MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Financial Statements and Required Supplementary Information

December 31, 2023 and 2022

(With Independent Auditors' Report Thereon)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

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KPMG LLP
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Independent Auditors' Report

The Retirement Board and Participants
Massachusetts Bay Transportation Authority Retirement Fund:

Opinion

We have audited the financial statements of the Massachusetts Bay Transportation Authority Retirement Fund (the Fund), as of and for the years ended December 31, 2023 and 2022 and the related notes to the financial statements, which collectively comprise the Fund's basic financial statements for the years then ended as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Fund as of December 31, 2023 and 2022, and the changes in its fiduciary net position for the years then ended in accordance with U.S. generally accepted accounting principles.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Fund and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

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

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

Auditors' Responsibilities for the Audit of the Financial Statements

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

In performing an audit in accordance with GAAS, we:

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

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

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis, the schedule of changes in net pension liability and related ratios, the schedule of investment returns, and the schedule of contributions be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

KPMG LLP

Boston, Massachusetts
June 24, 2024

This section presents Management's Discussion and Analysis (MD&A) of the Massachusetts Bay Transportation Authority Retirement Fund's (the Fund or MBTARF) financial activity and performance as of and for the years ended December 31, 2023 and 2022. The MD&A is unaudited and is intended to serve as an introduction to the Fund's basic financial statements, as well as to offer readers of the Fund's financial statements a narrative view and analysis of MBTARF's financial activities.

Financial Reporting Structure

The financial statements include the statements of fiduciary net position and changes in fiduciary net position. They present the financial position of the Fund as of December 31, 2023, and 2022 and its financial activities for the years then ended. The notes to the financial statements provide further information that is essential to a full understanding of the financial statements. The notes describe the significant accounting policies of the Fund and provide detailed disclosures on certain account balances. The required supplementary information includes the schedules of changes in net pension liability and related ratios, investment returns, contributions and related notes as prescribed by the Governmental Accounting Standards Board (GASB).

The Fund's financial statements are prepared on an accrual basis of accounting. This method of accounting requires recognizing and recording financial transactions when they occur and not just in conjunction with the inflows and outflows of cash.

The total assets managed by the Fund are held in the trust for the payment of pension and related benefits to its members. The Fund's Board of Trustees, in its fiduciary capacity, with assistance from its consultants established the Fund's investment policies and oversees their implementation.

Financial Highlights

Year ended December 31, 2023

The net position of the Fund increased $71.9 million, or 4.4%, from $1,622.5 million as of December 31, 2022 to $1,694.4 million as of December 31, 2023.

Net investment income increased $400.1 million, or 155.5%, from ($257.3) million for the year ended December 31, 2022 to $142.8 million for the year ended December 31, 2023. The Fund had a 9.40% rate of return for the year ended December 2023 compared to a (12.97%) rate of return for the year ended December 31, 2022. The returns identified in the MD&A are gross of fees.

The total contributions received during the year ended December 31, 2023 were $186.0 million compared to total contributions received during the year ended December 31, 2022 of $175.5 million.

Employer contributions during the year ended December 31, 2023 increased $5.2 million or 4.0% to $135.2 million from $130.0 million during the year ended December 31, 2022.

Member contributions were $50.7 million during the year ended December 2023, an increase of $5.2 million or 11.4% over year ended December 31, 2022 member contributions of $45.5 million.

Benefits paid during the year ended December 31, 2023 were $247.2 million, an increase of $20.9 million or 9.2% over year ended December 31, 2022 when benefits paid were $226.3 million. The increase in benefits is largely due to rising final average compensation, one time retro-active compensation payments and a cost-of-living adjustment to the membership as negotiated in the Pension Agreement which was effective in March 2023.

Year ended December 31, 2022

The net position of the Fund decreased $317.4 million, or (16.4%) from $1,939.9 million as of December 31, 2021 to $1,622.5 million as of December 31, 2022.

Net investment income decreased $489.7 million, or (210.7%), from $232.4 million for the year ended December 31, 2021 to ($257.3) million for the year ended December 31, 2022. The Fund had a (12.97%) rate of return for the year ended December 2022 compared to a 13.88% rate of return for the year ended December 31, 2021. The returns identified in the MD&A are gross of fees with the exception of hedge funds, which are net of fees.

The total contributions received during the year ended December 31, 2022 were $175.5 million compared to total contributions received during the year ended December 31, 2021 of $166.7 million.

Employer contributions during the year ended December 31, 2022 increased $6.5 million or 5.3% to $130.0 million from $123.5 million during the year ended December 31, 2021.

Member contributions were $45.5 million during the year ended December 2022, an increase of $2.3 million or 5.3% over year ended December 31, 2021 member contributions of $43.2 million.

Benefits paid during the year ended December 31, 2022 were $226.3 million an increase of 4.7 million or 2.1% over year ended December 31, 2021 when benefits paid were $221.6 million. The increase in benefits is largely due to rising final average compensation.

Financial Analysis

The following schedules report the condensed comparative fiduciary net position and activities for the Fund as of and for the three years ended December 31, 2023, 2022 and 2021.

Condensed Comparative Fiduciary Net Position

(Dollar values expressed in millions)

		December 31		
		2023	**2022**	**2021**
Cash	$	1.6	1.2	1.3
Receivables		15.7	9.5	9.4
Investments		1,681.3	1,616.1	1,934.3
Cash collateral on securities lending		22.4	10.3	17.5
Right-of-use asset net of accumulated amort.		0.9	—	—
Total assets		1,721.9	1,637.1	1,962.5
Cash collateral on securities lending		22.4	10.3	17.5
Accounts payable and accrued expenses		2.5	2.4	2.3
Payable for investments purchased		1.5	1.9	2.8
Lease Liability		1.1	—	—
Total liabilities		27.5	14.6	22.6
Net position – restricted for pension benefits	$	1,694.4	1,622.5	1,939.9

Total assets at fair value were $1,721.9 million as of December 31, 2023, an increase of $84.8 million or 5.2%, over the year ended December 31, 2022, which were $1,637.1 million, which represented a decrease of $325.4 million or (16.6%) over the period ending December 31, 2021, where total assets were $1,962.5 million. At December 31, 2023, Investments totaled $1,681.3 million. This was an increase of $65.2 million from the period ending December 31, 2022, which had investments at fair value were $1,616.1 million, a decrease of ($318.2) million, or (16.5%), over the year ended December 31, 2021, which were valued at $1,934.3 million. This investment increase in 2023 is due to markets rebounding after a disappointing 2022, with the notable exception of private equity and real estate investments, which continued to show negative returns. Fixed income returns also rebounded in 2023, as peak inflation leveled off, and pricing pressures over the course of the year gradually receded, even as short-term rates remain elevated. The Federal Reserve raised interest rates four times in 2023 although the interest rates are projected to level or even reverse in 2024.

As of December 31, 2023 cash collateral on securities lending increased by $12.1 million or 117%, over the year ended December 31, 2022. The cash collateral on securities lending decreased by $7.2 million or (41.1%), between December 31, 2021, and December 31, 2022. 2023 receivables increased by $6.1 million, or 63.5%, over the prior calendar year. Between December 31, 2021 and December 31, 2022 receivables increased by

$0.2 million, or 2.1%. GASB Statement No. 87 was implemented in 2023 and resulted in a right-of-use asset, net of accumulated amortization of $0.9 million for the year. This pronouncement was not reported in 2022 and 2021.

Total liabilities as of December 31, 2023 increased by $12.9 million, or 88.4% over the prior year, and decreased by $8.0 million, or (35.4)% during calendar year 2022. Cash collateral on securities lending increased by $12.1 million or (117%), over the year ended December 31, 2022. The cash collateral on securities lending decreased by $7.2 million or (41.1%), between December 31, 2021, and December 31, 2022. From December 31, 2022 through December 31, 2023, payable for investments purchased decreased by $0.4 million, or (21.1%). From December 31, 2021 through December 31, 2022, payable for investment purchased decreased by $0.9 million, or (32.1%). From December 31, 2021 through December 31, 2022, payable for investment purchased decreased by $0.9 million, or (32.1%). GASB Statement No. 87 was implemented in 2023 and resulted in a lease liability of $1.1 million. This statement was not reported in 2022 and 2021.

