

SCHEDULES OF EMPLOYER ALLOCATIONS AND  
PENSION AMOUNTS BY EMPLOYER

Boston Retirement System  
(A Component Unit of the City of Boston, Massachusetts)  
As of and for the Year Ended December 31, 2019  
With Report of Independent Auditors

Ernst & Young LLP



Boston Retirement System  
(A Component Unit of the City of Boston, Massachusetts)

Schedules of Employer Allocations and  
Pension Amounts by Employer

As of and for the  
Year Ended December 31, 2019

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## Report of Independent Auditors

### Management and The Boston Retirement Board

We have audited the accompanying Schedule of Employer Allocations of Boston Retirement System (the System), a component unit of the City of Boston, Massachusetts, as of and for the year ended December 31, 2019, and the related notes. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense, excluding that attributable to employer-paid member contributions included in the accompanying Schedule of Pension Amounts by Employer of Boston Retirement System, as of and for the year ended December 31, 2019 (collectively, the specified column totals and Schedules, respectively), and the related notes.

### Management's Responsibility for the Schedules

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

### Auditor's Responsibility

Our responsibility is to express opinions on the Schedule of Employer Allocations and the specified column totals included on the Schedule of Pension Amounts by Employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Schedule of Employer Allocations and specified column totals included on the Schedule of Pension Amounts by Employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures on the Schedule of Employer Allocations and specified column totals included on the Schedule of Pension Amounts by Employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Schedule of Employer Allocations and specified column totals included on the Schedule of Pension Amounts by Employer, 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 Schedule of Employer Allocations and specified column totals included in the Schedule of Pension Amounts by Employer 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 Schedule of Employer Allocations and specified column totals included on the Schedule of Pension Amounts by Employer.

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

### **Opinions**

In our opinion, the Schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense, excluding that attributable to employer-paid member contributions for the total of all participating entities for Boston Retirement System, as of and for the year ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

### **Other Matter**

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of Boston Retirement System, as of and for the year ended December 31, 2019, and our report thereon, dated July 31, 2020, expressed an unmodified opinion on those financial statements.

### **Restriction on Use**

Our report is intended solely for the information and use of Boston Retirement System management, the Boston Retirement Board, Boston Retirement System employers, and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

*Ernst + Young LLP*

July 31, 2020

**Boston Retirement System**  
(A Component Unit of the City of Boston, Massachusetts)

**Schedule of Employer Allocations**

As of and for the Year Ended December 31, 2019

<b>Employer</b>	<b>2019 Actual Employer Contributions</b>	<b>Employer Allocation Percentage</b>
<b>Group A</b>		
City of Boston (the City)*	\$ 253,170	83.1685%
Boston Housing Authority*	14,800	4.8620
Boston Planning and Development Agency*	2,734	0.8981
Boston Water and Sewer Commission*	12,585	4.1343
Boston Public Health Commission*	21,117	6.9371
Subtotal Participating Employers, excluding Sheriff of Suffolk County	304,406	100.0000
<b>Group B</b>		
Sheriff of Suffolk County (Retirees as of December 31, 2009, funded by the City)*	3,846	100.0000
Subtotal Participating Employers	308,252	
<b>Group C</b>		
Commonwealth of Massachusetts (Other contributing entity – City of Boston Teachers)	157,040	100.0000%
Total actuarially determined contributions	21,000	
Excess contributions	21,000	
Total employer contributions	\$ 486,292	

\* Indicates participating employer of the Plan

*See accompanying notes.*

Boston Retirement System  
(A Component Unit of the City of Boston, Massachusetts)

