

LEXINGTON
RETIREMENT SYSTEM
AUDIT REPORT
JAN. 1, 2017 - DEC. 31, 2022



PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION
COMMONWEALTH OF MASSACHUSETTS

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PERAC

COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

PHILIP Y. BROWN, ESQ., *Chair*

WILLIAM T. KEEFE, *Executive Director*

Auditor DIANA DIZOGLIO | KATHLEEN M. FALLON | KATE FITZPATRICK | JAMES J. GUIDO | RICHARD MACKINNON, JR. | JENNIFER F. SULLIVAN, ESQ.

August 29, 2025

The Public Employee Retirement Administration Commission (PERAC) has completed a review of the audits of the Lexington Retirement System conducted by the firms of Marcum, Melanson and Melanson Heath, Certified Public Accountants (the firms). The firms conducted these audits in accordance with auditing standards generally accepted in the United States of America (GAAS). The audits covered the period from January 1, 2017 to December 31, 2022. Melanson (Melanson Heath) was subsequently acquired by the firm of Marcum, LLP which was then acquired by CBIZ, Inc.

We conducted an inspection of the work papers prepared by the CPA firms. We determined that the audits were conducted in a competent professional manner and the work papers demonstrated that audit tests and procedures were performed in sufficient detail to allow us to accept the final audit reports as issued.

We identified specific differences between these financial audits designed to provide an opinion on financial statements and our compliance audits performed in accordance with the accounting and management standards established by PERAC in regulation 840 CMR 25.00 and in compliance with the provisions specified in PERAC Memo #18/2019.

Accordingly, we supplemented the field work conducted in the audits by the CPA firms with certain limited procedures designed to provide additional assurance that the accounting and management standards established by PERAC were adhered to and complied with. The specific objectives of our review were to determine: 1) that the Board is exercising appropriate fiduciary oversight, 2) that cash balances are accurately stated, 3) that investment balances and management fees are accurately stated, 4) that retirement contributions are accurately deducted, 5) that retirement allowances were correctly calculated, 6) that retiree overearnings were properly accounted for, 7) that refunds were properly computed and promptly paid out, and 8) that required member documentation is maintained.

To achieve these objectives, we inspected certain records of the Lexington Retirement Board in the above areas. Specifically, we reviewed the minutes of the Board meetings for compliance with fiduciary oversight, verified cash balances, verified investment balances, and reviewed management fees. We tested the payroll records of a sample of active members to confirm that the correct percentage of regular compensation is being deducted, including the additional two percent over \$30,000. We tested a sample of members who retired during our audit period to verify that their retirement allowance was calculated in accordance with the statute. We reviewed retiree overearnings collections and sampled refunds. We also reviewed a sample of member files for accuracy and completeness.



In our opinion, the financial records are being maintained and the management functions are being performed in conformity with the standards established by PERAC with the exception of those related to our supplemental work which are detailed in the findings presented in this report.

It should be noted that the financial statements included in this audit report were based on the work performed by Marcum, Melanson and Melanson Heath, CPAs and the tests conducted for the periods referenced in their opinion. These audits were not performed by employees or representatives of PERAC. It should also be noted that the opinions expressed in these audit reports were based on the laws and regulations in effect at the time.

The financial statements and footnotes presented in this report were limited to the express results as of and for the years ended December 31, 2022, December 31, 2021, December 31, 2020, December 31, 2019, December 31, 2018, and December 31, 2017.

In closing, I wish to acknowledge the work of Marcum, Melanson and Melanson Heath, CPAs who conducted these examinations, and the PERAC examiners who conducted limited procedures to supplement the field work and express my appreciation to the Lexington Retirement Board and staff for their courtesy and cooperation.

Sincerely,

A handwritten signature in cursive script that reads "Bill Keefe".

William T. Keefe
Executive Director

EXPLANATION OF FINDINGS AND RECOMMENDATIONS

1. Excess Earnings for Disability Retirees:

The Lexington Retirement Board needs to implement a better system to track the repayment of excess earnings. The one member reviewed had excess earnings in 3 calendar years, and too much was collected for each of them, resulting in the member overpaying approximately \$3,000. With transition in Board administration, it is unclear how this happened.

Besides the errors in collecting the excess earnings, there were also mistakes in the allowance that was being paid to the member, generally involving either COLAs or dependent amounts. Finally, they did not record the collections to the proper general ledger account of #4841 Recovery of Overearnings.