Condensed Comparative Statement of Changes in Fiduciary Net Position

(Dollar values expressed in millions)

		December 31		
		2023	**2022**	**2021**
Additions:				
Employer contributions	$	135.2	130.0	123.5
Member contributions		50.7	45.5	43.2
Income from investments		142.8	(257.3)	232.4
Total additions		328.7	(81.8)	399.1
Deductions:				
Retirement benefits		247.2	226.3	221.5
Refunds of contributions		5.0	4.8	3.2
Administrative expense		4.4	4.5	4.4
Total deductions		256.6	235.6	229.1
Total changes in fiduciary net position	$	72.1	(317.4)	170.0
Net position restricted for pension benefits				
Beginning of Year		1,622.5	1,939.9	1,769.9
Adjustment for adoption of GASB 87		(0.2)	0.0	0.0
End of year	$	1,694.4	1,622.5	1,939.9

Additions to Plan Fiduciary Position

For the calendar year ended December 31, 2023, employer contributions increased by $5.2 million and member contributions also increased by $5.2 million. For the calendar year ended December 31, 2022, employer contributions increased by $6.5 million and member contributions increased by $2.3 million. For the year ending 2023, from January through June the contributions rates (employee and employer) were 9.3339% and 26.6561% respectively. On July 1, 2023, the employee contribution rate changed from 9.3339% to 10.3489%. This also includes the provision from the Pension Agreement effective March 2023 that the members pay 125 basis points over the actuarial required contribution rate. The employer contribution rate was changed from 26.6561% to 25.9511%. The current rates were effective as of July 1, 2023, based on the 2022 actuarial report recommendation. The Board of Directors voted in 2021 and 2022 to make no change to the contribution rates. Contributions are required to provide benefits and meet administrative expenses and are made jointly by the Massachusetts Bay Transportation Authority (the Authority) and members. The member contribution percentage is negotiated periodically as part of the collective bargaining agreement.

There was a net investment gain in 2023 of $142.8 million compared to a net investment loss in 2022 of ($257.3) million. Comparatively the investment gain in 2021 was $232.4 million. The increase in 2023 is due to improved market conditions in both the equity and fixed income markets. The loss in 2022 was a result of a decrease in the fair value of the investment portfolio from a sharp decline in overall market performance.

Deductions from Fiduciary Net Position

Benefits paid increased by $20.9 million and $4.8 million, or 9.2% and 2.2%, over the years ended 2023 and 2022, respectively. These increases are primarily due to the rising final average compensation and lengthening life span. The additional increase in 2023 can also be attributed to a one-time retroactive cost of living adjustment to the retired members as negotiated in the Pension Agreement. Administrative expenses decreased from $4.5 million to $4.4 million, a decrease of $0.1 million or (2.2%) over year 2022 and increased $0.1 million, or 2.3% over year 2021.

Net Pension Liability (NPL)

The Fund retains an independent actuarial firm, Buck Global, LLC, to conduct annual actuarial valuations to monitor the net pension liability.

As of December 31, 2023, and 2022, the fiduciary net position as a percentage of the total pension liability was 51.29% and 51.23%, respectively.

Investment Performance 2023

The Fund began the calendar year 2023 with a net position of $1,622.5 million and ended the calendar year with a net position of $1,694.4 million, representing a 4.4% increase. The Fund invests strategically to achieve the actuarial rate of return, while controlling risk through diversification of asset class exposure. The primary determinant of long-term investment performance is the strategic asset allocation policy.

Domestic equity 29.7%, international equity 15.8%, fixed income investments 23.3%, and cash equivalents 2.5% comprise approximately 71.3% of invested assets as of December 31, 2023. The remaining 28.7% of assets are invested in real estate 8.3%, and alternative investments 20.4%, which include private equity, absolute return, and diversified beta. These assets are expected to earn enhanced returns and manage risk through further diversification.

Investment performance results are measured by the relationship of the Fund's portfolio returns for equity and fixed income investment against widely accepted market indices. For the calendar year ended December 31, 2023, the MBTA Retirement Fund's total fund return was 9.4% compared to (13.0%) for the calendar year ended December 31, 2022. The 2023 increase in return is attributed to the return of positive gains experienced in most all asset classes after a down year in 2022. The only investment classes with significant negative returns were in real estate and private equity.

The domestic large cap equity returned 23.0% compared to the S&P 500 Index of 26.3%. The domestic small cap equity returned 17.3% compared to the Russell 2000 Growth Index of 18.7% and the Russell 2000 Value Index of 14.6%. The global equity and emerging markets returned 30.7% compared to MSCI All Country World Index of 22.2%. The international equity returned 17.2% compared to the MSCI EAFE Index of 18.2%. Fixed Income returned 7.1% compared to the Bloomberg Aggregate of 5.5%.

The total fund performance of 9.4% for calendar year 2023 trailed the total fund custom index (a blended composition of major market indices in proportion to the Fund's asset allocation) by 160 basis points, which returned 11.0%.

Additionally, for the year ended December 31, 2023, the real estate portfolio returned (17.9%) compared to the NCREIF Property Index of (7.9%). The hedge fund portfolio returned 10.4% compared to the CSFB/Tremont Hedge Fund Index of 5.8%. The opportunistic portfolio returned 11.2% compared to Bank of America/Merrill Lynch High Yield Benchmark return of 13.5%. The private equity portfolio returned (2.1%) compared to State Street's Private Equity benchmark return of 7.0%. The private credit portfolio returned 5.1% compared to State Street's Private Credit benchmark return of 10.2%. Diversified Beta returned 6.9% compared to the 60% MSCI World Eq / 40% Barclays Aggregate Bond return of 16.3%.

Investment Performance 2022

The Fund began the calendar year 2022 with a net position of $1,939.9 million and ended the calendar year with a net position of $1,622.5 million, representing a 16.4% decrease. The Fund invests strategically to achieve the actuarial rate of return, while controlling risk through diversification of asset class exposure. The primary determinant of long-term investment performance is the strategic asset allocation policy.

Domestic equity 24.6%, international equity 16.7%, fixed income investments 22.3%, and cash equivalents 3.5% comprise approximately 67.1% of invested assets as of December 31, 2022. The remaining 32.9% of assets are invested in real estate 10.7%, and alternative investments 22.2%, which include private equity, absolute return, and diversified beta. These assets are expected to earn enhanced returns and manage risk through further diversification.

Investment performance results are measured by the relationship of the Fund's portfolio returns for equity and fixed income investment against widely accepted market indices. For the calendar year ended December 31, 2022, the MBTA Retirement Fund's total fund return was (13.0%) compared to 13.9% for the calendar year ended December 31, 2021. The 2022 decrease in return is attributed to the decline in markets and reductions previous gains experienced in several core asset classes. Investment classes that drove the negative return were in the small cap growth equity, large cap growth equity, global equity and emerging markets and domestic fixed income.

The domestic large cap equity returned (15.8%) compared to the S&P 500 Index of (18.1%). The domestic small cap equity returned (22.3%) compared to the Russell 2000 Growth Index of (26.3%) and the Russell 2000 Value Index of (14.5%). The global equity and emerging markets returned (37.0%) compared to MSCI All Country World Index of (18.4%). The international equity returned (16.9%) compared to the MSCI EAFE Index of (14.5%). Fixed Income returned (10.3%) compared to the Bloomberg US Aggregate of (13.0%).

The total fund performance of (13.0%) for calendar year 2022 trailed by 465 basis points, the total fund custom index (a blended composition of major market indices in proportion to the Fund's asset allocation), which returned (8.3%).

Additionally, for the year ended December 31, 2022, the real estate portfolio returned 3.9% compared to the NCREIF Property Index of 5.5%. The hedge fund portfolio returned (2.5%) compared to the CSFB/Tremont Hedge Fund Index of 1.1%. The opportunistic portfolio returned (0.7%) compared to Bank of America/Merrill Lynch High Yield Benchmark return of (11.2%). The private equity portfolio returned (0.5%) compared to State Street's Private Equity benchmark return of (5.47%). The private credit portfolio returned 7.9% compared to State Street's Private Credit benchmark return of 3.0%. Diversified Beta returned (19.6%) compared to the 60% MSCI World Eq / 40% Barclays Aggregate Bond return of (15.9%).

Contacting the MBTA Retirement Fund

This financial report is designed to provide a general overview of the Fund's investment results and financial condition of the Fund for the years ended December 31, 2023 and 2022. Please contact the MBTA Retirement Fund Office by emailing invest@mbtarf.com or by phone to 617-316-3800 for additional financial information or questions related to this report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Statements of Fiduciary Net Position
December 31, 2023 and 2022

	2023	2022
Assets:		
Investments, at fair value:		
Domestic:		
Cash and cash equivalents	$ 58,328,068	58,763,129
Fixed income	376,362,371	357,589,712
Common stock and equity funds	501,075,238	444,338,203
Real estate funds	139,792,010	173,477,871
Alternative investments and hedge funds	337,372,697	358,179,395
	1,412,930,384	1,392,348,310
International:		
Cash and cash equivalents	85,580	137,798
Fixed income	2,723,533	149,438
Common stock and equity funds	265,554,999	223,460,403
	268,364,111	223,747,639
Total investments	1,681,294,495	1,616,095,949
Cash and cash equivalents	1,578,779	1,204,250
Contribution receivable from Massachusetts Bay Transportation Authority	8,348,040	6,719,724
Cash collateral on securities lending, invested	22,392,120	10,255,356
Receivable for investments sold	7,401,551	2,902,212
Right-of-use asset, net of accumulated amortization	893,105	—
Total assets	1,721,908,090	1,637,177,491
Liabilities:		
Cash collateral on securities lending, due to borrowers	22,392,120	10,255,356
Accounts payable and accrued expenses	2,520,930	2,435,703
Payable for investments purchased	1,530,057	1,937,454
Lease liability	1,063,723	—
Total liabilities	27,506,830	14,628,513
Net position – restricted for pension benefits	$ 1,694,401,260	1,622,548,978