Schedule of Pension Amounts by Employer

As of and for the Year Ended December 31, 2019

Entity	Deferred Outflows of Resources					Deferred Inflows of Resources					Pension Expense				
	Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Pension Expense	Pension Expense Related to Specific Liabilities of Individual Employers	Net Amortization of Deferred Amounts From Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
<b>Group A</b>															
City of Boston (the City)*	\$ 1,622,820,593	\$ -	\$ -	\$ 419,205,297	\$ 24,911,221	\$ 444,116,518	\$ 99,205,323	\$ 47,036,537	\$ 12,736,806	\$ -	\$ 158,978,666	\$ 259,146,185	\$ -	\$ 10,724,252	\$ 269,870,437
Boston Housing Authority*	94,870,824	-	-	24,506,932	-	24,506,932	5,799,588	2,749,777	744,599	7,616,510	16,910,474	15,149,804	-	(4,837,938)	10,311,866
Boston Planning and Development Agency*	17,522,189	-	-	4,526,312	-	4,526,312	1,071,156	507,871	137,524	1,798,892	3,515,443	2,798,096	-	(776,612)	2,021,484
Boston Water and Sewer Commission*	80,669,740	-	-	20,838,522	693,413	21,531,935	4,931,456	2,338,167	633,141	4,560,309	12,463,073	12,882,050	-	(964,941)	11,917,109
Boston Public Health Commission*	135,362,221	-	-	34,966,625	892,383	35,859,008	8,274,884	3,923,397	1,062,399	12,521,306	25,781,986	21,615,823	-	(4,144,761)	17,471,062
Subtotal Participating Employers, excluding Sheriff of Suffolk County	1,951,245,567	-	-	504,043,688	26,497,017	530,540,705	119,282,407	56,555,749	15,314,469	26,497,017	217,649,642	311,591,958	-	-	311,591,958
<b>Group B</b>															
Sheriff of Suffolk County (retirees as of December 31, 2009, funded by the City)*	15,943,750	-	-	-	-	-	-	-	-	-	-	1,176,639	-	-	1,176,639
Subtotal Participating Employers, including Sheriff of Suffolk County	1,967,189,317	-	-	504,043,688	26,497,017	530,540,705	119,282,407	56,555,749	15,314,469	26,497,017	217,649,642	312,768,597	-	-	312,768,597
<b>Group C</b>															
Commonwealth of Massachusetts (other contributing entity - City of Boston Teachers)	2,572,923,164	-	-	205,817,722	-	205,817,722	107,445,868	65,094,630	-	-	172,540,498	252,345,250	-	-	252,345,250
Commonwealth of Massachusetts (state reimbursed COLA)	17,483,436	-	-	571,369	-	571,369	1,174,913	7,547,052	-	-	8,721,965	(3,119,296)	-	-	(3,119,296)
Subtotal Commonwealth of Massachusetts	2,590,406,600	-	-	206,389,091	-	206,389,091	108,620,781	72,641,682	-	-	181,262,463	249,225,954	-	-	249,225,954
Total for all entities	\$ 4,557,595,917	\$ -	\$ -	\$ 710,432,779	\$ 26,497,017	\$ 736,929,796	\$ 227,903,188	\$ 129,197,431	\$ 15,314,469	\$ 26,497,017	\$ 398,912,105	\$ 561,994,551	\$ -	\$ -	\$ 561,994,551

\* Indicates participating employer of the Plan

See accompanying notes.

**Boston Retirement System**  
(A Component Unit of the City of Boston, Massachusetts)

**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer**

December 31, 2019

**1. Plan Description**

The following description of the Boston Retirement System (formerly, the State-Boston Retirement System) (the System, BRS or the Plan) is provided for general information purposes only. Participants should refer to Chapter 32 of the Massachusetts General Law (M.G.L.) for more detailed information. The Board of Trustees is primarily responsible for the administration of the System and consists of five members as follows: the City Auditor (who serves as an ex officio member), a second member appointed by the Mayor, a third and fourth member elected by active or retired members, and a fifth member chosen by the other four members (or appointed by the Mayor if the other four members do not agree on a selection within 30 days of a vacancy).

