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

Years Ended June 30, 2021 and 2020



Financial Statements and Required Supplementary Information (With Independent Auditor's Report Thereon) Years Ended June 30, 2021 and 2020

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Independent Auditor's Report

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

Report on the Financial Statements

We have audited the accompanying 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, 2021, and 2020, 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.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement System as of June 30, 2021 and 2020, 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.

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, 2021 and 2020, and the changes in its financial position 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.

Other Matters

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 auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our 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 January 27, 2022, 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 for the year ended June 30, 2021. 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 Gihi & O'Conhell LAP
San Francisco, California

January 27, 2022

Management's Discussion and Analysis – Unaudited Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021 and 2020. We encourage readers to consider the information presented here in conjunction with the *Basic Financial Statements and Required Supplementary Information*, which follow this discussion. All amounts, unless otherwise indicated, are expressed in thousands of dollars.

Financial Highlights

Fiscal Year 2021

- 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, 2021. The Plan held \$35,673,834 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, 2021, measurement date, the fiduciary net position was 107.8% of the total pension liability.
- For the year ended June 30, 2021, the Retirement System's net investment income of \$9,447,669 represents 35.5% of fiduciary net position as of the beginning of the fiscal year.
- Total fiduciary net position held in trust for pension benefits increased by \$9,053,616, or 34.0%, 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 \$409,398, an increase of \$8,749 or 2.2% from the prior year, primarily as a result of a 1.6% increase in covered payroll. Employee contribution rates in fiscal year 2020-21 ranged from 7.5% 13.0%, same as in fiscal year 2019-20.
- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled \$836,559, an increase of \$93,574 or 12.6% from the prior year, partly due to the 1.6% increase in covered payroll and partly due to increased employer contribution rates. Employer contribution rates ranged from 22.40% to 26.90% in fiscal year 2020-21 and 20.69% to 25.19% in fiscal year 2019-20.
- Total deductions from the Plan were \$1,640,010, an increase of 4.6% 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 and an increase in the cost of living adjustments (COLA).

Fiscal Year 2020

■ 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, 2020. The Plan held \$26,620,218 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.

Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

- 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, 2020, measurement date, the fiduciary net position was 83.1% of the total pension liability
- For the year ended June 30, 2020, the Retirement System's net investment income of \$966,282 represents 3.7% of fiduciary net position as of the beginning of the fiscal year.
- Total fiduciary net position held in trust for pension benefits increased by \$541,569, or 2.1%, 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 \$400,649, an increase of \$19,669 or 5.2% from the prior year, primarily as a result of a 5.7% increase in covered payroll. Employee contribution rates in fiscal year 2019-20 ranged from 7.5% 13.0%, same as in fiscal year 2018-19.
- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled \$742,985, an increase of \$97,929 or 15.2% from the prior year, partly due to the 5.7% increase in covered payroll and partly due to increased employer contribution rates. Employer contribution rates ranged from 20.69% to 25.19% in fiscal year 2019-20 and 18.81% to 23.31% in fiscal year 2018-19.
- Total deductions from the Plan were \$1,568,347, an increase of 6.3% 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 and an increase in the COLA.

Overview of Financial Statements

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

- 1. **Statements of Fiduciary Net Position** are snapshots of account balances as of the close of the years June 30, 2021 and 2020. 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, 2021 and 2020.
- 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, 2021 and 2020.
- 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.

Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021 and 2020. 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, 2021, 2020, and 2019 are represented in the table below:

Fiduciary Net Position Summary – June 30, 2021, 2020, and 2019

	2021	 2020	2019
Other assets	\$ 330,508	\$ 539,779	\$ 245,668
Investments at fair value	36,210,381	26,704,727	26,021,469
Total assets	36,540,889	27,244,506	26,267,137
Deferred outflows of resources	2,255	1,587	1,027
Total assets and deferred outflows of resources	36,543,144	27,246,093	26,268,164
Total liabilities	867,338	624,636	188,422
Deferred inflows of resources	1,972	1,239	1,093
Total liabilities and deferred inflows of resources	869,310	625,875	189,515
Fiduciary net position	\$ 35,673,834	\$ 26,620,218	\$ 26,078,649
Total liabilities Deferred inflows of resources Total liabilities and deferred inflows of resources	\$ 867,338 1,972 869,310	\$ 624,636 1,239 625,875	\$ 188,422 1,093 189,515

As of June 30, 2021, the Plan's total fiduciary net position held in trust for pension benefits increased by \$9,053,616 or 34.0% for the year, primarily due to positive investment returns. Payables to brokers increased by \$6,073 and payables to borrowers of securities increased by \$223,485 due to the timing of investments and lending activities.

As of June 30, 2020, the Plan's total fiduciary net position held in trust for pension benefits increased by \$541,569 or 2.1% for the year, primarily due to positive investment returns. Payables to brokers decreased by \$112,744 and payables to borrowers of securities increased by \$547,029 due to the timing of investments and lending activities.

Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The Retirement Board believes that the Plan remains in a strong financial position to meet its obligations to the Plan members and beneficiaries. The U.S. economic recovery took hold in the year ended June 30, 2021, a result of re-opening measures enacted in the wake of the COVID-19 pandemic, along with optimism surrounding the vaccine rollout to combat the virus. Global governments supported their economies through continued fiscal stimulus measures, including the \$1.9 trillion American Rescue Plan passed in March 2021. The Federal Reserve remained accommodative, leaving the Federal Funds Rate in a targeted range of 0.00% to 0.25%, and continued its quantitative easing program. Similar actions were taken by central banks globally. These stimulus measures, along with the vaccine rollout for COVID-19 and easing of lockdown restrictions, provided strong tailwinds for risk assets during the fiscal year. U.S. stocks posted their twelfth consecutive year of positive returns and outperformed international equities, returning a robust 40.8% as measured by the S&P 500 Index. International developed-markets equities (+32.3% for the year) performed well but lagged domestic equities significantly. Emerging markets equities returned 40.9%, outperforming both U.S. equities and international-developed markets equities. U.S. equity outperformance was driven in large part by economically sensitive sectors like Financials, Industrials, and Energy, which were expected to benefit from re-opening measures. Reflecting a steepening yield curve over the year, U.S. high quality fixed income returns were modestly negative, returning -0.3% in the fiscal year as measured by the Bloomberg U.S. Aggregate Bond Index.

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.

Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Highlights of Changes in Fiduciary Net Position – Years ended June 30, 2021, 2020, and 2019

Additions: Member contributions \$ 409,398 \$ 400,649 \$ 380,980 Employer contributions 836,559 742,985 645,056 Interest 50,520 80,729 95,100 Dividends 84,514 108,344 203,047 Net appreciation in fair value of investments 9,372,334 822,342 1,720,605 Securities lending income 4,059 1,313 - Investment expenses (62,331) (46,671) (48,440) Securities lending borrower rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position - restricted for pension 9,053,616 541,569 1,520,683			2021	2020	2019	
Employer contributions 836,559 742,985 645,056 Interest 50,520 80,729 95,100 Dividends 84,514 108,344 203,047 Net appreciation in fair value of investments 9,372,334 822,342 1,720,605 Securities lending income 4,059 1,313 - Investment expenses (62,331) (46,671) (48,440) Securities lending borrower rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649	Additions:					
Interest 50,520 80,729 95,100 Dividends 84,514 108,344 203,047 Net appreciation in fair value of investments 9,372,334 822,342 1,720,605 Securities lending income 4,059 1,313 - Investment expenses (62,331) (46,671) (48,440) Securities lending borrower rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position — restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Member contributions	\$	409,398	\$ 400,649	\$	380,980
Dividends 84,514 108,344 203,047 Net appreciation in fair value of investments 9,372,334 822,342 1,720,605 Securities lending income 4,059 1,313 - Investment expenses (62,331) (46,671) (48,440) Securities lending borrower rebates and expenses 1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Employer contributions		836,559	742,985		645,056
Net appreciation in fair value of investments 9,372,334 822,342 1,720,605 Securities lending income 4,059 1,313 - Investment expenses (62,331) (46,671) (48,440) Securities lending borrower rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position — restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Interest		50,520	80,729		95,100
Securities lending income 4,059 1,313 - Investment expenses (62,331) (46,671) (48,440) Securities lending borrower rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Dividends		84,514	108,344		203,047
Investment expenses (62,331) (46,671) (48,440) Securities lending borrower rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Net appreciation in fair value of investments		9,372,334	822,342		1,720,605
Securities lending borrower rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Securities lending income		4,059	1,313		-
rebates and expenses (1,427) 225 - Total additions 10,693,626 2,109,916 2,996,348 Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Investment expenses		(62,331)	(46,671)		(48,440)
Deductions: 10,693,626 2,109,916 2,996,348 Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Securities lending borrower					
Deductions: Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	rebates and expenses		(1,427)	225		-
Benefits 1,599,507 1,531,041 1,438,935 Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Total additions		10,693,626	 2,109,916		2,996,348
Refunds of contributions 20,254 17,036 17,747 Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Deductions:					
Administrative expenses 20,995 19,670 18,204 Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Benefits		1,599,507	1,531,041		1,438,935
Administrative expenses and offset - OPEB (746) 600 779 Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Refunds of contributions		20,254	17,036		17,747
Total deductions 1,640,010 1,568,347 1,475,665 Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Administrative expenses		20,995	19,670		18,204
Net increase in fiduciary net position 9,053,616 541,569 1,520,683 Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Administrative expenses and offset - OPEB		(746)	600		779
Fiduciary net position – restricted for pension benefits: Beginning of year 26,620,218 26,078,649 24,557,966	Total deductions		1,640,010	1,568,347		1,475,665
Beginning of year 26,620,218 26,078,649 24,557,966	Net increase in fiduciary net position		9,053,616	541,569		1,520,683
	Fiduciary net position – restricted for pension	ı ben	efits:			
End of the year \$ 35,673,834 \$ 26,620,218 \$ 26,078,649	Beginning of year		26,620,218	26,078,649		24,557,966
	End of the year	\$	35,673,834	\$ 26,620,218	\$	26,078,649

Fiscal Year 2021

- Members' contributions to the Plan totaled \$409,398, an increase of \$8,749 or 2.2% from the prior year, primarily as a result of a 1.6% increase in covered payroll. Employee contribution rates in fiscal year 2020-21 ranged from 7.5% 13.0%, same as in fiscal year 2019-20.
- In order to maintain the fiscal soundness of the Plan, required employer contributions to the Plan totaled \$836,559, an increase of \$93,574 or 12.6% from the prior year, partly due to the 1.6% increase in covered payroll and partly due to increased employer contribution rates. Employer contribution rates ranged from 22.40% to 26.90% in fiscal year 2020-21 and 20.69% to 25.19% in fiscal year 2019-20.

Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

- Net investment income increased by \$8,481,387 from the prior year. The majority of the increase is attributed to the \$8,549,992 increase in net appreciation in fair value of investments primarily due to strong investment returns in most of the asset classes that the Retirement System invests in. Interest income decreased by \$30,209, mainly due to the domestic fixed income markets.
- Benefit payments to Plan participants increased by \$68,466 or 4.5%, due to a 2.4% increase in the number of payees, an increase in average retirement benefits and an increase in the COLA.

Fiscal Year 2020

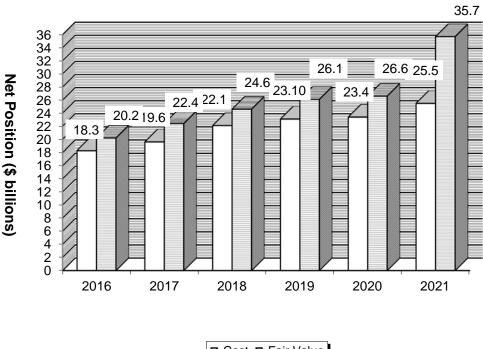
- Members' contributions to the Plan totaled \$400,649, an increase of \$19,669 or 5.2% from the prior year, primarily as a result of a 5.7% increase in covered payroll. Employee contribution rates in fiscal year 2019-20 ranged from 7.5% 13.0%, same as in fiscal year 2018-19.
- In order to maintain the fiscal soundness of the Plan, \$742,985 in required employer contributions were made during the year ended June 30, 2020. The increase of \$97,929 in required employer contributions reflected the increase in covered payroll. Employer contribution rates ranged from 20.69% to 25.19% in fiscal year 2019-20 and 18.81% to 23.31% in fiscal year 2018-19.
- Net investment income decreased by \$1,004,030 from the prior year. The majority of the decrease is attributed to the \$898,263 decline in net appreciation in fair value of investments primarily due to lower investment returns in most of the asset classes that the Retirement System invests in. Interest income decreased by \$14,371, mainly due to the domestic fixed income markets.

Benefit payments to Plan participants increased by \$92,106 or 6.4%, due to both a 1.5% increase in the number of payees and the Supplemental COLA and Basic COLA effective July 1, 2019, as well as an increase in average retirement benefits.

Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Fiduciary net position as of June 30, 2016 through 2021, expressed at cost and fair value of investments are represented in the chart below:

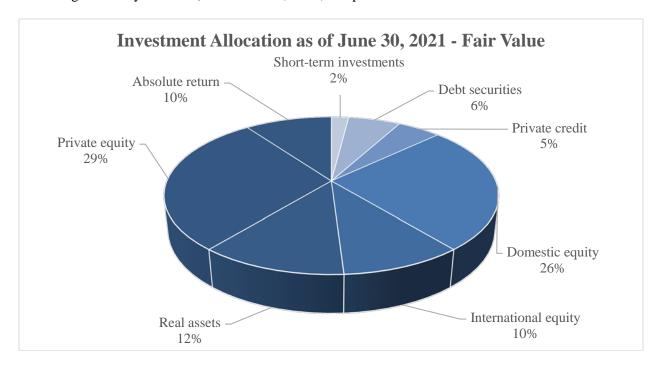
Plan Net Position as of June 30 (\$billions)



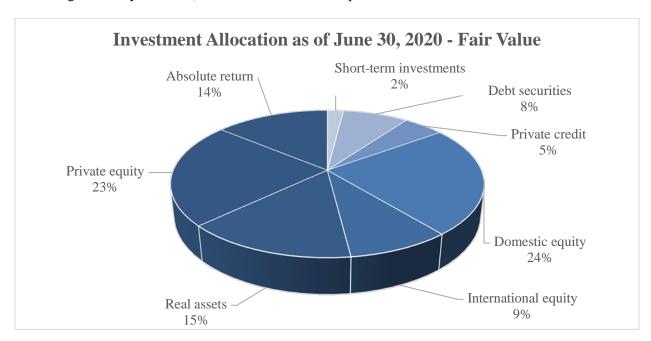
□ Cost ■ Fair Value

Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The investment allocation at fair value based on investment category (excluding securities lending collateral and foreign currency contracts) as of June 30, 2021, 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, 2020, is represented in the chart below:



Management's Discussion and Analysis – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021 and 2020. Questions regarding any of the information provided in this report or requests for additional financial information should be addressed to:

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

Statements of Fiduciary Net Position June 30, 2021 and 2020 (In thousands)

	2021			2020		
Assets:						
Deposits	\$	49,724	\$	44,386		
Contributions receivable - members		19,837		17,959		
Investment income receivable:						
Interest		9,578		10,931		
Dividends		2,154		2,482		
Securities Lending		275		490		
Receivable from brokers, general partners, and others		248,940		463,531		
Investments at fair value:						
Short-term investments		651,504		526,053		
City investment pool		9,184		32,391		
Debt securities:						
U.S. government and agency securities		1,090,034		1,094,201		
Other debt securities		1,094,046		958,424		
Equity securities:						
Domestic		9,126,749		6,204,312		
International		3,530,581		2,402,026		
Real assets		4,182,366		3,840,427		
Private credit		1,818,240		1,291,763		
Private equity		10,280,363		6,105,532		
Absolute return		3,656,388		3,702,667		
Foreign currency contracts, net		69		(116)		
Invested securities lending collateral		770,857		547,047		
Total investments		36,210,381		26,704,727		
Total assets		36,540,889		27,244,506		
Deferred outflows of resources:						
Other postemployment benefits (OPEB)		2,255		1,587		
Total assets and deferred outflows of resources		36,543,144		27,246,093		
Liabilities:						
Payable to brokers		41,847		35,774		
Other		54,977		41,833		
Payable to borrowers of securities		770,514		547,029		
Total liabilities		867,338		624,636		
Deferred inflows of resources:						
Other postemployment benefits (OPEB)		1,972		1,239		
Total liabilities and deferred inflows of resources		869,310		625,875		
Fiduciary net position – restricted for pension benefits	\$	35,673,834	\$	26,620,218		

See accompanying notes to financial statements.

Statements of Changes in Fiduciary Net Position Years Ended June 30, 2021 and 2020 (In thousands)

	2021			2020	
Additions:				_	
Member contributions					
Miscellaneous	\$	338,135	\$	330,197	
Police		42,304		41,514	
Fire		28,959		28,938	
Total member contributions		409,398		400,649	
Employer contributions					
Miscellaneous		709,918		630,730	
Police		73,398		65,059	
Fire		53,243		47,196	
Total employer contributions		836,559		742,985	
Investment income (expenses)					
Interest		50,520		80,729	
Dividends		84,514		108,344	
Net appreciation in fair value of investments		9,372,334		822,342	
Securities lending income		4,059		1,313	
Investment expenses		(62,331)		(46,671)	
Securities lending borrower rebates and expenses		(1,427)		225	
Net investment income		9,447,669		966,282	
Total additions		10,693,626		2,109,916	
Deductions:					
Benefits		1,599,507		1,531,041	
Refunds of contributions		20,254		17,036	
Administrative expenses		20,995		19,670	
Administrative expenses and offset - OPEB		(746)		600	
Total deductions		1,640,010		1,568,347	
Net increase in fiduciary net position		9,053,616		541,569	
Fiduciary net position – restricted for pension benefits					
Beginning of year		26,620,218		26,078,649	
End of year	\$	35,673,834	\$	26,620,218	

Notes to Financial Statements Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(1) Plan Description

(a) General

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

The Retirement System is considered to be a part of the City and County's financial reporting entity and is included in the City and County's basic financial statements as a pension trust fund. The financial statements of the Retirement System are intended to present only the fiduciary net position and changes in fiduciary net position of the Retirement System. They do not purport to, and do not, present fairly the financial position of the City and County as of June 30, 2021 and 2020, and the changes in its financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America. The City and County's Annual Comprehensive Financial Report can be obtained from City Hall, Room 316, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.

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

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(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. 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. 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. 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 before November 2, 1976, qualify for a service retirement benefit if they are at least 50 years old and have at least 25 years of credited service. The service retirement benefit is calculated using the member's final compensation (monthly salary earnable at the rank or position the member held for at least one year immediately prior to retiring) 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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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 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 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 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. Miscellaneous members hired before November 2, 1976, need 10 years of credited service to elect the vesting option.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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.

Death Benefits Prior to Retirement

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.

Death Benefits after Retirement

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)

Basic COLA

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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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 in years when there are sufficient "excess" investment earnings in the Plan. Effective July 1, 2012, voters approved changes in the criteria for payment of the Supplemental COLA benefit. Certain provisions of the voter approved proposition (Prop C) were challenged in the courts. A decision by the California courts modified the interpretation of the proposition. Effective July 1, 2012, Retirement System members who retired before November 6, 1996, will receive a Supplemental COLA when there are sufficient "excess" investment earnings in the Plan and the Plan is also fully funded on a market value of assets basis. The "full funding" requirement does not apply to Retirement System members who retired after November 6, 1996, and were hired before January 7, 2012. For members who were hired before January 7, 2012, all Supplemental COLAs paid to them in retirement benefits will continue into the future even where an additional Supplemental COLA is not payable in any given year. For members who are hired on and after January 7, 2012, a Supplemental COLA will be paid to retirees when there are sufficient "excess" investment earnings in the Plan and the Plan is also fully funded on a market value of assets basis. For this group, Supplemental COLAs will not be permanent adjustments to retirement benefits. In years when a Supplemental COLA is not paid, all previously paid Supplemental COLAs will expire.

(f) Deferred Retirement Option Program

In February 2008, the voters of the City and County approved a Charter amendment to provide a Deferred Retirement Option Program (DROP) for certain Police members of the Plan to be effective July 1, 2008. An eligible police officer could elect to participate in DROP for a specified period of time up to a maximum of three years depending on the rank of the police officer. While participating in DROP, the police officer continued to work and receive pay as a police officer and accrued monthly DROP distributions posted to a nominal account maintained by the Retirement System. The monthly DROP distribution is equal to the participant's monthly service retirement allowance calculated as of the participant's entry into DROP. Interest at an annual effective rate of 4% and applicable COLAs were posted to the participant's DROP account during participation in DROP. Upon exiting from DROP, the participant receives a lump sum distribution from his or her DROP account and begins to receive a monthly service retirement allowance calculated using age, covered compensation, and service frozen as of the date of his or her entry into DROP. DROP was closed to new applicants on June 30, 2011. The Retirement System has no qualified participants in DROP starting June 30, 2020.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(g) Membership

Membership of the Retirement System consisted of the following as of June 30, 2021:

Police ¹	Fire	Miscellaneous	Total
2,801	2,223	25,830	30,854
2,475	1,599	29,570	33,644
294	84	10,748	11,126
5,570	3,906	66,148	75,624
	2,801 2,475 294	2,801 2,223 2,475 1,599 294 84	2,801 2,223 25,830 2,475 1,599 29,570 294 84 10,748

¹ Police counts include Sheriff and Miscellaneous Safety.

Membership of the Retirement System consisted of the following as of June 30, 2020:

	Police ¹	Fire	Miscellaneous	Total
Retirees and beneficiaries				
currently receiving benefits	2,730	2,164	25,234	30,128
Active members	2,534	1,660	30,327	34,521
Terminated members entitled to				
but not yet receiving benefits	275	83	10,191	10,549
Total	5,539	3,907	65,752	75,198

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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The fair values of the Retirement System's partnership interests, which include private equity, real assets, private credit, and some public equity investments, are based on net asset values (NAV) provided by the general partners and investment managers. Partnership financial statements are audited annually 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.

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 net asset value, and are audited annually. The most significant input into the NAV of such an entity is the fair value of its investment holdings. These holdings are typically valued on a monthly basis by each fund's independent administrator and for certain illiquid investments, where no market exists, the General Partner may provide pricing input. The management assumptions are based upon the nature of the investment and the underlying business. Investments have the potential to become illiquid under stressed market conditions and, in certain circumstances, investors may be subject to redemption restrictions which can impede the timely return of capital. The valuation techniques vary based upon underlying investment type, but are predominantly derived from observed market prices.

At its January 8, 2020 Board Meeting, the Retirement Board approved reinstating a securities lending program through the Retirement System's custodian bank. The Charter and Retirement Board policies permit the Retirement System to use investments of the Plan to enter into securities lending transactions – loans of securities to broker-dealers and other entities for collateral with a simultaneous agreement to return the collateral for the same securities in the future. The collateral guidelines allow for both cash or non-cash collateral; non-cash collateral includes equity security baskets, investment grade corporate bonds, and sovereign debt issued by Organization for Economic Co-operation and Development (OECD) member countries.

The Retirement System's custodian, BNY Mellon, is the agent in lending the Plan's securities for cash and non-cash collateral. Contracts with the lending agent to indemnify the Retirement System if the borrowers fail to return the securities (and if the collateral were inadequate to replace the securities lent) or fail to pay the Retirement System for income distributions by the securities' issuers while the securities are on loan. BNY Mellon also indemnifies Retirement System from loss on all repurchase agreements held in the securities lending cash collateral account. If, with respect to investments of cash collateral in repurchase transactions, the counterparty fails to deliver the repurchase price upon termination, BNY Mellon will sell the purchased securities and deposit the proceeds to Retirement System's collateral account. If the proceeds are less than the repurchase price, BNY Mellon will credit the amount of such difference to Retirement System's collateral account.

To manage its counterparty risk, BNY Mellon requires additional collateral ranging between 102% and 110% depending on collateral type. As of June 30, 2021, BNY Mellon collected 105.25% for cash loans and 109.82% for non-cash loans, resulting in 108.20% over collateralization on extended loans. As of June 30, 2020, BNY Mellon collected 101.47% for cash loans and 108.38% for non-cash loans, resulting in 105.78% over collateralization on extended loans.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021 and 2020 was 68 days and 35 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. As of June 30, 2021 and 2020, the weighted average maturity of the reinvested cash collateral account was 30 days and 35 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) Use of Estimates

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

(e) Other Postemployment Benefits Other Than Pensions

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

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(3) Deposits

Deposits are carried at cost, which approximates fair value. Deposits in bank accounts were \$49,724 and \$44,386 as of June 30, 2021 and 2020, 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, 2021 and 2020, the Retirement System's deposits in bank accounts were not exposed to custodial credit risk.

(4) Investments

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

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

The investment policy permits investments in domestic and international debt and equity securities, securities lending, foreign currency contracts, derivative instruments, private equity, real assets, private credit, and absolute return investments, which include investments in a variety of commingled partnership vehicles.

The Retirement Board's asset allocation policies for the years ended June 30, 2021 and 2020, are as follows:

	Target Allocation	Target Allocation since
Asset Class	through October 2020	November 2020
Global Equity	31.0%	37.0%
Treasuries	6.0%	8.0%
Liquid Credit	3.0%	5.0%
Private Credit	10.0%	10.0%
Private Equity	18.0%	23.0%
Real Assets	17.0%	10.0%
Absolute Return	15.0%	10.0%
Leverage	0.0%	-3.0%
	100.0%	100.0%
	·	·

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021 and 2020, \$266,178 (or 34.5% of reinvested cash collateral) and \$68,431 (or 12.5% of reinvested cash collateral), respectively, consisted of such agreements.

The Retirement System maintains its operating fund cash in the City and County's investment pool. The City and County's pool is invested pursuant to investment policy guidelines established by the City Treasurer, subject to review by the Treasury Oversight Committee. The Treasury Oversight Committee, established under California Government Code Sections 27130 to 27137, is composed of various City and County officials and representatives of agencies with large cash balances in the pool. The investment policy addresses soundness of financial institutions in which the City and County will deposit funds, types of investment instruments as permitted by the California Government Code, and the percentage of the portfolio which may be invested in certain instruments with longer terms to maturity. The provisions of the City and County's investment policy also address interest rate risk, credit risk, and concentration of credit risk and provide for additional restrictions related to investments. The 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, 2021 and 2020.

(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.