See accompanying notes to financial statements.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Statements of Changes in Fiduciary Net Position
For the years ended December 31, 2023 and 2022

	2023	2022
Additions:		
Contributions by Massachusetts Bay Transportation Authority	$ 135,226,433	129,973,295
Contributions by members	50,735,073	45,511,253
Total contributions	185,961,506	175,484,548
Investment income:		
Income from investments	28,142,135	27,388,603
Less investment expenses, other than from securities lending	(4,464,889)	(4,901,736)
Net appreciation (depreciation) in fair value of investments	118,978,961	(279,781,753)
Net investment gain (loss)	142,656,208	(257,294,886)
Securities lending activity:		
Securities lending income	902,101	365,533
Less borrower rebates and fees	(857,844)	(325,638)
Net income from securities lending activities	44,257	39,896
Total net investment income (loss)	142,700,464	(257,254,990)
Total additions	328,661,971	(81,770,442)
Deductions:		
Retirement benefits	247,184,648	226,290,777
Refunds of members' contributions	5,005,285	4,847,462
Administrative expenses	4,415,368	4,484,766
Total deductions	256,605,301	235,623,005
Change in fiduciary net position	72,056,670	(317,393,447)
Net position restricted for pension benefits:		
Beginning of year	1,622,548,978	1,939,942,425
Adjustment for adoption of GASB 87	(204,388)	—
End of year	$ 1,694,401,260	1,622,548,978

See accompanying notes to financial statements.

(1) Description of the Fund

(a) General

The following description of the Massachusetts Bay Transportation Authority Retirement Fund (the Fund), a single employer defined benefit pension plan, provides only general information. Employees (members) should refer to the Pension Agreement for a more complete description of the Fund's provisions.

The Fund was established on January 1, 1948, under an agreement and declaration of trust (restated on November 17, 2023, July 19, 2019 and October 28, 1980) by and among the Massachusetts Bay Transportation Authority (the Authority), Local 589, Amalgamated Transit Union, Boston Carmen's Union, and AFL CIO (collectively, the Union). The Fund was established as a contributory defined benefit retirement plan in accordance with the Pension Agreement, effective July 1, 1970, adopted by the Authority and the Union for the purpose of receiving contributions and providing pension benefits for its members and qualified beneficiaries.

The general administration and responsibility for the operation of the Fund are vested in a seven-member Retirement Board. The Board consists of three members appointed by the Authority (at least one of whom must be a member of the Authority's Board of Directors), two members appointed by the Boston Carmen's Union, Local Union 589 of the Amalgamated Transit Union, AFL-CIO, one member elected by vote conducted by the Authority for a term of three years by members of the Fund who are not members of the Boston Carmen's Union, Local Union 589 of the Amalgamated Transit Union, AFL-CIO, and one member, who has no vote and is known as the honorary member, who is elected, for such period as the Retirement Board may determine, by the other six members of the Retirement Board.

(b) Membership

The Fund covers all employees of the Authority except the MBTA Police, who are covered separately, and certain executives who elect coverage under an alternate plan. At December 31, 2023 and 2022, Fund membership consisted of:

		2023	2022
Retired members or beneficiaries currently receiving benefits	$	6,773 (1)	6,759 (2)
Active members		5,805	5,555
Active members not presently earning service credit		444	307
Total membership	$	13,022	12,621

(1) Includes 6,625 retirees and beneficiaries and 148 individuals receiving payments under Qualified Domestic Relation Orders (QDROs)

(2) Includes 6,614 retirees and beneficiaries and 145 individuals receiving payments under Qualified Domestic Relation Orders (QDROs)

(c) Funding Policy

Contributions required to provide benefits and meet administrative expenses are made jointly by the Authority and members. The member contribution rate was increased from 9.339% to 10.3489% effective July 1, 2023 of pretax compensation. The Authority contribution rate decreased from 26.6561% to 25.9511% effective July 1, 2023. As of July 1, 2023, member contributions increased to 10.3489%, which is the negotiated 1.25% over the actuarial annual required contribution rate of 9.0989%. The Authority contribution rate was 25.9511% as determined by the 2022 Valuation of plan benefits and the executed Pension Agreement effective March 2023. As determined by the 2023 Valuation of plan benefits and the executed Pension Agreement the employer and employee rates as of July 1, 2024 will remain the same. The terms of the Fund's obligations are part of the Pension Agreement contained in the annual report of the Fund. Only parties to the Pension Agreement can amend the terms. The contributions by members and the Authority have been developed to provide normal contributions, interest on the unfunded accrued liability, and administrative expenses.

(d) Benefits

The Fund provides for retirement, disability and death benefits in accordance with the Pension Agreement, as amended.

On March 31, 2023, the parties to the Pension Agreement, Local 589, Amalgamated Transit Union, AFL-CIO (Union) and the Massachusetts Bay Transportation Authority (MBTA) reached agreement on a new Pension Agreement, which will run through June 30, 2028. The new Pension Agreement creates a two-tier benefit structure for new employees who become Members of the Fund after June 30, 2023 or existing employees who are otherwise eligible to switch into the new system. All other Members and retirees will remain subject to the preexisting benefit structure. Other changes to the Pension Agreement, which will be published to the Fund's website, include a COLA increase for eligible retired Members, contribution increases for active Members and the MBTA, changes in disability retirement calculations and the return of Member contributions, and Fund investments in the Pension Reserves Investment Trust (PRIT).

Summary of Changes from December 31, 2022 Valuation

- A one-time COLA increase was provided to select retirees and beneficiaries.
- The maximum pensionable earnings percentage was increased from 75% to 80%.
- A two-tier benefit structure consisting of the Group A Plan and the Group B Plan was adopted

A summary of benefits is as follows:

(i) *Normal Retirement Allowance for Group A Plan Members*

Condition for Allowance

Any member may retire at age 65. A member may remain in service after the stated retirement date.

Amount of Allowance

The normal retirement allowance equals 2.46% of 3-year average annual compensation multiplied by the years of service, such allowance not to exceed 80% of such average annual compensation.

(ii) *Normal Retirement Allowance for Group B Plan members*

Condition for Allowance

Any member may retire beginning at age 55 with at least 10 years of creditable service.

Amount of Allowance

The normal retirement allowance equals the average of the Member's highest 3 years of pensionable earnings multiplied by the Age Multiplier multiplied by the years of service.

The Age Multiplier is determined using the following table:

Age at Retirement	Percentage
55	1.750%
56	1.875%
57	2.000%
58	2.125%
59	2.250%
60	2.375%
61+	2.460%

A Retired Member's retirement allowance cannot exceed 80% of the average of the Retired Member's highest 3 years of pensionable earnings.

(iii) *Early Normal Retirement Allowance for Group A Plan members*

Condition for Allowance

Any member hired prior December 6, 2012 and has completed at least 23 years of service may retire on an early normal retirement allowance.

Any member hired on or after December 6, 2012 and has attained age 55 and completed at least 25 years of service may retire on an early normal retirement allowance.

Amount of Allowance

The early normal retirement allowance is computed in the same manner as a normal retirement allowance on the basis of the compensation and service to the time of retirement.

(iv) Early Reduced Retirement Allowance for Group A Plan members

Condition for Allowance

A member who has attained age 55 and has completed at least 20 years of service may be retired on an early reduced retirement allowance.

Amount of Allowance

The early reduced retirement allowance is an immediate allowance, commencing at the date of retirement, and is computed in the same manner as a normal retirement allowance on the basis of compensation and service to the time of early retirement, but reduced by ½ of 1% for each month of retirement prior to normal retirement date.

(v) Disability Retirement Allowance for Group A Plan members

Condition for Allowance

Any member who has completed 4 years of service in case of disablement due to an occupational accident or sickness, or who has completed 6 years of service in case of disablement due to any other cause, and who has become totally and permanently incapacitated, mentally or physically, for the further performance of duty may be retired.

Amount of Allowance

Upon disability retirement, a member receives an allowance commencing immediately, which is computed as a normal retirement allowance on the basis of the compensation and service to the time of disability retirement and is not less than 15% of the member’s 3-year average annual compensation.

(vi) Disability Retirement Allowance for Group B Plan members

Condition for Allowance

Any member who has completed 4 years of service in case of disablement due to an occupational accident or sickness, or who has completed 6 years of service in case of disablement due to any other cause, and who has become totally and permanently incapacitated, mentally or physically, for the further performance of duty may be retired.