**General**

The Plan is a cost-sharing, multiple-employer qualified defined benefit governmental pension plan established under Chapter 32 of the M.G.L. The Plan provides pension benefits for participating employees of the following plan member governmental units:

- City of Boston (the City)\*
- Commonwealth of Massachusetts (other contributing entity – contributing towards City of Boston Teachers pensions)
- Boston Planning and Development Agency\*
- Boston Housing Authority\*
- Boston Water and Sewer Commission\*
- Boston Public Health Commission\*
- Sheriff of Suffolk County (retirees as of December 31, 2009, funded by the City)\*

\* Indicates participating employer of the Plan

**Boston Retirement System**  
(A Component Unit of the City of Boston, Massachusetts)

**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)**

**1. Plan Description (continued)**

At December 31, 2019, System membership consisted of the following:

Active plan members	20,856
Retirees and beneficiaries receiving benefits	14,560
Inactive members entitled to a return of contributions	11,531
Inactive members entitled to, but not yet receiving benefits	<u>1,147</u>
Total membership	<u><u>48,094</u></u>
Number of participating employers	6

The Commonwealth of Massachusetts (the Commonwealth) is responsible for funding the employer portion of all teacher pensions in the Commonwealth. All teachers in the Commonwealth are members of the Massachusetts Teachers Retirement System, with the exception of teachers employed by the City (Boston Teachers), who are members of the System. Although Boston Teachers are members of the System, the Commonwealth is the responsible contributing entity. Additionally, the Commonwealth reimburses the Plan for all cost-of-living increases paid to recipients that were awarded before 1997.

**Significant Provisions and Requirements**

Participation in the System is mandatory for all permanent, full-time, and certain part-time employees immediately upon the commencement of employment. Participants who resign from employment or are receiving workers' compensation benefits and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. In addition, those participants who resign voluntarily with less than ten years of service are entitled to receive 3% per year interest; all others receive interest that has accrued on their cumulative deductions at the regular interest rate (.10% at December 31, 2019).

Employees with ten or more years of service having attained age 55 are entitled to pension benefits; an earlier retirement is allowed upon completion of 20 years of service. The System provides for retirement allowance benefits up to a maximum of 80% of a participant's highest consecutive three-year average annual rate of regular compensation (highest consecutive five-year average for those members who join the System on or after April 2, 2012). Benefit payments are based upon



**Boston Retirement System**  
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**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)**

**1. Plan Description (continued)**

a participant's age, length of creditable service, regular compensation, and group classification. Participants become vested after ten years of creditable service. Effective July 1, 1998, Chapter 32 of the M.G.L. assigned the authority to establish and amend benefit provisions and grant cost-of-living increases for the Plan to the Boston Retirement Board.

If a member in service dies due to causes unrelated to his or her job, the surviving spouse and/or surviving dependent children may receive retirement allowance benefits, either in a lump sum or in the form of an annuity, based on the length of service, contributions, and age. In the event there is no spouse and/or dependent children named, other beneficiaries may be entitled to a lump-sum distribution. Participants who become permanently and totally disabled from further duty may be eligible to receive accidental or ordinary disability retirement benefits.

Accidental disability is provided to members with incapacitation resulting from a work-related injury or hazard. Generally, annual pension benefits are provided based on 72% of the annual rate of regular compensation that a member earned while an active employee on date of injury or average annual rate of regular compensation. Ordinary disability is available to any member whose permanent incapacitation is not work related and has attained ten years of creditable service. Such benefits are provided as if the member had attained the age of 55 (or actual age if over 55), based on the amount of creditable service actually earned. Limits are placed on how much a disability employee can earn from other sources while collecting a disability retirement pension.

**2. Summary of Significant Accounting Policies**

Investments are reported 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 (an exit price).

Following is a description of the valuation techniques and inputs used for each major class of assets and liabilities measured at fair value:

**Boston Retirement System**  
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**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)**

**2. Summary of Significant Accounting Policies (continued)**

**Short-Term, Equity and Fixed Income Investments**

Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Certain fixed income securities not traded on an exchange are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

**Pooled Funds**

The fair value of shares in managed investment pools is based on unit values reported by the funds.

