.sf.gov/annual-comprehensive-financial-reports-acfr.

Schedule of Changes in Collective Net Pension Liability/(Asset) and Related Ratios
Dollars in thousands

Year ended June 30	2024	2023	2022	2021	2020
Total pension liability:					
Service cost	$872,979	$813,901	$781,610	$718,771	$704,637
Interest	2,650,500	2,518,802	2,471,994	2,302,075	2,230,441
Changes of benefit terms	–	59,080	–	–	–
Differences between expected and actual experience	480,293	295,778	98,920	136,097	205,869
Changes of assumptions	–	–	786,100	(479,435)	(117,141)
Benefit payments, including refunds of member contributions	(1,932,046)	(1,844,365)	(1,737,750)	(1,619,761)	(1,548,077)
Net change in total pension liability	2,071,726	1,843,196	2,400,874	1,057,747	1,475,729
Total pension liability - beginning of year	37,332,835	35,489,639	33,088,765	32,031,018	30,555,289
Total pension liability - ending of year (a)	39,404,561	37,332,835	35,489,639	33,088,765	32,031,018
Fiduciary net position:					
Contributions - member	427,512	413,916	423,471	409,398	400,649
Contributions - employer	672,618	672,651	768,463	836,559	742,985
Net investment income	2,587,698	1,670,666	(2,308,320)	9,447,669	966,282
Benefit payments, including refunds of member contributions	(1,932,046)	(1,844,365)	(1,737,750)	(1,619,761)	(1,548,077)
Administrative expenses	(26,544)	(22,964)	(21,174)	(20,249)	(20,270)
Net change in fiduciary net position	1,729,238	889,904	(2,875,310)	9,053,616	541,569
Fiduciary net position - beginning of year					
Beginning of year (as previously reported)	33,688,428	32,798,524	35,673,834	26,620,218	26,078,649
Restatement due to adoption of GASB 75	–	–	–	–	–
Beginning of year (as restated)	33,688,428	32,798,524	35,673,834	26,620,218	26,078,649
Fiduciary net position - ending of year (b)	35,417,666	33,688,428	32,798,524	35,673,834	26,620,218
Net pension liability - ending of year (a) – (b)	$3,986,895	$3,644,407	$2,691,115	$ (2,585,069)	$5,410,800
Fiduciary net position as a percentage of total pension liability	89.9 %	90.2 %	92.4 %	107.8 %	83.1 %
Covered payroll	$4,319,733	$3,994,117	$3,742,459	$3,623,898	$ 3,566,991
Net pension liability/(asset) as a percentage of of covered payroll	92.3 %	91.2 %	71.9 %	-71.3 %	151.7 %

SAN FRANCISCO CITY AND COUNTY EMPLOYEES' RETIREMENT SYSTEM
Required Supplementary Information – Unaudited
Years Ended June 30, 2024 and 2023

Schedule of Changes in Collective Net Pension Liability/(Asset) and Related Ratios (continued)
Dollars in thousands