Below are tables depicting the segmented time distribution for fixed income investments based upon the expected maturity (in years) as of June 30, 2021 and 2020.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Investments at Fair Value as of June 30, 2021

Maturities Less than 1 ye ar 1-5 years 6-10 years 10+ <u>years</u> **Investment Type** Fair Value Asset-Backed Securities 20 \$ \$ 24,457 3,915 \$ 4,108 16,414 Bank Loans 112,605 3,151 57,243 52,211 6,597 2,587 City Investment Pool 9,184 Collateralized Bonds 2,011 533 1,478 87,798 621 Commercial Mortgage-Backed 1,927 85,250 Commingled and Other Fixed Income Funds 321,260 2,009 87,236 232,015 Corporate Bonds 274,249 1,686 89,417 142,457 40,689 Corporate Convertible Bonds 197,414 141,231 49,560 1,917 4,706 Government Bonds 1,139,367 1,545 755,004 351,452 31,366 Government Mortgage-**Backed Securities** 4,783 4,783 1,450 Municipal/Provincial Bonds 3,079 1,292 337 Non-Government Backed Collateralized Mortgage Obligations 16,541 366 16,175 12 Options (6) 6 Short-Term Investment Funds 651,504 651,504 Swaps 510 26 217 292 (25)2,844,768 1,051,539 434,301 Total 668,815 690,113

Investments at Fair Value as of June 30, 2020

	Maturities								
		Les	ss than 1						
Fair Value	2		ye ar	1-5 years		6-10 years		10+ years	
\$ 10,10)8	\$	-	\$	60	\$	505	\$	9,543
94,41	5		1,517		56,186		36,712		-
32,39	91		25,280		7,111		-		-
80)2		-		-		532		270
75,59	97		951		247		2,862		71,537
315,74	19		444		-		83,140		232,165
159,42	27		2,535		68,865		77,552		10,475
167,0	9		8,612		100,002		51,691		6,714
1,190,3	2		20,309		741,719		394,942		33,342
	2		-		-		1		1
6,87	71		-		601		-		6,270
	(1)		(1)		-		_		-
553,24	19		553,249		-		_		-
5,12	28		1,295		2,484		576		773
\$ 2,611,00	59	\$	614,191	\$	977,275	\$	648,513	\$	371,090
	\$ 10,10 94,41 32,39 80 75,59 315,74 159,42 167,01 1,190,31	94,415 32,391 802 75,597 315,749 159,427 167,019 1,190,312	Fair Value \$ 10,108	\$ 10,108 \$ - 94,415 1,517 32,391 25,280 802 - 75,597 951 315,749 444 159,427 2,535 167,019 8,612 1,190,312 20,309 2 - 6,871 - (1) (1) 553,249 553,249 5,128 1,295	Fair Value year 1- \$ 10,108 - \$ 94,415 1,517 32,391 25,280 802 - 75,597 951 315,749 444 159,427 2,535 167,019 8,612 1,190,312 20,309 2 - 6,871 - (1) (1) 553,249 553,249 553,249 5,128 1,295 1,295	Fair Value Less than 1 year 1-5 years \$ 10,108 \$ - \$ 60 94,415 1,517 56,186 32,391 25,280 7,111 802 - - 75,597 951 247 315,749 444 - 159,427 2,535 68,865 167,019 8,612 100,002 1,190,312 20,309 741,719 2 - - 6,871 - 601 (1) (1) - 553,249 553,249 - 5,128 1,295 2,484	Less than 1 year 1-5 years 6-1 \$ 10,108 \$ - \$ 60 \$ 94,415 1,517 56,186 56,186 56,186 56,186 56,186 56,186 7,111 56,186 7,111 56,186 7,111 56,186 7,111 56,186 7,111 52,128 7,111 56,186 7,111 56,186 7,111 56,186 7,111 56,865 68,865 68,865 68,865 68,865 68,865 100,002 741,719 7,111	Fair Value Less than 1 year 1-5 years 6-10 years \$ 10,108 \$ - \$ 60 \$ 505 94,415 1,517 56,186 36,712 32,391 25,280 7,111 - 802 - - 532 75,597 951 247 2,862 315,749 444 - 83,140 159,427 2,535 68,865 77,552 167,019 8,612 100,002 51,691 1,190,312 20,309 741,719 394,942 2 - - 1 6,871 - 601 - (1) (1) - - 553,249 553,249 - - 5,128 1,295 2,484 576	Less than 1 year 1-5 years 6-10 years 10 \$ 10,108 \$ - \$ 60 \$ 505 \$ 94,415 1,517 56,186 36,712 32,391 25,280 7,111 - 532 802 - - - 532 533 533 533 533 533 533 533 533 533 533 533 533 533 533 533 533 534 5

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(b) Credit Risk – Investments

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

Investments are classified and rated using the lower of (1) 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.

The credit rating of the United States remains a point of concern for some investors. In 2011, S&P lowered the credit rating for U.S. long-term debt to AA+ from AAA and continues to maintain that posture. Moody's and Fitch, the other two large credit rating agencies, continue to maintain a AAA rating for U.S. long-term debt. 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, 2021. Investments issued or explicitly guaranteed by the U.S. government of \$1,082,472 as of June 30, 2021, are exempt from the credit rating disclosures and are excluded from the table below.

Credit Ratings of Fixed Income Investments as of June 30, 2021

		Fair Value as a
Credit Rating	 Fair Value	Percentage of Total
AAA	\$ 630,147	35.8%
AA	11,985	0.7%
A	34,910	2.0%
BBB	95,573	5.4%
BB	112,351	6.4%
В	205,694	11.7%
CCC	45,619	2.6%
CC	4,806	0.3%
D	5,589	0.3%
Not Rated	 615,622	34.8%
Total	\$ 1,762,296	100.0%

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The following table illustrates the Retirement System's exposure to credit risk as of June 30, 2020. Investments issued or explicitly guaranteed by the U.S. government of \$1,094,199 as of June 30, 2020, are exempt from the credit rating disclosures and are excluded from the table below.

Credit Ratings of Fixed Income Investments as of June 30, 2020

		Fair Value as a
Credit Rating	Fair Value	Percentage of Total
AAA	\$ 2,607	0.2%
AA	3,824	0.3%
A	36,283	2.4%
BBB	75,990	5.0%
BB	102,632	6.8%
В	155,557	10.3%
CCC	43,517	2.9%
CC	1,798	0.1%
D	4,949	0.3%
Not Rated	1,089,713	71.7%
Total	\$ 1,516,870	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 8.4% for 2021 and 8.3% for 2020.

(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, 2021 and 2020, the Retirement System had no investments of a single issuer that equaled or exceeded 5% of total Retirement System's investments or net position.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(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, 2021 and 2020, \$127,431 and \$114,747, 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 international managers to enter into foreign exchange contracts, which are limited to hedging currency exposure existing in the portfolio.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The Retirement System's net exposures to foreign currency risk as of June 30, 2021, are as follows:

Foreign Currency Risk Analysis as of June 30, 2021

			Fixed	Private	Real	Private	Foreign Currency	
Currency	Cash	Equities	Income	Equities	Assets	Credit	Contracts	Total
Argentina peso	\$ -	\$ -	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ 1
Australian dollar	_	20,693	121	12,820	_	_	2,565	36,199
Brazil real	-	10,282	1,995	_	_	_	1,764	14,041
Canadian dollar	_	51,175	14	_	_	_	3,976	55,165
Chilean peso	-	1,333	829	_	_	_	986	3,148
Chinese r yuan HK	-	-	-	-	-	-	(5,497)	(5,497)
Chinese yuan renminbi	38,546	483,245	4,622	-	-	-	(17,531)	508,882
Colombian peso	-	-	5,113	_	_	_	(3,431)	1,682
Czech koruna	-	-	(60)	-	-	-	1,760	1,700
Danish krone	-	54,690	-	-	-	-	_	54,690
Dominican rep peso	-	-	618	-	-	-	(808)	(190)
Egyptian pound	-	-	670	-	-	-	_	670
Euro	-	578,211	45,092	139,170	431,880	65,124	(108,522)	1,150,955
Hong Kong dollar	-	120,819	-	-	-	-	872	121,691
Hungarian forint	-	3,342	828	-	-	-	882	5,052
Indonesian rupiah	-	1,176	3,707	-	-	-	595	5,478
Israeli shekel	-	-	-	-	-	-	(19)	(19)
Japanese yen	-	80,806	-	-	56,587	-	20,759	158,152
Kazakhstan tenge	-	-	253	-	-	-	-	253
Kenyan shilling	-	-	-	-	-	-	_	-
Malaysian ringgit	-	-	3,063	-	-	-	137	3,200
Mexican peso	-	6,589	1,923	-	-	-	2,111	10,623
New Taiwan dollar	-	46,346	-	-	-	-	-	46,346
Norwegian krone	-	4,817	-	-	-	-	-	4,817
Peruvian sol	-	-	5,679	-	-	-	(5,863)	(184)
Philippines peso	-	1,833	206	-	-	-	(152)	1,887
Polish zloty	-	9,086	2,024	-	-	-	847	11,957
Pound sterling	-	210,529	8,079	53,304	50,326	-	(11,917)	310,321
Romanian leu	-	-	851	-	-	-	501	1,352
New Russian ruble	-	2,332	2,523	-	-	-	1,219	6,074
Singapore dollar	-	1,495	-	-	-	-	-	1,495
South African rand	-	11,021	8,676	-	-	-	(6,419)	13,278
South Korean won	-	33,545	-	-	-	-	(459)	33,086
Swedish krona	-	45,299	-	-	-	-	-	45,299
Swiss franc	-	99,888	-	-	-	-	(645)	99,243
Thailand baht	-	4,330	1,442	-	-	-	2,219	7,991
Turkish lira	-	3,509	-	-	-	-	86	3,595
Uruguayan peso							130	130
Total	\$38,546	\$1,886,391	\$98,269	\$205,294	\$538,793	\$65,124	\$(119,854)	\$2,712,563

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The Retirement System's net exposures to foreign currency risk as of June 30, 2020, are as follows:

Foreign Currency Risk Analysis as of June 30, 2020

			Fixed	Private	Private Real		Foreign Currency		
Currency	Cash	Equities	Income	Equities	Assets	Credit	Contracts	Total	
Argentina peso	\$ -	\$ -	\$ 144	\$ -	\$ -	\$ -	\$ -	\$ 144	
Australian dollar	-	10,171	-	3,294	-	-	-	13,465	
Brazil real	-	8,455	5,113	-	-	-	5,666	19,234	
Canadian dollar	-	15,500	-	-	-	-	(4)	15,496	
Chilean peso	-	-	1,993	-	-	-	394	2,387	
Chinese yuan renminbi	3,334	374,375	9,751	-	-	-	21	387,481	
Colombian peso	-	-	13,035	-	-	-	497	13,532	
Czech koruna	-	-	4,052	-	-	-	2,516	6,568	
Danish krone	-	28,004	-	-	-	-	-	28,004	
Dominican rep peso	-	-	2,357	-	-	-	(2,151)	206	
Egyptian pound	-	-	-	-	-	-	-	-	
Euro	-	329,417	35,046	82,714	350,035	51,530	(38,620)	810,122	
Hong Kong dollar	-	103,612	-	-	-	-	(2,070)	101,542	
Hungarian forint	-	2,753	10,131	-	-	-	(5,014)	7,870	
Indonesian rupiah	-	471	12,158	-	-	-	(128)	12,501	
Israeli shekel	-	-	277	-	-	-	(334)	(57)	
Japanese yen	-	78,825	-	-	53,158	-	206	132,189	
Kazakhstan tenge	-	-	239	-	-	-	-	239	
Malaysian ringgit	-	-	7,656	-	-	-	1,223	8,879	
Mexican peso	-	2,873	5,823	-	-	-	7,020	15,716	
New Taiwan dollar	-	37,573	-	-	-	-	-	37,573	
New Zealand dollar	-	449	-	-	-	-	-	449	
Norwegian krone	-	2,113	-	-	-	-	-	2,113	
Peruvian sol	-	-	10,807	-	-	-	(6,488)	4,319	
Philippines peso	-	1,495	203	-	-	-	51	1,749	
Polish zloty	-	2,622	11,369	-	-	-	(1,255)	12,736	
Pound sterling	-	102,755	2,239	41,150	25,385	-	(1,768)	169,761	
Romanian leu	-	-	2,249	-	-	-	1,501	3,750	
New Russian ruble	-	-	12,915	-	-	-	(1,620)	11,295	
South African rand	-	2,664	11,910	-	-	-	(3,383)	11,191	
South Korean won	-	21,595	-	-	-	-	-	21,595	
Swedish krona	-	13,920	-	-	-	-	(197)	13,723	
Swiss franc	-	57,320	-	-	-	-	(124)	57,196	
Thailand baht	-	872	5,278	-	-	-	7,372	13,522	
Turkish lira	-	-	1,206	-	-	-	1,598	2,804	
Uruguayan peso			104				259	363	
Total	\$ 3,334	\$ 1,197,834	\$ 166,055	\$ 127,158	\$ 428,578	\$ 51,530	\$ (34,832)	\$ 1,939,657	

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(f) Unfunded Investments Commitments

The Retirement System has unfunded commitments to contribute capital for real assets in the amount of \$2,256,250, private equity in the amount of \$3,302,462, private credit in the amount of \$1,697,846 and absolute return in the amount of \$336,269 totaling \$7,592,827 as of June 30, 2021.

(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, 2021 and 2020, 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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021 and 2020.