**Alternative Investments**

Alternative investments include hedge funds, holdings through commingled limited partnerships of venture capital funds, including equity interests in early, middle, and later stage companies, as well as debt and equity interests in buyouts, acquisitions, restructurings, mezzanine structures and special situations, such as litigation or spin-off activities. These investments are carried at the limited partnership interest or redemption value, the equivalent of net asset value, which approximates fair value. Values assigned to such investments are based on available information and do not necessarily represent amounts that may ultimately be realized in liquidation. Liquidation values depend largely on future circumstances, including marketability, and frequently cannot reasonably be estimated until at, or near, the liquidation date.

**Real Estate**

Real estate investments consist of interests in commercial properties held by various partnerships and other limited liability entities, some of which utilize debt financing. Fair values of such holdings are reported based on the net asset values of the entities, which are estimated using third-party appraisals and other information provided by property managers.

Boston Retirement System  
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Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)

**2. Summary of Significant Accounting Policies (continued)**

**Basis of Accounting**

The Schedules of Employer Allocations and Pension Amounts by Employer for the System present amounts that are considered elements of the financial statements of the System or of its participating employers. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of the System or of its participating employers. The amounts presented on the Schedules were prepared in accordance with U.S. generally accepted accounting principles. Such preparation requires management of the System to make a number of estimates and assumptions related to the reported amounts. Due to the inherent nature of these estimates, actual results could differ from those estimates.

**3. Allocation Percentage Methodology**

Although the System administers one cost-sharing multiple-employer defined benefit pension plan, separate (sub) actuarial valuations are prepared to determine the actuarial determined contributions rates by group for: (a) the participating employers of the Plan, excluding Sheriff of Suffolk County, (b) Sheriff of Suffolk County, and (c) the Commonwealth. The measurement of the collective net pension liability, deferred outflows of resources, deferred inflows of resources, and pension expense, excluding that attributable to employer-paid member contributions, are determined separately for each group.

Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions*, requires participating employers in the System to recognize their proportionate share of the collective net pension liability, collective deferred outflows of resources, collective deferred inflows of resources and collective pension expense, excluding that attributable to employer-paid member contributions. The employer allocation percentages presented in the Schedule of Employer Allocations and applied to amounts presented in the Schedule of Pension Amounts by Employer are based on the ratio of each participating employer's contributions to the total actuarially determined employer contributions of the respective group during the year ended December 31, 2019. The employer allocation percentages have been rounded for presentation purposes. Therefore, use of these percentages to recalculate individual employer amounts presented on the Schedule of Employer Pension Amounts may result in immaterial differences due to this rounding.

**Boston Retirement System**  
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**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)**

**4. Contributions**

Participating employers are required to pay into the System their share of the remaining actuarially determined contribution and plan administration costs, which are apportioned among the participating employers based on an actuarial computation.

As a condition of participation, employees are required to contribute 5% of their salary if hired prior to January 1, 1975, 7% if hired after January 1, 1975 and before January 1, 1984, 8% if hired after January 1, 1984 and before July 1, 1996, and 9% if hired after July 1, 1996. Employees hired after January 1, 1979 contribute an additional 2% of earnings in excess of \$30,000 per year. Additionally, teachers who became members of the System after June 30, 2001, or other teachers who elect this option, are required by law to contribute 11% of their salary. Overtime and certain additional earnings are not subject to these assessments and are not considered in the determination of final average salary.