Amount of Allowance

Upon disability retirement, a member receives an allowance commencing immediately, which is computed as a normal retirement allowance on the basis of the compensation and service to the time of disability retirement and is not less than 15% of the member’s 3-year average annual compensation. The Age Multiplier is based on the member retiring at the age of 55 or the member’s age at the time of disability retirement (referenced on the Age Multiplier chart above) if the member is over the age of 55.

(vii) Vested Retirement Allowance for Group A Plan members

Condition for Allowance

Any member who has completed 10 years of service and does not receive a refund of his contributions with interest, in the event his employment terminates for reasons other than voluntary quit or discharge for cause.

Amount of Allowance

The vested retirement allowance is a deferred allowance commencing on the member's normal retirement date and equal to the amount computed as a normal retirement allowance on the basis of the compensation and service to the time of termination.

(viii) Vested Retirement Allowance for Group B Plan members

Condition for Allowance

Any member shall have a fully vested deferred retirement allowance if the member has accrued 10 or more years of service and has not withdrawn their contributions from the Fund.

Amount of Allowance

The vested retirement allowance is computed as the average of the member's highest 3 years of pensionable earnings multiplied by 2.46% multiplied by the years of service; provided, however, that if a vested member retires prior to the age of 65, then the vested member's retirement allowance will be reduced for their entire retirement by 6% per year, or one-half percent each month, of retirement before age 65.

(ix) Survivor Benefit

Condition for Benefit

Upon the death of a member who has completed 10 years of service and who is survived by a spouse and/or dependent children designated to receive the deceased member's contributions with interest, a benefit may be elected by such survivor in lieu of the payment of the contributions with interest.

Amount of Benefit

If the deceased member had completed at least 10 but fewer than 23 years of service, the survivor's benefit, payable for life, is equal to the amount which would have become payable if the member had retired as of the date of his death and elected a 50% joint and survivor option in effect as of the date of death with the survivor as the designated person under the option. There is no reduction for early commencement.

If the deceased member had completed at least 23 years of service, the survivor's benefit, payable for life, is equal to the amount which would have become payable if the member had retired as of the date of his death and elected a 100% joint and survivor option in effect as of the date of death with the survivor as the designated person under the option. There is no reduction for early commencement.

(x) Accidental Death Benefit

Condition for Benefit

Upon the death of a member in service whose death results solely from an injury or injuries sustained in the performance of duty, and who is survived by a spouse designated to receive the deceased member's contribution with interest, an allowance shall be payable to said spouse.

Amount of Benefit

The accidental death benefit, payable for life, is equal to the amount which would have become payable to the member if the member had retired as of the date of his death on a disability retirement allowance. If there should be insufficient creditable service, the surviving spouse receives the minimum allowance available under the disability retirement provision.

(xi) Return of Contributions

On Account of Termination of Service

In the event of a Group A Plan member's termination of employment for any reason other than death or retirement or a Group B Plan member's nonvested termination, he is paid the amount of his contributions, with interest. Group A Plan members may not elect to keep their contributions in the Fund. Group B Plan members may elect to keep their contributions in the Fund to maintain and resume creditable service in the event they become an employee again in the future.

On Account of Death Prior to Retirement

Upon the death of a member or retired member before his retirement allowance has become effective, the amount of his contributions, with interest, is paid to his beneficiary or estate, unless a survivor benefit is payable.

On Account of Death after Retirement

Upon the death of a retired member, or the survivor of a retired member and his designated beneficiary under an optional benefit, any excess of his contributions at retirement, with interest, over the sum of all retirement allowance payments made is paid to the member's beneficiary or to the survivor's estate.

Our valuation does not include return of contributions on account of death after retirement for current retirees due to negligible impact on the Fund's liabilities.

(xii) Optional Benefits in Lieu of Regular Benefits

At retirement, or on his normal retirement date if prior thereto, any member may elect to convert his allowance into an optional benefit of equivalent actuarial value permitted by the Rules and Regulations.

(xiii) Reinstatement of Creditable Service

If a member's service is interrupted by reason of resignation or dismissal, he has the opportunity upon the completion of 3 years of service after he has been rehired to repay to the Fund all amounts he has withdrawn together with an amount equal to their reasonable earnings. Upon such repayment, the member is to be credited with service for the periods before and after the interruption as though they had been a single period of service.

(2) Significant Accounting Policies

(a) Basis of Accounting

The financial statements have been prepared on the accrual basis of accounting in conformity with U.S. generally accepted accounting principles (GAAP), as promulgated by the Governmental Accounting Standards Board (GASB).

(b) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of additions and deductions during the reporting periods. Actual results could differ from estimates.

(c) Cash and Cash Equivalents

Cash and cash equivalents generally consist of cash on deposit with banks and financial institutions and highly liquid short-term investments, which have original maturities of three months or less. The Fund maintains its cash deposits with financial institutions, which management considers being of high credit quality and, by policy, limits the allocation of funds to any single major financial institution to minimize the Fund's amount of credit exposure.

(d) Revenue Recognition

Contributions are recognized pursuant to the contractual requirements of the Pension Agreement. Investment income is recognized as it is earned. Net appreciation (depreciation) in the fair value of investments is recorded as an increase (decrease) to investment income based on the valuation of investments as of the date of the financial statements.

(e) Retirement Benefits and Refunds

Retirement benefits and refunds are recognized when they become due and payable.

(f) Investments

Investments are stated at fair value. Securities traded on national security exchanges are valued on the basis of the closing price as of the last business day of the reporting period. Securities traded in the over-the-counter market are normally valued at the mean of the closing bid and ask prices. Securities listed or traded on certain foreign exchanges whose operations are similar to the U.S. over-the-counter market are valued at the price within the limits of the latest available current bid and ask prices deemed best to reflect current value. Gains and losses on sales of investments are determined on the basis of average cost.

Investments in real estate represent the Fund's percent ownership in private real estate funds. The Fund's investments are valued based on estimates by the Fund's management as a result of their review of financial information of the underlying real estate investment assets and standards established by the real estate industry, generally using the net asset value of the underlying investment as a practical expedient.

Investments in alternative investments and hedge funds include the Fund's percent ownership in venture capital, leveraged buyouts, private placements, hedge fund-of-funds, and other investments where the structure, risk profile, and return potential differ from traditional equity and fixed income investments. These investments are included in the statement of fiduciary net position at estimated values determined in good faith by the Fund's management, generally using the net asset value of the underlying investment as a practical expedient.

Purchase and sales of investments are selected on a trade-date basis.

(Continued)

(g) Derivatives

A derivative is an investment agreement or security with a value that depends on, or is derived from, the value of an underlying asset, reference rate, or financial index. The Fund has classified its investment in forward exchange contracts as investment in derivative instruments. A forward exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. The Fund utilizes forward foreign exchange contracts to minimize the effect of fluctuating foreign currencies. Risk associated with such contracts includes movement in the value of a foreign currency relative to the U.S. dollar. Realized gain or loss on forward exchange contracts is the difference between the original contract and the closing value of such contract and is included in the statement of changes in fiduciary net position. At December 31, 2023 and 2022, the Fund held open forward exchange contracts of varying amounts and currencies. Unrealized gains and losses are not significant to the financial statements.

(h) Currency Translation

As a result of having assets and liabilities denominated in foreign currencies, the Fund is exposed to the effect of foreign exchange rate fluctuations. Assets and liabilities denominated in foreign currencies and commitments under forward foreign exchange contracts and currency options are translated into U.S. dollars at the mean of the quoted bid and ask prices of such currencies against the U.S. dollar. Changes in foreign exchanges are reflected directly in income. Purchases and sales of portfolio securities are translated at the rates of exchange prevailing when such securities were acquired or sold. Income and expenses are translated at rates of exchange prevailing when accrued. It is not practical to isolate that portion of the results of operations arising as a result of changes in the foreign exchange rates from the fluctuations arising from changes in the market price of securities during the period. Net realized gains on foreign currency transactions represent net foreign exchange gains from holding foreign currencies, currency gains or losses realized between the trade and settlement dates on security transactions, and the difference between the amounts of dividends, interest, and foreign taxes recorded on the Fund’s books and the U.S. dollar equivalent amounts actually received or paid.

(i) Income Taxes

The Fund is considered a qualified governmental plan under Internal Revenue Code Section 414(d) and, is generally exempt from federal and state income tax under the Internal Revenue Code Section 115.

(j) Leases (Lessee)

The Fund is a lessee for a noncancellable lease of space and recognizes a lease liability and an intangible right-to-use lease asset.

The Fund initially measured the lease liability at the present value of payments expected to be made during the lease term. Subsequently, the lease liability is reduced by the principal portion of lease payments made. The lease asset is initially measured as the initial amount of the lease liability. Subsequently, the lease asset is amortized into administration expense on a straight-line basis over the lease term.

The lease term expires in 2026. The discount rate used for the calculation of the lease liability is 2.50%. Interest Expense from this lease totaled $31,774 and $41,025 for the years ended December 31, 2023 and 2022, respectively.