As of and for the Year Ended June 30, 2021

Derivative Type / Contracts		Totional	Fai Valu	r	Net Appreciation (Depreciation) in Fair Value		
Forwards	.	2 - 2 - 2 - 2	Φ.		Φ.	40.	
Foreign Exchange Contracts	\$	263,225	\$	69	\$	185	
Futures							
Bond Futures Long		8,898		84		84	
Equity Index Futures Long		76,766	1,	073		(548)	
Treasury Futures Long		400,741	1,	474		1,070	
Treasury Futures Short		(8,215)		(47)		(47)	
Options							
Credit Contracts		-		(6)		12	
Foreign Exchange Contracts		200		12		(133)	
Swaps							
Credit Contracts		5,375		324		(150)	
Currency Contracts		440		247		(306)	
Interest Rate Contracts		115,953		(61)		(3,660)	
Rights/Warrants							
Equity Contracts	40,4	149 shares	101,	656		(5,254)	
Total			\$104,	825	\$	(8,747)	

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

As of and for the Year Ended June 30, 2020

Derivative Type / Contracts		otional mount	Fai	r Value	Net Appreciation (Depreciation) in Fair Value		
Forwards							
Foreign Exchange Contracts	\$	172,991	\$	(116)	\$	(212)	
Futures							
Currency Futures Long		_		-		(29)	
Equity Index Futures Long		55,315		1,620		(1,453)	
Equity Index Futures Short		-		-		410	
Treasury Futures Long	263,246			404	249		
Options							
Foreign Exchange Contracts		(1,600)		(1)		14	
Swaps							
Credit Contracts		11,280		247		60	
Currency Contracts		7,669		580		617	
Equity Index Contracts		-		-		31	
Interest Rate Contracts		325,034		4,301		915	
Rights/Warrants							
Equity Contracts	30,	686 shares		91,806		12,471	
Total			\$	98,841	\$	13,073	

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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021

Credit Rating	Fair Value	
AA		\$ 462
A		1,609
BBB		1,684
,	Total	\$ 3,755

Derivative Instruments Subject to Counterparty Credit Risk as of June 30, 2020

Credit Rating	 Fair Value				
AA	\$ 2,500				
A	403				
BBB	 2,109				
Total	\$ 5,012				

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, 2021 and 2020, 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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Interest Rate Risk

The tables below describe the maturity periods of the derivative instruments exposed to interest rate risk at June 30, 2021 and 2020.

Derivative Interest Rate Risk as of June 30, 2021

	Maturities									
			Les	s than 1						
Derivative Type / Contracts		Fair Value		year		1-5 years		6-10 years		years
Futures										
Treasury Futures Long	\$	1,474	\$	1,474	\$	-	\$	-	\$	-
Treasury Futures Short		(47)		(47)		-		-		-
Options										
Foreign Exchange Contracts		12		-		12		-		-
Swaps										
Currency Contracts		247		-		187		60		-
Interest Rate Contracts (6)		(61)				(268)		232		(25)
Total	\$	1,625	\$	1,427	\$	(69)	\$	292	\$	(25)

Derivative Interest Rate Risk as of June 30, 2020

		,	Maturities									
			Les	s than 1								
Derivative Type / Contracts		Fair Value		ye ar		1-5 years		6-10 years		10+ years		
Forwards												
Foreign Exchange Contracts	\$	(116)	\$	(97)	\$	(19)	\$	-	\$	-		
Futures												
Treasury Futures Long		404		404		-		-		-		
Options												
Foreign Exchange Contracts		(1)		(1)		-		-		-		
Swaps												
Currency Contracts		580		420		120		40		-		
Interest Rate Contracts	4,301			893	2,099		536			773		
Total		5,168	\$	1,619	\$	2,200	\$	576	\$	773		

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The following table details the reference rate, notional amount, and fair value of interest rate swaps that are highly sensitive to changes in interest rates as of June 30, 2021 and 2020:

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 0.25%, Pay Variable 3-Month BBA	\$ 1,760	\$ (54)
Interest Rate Swap	Receive Fixed 0.48%, Pay Variable 6-Month PRIBOR	658	(7)
Interest Rate Swap	Receive Fixed 0.57%, Pay Variable 6-Month WIBOR	22,800	216
Interest Rate Swap	Receive Fixed 1.48%, Pay Variable 6-Month PRIBOR	1,152	35
Interest Rate Swap	Receive Fixed 2.00%, Pay Variable 6-Month BUBOR	379	82
Interest Rate Swap	Receive Fixed 2.39%, Pay Variable 6-Month THB	5,158	(103)
Interest Rate Swap	Receive Fixed 2.42%, Pay Variable 6-Month THB	191	10
Interest Rate Swap	Receive Fixed 2.81%, Pay Variable 6-Month THB	613	(21)
Interest Rate Swap	Receive Fixed 3.34%, Pay Variable 3-Month KLIBOR	5,201	96
Interest Rate Swap	Receive Fixed 3.35%, Pay Variable 1-Day BIDOR	959	(25)
Interest Rate Swap	Receive Fixed 4.10%, Pay Variable 1-Day BIDOR	805	(10)
Interest Rate Swap	Receive Fixed 4.35%, Pay Variable 28-Day MXIBR	91	(4)
Interest Rate Swap	Receive Fixed 4.50%, Pay Variable 1-Day BIDOR	598	48
Interest Rate Swap	Receive Fixed 4.87%, Pay Variable 1-Day BIDOR	790	(23)
Interest Rate Swap	Receive Fixed 5.25%, Pay Variable 1-Day BIDOR	241	7
Interest Rate Swap	Receive Fixed 5.26%, Pay Variable 3-Month JIBAR	837	(21)
Interest Rate Swap	Receive Fixed 5.60%, Pay Variable 1-Day COOVIBR	359	17
Interest Rate Swap	Receive Fixed 6.71%, Pay Variable 28-Day MXIBR	4,145	30
Interest Rate Swap	Receive Fixed 7.13%, Pay Variable 28-Day MXIBR	11,340	(96)
Interest Rate Swap	Receive Fixed 7.48%, Pay Variable 1-Day BIDOR	574	46
Interest Rate Swap	Receive Fixed 11.33%, Pay Variable 1-Day BIDOR	1,158	(3)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.25%	693	(37)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 7.17%	598	49
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 1.20%	996	(8)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 4.20%	1,774	(63)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 5.12%	1,696	(1)
Interest Rate Swap	Receive Variable 3-Month BBA, Pay Fixed 0.36%	998	68
Interest Rate Swap	Receive Variable 3-Month JIBAR, Pay Fixed 7.46%	2,591	124
Interest Rate Swap	Receive Variable 6-Month WIBOR, Pay Fixed 0.94%	46,798	(413)
Total Interest Rate	e Swaps	\$ 115,953	\$ (61)

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 0.02%, Pay Variable 6-Month CLP	\$ 1,629	\$ 9
Interest Rate Swap	Receive Fixed 0.03%, Pay Variable 6-Month CLP	11	1
Interest Rate Swap	Receive Fixed 0.48%, Pay Variable 6-Month PRIBOR	628	-
Interest Rate Swap	Receive Fixed 0.50%, Pay Variable 6-Month BUBOR	156	-
Interest Rate Swap	Receive Fixed 0.78%, Pay Variable 6-Month THB	1,369	(3)
Interest Rate Swap	Receive Fixed 0.79%, Pay Variable 6-Month BUBOR	347	2
Interest Rate Swap	Receive Fixed 0.94%, Pay Variable 6-Month THB	123	(2)
Interest Rate Swap	Receive Fixed 0.98%, Pay Variable 6-Month CLP	12	-
Interest Rate Swap	Receive Fixed 1.04%, Pay Variable 3-Month TELBOR	3,178	110
Interest Rate Swap	Receive Fixed 1.05%, Pay Variable 3-Month TELBOR	2,918	97
Interest Rate Swap	Receive Fixed 1.07%, Pay Variable 6-Month CLP	84	1
Interest Rate Swap	Receive Fixed 1.09%, Pay Variable 6-Month CLP	3,419	(12)
Interest Rate Swap	Receive Fixed 1.18%, Pay Variable 6-Month CLP	46	1
Interest Rate Swap	Receive Fixed 1.19%, Pay Variable 6-Month CLP	128	2
Interest Rate Swap	Receive Fixed 1.20%, Pay Variable 6-Month CLP	13	-
Interest Rate Swap	Receive Fixed 1.27%, Pay Variable 3-Month TELBOR	982	65
Interest Rate Swap	Receive Fixed 1.48%, Pay Variable 6-Month PRIBOR	717	54
Interest Rate Swap	Receive Fixed 1.49%, Pay Variable 6-Month WIBOR	303	17
Interest Rate Swap	Receive Fixed 1.50%, Pay Variable 6-Month BUBOR	394	12
Interest Rate Swap	Receive Fixed 1.78%, Pay Variable 6-Month PRIBOR	1,024	49
Interest Rate Swap	Receive Fixed 1.81%, Pay Variable 3-Month TELBOR	1,531	131
Interest Rate Swap	Receive Fixed 1.83%, Pay Variable 6-Month THB	712	40
Interest Rate Swap	Receive Fixed 1.83%, Pay Variable 6-Month WIBOR	126	3
Interest Rate Swap	Receive Fixed 1.86%, Pay Variable 7-Day PBOC	1,809	38
Interest Rate Swap	Receive Fixed 1.90%, Pay Variable 3-Month TELBOR	925	84
Interest Rate Swap	Receive Fixed 1.92%, Pay Variable 6-Month THB	142	7
Interest Rate Swap	Receive Fixed 1.93%, Pay Variable 6-Month THB	442	8
Interest Rate Swap	Receive Fixed 1.94%, Pay Variable 6-Month THB	485	23
Interest Rate Swap	Receive Fixed 1.94%, Pay Variable 6-Month WIBOR	3,666	197
Interest Rate Swap	Receive Fixed 1.95%, Pay Variable 6-Month THB	191	15
Interest Rate Swap	Receive Fixed 2.00%, Pay Variable 6-Month PRIBOR	1,336	100
Interest Rate Swap	Receive Fixed 2.00%, Pay Variable 6-Month WIBOR	607	1
Interest Rate Swap	Receive Fixed 2.01%, Pay Variable 6-Month THB	1,155	46
Interest Rate Swap	Receive Fixed 2.02%, Pay Variable 6-Month THB	647	1
Interest Rate Swap	Receive Fixed 2.04%, Pay Variable 6-Month THB	511	24
Interest Rate Swap	Receive Fixed 2.08%, Pay Variable 6-Month CLP	122	-
Interest Rate Swap	Receive Fixed 2.11%, Pay Variable 6-Month CLP	43	-
Interest Rate Swap	Receive Fixed 2.12%, Pay Variable 6-Month THB	1,129	28
Interest Rate Swap	Receive Fixed 2.18%, Pay Variable 6-Month THB	81	8
Interest Rate Swap	Receive Fixed 2.19%, Pay Variable 6-Month THB	831	62

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

		Notional	Fair
Investment Type	Reference Rate	Value	Value
Interest Rate Swap	Receive Fixed 2.22%, Pay Variable 6-Month THB	453	3
Interest Rate Swap	Receive Fixed 2.25%, Pay Variable 6-Month PRIBOR	3,912	138
Interest Rate Swap	Receive Fixed 2.26%, Pay Variable 3-Month PRIBOR	6,644	38
Interest Rate Swap	Receive Fixed 2.38%, Pay Variable 7-Day PBOC	198	-
Interest Rate Swap	Receive Fixed 2.39%, Pay Variable 6-Month CLP	853	52
Interest Rate Swap	Receive Fixed 2.39%, Pay Variable 6-Month THB	620	70
Interest Rate Swap	Receive Fixed 2.42%, Pay Variable 6-Month CLP	77	5
Interest Rate Swap	Receive Fixed 2.42%, Pay Variable 6-Month THB	620	71
Interest Rate Swap	Receive Fixed 2.44%, Pay Variable 7-Day PBOC	325	2
Interest Rate Swap	Receive Fixed 2.46%, Pay Variable 7-Day PBOC	862	5
Interest Rate Swap	Receive Fixed 2.49%, Pay Variable 7-Day PBOC	42	-
Interest Rate Swap	Receive Fixed 2.51%, Pay Variable 6-Month CLP	1,265	85
Interest Rate Swap	Receive Fixed 2.51%, Pay Variable 6-Month THB	353	28
Interest Rate Swap	Receive Fixed 2.55%, Pay Variable 6-Month CLP	341	23
Interest Rate Swap	Receive Fixed 2.56%, Pay Variable 6-Month THB	757	80
Interest Rate Swap	Receive Fixed 2.58%, Pay Variable 6-Month THB	424	36
Interest Rate Swap	Receive Fixed 2.63%, Pay Variable 6-Month THB	709	65
Interest Rate Swap	Receive Fixed 2.64%, Pay Variable 6-Month CLP	380	22
Interest Rate Swap	Receive Fixed 2.68%, Pay Variable 6-Month CLP	609	46
Interest Rate Swap	Receive Fixed 2.78%, Pay Variable 6-Month CLP	329	26
Interest Rate Swap	Receive Fixed 2.78%, Pay Variable 6-Month THB	30	3
Interest Rate Swap	Receive Fixed 2.81%, Pay Variable 6-Month THB	596	62
Interest Rate Swap	Receive Fixed 2.88%, Pay Variable 7-Day PBOC	1,696	39
Interest Rate Swap	Receive Fixed 2.97%, Pay Variable 7-Day PBOC	1,202	11
Interest Rate Swap	Receive Fixed 3.12%, Pay Variable 6-Month CLP	111	11
Interest Rate Swap	Receive Fixed 3.27%, Pay Variable 6-Month CLP	554	40
Interest Rate Swap	Receive Fixed 3.34%, Pay Variable 3-Month KLIBOR	233	13
Interest Rate Swap	Receive Fixed 3.54%, Pay Variable 6-Month CLP	604	43
Interest Rate Swap	Receive Fixed 3.76%, Pay Variable 6-Month CLP	1,507	232
Interest Rate Swap	Receive Fixed 3.77%, Pay Variable 6-Month CLP	1,490	202
Interest Rate Swap	Receive Fixed 4.26%, Pay Variable 1-Day COOVIBR	660	26
Interest Rate Swap	Receive Fixed 4.50%, Pay Variable 1-Day BIDOR	6,429	164
Interest Rate Swap	Receive Fixed 4.58%, Pay Variable 1-Day COOVIBR	518	34
Interest Rate Swap	Receive Fixed 4.61%, Pay Variable 1-Day COOVIBR	561	38
Interest Rate Swap	Receive Fixed 4.70%, Pay Variable 28-Day MXIBR	1,099	1
Interest Rate Swap	Receive Fixed 4.72%, Pay Variable 28-Day MXIBR	840	1
Interest Rate Swap	Receive Fixed 4.87%, Pay Variable 28-Day MXIBR	1,268	9
Interest Rate Swap	Receive Fixed 5.00%, Pay Variable 1-Day BIDOR	2,750	61
Interest Rate Swap	Receive Fixed 5.08%, Pay Variable 28-Day MXIBR	130	1
Interest Rate Swap	Receive Fixed 5.12%, Pay Variable 1-Day COOVIBR	426	18
Interest Rate Swap	Receive Fixed 5.17%, Pay Variable 1-Day COOVIBR	2,723	239
Interest Rate Swap	Receive Fixed 5.25%, Pay Variable 1-Day BIDOR	3,788	122
Interest Rate Swap	Receive Fixed 5.60%, Pay Variable 1-Day COOVIBR	1,159	81
Interest Rate Swap	Receive Fixed 5.61%, Pay Variable 1-Day COOVIBR	116	13
Interest Rate Swap	Receive Fixed 5.63%, Pay Variable 28-Day MXIBR	134	2
Interest Rate Swap	Receive Fixed 5.75%, Pay Variable 1-Day BIDOR	1,166	55