**5. Collective Net Pension Liability and Actuarial Information**

The components of the net pension liability of the participating employers are as follows:

	<b>December 31, 2019</b>
Total pension liability	\$ 11,964,670,843
Plan fiduciary net position	7,407,074,926
Employers' net pension liability	\$ 4,557,595,917
Plan fiduciary net position as a percentage of the total pension liability	61.91%

*Actuarial assumptions:* The total pension liability was measured by an actuarial valuation as of January 1, 2018, with update procedures used to roll forward the total pension liability to December 31, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation: 3.25% for BRS excluding Boston Teachers, 3.25% for Boston Teachers

**Boston Retirement System**  
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Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)

**5. Collective Net Pension Liability and Actuarial Information (continued)**

Salary increases:

<u>Years of Service</u>	<u>Boston Teachers</u>	<u>BRS Excluding Boston Teachers</u>		
		<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
0	7.50%	4.00%	4.25%	4.50%
1	7.10	4.00	4.25	4.50
2	7.00	4.00	4.25	4.50
3	6.90	4.00	4.25	4.50
4	6.80	4.00	4.25	4.50
5	6.70	4.00	4.25	4.50
6	6.60	4.00	4.25	4.50
7	6.50	4.00	4.25	4.50
8	6.30	4.00	4.25	4.50
9	6.10	4.00	4.25	4.50
10	5.90	4.00	4.25	4.50
11	5.70	4.00	4.25	4.50
12	5.20	4.00	4.25	4.50
13	4.70	4.00	4.25	4.50
14	4.35	4.00	4.25	4.50
15–16	4.20	4.00	4.25	4.50
17–19	4.10	4.00	4.25	4.50
20 and later	4.00	4.00	4.25	4.50

Investment rate of return                      7.05% for BRS excluding Boston Teachers and 7.15% for Boston Teachers, net of investment expenses, including inflation

Cost of living adjustments                      3% of first \$14,000

**Boston Retirement System**  
(A Component Unit of the City of Boston, Massachusetts)

**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)**

**5. Collective Net Pension Liability and Actuarial Information (continued)**

**Mortality Rates:**

**Healthy:** Pub-2010 General Employee, Healthy Retiree and Contingent Survivor Amount-Weighted Mortality Tables set forward one year projected generationally using Scale MP-2019 for Groups 1 and 2 and Pub-2010 Safety Employee, Healthy Retiree and Contingent Survivor Amount-Weighted Mortality Tables projected generationally using Scale MP-2019 for Group 4 (previously, RP-2014 Blue Collar Employee and Healthy Annuitant Mortality Tables Set Forward 1 year for female participants projected generationally using Scale MP-2017) for BRS excluding Boston Teachers and Pub-2010 Teacher Employee, Healthy Retiree and Contingent Survivor Headcount-Weighted Mortality Tables projected generationally using Scale MP-2019 (previously, RP-2014 White Collar Employee and Healthy Annuitant Mortality Tables projected generationally using Scale MP-2016 for Boston Teachers.

**Disabled:** Pub-2010 General Healthy Retiree Amount-Weighted Mortality Table set forward one year projected generationally using Scale MP-2019 for Groups 1 and 2 and the Pub-2010 Disabled Retiree Amount-Weighted Mortality Table projected generationally using Scale MP-2019 (previously, RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward 1 year projected generationally using Scale MP-2017 for BRS excluding Boston Teachers and Pub-2010 Teacher Healthy Retiree Headcount-Weighted Mortality Table projected generationally using Scale MP-2019) (previously, RP-2014 Healthy Annuitant Mortality Table set forward four years projected generationally using Scale BB2D) for Boston Teachers.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns 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. The target allocation (approved by the Boston Retirement Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

**Boston Retirement System**  
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Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)

**5. Collective Net Pension Liability and Actuarial Information (continued)**

<b>Asset Class</b>	<b>BRS Excluding Boston Teachers – Target Allocation</b>	<b>Boston Teachers – Target Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
Domestic equity	23.00%	21.00%	6.15%
International developed markets equity	17.00	13.00	6.78
Emerging markets equity	8.00	5.00	8.65
Core fixed income	16.00	15.00	1.11
High yield fixed income	10.00	8.00	3.51
Real estate	10.00	10.00	4.33
Commodities	0.00	4.00	4.13
Hedge fund, GTAA, risk parity	5.00	11.00	3.19
Private equity	11.00	13.00	9.99