Future annual lease payments are as follows:

Year ending December 31:

	Principal	Interest	Total
2024	$ 397,295	$ 22,084	$ 419,379
2025	415,552	11,943	427,495
2026	250,876	2,103	252,979
Total	$ 1,063,723	$ 36,130	$ 1,099,853

(k) Subscription Based Information Technology Agreements (SBITAs)

The Fund evaluated all subscription-based Information Technology platforms and determined that all subscription agreements are of a short term (less than 12 months) nature and would not require an adjustment to record a right-of-use asset or related liability as of December 31, 2023, in accordance with GASB 96.

GASB 96 provides an exception for short-term SBITAs. Short-term SBITAs have a maximum possible term under the SBITA contract of 12 months (or less), including any options to extend, regardless of their probability of being exercised. Any subscription payments for short-term SBITAs are recognized as outflows of resources as of December 31, 2023.

(l) Adoption of New Accounting Pronouncement

In 2023, the Fund implemented GASB Statement No. 87, *Leases*. This statement requires the recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset.

In 2023, the Fund implemented GASB No. 96, *Subscription Based Information Technology Agreements* (SBITAs). This statement establishes uniform accounting and financial reporting requirements for SBITAs. The Fund evaluated all subscription-based Information Technology platforms and determined that all subscription agreements are of a short term (less than 12 month) nature, and would not require an adjustment to record a right-of-use asset or related liability as of December 31, 2023, in accordance with GASB 96.

(3) Cash Deposits, Investments, and Securities Lending

The Fund, in accordance with the declaration of trust agreement, is authorized to make deposits into checking and savings accounts and to invest in any form or type of investment, financial instrument, or financial transaction deemed prudent in the informed opinion of the Retirement Board. State Street Bank & Trust Company serves as the master custodian for the Fund's assets.

For the years ended December 31, 2023 and 2022, the Fund's essential risk information about deposits and investments is presented on the following tables.

(a) Custodial Credit Risk

Custodial credit risk is the risk that, in the event of failure of a depository financial institution, the Fund's deposits may not be returned. The Fund maintains its cash and cash equivalent deposits with various financial institutions, which management considers being of high quality. The Fund limits the allocation of its cash and cash equivalent deposits to any single financial institution to minimize the Fund's exposure. The Fund's Board has not adopted a formal custodial credit risk policy.

The Fund's cash and cash equivalent deposits that are not collateralized are subject to the Federal Deposit Insurance Corporation (FDIC) insurance limits. At December 31, 2023 and 2022, $0.00 and $804,225 of the Fund's cash and cash equivalents deposits were in excess of the FDIC insurance limit. The Fund held no un-collateralized cash or cash equivalents in excess of the FDIC insurance limit as of December 31, 2023.

Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Fund and are held by either the depository financial institution or the depository financial institution's trust department or agent but not in the Fund's name.

All of the Fund's investments are held by the Fund's custodian in the Fund's name, except for investments in hedge funds, real estate and alternative investments, which by their nature are not required to be categorized.

(b) Investment Policy

The Fund's investment objective is to achieve consistent positive real returns and to maximize long-term total return within prudent levels of risk through a combination of income and capital appreciation. The Fund's goal is to meet or exceed the Fund's actuarial target rate of return in order to maintain and improve upon its funded status.

The Fund is currently invested in stocks (domestic and foreign), fixed income securities (domestic), real estate, private equity, private credit and hedge funds.

The following was the Board's adopted target asset allocation policy as of December 31, 2023 and 2022:

Asset class	2023	2022
Domestic equity	24 %	24 %
International large cap equity	9	9
International small cap equity	2	2
Global/emerging markets	8	8
Fixed income	23	23
Real estate	9	9
Private equity	8	8
Private credit	2	2
Hedge funds	5	5
Hedge funds – opportunistic	2	2
Risk parity/diversified beta	6	6
Cash	2	2
Total	100 %	100 %

(c) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The following is a listing of the Fund's fixed income investments and related maturity schedule (in years) as of December 31, 2023 and 2022:

	2023				
Investment type	**Fair value**	**Less than 1**	**1-5**	**6-10**	**More than 10**
Agency debt	$ 2,762,771	—	614,074	1,267,305	881,392
U.S. Treasury notes & bonds	91,584,398	1,944,706	39,409,508	30,010,040	20,220,144
Domestic corporate	215,486,535	3,340,982	98,202,827	46,970,590	66,972,136
International corporate	2,723,533	—	355,318	1,850,538	517,677
Asset Backed:					
CMOs	9,460,199	134,407	57,133	231,639	9,037,020
Mortgage backed	33,251,264	—	—	522,529	32,728,735
Other	23,817,204	3,151	2,056,708	3,924,141	17,833,204
	$ 379,085,904	5,423,246	140,695,568	84,776,782	148,190,308

	2022				
Investment type	**Fair value**	**Less than 1**	**1-5**	**6-10**	**More than 10**
Agency debt	$ 2,536,775	368,340	586,350	586,718	995,367
U.S. Treasury notes & bonds	83,746,982	9,942,351	36,262,963	21,959,405	15,582,263
Domestic corporate	203,331,868	1,624,489	105,276,205	33,442,625	62,988,549
International corporate	149,438	—	149,438	—	—
Asset Backed:					
CMOs	10,407,771	—	194,230	273,082	9,940,459
Mortgage backed	32,383,692	—	—	648,757	31,734,935
Other	25,182,624	—	4,445,322	2,048,918	18,688,384
	$ 357,739,150	11,935,180	146,914,508	58,959,505	139,929,957

The Fund's guidelines limit its effective exposure to interest rate risk by benchmarking the separately managed fixed income investment accounts to an intermediate duration benchmark with a weighted average duration of four to five years. The Fund further constrains its actively managed fixed income portfolios to maintain a duration that shall not exceed 1.5 times the benchmark duration.

Fixed income managers are also expected to report risk statistics and give a description of portfolio characteristics, including quality, duration, allocation by security type, and yield to maturity.

The collateralized mortgage obligations (CMOs) held by the Fund at December 31, 2023 and 2022 are highly sensitive to changes in interest rates.

(d) Credit Risk

Credit risk exists when there is a possibility the issuer or other counterparty to an investment may be unable to fulfill its obligations.

The Fund's Board does not have a formal investment policy governing credit risk; each fixed income securities investment manager is given a specific set of guidelines to invest within based on the mandate for which it was hired. The Fund expects all investment managers to perform their fiduciary duties as prudent people would and conform to all state and federal statutes governing the investment of the funds. Managers are to adhere to the philosophy and style that was articulated to the Retirement Board at the time of hire. The fixed income investment managers have full discretion to invest in fixed income securities in order to exceed their strategy specific benchmarks.

The Fund's fixed income investments as of December 31, 2023 and 2022 were rated by Standard and Poor's and/or an equivalent national rating organization, and the ratings are presented below using the Standard & Poor's rating scale:

	2023								
Investment type	**Fair value**	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**	**CCC****	**Not Rated**
Agency debt	$ 2,762,771	—	2,364,287	—	—	—	—	—	398,484
Domestic corporate	215,486,535	49,776,255	2,124,627	18,774,149	64,093,157	14,313,250	61,781,151	2,283,097	2,340,849
International	2,723,533	—	—	—	619,239	1,598,659	—	—	505,635
Asset backed:									
CMOs	9,460,199	1,372,727	221,431	246,240	—	71,362	—	—	7,548,439
Mortgage backed	33,251,264	—	—	—	—	—	—	—	33,251,264
Other	23,817,203	4,737,809	89,153	1,618,700	3,589,982	105,364	107,524	—	13,568,673
Total credit securities risk	287,501,506	55,886,791	4,799,498	20,639,089	68,302,378	16,088,634	61,888,675	2,283,097	57,613,344
U.S. government fixed income securities*	91,584,398								
Total fixed income securities	$ 379,085,904								

	2022								
Investment type	**Fair value**	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**	**CCC****	**Not Rated**
Agency debt	$ 2,536,775	—	2,536,775	—	—	—	—	—	—
Domestic corporate	203,331,868	47,420,833	1,395,366	19,227,985	64,966,295	12,754,464	53,960,675	1,313,337	2,292,913
International	149,438	—	—	—	102,960	—	—	46,478	—
Asset backed:									
CMOs	10,407,771	1,927,758	191,423	285,139	37,385	87,326	—	—	7,878,740
Mortgage backed	32,383,692	—	—	—	—	—	—	—	32,383,692
Other	25,182,624	5,561,507	685,085	3,241,367	3,187,235	—	131,506	—	12,375,924
Total credit securities risk	273,992,168	54,910,098	4,808,649	22,754,491	68,293,875	12,841,790	54,092,181	1,359,815	54,931,269
U.S. government fixed income securities*	83,746,982								
Total fixed income securities	$ 357,739,150								

* Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk.