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 5.78%, Pay Variable 1-Day BIDOR	219	10
Interest Rate Swap	Receive Fixed 5.86%, Pay Variable 28-Day MXIBR	1,324	48
Interest Rate Swap	Receive Fixed 5.87%, Pay Variable 28-Day MXIBR	1,333	22
Interest Rate Swap	Receive Fixed 5.88%, Pay Variable 1-Day COOVIBR	832	104
Interest Rate Swap	Receive Fixed 5.92%, Pay Variable 1-Day BIDOR	1,202	63
Interest Rate Swap	Receive Fixed 6.01%, Pay Variable 1-Day BIDOR	255	6
Interest Rate Swap	Receive Fixed 6.12%, Pay Variable 1-Day COOVIBR	87	11
Interest Rate Swap	Receive Fixed 6.20%, Pay Variable 1-Day COOVIBR	80	10
Interest Rate Swap	Receive Fixed 6.23%, Pay Variable 1-Day BIDOR	2,586	161
Interest Rate Swap	Receive Fixed 6.26%, Pay Variable 1-Day BIDOR	911	55
Interest Rate Swap	Receive Fixed 6.41%, Pay Variable 1-Day COOVIBR	447	76
Interest Rate Swap	Receive Fixed 6.42%, Pay Variable 28-Day MXIBR	342	24
Interest Rate Swap	Receive Fixed 6.43%, Pay Variable 1-Day COOVIBR	25	(4)
Interest Rate Swap	Receive Fixed 6.51%, Pay Variable 28-Day MXIBR	844	62
Interest Rate Swap	Receive Fixed 6.52%, Pay Variable 1-Day BIDOR	656	12
Interest Rate Swap	Receive Fixed 6.60%, Pay Variable 28-Day MXIBR	2,666	205
Interest Rate Swap	Receive Fixed 6.62%, Pay Variable 28-Day MXIBR	969	75
Interest Rate Swap	Receive Fixed 6.64%, Pay Variable 28-Day MXIBR	1,809	(142)
Interest Rate Swap	Receive Fixed 6.68%, Pay Variable 1-Day BIDOR	2,131	157
Interest Rate Swap	Receive Fixed 6.71%, Pay Variable 28-Day MXIBR	567	49
Interest Rate Swap	Receive Fixed 6.80%, Pay Variable 28-Day MXIBR	104	8
Interest Rate Swap	Receive Fixed 6.89%, Pay Variable 1-Day BIDOR	2,113	94
Interest Rate Swap	Receive Fixed 6.99%, Pay Variable 1-Day BIDOR	892	37
Interest Rate Swap	Receive Fixed 7.05%, Pay Variable 1-Day BIDOR	1,457	69
Interest Rate Swap	Receive Fixed 7.10%, Pay Variable 1-Day BIDOR	2,040	99
Interest Rate Swap	Receive Fixed 7.12%, Pay Variable 1-Day BIDOR	728	34
Interest Rate Swap	Receive Fixed 7.13%, Pay Variable 28-Day MXIBR	528	53
Interest Rate Swap	Receive Fixed 7.18%, Pay Variable 1-Day BIDOR	1,257	64
Interest Rate Swap	Receive Fixed 7.19%, Pay Variable 1-Day BIDOR	492	25
Interest Rate Swap	Receive Fixed 7.22%, Pay Variable 1-Day BIDOR	965	49
Interest Rate Swap	Receive Fixed 7.25%, Pay Variable 3-Month JIBAR	426	39
Interest Rate Swap	Receive Fixed 7.31%, Pay Variable 1-Day BIDOR	455	25
Interest Rate Swap	Receive Fixed 7.38%, Pay Variable 28-Day MXIBR	684	87 167
Interest Rate Swap	Receive Fixed 7.42%, Pay Variable 1-Day BIDOR Receive Fixed 7.48%, Pay Variable 1-Day BIDOR	1,949 1,439	167 123
Interest Rate Swap Interest Rate Swap	Receive Fixed 7.46%, Fay Variable 1-Day BIDOR Receive Fixed 7.63%, Pay Variable 28-Day MXIBR	294	47
Interest Rate Swap	Receive Fixed 7.65%, Fay Variable 28-Day MXIBR	307	50
Interest Rate Swap	Receive Fixed 7.65%, Pay Variable 28-Day MXIBR	2,480	201
Interest Rate Swap	Receive Fixed 7.68%, Pay Variable 28-Day MXIBR	169	27
Interest Rate Swap	Receive Fixed 7.80%, Pay Variable 1-Day BIDOR	255	20
Interest Rate Swap	Receive Fixed 7.83%, Pay Variable 1-Day BIDOR	2,604	167
Interest Rate Swap	Receive Fixed 7.88%, Pay Variable 28-Day MXIBR	74	6
Interest Rate Swap	Receive Fixed 7.89%, Pay Variable 28-Day MXIBR	1,082	207
Interest Rate Swap	Receive Fixed 7.92%, Pay Variable 28-Day MXIBR	1,714	188
Interest Rate Swap	Receive Fixed 7.98%, Pay Variable 28-Day MXIBR	2,294	396
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Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Fixed 7.99%, Pay Variable 28-Day MXIBR	320	56
Interest Rate Swap	Receive Fixed 8.04%, Pay Variable 28-Day MXIBR	1,770	369
Interest Rate Swap	Receive Fixed 8.06%, Pay Variable 28-Day MXIBR	4,544	(2)
Interest Rate Swap	Receive Fixed 8.28%, Pay Variable 28-Day MXIBR	169	40
Interest Rate Swap	Receive Fixed 8.31%, Pay Variable 28-Day MXIBR	69	16
Interest Rate Swap	Receive Fixed 8.32%, Pay Variable 28-Day MXIBR	351	78
Interest Rate Swap	Receive Fixed 8.39%, Pay Variable 28-Day MXIBR	294	62
Interest Rate Swap	Receive Fixed 8.64%, Pay Variable 1-Day BIDOR	109	13
Interest Rate Swap	Receive Fixed 8.82%, Pay Variable 28-Day MXIBR	3,726	505
Interest Rate Swap	Receive Fixed 8.98%, Pay Variable 28-Day MXIBR	433	61
Interest Rate Swap	Receive Fixed 9.65%, Pay Variable 1-Day BIDOR	437	84
Interest Rate Swap	Receive Fixed 9.76%, Pay Variable 1-Day BIDOR	18	4
Interest Rate Swap	Receive Fixed 10.30%, Pay Variable 1-Day BIDOR	364	78
Interest Rate Swap	Receive Fixed 10.33%, Pay Variable 1-Day BIDOR	1,512	331
Interest Rate Swap	Receive Fixed 11.33%, Pay Variable 1-Day BIDOR	1,111	285
Interest Rate Swap	Receive Fixed 12.06%, Pay Variable 1-Day BIDOR	508	86
Interest Rate Swap	Receive Fixed 12.20%, Pay Variable 1-Day BIDOR	945	175
Interest Rate Swap	Receive Fixed 12.29%, Pay Variable 1-Day BIDOR	127	36
Interest Rate Swap	Receive Fixed 16.40%, Pay Variable 1-Day BIDOR	2,185	690
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 2.15%	21,236	-
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 2.64%	31,289	(1)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 3.99%	2,058	(35)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 4.00%	9,489	(164)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 4.50%	3,715	(57)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 4.80%	1,166	(36)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 4.99%	127	(4)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 5.44%	1,111	(45)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 5.65%	401	(19)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.25%	200	-
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.34%	237	(15)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.50%	674	(4)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.55%	710	(12)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.71%	200	(11)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.81%	2,349	(139)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.93%	1,821	(82)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.95%	219	(9)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 6.98%	2,623	(124)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 7.17%	1,111	(56)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 7.26%	1,894	(96)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 7.29%	3,023	(155)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 8.79%	838	(73)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 9.60%	747	(130)
Interest Rate Swap	Receive Variable 1-Day BIDOR, Pay Fixed 11.35%	856	(146)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 1.20%	2,729	(183)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 2.72%	6,680	(61)

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Investment Type	Reference Rate	Notional Value	Fair Value
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 4.16%	951	(37)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 4.35%	475	(26)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 4.45%	327	(19)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 4.49%	88	(6)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 4.88%	1,715	(132)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 5.19%	669	(50)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 5.28%	371	28
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 6.39%	346	(58)
Interest Rate Swap	Receive Variable 1-Day COOVIBR, Pay Fixed 6.42%	56	(8)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.38%	329	(2)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.43%	251	(3)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.48%	437	(8)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.52%	653	(46)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.54%	649	(17)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.55%	221	(6)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.60%	286	(22)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.62%	831	(65)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.65%	3,237	(87)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.77%	303	(9)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.83%	558	(53)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.85%	381	(37)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.86%	744	(67)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 6.87%	550	(1)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 7.07%	299	(27)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 7.18%	974	(103)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 7.72%	4,328	(367)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 7.73%	662	(56)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 8.11%	1,069 961	(203)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 9.09%		(246)
Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 9.10%	2,259 368	(579)
Interest Rate Swap Interest Rate Swap	Receive Variable 28-Day MXIBR, Pay Fixed 9.21% Receive Variable 28-Day MXIBR, Pay Fixed 9.33%	260	(97) (71)
Interest Rate Swap	Receive Variable 2-day MAIBR, 1 ay 14xed 3.35% Receive Variable 3-Month JIBAR, Pay Fixed 7.46%	299	(12)
Interest Rate Swap	Receive Variable 3-Month JIBAR, Pay Fixed 7.49%	299	(13)
Interest Rate Swap	Receive Variable 3-Month JIBAR, Pay Fixed 7.75%	535	(45)
Interest Rate Swap	Receive Variable 3-Month KLIBOR, Pay Fixed 3.74%	560	(21)
Interest Rate Swap	Receive Variable 3-Month KLIBOR, Pay Fixed 3.75%	887	(33)
Interest Rate Swap	Receive Variable 3-Month TELBOR, Pay Fixed 0.48%	1,011	(13)
Interest Rate Swap	Receive Variable 3-Month TELBOR, Pay Fixed 0.49%	982	(13)
Interest Rate Swap	Receive Variable 3-Month TELBOR, Pay Fixed 0.51%	1,300	(19)
Interest Rate Swap	Receive Variable 3-Month TELBOR, Pay Fixed 0.70%	982	(21)
Interest Rate Swap	Receive Variable 3-Month TELBOR, Pay Fixed 0.80%	2,514	(73)
Interest Rate Swap	Receive Variable 3-Month TELBOR, Pay Fixed 0.95%	1,127	(35)
Interest Rate Swap	Receive Variable 3-Month TELBOR, Pay Fixed 0.96%	1,098	(35)
Interest Rate Swap	Receive Variable 3-Month WIBOR, Pay Fixed 1.71%	6,699	(28)

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

		Notional	Fair
Investment Type	Reference Rate	Value	Value
Interest Rate Swap	Receive Variable 6-Month BUBOR, Pay Fixed 0.98%	2,112	(25)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 0.02%	1,845	(46)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 0.03%	396	(19)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 1.34%	763	(14)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 1.81%	1,989	(67)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 1.84%	1	-
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 1.88%	1,570	(35)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 1.94%	2,511	(9)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 1.95%	316	(10)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 2.26%	318	(23)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 2.27%	325	(24)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 2.32%	464	(25)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 2.34%	490	(27)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 2.59%	799	(56)
Interest Rate Swap	Receive Variable 6-Month CLP, Pay Fixed 3.22%	693	(77)
Interest Rate Swap	Receive Variable 6-Month PRIBOR, Pay Fixed 0.77%	843	(10)
Interest Rate Swap	Receive Variable 6-Month PRIBOR, Pay Fixed 0.85%	1,387	(22)
Interest Rate Swap	Receive Variable 6-Month PRIBOR, Pay Fixed 0.93%	548	(12)
Interest Rate Swap	Receive Variable 6-Month PRIBOR, Pay Fixed 2.47%	1,391	(99)
Interest Rate Swap	Receive Variable 6-Month THB, Pay Fixed 0.78%	654	2
Interest Rate Swap	Receive Variable 6-Month THB, Pay Fixed 0.96%	230	(2)
Interest Rate Swap	Receive Variable 6-Month THB, Pay Fixed 1.12%	421	(1)
Interest Rate Swap	Receive Variable 6-Month THB, Pay Fixed 1.28%	2,168	(44)
Interest Rate Swap	Receive Variable 6-Month THB, Pay Fixed 1.33%	1,200	(31)
Interest Rate Swap	Receive Variable 6-Month WIBOR, Pay Fixed 0.66%	1,062	(5)
Interest Rate Swap	Receive Variable 6-Month WIBOR, Pay Fixed 0.98%	708	(8)
Interest Rate Swap	Receive Variable 6-Month WIBOR, Pay Fixed 1.83%	3,084	(168)
Interest Rate Swap	Receive Variable 6-Month WIBOR, Pay Fixed 1.86%	4,298	(104)
Interest Rate Swap	Receive Variable 6-Month WIBOR, Pay Fixed 2.25%	430	(28)
Total Interest Rate	Swaps	\$ 325,034	\$ 4,301