Year ended June 30	2019	2018	2017	2016	2015
Total pension liability:					
Service cost	$675,065	$632,118	$644,277	$567,576	$523,644
Interest	2,131,847	2,041,110	1,924,206	1,669,996	1,621,582
Changes of benefit terms	–	–	–	1,293,714	–
Differences between expected and actual experience	12,484	(42,382)	57,911	(119,270)	(197,981)
Changes of assumptions	351,902	170,699	88,180	1,087,309	216,845
Benefit payments, including refunds of member contributions	(1,456,682)	(1,364,587)	(1,278,140)	(1,256,146)	(1,131,030)
Net change in total pension liability	1,714,616	1,436,958	1,436,434	3,243,179	1,033,060
Total pension liability - beginning of year	28,840,673	27,403,715	25,967,281	22,724,102	21,691,042
Total pension liability - ending of year (a)	30,555,289	28,840,673	27,403,715	25,967,281	22,724,102
Fiduciary net position:					
Contributions - member	380,980	364,696	316,844	322,764	301,682
Contributions - employer	645,056	619,067	551,809	526,805	592,643
Net investment income	1,970,312	2,549,674	2,683,468	150,190	763,429
Benefit payments, including refunds of member contributions	(1,456,682)	(1,364,587)	(1,278,140)	(1,256,146)	(1,131,030)
Administrative expenses	(18,983)	(18,238)	(18,134)	(17,179)	(19,262)
Net change in fiduciary net position	1,520,683	2,150,612	2,255,847	(273,566)	507,462
Fiduciary net position - beginning of year					
Beginning of year (as previously reported)	24,557,966	22,410,350	20,154,503	20,428,069	19,920,607
Restatement due to adoption of GASB 75	–	(2,996)	–	–	–
Beginning of year (as restated)	24,557,966	22,407,354	20,154,503	20,428,069	19,920,607
Fiduciary net position - ending of year (b)	26,078,649	24,557,966	22,410,350	20,154,503	20,428,069
Net pension liability - ending of year (a) – (b)	$4,476,640	$4,282,707	$4,993,365	$ 5,812,778	$2,296,033
Fiduciary net position as a percentage of total pension liability	85.3 %	85.2 %	81.8 %	77.6 %	89.9 %
Covered payroll	$3,375,447	$3,221,544	$3,041,818	$2,836,498	$ 2,642,752
Net pension liability/(asset) as a percentage of of covered payroll	132.6 %	132.9 %	164.2 %	204.9 %	86.9 %

Schedule of Employer Contributions
Dollars in thousands

Year Ended June 30	Actuarially Determined Contributions	Contributions in Relation to Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2024	$ 672,618	$ 672,618	$ —	$ 4,319,733	15.6 %
2023	672,651	672,651	—	3,994,117	16.8 %
2022	768,463	768,463	—	3,742,459	20.5 %
2021	836,559	836,559	—	3,623,898	23.1 %
2020	742,985	742,985	—	3,566,991	20.8 %
2019	645,056	645,056	—	3,375,447	19.1 %
2018	619,067	619,067	—	3,221,544	19.2 %
2017	551,809	551,809	—	3,041,818	18.1 %
2016	526,805	526,805	—	2,836,498	18.6 %
2015	592,643	592,643	—	2,642,752	22.4 %

Schedule of Money-Weighted Rate of Return

Year Ended June 30	Money-Weighted Rate of Return
2024	7.87%
2023	5.26%
2022	-6.24%
2021	35.45%
2020	3.86%
2019	8.19%
2018	11.55%
2017	13.52%
2016	0.96%
2015	4.03%

Note to Schedule of Changes in Collective Net Pension Liability and Related Ratios

The total pension liability contained in the schedule 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
2024	7.20%
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%

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. Methods and assumptions used to determine contribution rates are:

Year Ended June 30	Valuation Date	Discount Rate	Salary Increase/ Amortization Growth	Mortality	Significant Changes in Assumptions from Prior Year
2024	7/1/2022	7.20%	3.25%	Adj. 2010 Pub-G and 2010 Pub-S Mortality Tables projected generationally with MP-2019	None
2023	7/1/2021	7.20%	3.25%		Discount rate
2022	7/1/2020	7.40%	3.25%		Wage inflation and demographic assumptions including rates of retirement, termination, refund, disability and mortality and salary merit based upon experience study
2021	7/1/2019	7.40%	3.50%	Adj. 2009 CalPERS Mortality Tables projected generationally with mod. MP-2015	None
2020	7/1/2018	7.40%	3.50%		Discount rate
2019	7/1/2017	7.50%	3.50%		Wage inflation assumption
2018	7/1/2016	7.50%	3.75%		None
2017	7/1/2015	7.50%	3.75%		Demographic assumptions including rates of retirement, termination, refund, disability and mortality and salary merit based upon experience study
2016	7/1/2014	7.50%	3.75%	RP2000 Mortality projected with Scale AA	Investment return and wage inflation assumptions
2015	7/1/2013	7.58%	3.83%		None

A complete description of the methods and assumptions used to determine contribution rates can be found in the corresponding actuarial valuation reports.