** The rating associated with this investment grade can be between C to CCC.

(e) Concentration Risk

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. The Fund places a 5% limit on the individual exposure to any single issuer at the time of purchase. The Fund has no investments with the exception of commingled funds, at fair value, that exceed 5% of the Fund's total investments as of December 31, 2023 and 2022. The Fund does have investments in individual commingled funds and trusts that represent more than 5% of the Fund's assets, but in each case, these investments are in institutional commingled funds that are invested in diversified portfolios.

(f) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Fund's exposure to foreign currency risk is attributable to its investments in separately managed and commingled international equity mutual funds and trusts that are invested in diversified portfolios of international stocks that are denominated in foreign currencies. The Fund's combined policy target allocation to all non-U.S. securities is currently 19.0% of the Fund's total assets. Currency hedging is permitted for defensive purposes. Currency hedging shall be effected through the use of forward currency contracts, which are described more fully in note 2.

Risk of loss arises from changes in currency exchange rates. The Fund's exposure to foreign currency risk as of December 31, 2023 and 2022 are presented on the following tables:

		2023			
Currency		**Short-Term**	**Fixed Income**	**Equity**	**Total**
Brazilian Real		—	748,564	—	748,564
Canadian Dollar		85,635	—	—	85,635
Euro		(55)	444,408	—	444,353
Indonesian Rupiah		—	505,635	—	505,635
Mexican Peso		0	507,249	—	507,249
South African Rand		—	517,677	—	517,677
International equity pooled funds (various currencies)		—	—	265,554,999	265,554,999
Total securities subject to foreign currency risk		85,580	2,723,533	265,554,999	268,364,111
United States dollars (securities held by international investment managers)		—	—	3,642,882	3,642,882
Total International Investment Securities	$	85,580	2,723,533	269,197,881	272,006,993

Currency		2022 Short-Term	Fixed Income	Equity	Total
Argentine peso	$	53,521	46,478	—	99,999
Canadian dollar		82,723	—	—	82,723
Euro currency		(105)	102,960	3,993,614	4,096,469
Indian rupee		0	—	6,462,030	6,462,030
Japanese yen		0	—	3,793,044	3,793,044
Norwegian krone		1,666	—	122,152	123,818
Pound sterling		(7)	—	2,486,758	2,486,751
Swiss franc		0	—	2,297,034	2,297,034
Thailand baht		—	—	948,820	948,820
International equity pooled funds (various currencies)		—	—	203,356,951	203,356,951
Total securities subject to foreign currency risk		137,798	149,438	223,460,403	223,747,639
United States dollars (securities held by international investment managers)		—	—	5,930,124	5,930,124
Total International Investment Securities	$	137,798	149,438	229,390,527	229,677,763

(g) *Securities Lending Transactions*

The Fund participates in the State Street Bank and Trust Company securities lending program by lending securities to borrowers (subject to borrower limits and program guidelines) and earning additional income, which is included in net investment income in the statement of changes in fiduciary net position. The lending program loans domestic and international equities, real estate investment trusts and fixed income securities for collateral with a concurrent agreement to return the collateral for the same securities in the future.

The Fund did not incur any losses on loaned securities during the year ended December 31, 2023 and 2022. The securities are monitored and valued on a daily basis by the custodian to ensure that the loans are properly collateralized. The collateral value is required to be at least 102% of the fair value of loaned domestic investments and a collateral value of at least 105% of the fair value on loaned international investments. Collateral can consist of both cash and securities. Should the collateral percentage levels fall below the stated figures, the borrowers are required to provide additional collateral to proper levels. The indemnification that State Street Bank provides the Fund in regard to loan risk is that should a borrower default on returning a security from loan, the collateral held is used to buy the security to be returned to the Fund. Any shortfall of proceeds to purchase the securities is taken on by State Street Bank. Since loans are terminable at will, loan durations do not generally match the duration of the investments made with the cash collateral.

Loaned securities are included in the statement of fiduciary net position since the Fund maintains ownership. For loans collateralized by cash, the value of the collateral is recorded as a liability offsetting the cash collateral recorded as an asset. The cash collateral as of December 31, 2023 and 2022 was $22,392,120 and $10,255,356, respectively. For loans having collateral other than cash, the related collateral securities are not recorded as assets in the statement of fiduciary net position, and a corresponding liability is not recorded, since the Fund cannot pledge or sell the collateral securities, except in the event of a borrower's default.

At December 31, 2023 and 2022, the fair value of loaned securities outstanding, included in investments, was approximately $21,834,761 and $10,008,621 respectively.

(h) Commitments

At December 31, 2023 and 2022, the Fund had contractual commitments to provide approximately $107.9 million and $109.2 million, respectively, of additional funding for alternative investments and real estate.

(i) Money-Weighted Rate of Return

The annual money-weighted rate of return on the Fund's investments calculated as the internal rate of return on the pension fund net of investment expenses for the years ended December 31, 2023 and 2022 was 8.73% and (9.26%), respectively. A money weighted return expresses investment performance net of pension plan investment expense, adjusted for the changing amounts actually invested.

(4) Fair Value Measurements

The Fund measures and records its investments using fair value measurement guidelines established by generally accepted accounting principles. The fair value gives the highest priority to unadjusted quoted prices in active markets for identical assets and liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). These levels of the fair value hierarchy are described below:

- Level 1 – Unadjusted quoted prices for identical assets or liabilities in active markets
- Level 2 – Observable inputs other than quoted prices in active markets for identical assets and liabilities. Level 2 inputs include the following:
  - Quoted prices for similar assets and liabilities in active markets
  - Quoted prices for identical or similar assets or liabilities in markets that are not active
  - Inputs other than quoted prices that are observable for the asset or liability, such as:
    1. Interest rates and yield curves observable at commonly quoted intervals
    2. Implied volatilities
    3. Credit spreads

- Level 3 – Unobservable inputs for the asset or liability (i.e., supported by little or no market activity). Level 3 inputs include management's assumptions.

The following tables' set forth by fair value hierarchy level, the Fund's assets carried at fair value on December 31, 2023 and 2022:

		Fair value measurements using:		
		Quoted prices in active markets for identical assets	Significant other observable inputs	Significant unobservable inputs
	Total at December 31, 2023	(Level 1)	(Level 2)	(Level 3)
Cash equivalents:				
Active cash	$ 6,113,532	6,113,532	—	—
International cash and equivalents	85,580	85,580	—	—
STIF-type instrument	41,975,528	41,975,528	—	—
Treasury bill	10,239,008	10,239,008	—	—
Total cash equivalents	58,413,648	58,413,648	—	—
U.S. equities:				
Common stock	184,279,529	184,279,529	—	—
Depository receipts	6,332,533	6,332,533	—	—
Mutual funds	307,404,392	307,404,392	—	—
Preferred stock	448,413	448,413	—	—
Real estate investment trust	2,610,371	2,610,371	—	—
Total U.S. equities	501,075,238	501,075,238	—	—
International equities - common stock	265,554,999	265,554,999	—	—
Fixed income:				
Agency debt	2,762,771	—	2,762,771	—
U.S. treasury notes and bonds	91,584,398	—	91,584,398	—
Domestic corporate	215,486,535	—	215,486,535	—
Asset backed:				
CMO	9,460,199	—	9,460,199	—
Mortgage-backed	33,251,264	—	33,251,264	—
Other asset backed	23,817,204	—	23,817,204	—
Total U.S. fixed income	376,362,371	—	376,362,371	—
International fixed income - bonds	2,723,533	—	2,723,533	—
Total investments by fair value level	1,204,129,789	825,043,885	379,085,904	—
Total investments measured at net asset value (NAV):				
Hedge fund of funds	155,617,354			
Private equity funds	181,755,342			
Private real estate funds	139,792,010			
Total investments measured at NAV	477,164,706			
Total investments	$ 1,681,294,495			

		Fair value measurements using:		
	Total at December 31, 2022	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Cash equivalents:				
Active cash	$ 9,165,056	9,165,056	—	—
International cash and equivalents	137,798	137,798	—	—
STIF-type instrument	40,022,933	40,022,933	—	—
Treasury bill	9,575,140	9,575,140	—	—
Total cash equivalents	58,900,927	58,900,927	—	—
U.S. equities:				
Common stock	202,033,228	202,033,228	—	—
Depository receipts	10,686,069	10,686,069	—	—
Mutual funds	228,438,926	228,438,926	—	—
Preferred stock	805,793	805,793	—	—
Real estate investment trust	2,374,187	2,374,187	—	—
Total U.S. equities	444,338,203	444,338,203	—	—
International equities - common stock	223,460,403	223,460,403	—	—
Fixed income:				
Agency debt	2,536,775	—	2,536,775	—
U.S. treasury notes and bonds	83,746,982	—	83,746,982	—
Domestic corporate	203,331,868	—	203,331,868	—
Asset backed:				
CMO	10,407,771	—	10,407,771	—
Mortgage-backed	32,383,692	—	32,383,692	—
Other asset backed	25,182,624	—	25,182,624	—
Total U.S. fixed income	357,589,712	—	357,589,712	—
International fixed income - bonds	149,438	—	149,438	—
Total investments by fair value level	1,084,438,683	726,699,533	357,739,150	—
Total investments measured at net asset value (NAV):				
Hedge fund of funds	178,789,685			
Private equity funds	179,389,711			
Private real estate funds	173,477,871			
Total investments measured at NAV	531,657,266			
Total investments	$ 1,616,095,949			

Commingled funds are typically structured as an investment vehicle created by the Investment Manager to execute a specific investment strategy. Some investment strategies are only pursued by commingled accounts. Mutual funds and/or other types of commingled investment vehicles, including, but not limited to, Alternative Investments, may provide lower costs and better diversification than can be obtained with a separate account that pursues the same investment objectives. The fair value of the hedge fund of funds, private equity funds and real estate funds are not rated funds. The fair values of these funds are based on net asset value calculated in accordance with the general partner's fair valuation policy as of the measurement date and are annually audited separately.