*Discount rate:* The discount rates used to measure the Total Pension Liability (TPL) as of December 31, 2019 were 7.05% for the BRS excluding Boston Teachers and 7.15% for Boston Teachers. The discount rates used to measure the TPL as of December 31, 2018 were 7.50% for the BRS excluding Boston Teachers and 7.35% for the Boston Teachers. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for the current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan Fiduciary Net Position (FNP) was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both December 31, 2019 and 2018.

Boston Retirement System  
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Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)

**5. Collective Net Pension Liability and Actuarial Information (continued)**

*Sensitivity of the net pension liability to changes in the discount rate:* The following presents the net pension liability of the System as of December 31, 2019, calculated using the discount rate of 7.05% for the BRS excluding Boston Teachers and 7.15% for Boston Teachers, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.05% for the BRS excluding Boston Teachers and 6.15% for the Boston Teachers) or 1-percentage-point higher (8.05% for the BRS excluding Boston Teachers and 8.15% for the Boston Teachers) than the current rate:

	<b>1% Decrease</b>	<b>Current Discount</b>	<b>1% Increase</b>
Group A	\$ 2,829,090,749	\$ 1,951,245,567	\$ 1,211,415,733
Group B	17,801,315	15,943,750	14,378,233
Group C	3,113,470,788	2,590,406,600	2,157,247,751
System's net pension liability as of December 31, 2019	\$ 5,960,362,852	\$ 4,557,595,917	\$ 3,383,041,717



**Boston Retirement System**  
(A Component Unit of the City of Boston, Massachusetts)

**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)**

**6. Collective Deferred Outflows of Resources and Deferred Inflows of Resources**

The following presents a summary of changes in the collective deferred outflows of resources and deferred inflows of resources for the year ended December 31, 2019:

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
Difference between expected and actual experience in the Total Pension Liability	\$ —	\$ 227,903,188
Changes in proportion and differences between employer's contributions and proportionate share of contributions	26,497,017	26,497,017
Changes of assumptions	710,432,779	15,314,469
Net difference between projected and actual earnings on pension plan investments	—	129,197,431
Total	<u>\$ 736,929,796</u>	<u>\$ 398,912,105</u>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

<b>Participating Employers' Fiscal Year Ending June 30:</b>	<b>Group A</b>	<b>Group B</b>	<b>Group C</b>	<b>Total</b>
2021	\$ 44,702,026	\$ —	\$ 12,744,196	\$ 57,446,222
2022	46,381,629	—	(16,794,099)	29,587,530
2023	156,006,973	—	34,736,618	190,743,591
2024	(14,205,591)	—	(23,869,353)	(38,074,944)
2025	80,006,026	—	18,309,266	98,315,292
Total	<u>\$ 312,891,063</u>	<u>\$ —</u>	<u>\$ 25,126,628</u>	<u>\$ 338,017,691</u>

**Boston Retirement System**  
(A Component Unit of the City of Boston, Massachusetts)

**Notes to Schedules of Employer Allocations and  
Pension Amounts by Employer (continued)**

**7. Pension Expense**

The components of allocable pension expense for the year ended December 31, 2019 are as follows:

Service cost	\$ 231,992,044
Interest	810,769,244
Recognized portion of current period difference between expected and actual experience in the TPL	
Contributions – employee	(176,060,009)
Projected earnings on pension plan investments	(477,823,565)
Administrative expenses	8,820,161
Recognized portion of current-period changes of assumptions or other inputs	98,315,290
Recognized portion of current period difference between projected and actual earnings on pension plan investments	(105,968,631)
Recognition of deferred inflows of resources	(209,636,611)
Recognition of deferred outflows of resources	381,586,628
Total pension expense	<u>\$ 561,994,551</u>

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