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Foreign Currency Risk

At June 30, 2021, 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, 2021

<u>Rights/</u>							
Currency	Forwards	Options	Warrants	<u>Swaps</u>	Futures	<u>Total</u>	
Argentina peso	\$ -	\$ -	\$ -	\$ (197)	\$ -	\$ (197)	
Australian dollar	2,565	-	-	-	-	2,565	
Brazil real	1,764	-	-	161	-	1,925	
Canadian dollar	3,976	-	-	-	14	3,990	
Chilean peso	986	-	-	-	-	986	
Chinese r yuan HK	(5,497)	-	-	-	-	(5,497)	
Chinese yuan renminbi	(17,531)	-	-	-	-	(17,531)	
Colombian peso	(3,431)	-	-	30	-	(3,401)	
Czech koruna	1,760	-	-	(60)	-	1,700	
Dominican rep peso	(808)	-	-	-	-	(808)	
Euro	(108,522)	(4)	111	-	66	(108,349)	
Hong Kong dollar	872	-	-	-	-	872	
Hungarian forint	882	-	-	(3)	-	879	
Indonesian rupiah	595	-	-	-	-	595	
Israeli shekel	(19)	-	-	-	-	(19)	
Japanese yen	20,759	-	-	-	-	20,759	
Malaysian ringgit	137	-	-	7	-	144	
Mexican peso	2,111	-	-	(122)	-	1,989	
Peruvian sol	(5,863)	-	-	-	-	(5,863)	
Philippines peso	(152)	-	-	-	-	(152)	
Polish zloty	847	-	-	14	-	861	
Pound sterling	(11,917)	-	-	-	3	(11,914)	
Romanian leu	501	-	-	-	-	501	
New Russian ruble	1,219	-	-	-	-	1,219	
South African rand	(6,419)	-	-	(36)	-	(6,455)	
South Korean won	(459)	-	-	-	-	(459)	
Swiss franc	(645)	-	5	-	-	(640)	
Thailand baht	2,219	-	-	143	-	2,362	
Turkish lira	86	-	-	-	-	86	
Uruguayan peso	130					130	
Total	\$ (119,854)	\$ (4)	\$ 116	\$ (63)	\$ 83	\$ (119,722)	

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

At June 30, 2020, 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, 2020

Currency	Forwards	Swaps	Total
Argentina peso	\$ -	\$ (282)	\$ (282)
Brazil real	5,666	2,206	7,872
Canadian dollar	(4)	-	(4)
Chilean peso	394	359	753
Chinese yuan renminbi	21	95	116
Colombian peso	497	93	590
Czech koruna	2,516	236	2,752
Dominican rep peso	(2,151)	-	(2,151)
Euro	(38,620)	-	(38,620)
Hong Kong dollar	(2,070)	-	(2,070)
Hungarian forint	(5,014)	(11)	(5,025)
Indonesian rupiah	(128)	-	(128)
Israeli shekel	(334)	277	(57)
Japanese yen	206	-	206
Malaysian ringgit	1,223	(40)	1,183
Mexican peso	7,020	641	7,661
Peruvian sol	(6,488)	-	(6,488)
Philippines peso	51	-	51
Polish zloty	(1,255)	(123)	(1,378)
Pound sterling	(1,768)	-	(1,768)
Romanian leu	1,501	-	1,501
New Russian ruble	(1,620)	-	(1,620)
South African rand	(3,383)	(31)	(3,414)
Swedish krona	(197)	-	(197)
Swiss franc	(124)	-	(124)
Thailand baht	7,372	597	7,969
Turkish lira	1,598	(1,396)	202
Uruguayan peso	259		259
Total	\$ (34,832)	\$ 2,621	\$ (32,211)

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Contingent Features

At June 30, 2021 and 2020, the Retirement System held no positions in derivatives containing contingent features.

(5) Fair Value Measurement of Investments

The Retirement System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles.

The Retirement System has the following recurring fair value measurements as of June 30, 2021:

As of June 30, 2021		Total	M	Quoted Prices in Active arkets for Identical Assets (Level 1)	O	ignificant Other bservable Inputs Level 2)	observable Inputs Level 3)
Investments by fair value level							
Short-term investments	\$	644,979	\$	606,433	\$	-	\$ 38,546
Debt securities:							
U.S. government and agency securities		1,090,034		1,080,220		9,814	-
Other debt securities		951,706		178,928		656,576	116,202
Equity securities:							
Domestic		3,887,573		3,881,652		3,635	2,286
International		2,905,789		2,905,142		647	-
Foreign currency contracts, net		69		-		-	69
Invested securities lending collateral		770,857		-		417,710	 353,147
Total investments by fair value level		10,251,007	\$	8,652,375	\$	1,088,382	\$ 510,250
Investments measured at the net asset value (NA	V)						
Short-term investments		6,525					
Fixed income funds invested in:							
Other debt securities		142,340					
Equity funds invested in:							
Domestic		5,239,176					
International		624,792					
Real assets		4,182,366					
Private credit		1,818,240					
Private equity		10,280,363					
Absolute return		3,656,388					
Total investments measured at the NAV		25,950,190					
Investments not subject to the fair value hierarch	hy						
City investment pool		9,184					
Total investments measured at fair value	\$	36,210,381					

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The Retirement System has the following recurring fair value measurements as of June 30, 2020:

			Qι	oted Prices				
				in Active Iarkets for		ignificant Other		
				Identical	Ol	bservable	Une	observable
				Assets		Inputs		Inputs
As of June 30, 2020		Total		(Level 1)	(Level 2)	(]	Level 3)
Investments by fair value level							•	
Short-term investments	\$	524,408	\$	-	\$	-	\$	524,408
Debt securities:								
U.S. government and agency securities		1,094,201		1,094,199		2		-
Other debt securities		820,556		179,683		546,063		94,810
Equity securities:								
Domestic		2,884,344		2,876,298		8,046		-
International		1,867,980		1,867,041		930		9
Foreign currency contracts, net		(116)		-		-		(116)
Invested securities lending collateral		547,047		-		420,514		126,533
Total investments by fair value level		7,738,420	\$	6,017,221	\$	975,555	\$	745,644
Investments measured at the net asset value (NA	V)	_					•	
Short-term investments		1,645						
Fixed income funds invested in:								
Other debt securities		137,868						
Equity funds invested in:								
Domestic		3,319,968						
International		534,046						
Real assets		3,840,427						
Private credit		1,291,763						
Private equity		6,105,532						
Absolute return		3,702,667						
Total investments measured at the NAV		18,933,916						
Investments not subject to the fair value hierarch	y							
City investment pool		32,391						
Total investments measured at fair value	\$	26,704,727						

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Investments at Fair Value

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In some cases, a valuation technique may have multiple inputs used to measure fair value, and each input might fall into a different level of the fair value hierarchy. The level in the fair value hierarchy within which a fair value measurement falls in its entirety is determined based on the lowest level input that is significant to the measurement. The prices used in determining the fair value hierarchy are obtained from various pricing sources by the Retirement System's custodian bank.

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

Investments at Net Asset Value (NAV)

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

The fair value of the Retirement System's investments in private equity, real assets, private credit, absolute return, and some public equity investments are based on NAV provided by the investment managers and general partners (hereinafter collectively referred to as the "General Partners"). Such value generally represents the Retirement System's proportionate share of the net assets of the limited partnerships. The partnership financial statements are 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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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

Private credit investment strategies include capital preservation, return maximization and opportunistic. Investments in the asset class are achieved through commingled funds and separate account partnerships. Private credit investments are mostly illiquid and distributions are received over the life of the investments. These investments are not typically redeemed, nor do they have set redemption schedules. There are fourteen public equity investments held in commingled funds valued at NAV. These investments may be subject to varying lock-up provisions and redemption schedules. The real asset holdings are illiquid. Distributions are received over the life of the investments, which could equal or exceed ten years. They are not redeemed, nor do they have set redemption schedules. Private equity investment strategies include buyout, venture capital, growth capital, and special situations. Investments in the asset class are achieved primarily through commingled funds and separate account partnerships, but may also include direct and co-investment opportunities. Private equity investments are illiquid and distributions are received over the life of the investments, which could equal or exceed ten years. These investments are not typically redeemed, nor do they have set redemption schedules.

Absolute return investment strategies include equity, credit, macro, emerging markets, quantitative, multi-strategy, special situations/other, co-investments and commodities. Investments are achieved through limited partnerships. The table below provides a summary of the terms and conditions upon which the Retirement System may redeem its absolute return investments. 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.

Absolute Return Investments Measured at NAV as of June 30, 2021

% of NAV	Redemption Frequency (excludes illiquid)	Redemption Notice Period			
43%	Monthly	5-95 Days			
45%	Quarterly	45-180 Days			
12%	Semi-annually	60-180 Days			
100%					
% of NAV in Lock Up	As of Fiscal Year-End				
14%	2021-2022				
10%	2022-2023				
4%	2023-2024				
0%	2024-2025				

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(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. There are no restrictions on the number of securities that can be lent at one time. The term to maturity of the loaned securities is generally not matched with the term to maturity of the investment of the corresponding collateral.

The Retirement System does not have the ability to pledge or sell collateral securities unless a borrower defaults. The securities collateral is not reported on the statements of fiduciary net position. As of June 30, 2021 and 2020, 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, 2021, the Retirement System has lent \$2,060,039 in securities and received collateral of \$770,514 and \$1,458,413 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 \$770,857. The net unrealized gain of \$343 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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The Retirement System's securities lending transactions as of June 30, 2021 are summarized in the following table.

Securities Lending as of June 30, 2021

Investment Type	Fair Value of Loaned Securities		C	Cash ollateral	r Value of Non- ash Collateral
Securities on Loan for Cash Collateral					_
U.S. Corporate Fixed Income	\$	86,347	\$	88,523	\$ -
U.S. Equities		445,420		477,334	-
U.S. Government Fixed Income		191,064		194,848	-
International Fixed Income		825		882	-
International Equities		8,418		8,927	-
Securities on Loan for Non-Cash Collater	al				
U.S. Corporate Fixed Income		3,118		-	3,192
U.S. Equities		538,114		-	586,380
U.S. Government Fixed Income		655,451		-	717,379
International Fixed Income		4,753		-	5,153
International Equities		126,529			 146,309
	\$	2,060,039	\$	770,514	\$ 1,458,413

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, 2021.

Fair Value of Cash Collateral Account as of June 30, 2021

		Maturities			es
Investment Type	 Fair Value	Les	s Than 1 Year		1-5 Years
Certificates of Deposit	\$ 20,728	\$	20,728	\$	-
Commercial Paper	98,781		98,781		-
Floating Rate Notes	349,033		345,999		3,034
Money Market Funds	36,095		36,095		-
Repurchase Agreements	266,178		266,178		-
Payable/Receivable	 42		42		
Total	\$ 770,857	\$	767,823	\$	3,034

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The Retirement System's exposure to credit risk in its reinvested cash collateral account as of June 30, 2021 is as follows:

Credit Rating of Cash Collateral Account as of June 30, 2021

			Fair Value as a
Credit Rating	F	'air Value	Percentage of Total
A-1	\$	125,609	16.3%
AAA		36,095	4.7%
AA		181,580	23.6%
A		161,353	20.9%
Not Rated *		266,220	34.5%
Total	\$	770,857	100.0%

^{*} This figure includes \$266,178 in repurchase agreements.

As of June 30, 2020, the Retirement System has lent \$1,433,684 in securities and received collateral of \$547,029 and \$969,557 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 \$547,047. The net unrealized gain of \$18 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, 2020 are summarized in the following table.

Securities Lending as of June 30, 2020						
Investment Type		ir Value of ed Securities	C	Cash ollateral		air Value of Non- Cash Collateral
Securities on Loan for Cash Collateral						
U.S. Corporate Fixed Income	\$	41,564	\$	42,504	\$	-
U.S. Equities		419,809		424,541		-
U.S. Government Fixed Income		66,421		67,882		-
International Fixed Income		2,057		2,298		-
International Equities		9,248		9,804		-
Securities on Loan for Non-Cash Collateral		-				
U.S. Equities		265,391		-		278,246
U.S. Government Fixed Income		542,456		-		592,478
International Fixed Income		1,087		-		1,135
International Equities		85,651				97,698
	\$	1,433,684	\$	547,029	\$	969,557

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2020.