The following represents the significant investment strategies and terms on which the Fund may redeem investments for those investments measured at the NAV (or its equivalent) as a practical expedient:

	Fair Value December 31, 2023	Fair Value December 31, 2022	Total Unfunded Commitments as of December 31, 2023	Redemption Frequency if Currently Eligible	Redemption Notice Period
Hedge fund of funds					
Diversified beta[1]	$ 51,932,671	$ 90,623,911	$ -	monthly	15-30 days
Fund of hedge fund[2]	73,171,290	66,252,755	—	quarterly	30-90 days
Opportunistic hedge fund[3]	30,513,393	21,913,019	24,504,747	N/A	N/A
Private equity funds[4]	181,755,342	179,389,710	83,402,237	N/A	N/A
Private real estate funds					
Open-ended real estate funds[5]	125,872,993	155,439,203	—	quarterly	30 days - 1 year
Closed-end real esate funds[6]	13,919,017	18,038,668	—	N/A	N/A
Total Investments Measured at NAV	**$ 477,164,706**	**$ 531,657,266**	**$ 107,906,984**		

1 This category includes one diversified beta investment manager who utilizes a risk premium capture strategy that seeks to generate returns by investing in equity, bond and commodity markets using a risk-balanced investment process. The manager provides monthly liquidity with 15 - 30-day notification.

2 This category includes one fund of hedge fund managers; the manager provides quarterly liquidity with 30 - 90-day notice.

3 This category includes one opportunistic hedge fund manager who is not subject to redemption and is normally returned through distributions as a result of the liquidation of the underlying assets over a period of approximately three to seven years.

4 This type includes private equity funds that invest in nonmarketable securities of private companies, which ultimately may become public in the future and whose strategies include buyout, growth equity, venture, mezzanine debt, distressed debt, secondary fund of funds or special situations. Generally, each fund in this category may not be subject to redemption and is normally returned through distributions as a result of liquidation of the underlying assets over a weighted average period of approximately nine years.

5 This category includes six open-ended real estate funds that invest directly in real estate and real estate related assets, including retail, industrial, office, residential and hotels. Investments in this category can be redeemed quarterly upon 30 days to one-year notice.

[6] This category includes funds that invest directly in real estate and real estate related assets, including retail, industrial, office, residential and hotels. Generally, investment in each fund in this category may not be subject to redemption and is normally returned through distributions as a result of the liquidation of the underlying assets over a weighted average period of approximately seven or more years.

(5) Related-Party Transactions

The Fund invests certain cash in a money market fund, the State Street Bank and Trust Company Short Term Investment Fund, which is sponsored by the Fund's custodial bank. The total value of the funds held at December 31, 2023 and 2022 was $41,975,528 and $40,022,933 respectively.

The Fund invests in the AFL-CIO Housing Investment Trust and the AFL-CIO Building Investment Trust, two for-profit investment programs of the AFL-CIO. The total value of AFL-CIO Housing Investment Trust at December 31, 2023 and 2022 was $48,705,743 and $46,312,964 respectively. The total value of AFL-CIO Building Investment Trust at December 31, 2023 and 2022 was $9,890,903 and $14,988,018, respectively.

(6) Net Pension Liability

The components of the net pension liabilities of the Fund as of December 31, 2023 and 2022 are shown as follows (amounts in thousands):

		2023	2022
Total pension liability	$	3,303,364	3,167,471
Plan fiduciary net position		(1,694,401)	(1,622,549)
Fund's net pension liability	$	1,608,963	1,544,922
Plan fiduciary net position as a percentage of total pension liability		51.29 %	51.23 %

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of December 31, 2023 and 2022, using the following actuarial assumptions:

- As of December 31, 2023, a table of increases based on years of service, with rates of increase declining from 14% per year for the newly hired to 2.75% per year with 15 or more years of service
- Investment rate of return compounded annually in 2023 and 2022 of 7.25% per annum
- Inflation rate of 2.75%

The PRI-2012 Amount Weighted Blue Collar Mortality Tables with fully generational projection using Scale MP-2021 are used for all active participants. 101.1% of the PRI-2012 Amount Weighted Blue Collar Post Commencement Tables with fully generational projection using Scale MP-2021 are used for all retirees and beneficiaries preceding their related member's death. 98.3% of the PRI-2012 Amount Weighted Blue Collar Contingent Survivor Tables with fully generational projection using Scale MP-2021 are used for all beneficiaries following the death of their related member. The PRI-2012 Amount Weighted Total Dataset Disability Tables with fully generational projection using Scale MP-2021 are used for the period after disability retirement. Among pre-retirement deaths, 7.50% are assumed to qualify for accidental death benefits.

The actuarial assumptions used in the December 31, 2023 valuation were based on the results of an actuarial experience study for the period from January 1, 2018, through December 31, 2022. Actuarial valuations attempt to estimate costs associated with the pension fund based on a number of demographic, economic and retirement experience assumptions. Experience studies are required by statute to be conducted every five years to review experience in comparison to these assumptions and to provide recommended changes to assumptions.

The long-term expected rate of return on Fund investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension Fund investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of long-term arithmetic rates of return for each major asset class included in the Fund's target asset allocation as of December 31, 2023, are summarized in the following table:

	Target asset allocation		Long-term expected real rate of return	
Asset class	**2023**	**2022**	**2023**	**2022**
Equity				
US Large Cap	17 %	17 %	5.24 %	7.33 %
US Small Cap	7 %	7 %	8.13 %	7.91 %
Non-US Equity				
Global Equity	4 %	4 %	5.65 %	7.47 %
Emerging Markets Equity	4 %	4 %	8.62 %	9.54 %
Developed International Equity	11 %	11 %	7.10 %	7.19 %
Total Equity	43 %	43 %		
Fixed income				
Global Aggregate	8 %	8 %	2.19 %	1.74 %
Mortgage-Backed Securities	3 %	3 %	2.08 %	1.48 %
Global Multi Sector	6 %	6 %	1.18 %	1.08 %
US TIPS	3 %	3 %	2.22 %	1.98 %
Bank Loans	3 %	3 %	6.36 %	5.99 %
Total Fixed Income	23 %	23 %		
Alternatives				
Private Equity	8 %	8 %	8.59 %	12.92 %
Private Credit	2 %	2 %	6.56 %	5.91 %
Real Estate	9 %	9 %	3.87 %	5.17 %
Multi Asset Class	6 %	6 %	4.27 %	5.18 %
Hedge Funds FOF & Hedged Equity	7 %	7 %	4.13 %	4.12 %
Total Alternatives	32 %	32 %		
Cash	2 %	2 %	0.64 %	0.51 %

Nominal long-term expected rates of return for these asset classes are equal to the sum of the above expected long-term real rates and the expected long-term inflation rate of 2.36%.

(a) Discount Rate

The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that contributions will continue to be made in accordance with the current funding policy. Based on these assumptions, the fiduciary net position was projected to be available to make all projected future benefit payments to current Fund members. The assumed discount rate has been determined in accordance with the method prescribed by GASB 67 and is based on an expected long-term rate of return on Fund assets of 7.25% and the S&P Municipal Bond 20 Year High Grade Rate Index, whose yield to maturity was 4.00% as of December 29, 2023. We believe these assumptions do not significantly from what we deem reasonable for the purposes of the measurements required by GASB 67.

(b) Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability as of December 31, 2023 and 2022, calculated using the discount rate of 7.25%, respectively, as well as what the Fund's net pension liability would be if it were calculated using a discount rate that is one percentage point lower 6.25% or one percentage point higher 8.25% than the current rate (amounts in thousands):

		1% Decrease (6.25%)	Current discount rate (7.25%)	1% Increase (8.25%)
2023 Net pension liability	$	1,941,656	1,608,963	1,325,603
2022 Net pension liability	$	1,862,112	1,544,922	1,274,657

(7) Subsequent Events

There have been no other subsequent events through June 24, 2024 the date that the Fund's financial statements were available to be issued, that require recognition or disclosure.