Fair Value of Cash Collateral Account as of June 30, 2020

			Ma	turity Less	
Investment Type	Fair Value		Than 1 Year		
U.S. Agencies	\$	549	\$	549	
Negotiable Certificates of Deposit		124,267		124,267	
Commercial Paper		122,720		122,720	
Fixed Rate Notes		7,920		7,920	
Floating Rate Notes		140,445		140,445	
Money Market Funds		82,507		82,507	
Repurchase Agreements		68,431		68,431	
Payable/Receivable		208		208	
Total	\$	547,047	\$	547,047	

The Retirement System's exposure to credit risk in its reinvested cash collateral account as of June 30, 2020 is as follows:

Credit Rating of Cash Collateral Account as of June 30, 2020

		Fair Value as a
F	air Value	Percentage of Total
\$	251,059	46.0%
	82,507	15.1%
	54,905	10.0%
	89,937	16.4%
	68,639	12.5%
\$	547,047	100.0%
		82,507 54,905 89,937 68,639

^{*} This figure includes \$68,431 in repurchase agreements.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(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, 2021 and 2020, are summarized as follows:

	2021		2020	
Investments:				
Beginning of the year	\$	3,840,427	\$	4,334,229
Capital investments		547,457		763,762
Equity in net earnings		72,408		54,982
Net appreciation (depreciation) in fair value		509,855		(344,955)
Capital distributions		(787,781)		(967,591)
End of the year	\$	4,182,366	\$	3,840,427

(8) Benefits

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

	2021		2020	
Service retirement benefits	\$	1,272,492	\$	1,209,024
Disability retirement benefits		204,831		199,655
Death benefits		11,538		8,667
COLA benefit adjustments		110,646		113,695
Total	\$	1,599,507	\$	1,531,041

(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 2020-21 and 2019-20 are based on a schedule of rates determined from actuarial studies by the consulting actuary as of July 1, 2019 and 2018, respectively.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Required and actual employer contribution rates for the years ended June 30, 2021 and 2020 as a percentage of covered payrolls were as follows:

	Fiscal Year 2020-21	Fiscal Year 2019-20
Police members	22.40% - 23.40%	20.69% - 21.69%
Fire members	22.40% - 23.40%	20.69% - 21.69%
Miscellaneous Non-Safety members	22.90% - 26.90%	21.19% - 25.19%
Sheriff and Miscellaneous Safety members	22.90% - 23.40%	21.19% - 21.69%

Employee contributions are mandatory as required by the Charter. Employee contribution rates for fiscal years 2020-21 and 2019-20 as a percentage of gross covered salary were as follows:

	Fiscal Year 2020-21	Fiscal Year 2019-20
Participants entering the Retirement System prior to		
November 2, 1976		
Police and fire	11.5%	11.5%
Miscellaneous	8.0% - 12.0%	8.0% - 12.0%
Participants entering the Retirement System after		
November 2, 1976 and prior to July 1, 2010		
Police and fire	12.0%	12.0%
Miscellaneous	7.5% - 11.5%	7.5% - 11.5%
Participants entering the Retirement System on or		
after July 1, 2010		
Police and fire	12.5% - 13.0%	12.5% - 13.0%
Miscellaneous	7.5% - 11.5%	7.5% - 11.5%
Sheriff and Miscellaneous Safety hired on or after		
January 7, 2012	12.5% - 13.0%	12.5% - 13.0%

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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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 interest rate applied to accumulated employee contributions is determined by the Retirement System's consulting actuary and recommended to the Retirement Board. The Retirement Board reviews and sets the crediting interest rate for the Plan on an annual basis. Interest for the years ended June 30, 2021 and 2020, accumulated at 4.00%.

(10) Net Pension Liability/(Asset) of Employers

The components of the employers' net pension liability/(asset) at June 30, 2021 and 2020, were as follows:

	June 30, 2021	June 30, 2020		
Total pension liability	\$ 33,088,765	\$ 32,031,018		
Fiduciary net position	\$ 35,673,834	\$ 26,620,218		
Net pension liability/(asset)	\$ (2,585,069)	\$ 5,410,800		
Fiduciary net position as a percentage of				
total pension liability	107.8%	83.1%		

(a) Actuarial Assumptions

The total pension liabilities as of June 30, 2021 and 2020, were determined by actuarial valuations as of July 1, 2020 and 2019, respectively, which were rolled forward to June 30, 2021 and 2020, using standard roll forward procedures.

The following is a summary of actuarial methods and assumptions used at the June 30, 2021, measurement date:

Inflation 2.50%

Salary increases 3.25% plus merit component based on employee classification

and years of service

Investment rate of return 7.40%, 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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The actuarial assumptions used at the June 30, 2021, measurement date are based upon the results of a demographic experience study for the period July 1, 2014 through June 30, 2019, and an economic experience study as of July 1, 2020.

The Supplemental COLA assumption as of June 30, 2021, was developed based upon the probability and amount of Supplemental COLA for each future year. The tables below show the net assumed Supplemental COLA for members at sample years.

Assumed Future Supplemental COLA for Members Retiring Before 11/6/1996 or Hired After Prop C

		Old Police & Fire,	Old Police & Fire
July 1,	Old Miscellaneous and all New Plans	pre-7/1/75 Retirements	A8.595, A8.596, Retirements
2021	1.50%	1.60%	1.00%
2022	0.80%	0.80%	0.50%
2027	0.60%	0.70%	0.40%
2032	0.50%	0.60%	0.40%
2034+	0.50%	0.60%	0.40%

Assumed Future Supplemental COLA for Members Retiring After 11/6/1996 and Hired Before Prop C

July 1,	Old Miscellaneous and all New Plans	Old Police & Fire
2021	1.50%	3.5% less assumed Basic COLA, not less
		than zero
2022+	0.75%	½ x (3.5% less assumed Basic COLA), not
		less than zero

The long-term expected rate of return on pension plan investments was 7.40%. It was set by the Retirement Board after consideration of both expected future returns and historical returns experienced by the Retirement System. Expected future returns were determined by using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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, 2021, are summarized in the following table:

		Long-Term Expected
Asset Class	Target Allocation	Real Rate of Return
Global Equity	37.0%	4.2%
Treasuries	8.0%	0.0%
Liquid Credit	5.0%	2.3%
Private Credit	10.0%	5.1%
Private Equity	23.0%	7.9%
Real Assets	10.0%	5.1%
Absolute Return	10.0%	2.9%
Leverage	-3.0%	0.1%
	100.0%	

The following is a summary of actuarial methods and assumptions used at the June 30, 2020, measurement date:

Inflation	2.75%
Salary increases	3.50% plus merit component based on employee classification and years of service
Investment rate of return	7.40%, net of pension plan investment expense, including inflation

Mortality rates for active members and healthy annuitants were based upon adjusted Employee and Healthy Annuitant CalPERS mortality tables projected generationally from the 2009 base year using a modified version of the MP-2015 projection scale.

The actuarial assumptions used at the June 30, 2020, measurement date were based upon the results of a demographic experience study for the period July 1, 2009 through June 30, 2014, and an economic experience study as of July 1, 2019.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

The Supplemental COLA assumption as of June 30, 2020, was developed based upon the probability and amount of Supplemental COLA for each future year. The tables below show the net assumed Supplemental COLA for members at sample years.

Assumed Future Supplemental COLA for Members Retiring Before 11/6/1996 or Hired After Prop C

of three fitter top c					
Old Miscellaneous and all New Plans	Old Police & Fire, pre-7/1/75 Retirements	Old Police & Fire A8.595, A8.596, Retirements			
0.000%	0.000%	0.000%			
0.110%	0.070%	0.030%			
0.190%	0.130%	0.050%			
0.330%	0.220%	0.090%			
0.360%	0.240%	0.100%			
0.375%	0.250%	0.100%			
	Old Miscellaneous and all New Plans 0.000% 0.110% 0.190% 0.330% 0.360%	Old Miscellaneous and all New Plans Old Police & Fire, pre-7/1/75 0.000% 0.000% 0.110% 0.070% 0.190% 0.130% 0.330% 0.220% 0.360% 0.240%			

Assumed Future Supplemental COLA for Members Retiring After 11/6/1996 and Hired Before Prop C

	Old Miscellaneous	
July 1,	and all New Plans	Old Police & Fire
2020	0.000%	0.0%
2021+	0.750%	½ x (3.5% less assumed Basic COLA)

The long-term expected rate of return on pension plan investments was 7.40%. It was set by the Retirement Board after consideration of both expected future returns and historical returns experienced by the Retirement System. Expected future returns were determined by using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target allocation and best estimates of geometric long-term expected real rates of return (expected returns, net of pension plan investment expense and inflation) for each major asset class as of June 30, 2020, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	31.0%	4.9%
Treasuries	6.0%	-0.5%
Liquid Credit	3.0%	2.7%
Private Credit	10.0%	4.8%
Private Equity	18.0%	7.9%
Real Assets	17.0%	5.7%
Hedge Funds/Absolute Return	15.0%	3.0%
-	100.0%	

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(b) Discount Rate

The discount rate used to measure the total pension liability at June 30, 2021, was 7.40%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the rates specified in the Charter. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the July 1, 2020, 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, 2021, 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 7.40% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 2.16% to the extent that they are not available. The single equivalent percentage rate used to determine the total pension liability as of June 30, 2021, rounded to two decimals is 7.40%.

The discount rate used to measure the total pension liability at June 30, 2020, was 7.40%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the rates specified in the Charter. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the July 1, 2019, 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, 2020, the System's fiduciary net position was projected to be available to make projected future benefit payments for current members until fiscal year end 2099, when only a portion of the projected benefit payments are expected to be made from the projected fiduciary net position. Projected benefit payments are discounted at the long-term expected return on assets of 7.40% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 2.21% to the extent that they are not available. The single equivalent percentage rate used to determine the total pension liability as of June 30, 2020, rounded to two decimals is 7.40%.

The municipal bond rates of 2.16% and 2.21% used to determine the above discount rates represent the yields available on June 24, 2021 and June 25, 2020, respectively, on the Bond Buyer 20-Bond GO Index.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(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, 2021 and 2020, calculated using the discount rates of 7.40% and 7.40%, 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)		
	June 30, 2021	June 30, 2020	
1% Decrease	\$1,722,874	\$9,566,972	
Current Discount Rate	\$(2,585,069)	\$5,410,800	
1% Increase	\$(6,141,630)	\$1,977,024	

(d) Money Weighted Rate of Returns

For the years ended June 30, 2021 and 2020, the annual money-weighted rates of return on pension plan investments, net of investment expenses, adjusted for the changing amounts actually invested, were 35.45% and 3.86%, 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 this report, the following timeframes are used.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

San Francisco Health Service System Retiree Plan – Multiple-Employer

Valuation Date (VD) June 30, 2020 Measurement Date (MD) June 30, 2020

Measurement Period (MP) July 1, 2019 to June 30, 2020

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, 2020. 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 0.31% as of the measurement date.

(b) Benefits

Dental:

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 City and County of San Francisco Employees' Retirement System. The eligibility requirements are as follows:

Normal Retirement Miscellaneous Age 50 with 20 years of credited service¹

Age 60 with 10 years of credited service

Safety Age 50 with 5 years of credited service

Disabled Retirement² 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.
- 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 – City Health Plan (self-insured) and

UHC Medicare Advantage (fully-insured)

HMO – Kaiser (fully-insured) and Blue Shield (flex-funded) 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.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(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, 2021, the City's funding was based on "pay-as-you-go" plus a contribution of \$39,555 to the Retiree Health Care Trust Fund. The "pay-as-you-go" portion paid by the City was \$206,439 for a total contribution of \$245,994 for the year ended June 30, 2021. The Retirement System's proportionate share of the City's contributions for fiscal year 2020-21 was \$771.

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

As of June 30, 2021, the City reported net OPEB liability related to the Plan of \$3.8 billion. The Retirement System's proportionate share of the City's net OPEB liability as of June 30, 2021 was \$11,988.

For the year ended June 30, 2021, the City's recognized OPEB expense was \$320,684. 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 \$25.

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

As of June 30, 2021, the Retirement System reported its proportionate share of the City's deferred outflows and inflows of resources related to OPEB from the following sources:

	_	eferred tflows of		eferred lows of
Retirement System	Re	sources	Res	sources
Contributions subsequent to measurement date	\$	771	\$	-
Differences between expected and actual experience		435		1,717
Changes in assumptions		606		-
Net difference between projected and actual				
earnings on plan investments		8		-
Change in proportion		435		255
Tota	ıl \$	2,255	\$	1,972

Amounts reported as deferred outflows, exclusive of contributions made after the measurement date, and deferred inflows of resources will be amortized annually and recognized in OPEB expense as follows:

Year ending June 30:	
2022	

2022	(132)
2023	(127)
2024	(128)
2025	(125)
2026	57
Thereafter	(33)

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(e) Actuarial Assumptions

A summary of the actuarial assumptions and methods used to calculate the total OPEB liability as of June 30, 2020 (measurement date), is provided below:

Key Actuarial Assumptions

Valuation DateJune 30, 2020Measurement DateJune 30, 2020

Actuarial Cost Method The Entry Age Actuarial Cost Method is used to measure the Plan's Total OPEB Liability

Healthcare Cost Trend Pre-Medicare trend starts at 4.00% in 2022, 7.00% in 2023, trending down to ultimate rate of 4.04% in 2075

Rates Medicare trend starts at 1.00% in 2022, 7.50% in 2023, trending down to ultimate rate of 4.04% in 2075

10-County average trend starts at 4.50% in 2022, 5.50% in 2023, trending down to ultimate rate of 4.04% in 2075

Adjustment Factor

Vision and expenses trend remains a flat 3.00% for all years

Expected Rate of

Salary Increase Rate

Return on Plan Assets 7.00%

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%

C:--ft. 0 500/ 2 750/

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

ending June 30, 2019.