REQUIRED SUPPLEMENTARY INFORMATION

(Unaudited)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

(Unaudited)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service cost	62,188,799	55,162,629	55,417,684	52,008,968	47,942,711	46,101,006	31,850,127	31,896,560	37,305,333	34,500,540
Interest	225,168,408	220,640,668	217,508,956	214,772,564	214,112,586	207,497,686	204,779,603	195,768,057	191,392,028	184,667,178
Differences between expected and actual experience	65,179,233	66,601,348	1,811,509	(7,346,171)	(3,179,975)	11,599,381	44,627,096	90,067,566	31,325,149	48,560,391
Changes of assumptions	35,546,454	(45,499,300)	(3,389,843)	-	69,299,287	43,926,927	128,688,470	-	(6,762,751)	-
Benefit Payments	(252,189,933)	(231,138,239)	(224,767,671)	(225,422,340)	(223,864,973)	(221,710,054)	(212,814,757)	(197,561,539)	(188,906,232)	(184,130,187)
Net change in total pension liability	135,892,961	65,767,106	46,580,635	34,013,021	104,309,636	87,414,946	197,130,539	120,170,644	64,353,527	83,597,922
Total pension liability-beginning of year	3,167,471,121	3,101,704,015	3,055,123,380	3,021,110,359	2,916,800,723	2,829,385,777	2,632,255,238	2,512,084,594	2,447,731,057	2,364,133,135
Total pension liability-ending (a)	3,303,364,082	3,167,471,121	3,101,704,015	3,055,123,380	3,021,110,359	2,916,800,723	2,829,385,777	2,632,255,238	2,512,084,594	2,447,731,057
Change in fiduciary net position:										
Contributions - employer	135,226,433	129,973,295	123,493,762	116,285,928	103,263,763	92,013,124	83,382,882	77,239,279	73,373,672	70,603,285
Contributions - emplopyee	50,735,073	45,511,253	43,224,002	40,774,027	36,366,108	32,606,337	29,775,344	27,791,543	26,510,946	25,318,224
Net investment (loss) income	142,700,464	(257,254,990)	232,417,541	228,670,823	253,730,990	(52,072,879)	221,690,618	86,782,343	4,711,246	73,543,477
Benefit payments	(252,189,933)	(231,138,239)	(224,767,671)	(225,422,340)	(223,864,973)	(221,710,054)	(212,814,757)	(197,561,539)	(188,906,232)	(184,130,187)
Administrative expenses	(4,619,755)	(4,484,766)	(4,366,485)	(4,511,375)	(5,046,775)	(4,317,624)	(4,463,775)	(6,493,777)	(5,808,086)	(4,052,664)
Net change in fiduciary net position	71,852,282	(317,393,447)	170,001,149	155,797,063	164,449,113	(153,481,096)	117,570,312	(12,242,151)	(90,118,454)	(18,717,865)
Fund fiduciary net position-beginning of year	1,622,548,978	1,939,942,425	1,769,941,276	1,614,144,213	1,449,695,100	1,603,176,196	1,485,605,884	1,497,848,035	1,587,966,489	1,606,684,354
Fund fiduciary net position - end of year (b)	1,694,401,260	1,622,548,978	1,939,942,425	1,769,941,276	1,614,144,213	1,449,695,100	1,603,176,196	1,485,605,884	1,497,848,035	1,587,966,489
Fund's net pension liability-ending (a)-(b)	1,608,962,822	1,544,922,143	1,161,761,590	1,285,182,104	1,406,966,146	1,467,105,623	1,226,209,581	1,146,649,354	1,014,236,559	859,764,568
Fund fiduciary net position as a percentage of the total pension liability	51.29%	51.23%	62.54%	57.93%	53.43%	49.70%	56.66%	56.44%	59.63%	64.88%
Covered payroll	560,824,908	496,467,531	458,857,189	460,921,559	436,828,077	425,862,201	428,830,122	446,740,427	443,237,899	417,957,007
Net pension liability as a percentage of covered payroll	286.89%	311.18%	253.19%	278.83%	322.09%	344.50%	285.94%	256.67%	228.82%	205.71%

See accompanying independent auditors' report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

(Unaudited)

Change of Assumptions:

2023: No change of assumptions

2022: Assumption changes to the salary scale, mortality rates, termination rates, and retirement rates were made according to the experience study completed in 2023. This decreased the total pension liability by $45.5 million.

2021: Participants who have been receiving Workers' Compensation benefits for five or more years are assumed to never receive a Massachusetts Bay Transportation Authority Retirement Fund pension benefit. This decreased the actuarial accrued liability by $2.76 million.

Participants who are active, but did not contribute to the plan in 2021, are assumed to remain non-contributing to the remainder of their employment and to receive only a refund of their contributions to the Fund with interest. This decreased the actuarial accrued liability by $0.63 million.

2020: No change of assumptions.

2019: Discount rate decreased from 7.50% to 7.25% resulting in an increased net pension liability totaling $69.3 million.

2018: Salary scale decreased the net pension liability by $(59.6) million, mortality rates increased the net pension liability by $6.0 million, termination rates increased the net pension liability by $9.4 million, and retirement rates increased the net pension liability by $88.1 million, resulting in increased net pension liability totaling $43.9 million.

2017: Discount rate decreased from 7.75% to 7.50% resulting in an increased net pension liability totaling $128.7 million.

See accompanying independent auditor's report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Required Supplementary Information

Schedule of Investment Returns

(Unaudited)

Annual money-weighted rate of return, net of investment expense

Year	Money-Weighted Rate of Return
2023	8.73 %
2022	(9.26)
2021	13.23
2020	14.22
2019	17.67
2018	(3.37)
2017	17.79
2016	5.88
2015	0.65
2014	4.80

See accompanying independent auditors' report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Required Supplementary Information

Schedule of Contributions

(Unaudited)

Year	Actuarially determined contribution	Actual contribution in relation to actuarially determined contribution	Percentage of actuarially required contributions	Covered-payroll	Contribution as a percentage of covered-payroll
2023	$131,307,539	$131,307,539	100.00 %	$560,824,908	24.11 %
2022	126,389,486	129,973,295	102.84	496,467,531	26.18
2021	122,034,414	123,493,762	101.20	458,857,189	26.91
2020	116,285,928	116,285,928	100.00	460,921,559	25.23
2019	103,264,000	103,263,763	100.00	436,828,077	23.64
2018	92,013,000	92,013,124	100.00	425,862,201	21.61
2017	83,383,000	83,382,882	100.00	428,830,122	19.44
2016	77,239,000	77,239,279	100.00	446,740,427	17.29
2015	73,359,000	73,373,372	100.02	443,237,899	16.55
2014	77,594,000	70,603,285	90.99	417,957,007	16.89

See accompanying independent auditors' report.

Actuarial Assumption and Methods Used to Determine Contribution Rates

- Actuarially determined contributions are calculated as of the December 31 preceding by six months the start of the fiscal year in which contributions are made. For example, the contribution calculated in the December 31, 2023 actuarial valuation are to be made during the period from July 1, 2024, to June 30, 2025.
- The methods and assumptions used to calculate the actuarially determined contribution in the December 31, 2023 actuarial valuation are shown in Section III. For funding purpose, an allowance of 1.00% of annual compensation of active members below normal retirement age is included in the total required contribution to cover expenses
- Salary – As of December 31, 2023, a table of increases based on years of service, with rates of increase declining from 14% per year for the newly hired to 2.75% per year with 15 or more years of service. As of December 31, 2022, a table of increases based on years of service, with rates of increase declining from 14% per year for the newly hired to 2.75% per year with 15 or more years of service.
- Actuarial cost method – Entry Age Normal, Level Percentage of Pay
- Amortization method – Closed period (specified below); installments increase at the rate of 4% per year
- Remaining amortization period – 15 years (2023 valuation), 16 years (2023 valuation)
- Asset Valuation method – Five-year phase-in smoothing method
- Investment rate of return – 7.25% net of pension plan investment expense.
- Retirement Age – Probabilities of retirement are based on table that reflects both age and service
- Mortality - The PRI-2012 Amount Weighted Blue Collar Mortality Tables with fully generational projection using Scale MP-2021 are used for all active participants. 101.1% of the PRI-2012 Amount Weighted Blue Collar Post Commencement Tables with fully generational projection using Scale MP-2021 are used for all retirees and beneficiaries preceding their related member's death. 98.3% of the PRI-2012 Amount Weighted Blue Collar Contingent Survivor Tables with fully generational projection using Scale MP-2021 are used for all beneficiaries following the death of their related member. The PRI-2012 Amount Weighted Total Dataset Disability Tables with fully generational projection using Scale MP-2021 are used for the period after disability retirement. Among pre-retirement deaths, 7.50% are assumed to qualify for accidental death benefits.