Non Annuitante

Non-Ammultants			Aujusunei	it ractor
		Published Table	Male	Female
	Miscellaneous	PubG-2010 Employee	0.834	0.866
	Safety	PubS-2010 Employee	1.011	0.979
Healthy Ret	tirees 🗆		Adjustment Factor	
		Published Table	Male	Female
	Miscellaneous	PubG-2010 Employee	1.031	0.977
	Safety	PubS-2010 Employee	0.947	1.044
Disabled Retirees			Adjustmen	nt Factor
Disabled No	thees -			
Disabled Re		Published Table	Male	Female
Disabled IX	Miscellaneous	Published Table PubG-2010 Employee	•	1.003
Disabled Re			Male	
Beneficiarie	Miscellaneous Safety	PubG-2010 Employee	Male 1.045	1.003 0.995
	Miscellaneous Safety	PubG-2010 Employee	Male 1.045 0.916	1.003 0.995
	Miscellaneous Safety	PubG-2010 Employee PubS-2010 Employee	Male 1.045 0.916 Adjustmen	1.003 0.995 nt Factor

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

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

(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 Trend		1% Increase	
\$	10,365	\$	11,988	\$	14,103

(g) Discount Rate

The discount rate used to measure the total OPEB liability as of June 30, 2020 was 7.00%. Based on the assumption that plan member 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 7.00% 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:

Notes to Financial Statements (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Asset Class	Target Allocation	Long-term Expected Real Rate of Return	
Equities			
U.S. Large Cap	28.0%	8.4%	
U.S. Small Cap	3.0%	9.8%	
Developed Market Equity (non-U.S.)	15.0%	9.6%	
Emerging Market Equity	13.0%	11.7%	
Credit			
Bank Loans	3.0%	4.9%	
High Yield Bonds	3.0%	4.9%	
Emerging Market Bonds	3.0%	4.8%	
Rate Securities			
Investment Grade Bonds	9.0%	2.2%	
Long-term Government Bonds	4.0%	3.1%	
Short-term Treasury Inflation Protected Securities (TIPS)	4.0%	1.9%	
Private Markets			
Private Equity	5.0%	12.5%	
Core Private Real Estate	5.0%	6.4%	
Risk Mitigating Strategies			
Global Macro	5.0%	4.1%	
Total	100.0%		

The asset allocation targets summarized above have a 20-year return estimate of 6.90%, which was weighted against a 10-year model estimating a 6.93% return, resulting in the ultimate long-term expected rate of return of 7.00%.

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		Ι	Discount Rate	1% Increase		
	6.00% 7.00%		7.00%		8.00%	
\$	13,911	\$	11,988	\$	10,417	

City issues a publicly available 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.

Required Supplementary Information – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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

Total pension liability: Service cost \$718,771 \$704,637 \$675,065 \$632,118 Interest on total pension liability 2,302,075 2,230,441 2,131,847 2,041,110 Changes of benefit terms 2,002,075 2,05,869 12,484 (42,382) Changes of assumptions (479,435) (117,141 351,902 170,699 Benefit payments, including (1,619,761 1,455,072 1,714,616 1,436,987 Net change in total pension liability 1,057,747 1,475,729 1,714,616 1,436,988 Total pension liability - beginning of year 3,2031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 28,840,673 Total pension liability - end of year (a) 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including 1,619,761 1,548,077 1,1456,682 1,360,387 Refunds of contributions 2,620,240 2,020,390 2,403,344 Refunds of contributions 2,620,240 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 Refunds of contributions 2,620,240 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384 2,620,384		Year Ended	Year Ended	Year Ended	Year Ended
Service cost \$718,771 \$704,637 \$675,065 \$632,118 Interest on total pension liability 2,302,075 2,230,441 2,131,847 2,041,110 Changes of benefit terms - - - - - - Differences between expected and actual experience 136,097 205,869 12,484 (42,382) Changes of assumptions (479,435) (117,141) 351,902 170,699 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Net change in total pension liability - beginning of year 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - beginning of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 Fiduciary net position: Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674		June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018
Interest on total pension liability	Total pension liability:				
Changes of benefit terms - <td>Service cost</td> <td>\$ 718,771</td> <td>\$ 704,637</td> <td>\$ 675,065</td> <td>\$ 632,118</td>	Service cost	\$ 718,771	\$ 704,637	\$ 675,065	\$ 632,118
Differences between expected and actual experience 136,097 205,869 12,484 (42,382) Changes of assumptions (479,435) (117,141) 351,902 170,699 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Net change in total pension liability 1,057,747 1,475,729 1,714,616 1,436,958 Total pension liability - beginning of year 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 409,398 400,649 380,980 364,696 Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,410,350 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position as a percentage of total pension liability (asset) - end of year (a) - (b) \$(2,585,069) \$5,410,800 \$4,476,640 \$4,282,707	Interest on total pension liability	2,302,075	2,230,441	2,131,847	2,041,110
and actual experience 136,097 205,869 12,484 (42,382) Changes of assumptions (479,435) (117,141) 351,902 170,699 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Net change in total pension liability 1,057,747 1,475,729 1,714,616 1,436,958 Total pension liability - beginning of year 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 20,000 20,	Changes of benefit terms	-	-	-	-
Changes of assumptions (479,435) (117,141) 351,902 170,699 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Net change in total pension liability 1,057,747 1,475,729 1,714,616 1,436,958 Total pension liability - beginning of year 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Fiduciary net position: Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,	Differences between expected				
Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Net change in total pension liability 1,057,747 1,475,729 1,714,616 1,436,958 Total pension liability - beginning of year 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 Fiduciary net position: Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year 26,620,218 26,078,649 24,557,966 22,410,350	and actual experience	136,097	205,869	12,484	(42,382)
refunds of contributions Net change in total pension liability 1,057,747 1,475,729 1,714,616 1,436,958 Total pension liability - beginning of year 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 27,403,715 30,555,289 28,840,673 27,403,715 30,555,289 28,840,673 27,403,715 30,555,289 28,840,673 27,403,715 30,555,289 28,840,673 27,403,715 30,555,289 28,840,673 27,403,715 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 28,840,673 30,555,289 38,098 36,46,96 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,410,350 24,476,640 24,557,966 22,410,350 24,476,640 24,557	Changes of assumptions	(479,435)	(117,141)	351,902	170,699
Net change in total pension liability	Benefit payments, including				
Total pension liability - beginning of year 32,031,018 30,555,289 28,840,673 27,403,715 Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 Fiduciary net position: Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - - (2,996) Beginning of year (as restated) 26,620,218 26,078	refunds of contributions	(1,619,761)	(1,548,077)	(1,456,682)	(1,364,587)
Total pension liability - end of year (a) 33,088,765 32,031,018 30,555,289 28,840,673 Fiduciary net position: Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (a) - (b) \$1,520,699 \$5,410,800 \$4,4	Net change in total pension liability	1,057,747	1,475,729	1,714,616	1,436,958
Fiduciary net position: Contributions - member	Total pension liability - beginning of year	32,031,018	30,555,289	28,840,673	27,403,715
Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$(2,585,069) \$5,410,800 \$4,476,640 \$4,282,707	Total pension liability - end of year (a)	33,088,765	32,031,018	30,555,289	28,840,673
Contributions - member 409,398 400,649 380,980 364,696 Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$(2,585,069) \$5,410,800 \$4,476,640 \$4,282,707					
Contributions - employer 836,559 742,985 645,056 619,067 Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3%<	Fiduciary net position:				
Net investment income 9,447,669 966,282 1,970,312 2,549,674 Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Contributions - member	409,398	400,649	380,980	364,696
Benefit payments, including refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Contributions - employer	836,559	742,985	645,056	619,067
refunds of contributions (1,619,761) (1,548,077) (1,456,682) (1,364,587) Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Net investment income	9,447,669	966,282	1,970,312	2,549,674
Administrative expense (20,249) (20,270) (18,983) (18,238) Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Benefit payments, including				
Net change in fiduciary net position 9,053,616 541,569 1,520,683 2,150,612 Fiduciary net position - beginning of year 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	refunds of contributions	(1,619,761)	(1,548,077)	(1,456,682)	(1,364,587)
Fiduciary net position - beginning of year Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Administrative expense	(20,249)	(20,270)	(18,983)	(18,238)
Beginning of year (as previously reported) 26,620,218 26,078,649 24,557,966 22,410,350 Restatement due to adoption of GASB75 - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Net change in fiduciary net position	9,053,616	541,569	1,520,683	2,150,612
Restatement due to adoption of GASB75 - - - (2,996) Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Fiduciary net position - beginning of year				
Beginning of year (as restated) 26,620,218 26,078,649 24,557,966 22,407,354 Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Beginning of year (as previously reported)	26,620,218	26,078,649	24,557,966	22,410,350
Fiduciary net position - end of year (b) 35,673,834 26,620,218 26,078,649 24,557,966 Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Restatement due to adoption of GASB75				(2,996)
Net pension liability/(asset) - end of year (a) - (b) \$ (2,585,069) \$ 5,410,800 \$ 4,476,640 \$ 4,282,707 Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Beginning of year (as restated)	26,620,218	26,078,649	24,557,966	22,407,354
Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%	Fiduciary net position - end of year (b)	35,673,834	26,620,218	26,078,649	24,557,966
Fiduciary net position as a percentage of total pension liability 107.8% 83.1% 85.3% 85.2%					
of total pension liability 107.8% 83.1% 85.3% 85.2%	Net pension liability/(asset) - end of year (a) - (b)	\$ (2,585,069)	\$ 5,410,800	\$ 4,476,640	\$ 4,282,707
of total pension liability 107.8% 83.1% 85.3% 85.2%					
	Fiduciary net position as a percentage				
Covered payroll \$ 3,623,898 \$ 3,566,991 \$ 3,375,447 \$ 3,221,544	of total pension liability	107.8%	83.1%	85.3%	85.2%
	Covered payroll	\$ 3,623,898	\$ 3,566,991	\$ 3,375,447	\$ 3,221,544
Net pension liability/(asset) as a percentage	Net pension liability/(asset) as a percentage				
of covered payroll -71.3% 151.7% 132.6% 132.9%		-71.3%	151.7%	132.6%	132.9%

Required Supplementary Information – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

	Year Ended	Year Ended	Year Ended	Year Ended
	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Total pension liability:				
Service cost	\$ 644,277	\$ 567,576	\$ 523,644	\$ 509,200
Interest on total pension liability	1,924,206	1,669,996	1,621,582	1,542,266
Changes of benefit terms	-	1,293,714	=	-
Differences between expected				
and actual experience	57,911	(119,270)	(197,981)	-
Changes of assumptions	88,180	1,087,309	216,845	(73,315)
Benefit payments, including				
refunds of contributions	(1,278,140)	(1,256,146)	(1,131,030)	(1,072,526)
Net change in total pension liability	1,436,434	3,243,179	1,033,060	905,625
Total pension liability - beginning of year	25,967,281	22,724,102	21,691,042	20,785,417
Total pension liability - end of year (a)	27,403,715	25,967,281	22,724,102	21,691,042
Fiduciary net position:				
Contributions - member	316,844	322,764	301,682	289,020
Contributions - employer	551,809	526,805	592,643	532,882
Net investment income	2,683,468	150,190	763,429	3,175,431
Benefit payments, including				
refunds of contributions	(1,278,140)	(1,256,146)	(1,131,030)	(1,072,526)
Administrative expense	(18,134)	(17,179)	(19,262)	(15,745)
Net change in fiduciary net position	2,255,847	(273,566)	507,462	2,909,062
Fiduciary net position - beginning of year				
Beginning of year (as previously reported)	20,154,503	20,428,069	19,920,607	17,011,545
Restatement due to adoption of GASB75	-	-	-	-
Beginning of year (as restated)	20,154,503	20,428,069	19,920,607	17,011,545
Fiduciary net position - end of year (b)	22,410,350	20,154,503	20,428,069	19,920,607
Net pension liability - end of year (a) - (b)	\$ 4,993,365	\$ 5,812,778	\$ 2,296,033	\$ 1,770,435
Fiduciary net position as a percentage				
of total pension liability	81.8%	77.6%	89.9%	91.8%
Covered payroll	\$ 3,041,818	\$ 2,836,498	\$ 2,642,752	\$ 2,507,162
Net pension liability as a percentage	, , ,-	. ,,	. , , ,	. ,,
of covered payroll	164.2%	204.9%	86.9%	70.6%
I A			/0	

^{*} This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Required Supplementary Information – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

Schedule of Employer Contributions

Year Ended June 30	De	ctuarially termined atributions	Re Ac De	ributions in elation to etuarially termined atributions	Defic	ibution ciency	Covered Payroll	Contributions as a Percentage of Covered Payroll
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%
2014		532,882		532,882		-	2,507,162	21.3%
2013		442,870		442,870		-	2,448,734	18.1%
2012		410,797		410,797		_	2,360,413 *	17.4%

^{*} Covered compensation from actuarial projection.

Schedule of Money-Weighted Rate of Return

Year Ended June 30	Money-Weighted Rate of Return
2021	35.45%
2020	3.86%
2019	8.19%
2018	11.55%
2017	13.52%
2016	0.96%
2015	4.03%
2014	19.10%
2013	13.91%
2012	0.81%

Notes to Required Supplementary Information – Unaudited Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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
2021	7.40%
2020	7.40%
2019	7.40%
2018	7.50%
2017	7.50%
2016	7.50%
2015	7.46%
2014	7.58%
2013	7.52%

Notes to Required Supplementary Information – Unaudited (Continued) Years Ended June 30, 2021 and 2020 (Dollar amounts in thousands)

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
2021	7/1/2019	7.40%	3.50%		None
2020	7/1/2018	7.40%	3.50%		Discount rate
2019	7/1/2017	7.50%	3.50%	Adj. 2009 CalPERS	Wage inflation assumption
2018	7/1/2016	7.50%	3.75%	Mortality Tables	None
2017	7/1/2015	7.50%	3.75%	projected generationally with mod. MP-2015	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%		Investment return and wage inflation assumptions
2015	7/1/2013	7.58%	3.83%		None
2014	7/1/2012	7.58%	3.83%	RP2000 Mortality projected with Scale AA	Investment return and wage inflation assumptions
2013	7/1/2011	7.66%	3.91%		Investment return and wage inflation assumptions
2012	7/1/2010	7.75%	4.00%		Wage inflation and demographic assumptions including salary merit increases based upon experience study

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