Recommendation: The board should perform a reconciliation of the current status of this members' account and make any adjustments needed. In the future, the board should implement a system to track collections of overearnings. They should also use the correct account to record the repayment amounts.

Board Response:

The Board is working on a better system to track repayment of excess earnings. A reconciliation will be performed and adjustments made where necessary.

2. Bank Reconciliations

Bank reconciliations are not being prepared by the Town Treasurer and the bank statements and reconciliations are not being presented to the retirement board for review. Internal control would be improved if these two items were to be performed. We also noted that there was a \$350,000 variance when we reviewed the March 2024 bank reconciliation due to a journal entry that was mis-posted. This variance carried through every month until we brought it to the board's attention. This was corrected in October 2024.

Recommendation: Since the Town Treasurer is the custodian of the retirement system's funds pursuant to G.L. c. 32, § 23(2)(a), the Treasurer is obligated to perform a monthly reconciliation of all retirement system cash accounts. Reconciliations should be provided to board members as part of their financial package. Lastly, variances identified in the reconciliation process should be promptly resolved.

Board Response:

Internal Controls are a high priority for the Board. The newly appointed Treasury Assistant will be performing the monthly cash reconciliation once she's been brought up to speed since she just started on August 25, 2025. We will work closely with the Treasurer's Office to ensure that outstanding checks are handled in a timely fashion.

FINAL DETERMINATION:

PERAC Audit staff will follow up in six (6) months to ensure appropriate actions have been taken regarding all findings.

SUPPLEMENTARY INFORMATION

SCHEDULE OF ALLOCATION OF INVESTMENTS OWNED

(percentages by category)

AS OF DECEMBER 31, 2022		
	MARKET VALUE	PERCENTAGE OF TOTAL ASSETS
Cash	\$12,295,510	6.4%
Pooled Domestic Equity Funds	92,478,586	48.4%
Pooled International Equity Funds	11,073,977	5.8%
Pooled Domestic Fixed Income Funds	3,864,551	2.0%
Pooled Alternative Investment Funds	45,238,830	23.7%
Pooled Real Estate Funds	8,024,886	4.2%
Hedge Funds	<u>18,002,442</u>	<u>9.4%</u>
Grand Total	<u>\$190,978,784</u>	<u>100.0%</u>

For the year ending December 31, 2022, the rate of return for the investments of the Lexington Retirement System was -14.47%. For the ten-year period ending December 31, 2022, the rate of return for the investments of the Lexington Retirement System averaged 7.16%. For the 38-year period ending December 31, 2022, since PERAC began evaluating the returns of the retirement systems, the rate of return on the investments of the Lexington Retirement System was 8.42%.

The composite rate of return for all retirement systems for the year ending December 31, 2022 was -10.84%. For the ten-year period ending December 31, 2022, the composite rate of return for the investments of all retirement systems averaged 8.18%. For the 38-year period ending December 31, 2022, since PERAC began evaluating the returns of the retirement systems, the composite rate of return on the investments of all retirement systems averaged 8.99%.

SUPPLEMENTARY INFORMATION (Continued)

ADMINISTRATION OF THE SYSTEM

The System is administered by a five-person Board of Retirement consisting of the Assistant Manager For Finance who shall be a member ex-officio, a second member appointed by the governing authority, a third and fourth member who shall be elected by the members in or retired from the service of such system, and a fifth member appointed by the other four board members.

Ex-officio Member:	Carolyn Kosnoff		
Appointed Member	Frederick Weiss	Term Expires	01/11/2027
Elected Member:	Robert Cunha, Chairperson	Term Expires:	06/30/2026
Elected Member:	Joseph Foley	Term Expires:	12/29/2026
Appointed Member:	Alan Fields	Term Expires:	01/20/2027

The Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the system. The board must annually file a financial statement of condition for the system with the Executive Director of PERAC.

The investment of the system's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the system has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the System must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by two persons designated by the Board.

Retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts. Fidelity insurance is the only required policy coverage under Ch. 32 §21 and §23 as well as 840 CMR 17.01. The policy is designed to cover specific intentional acts such as theft, fraud or embezzlement and also specify who commits such acts, most commonly employees of the system. This coverage reimburses the system for the losses it suffers as a result of its employees' actions. It does not insure the employees for their illegal acts. Statutorily required coverage is provided by the current fidelity insurance policy to a limit of \$1,000,000 with a \$10,000 deductible issued through Travelers Casualty and Surety Company. The system also has Fiduciary coverage to a limit of \$50,000,000 under a blanket policy issued through the Massachusetts Association of Contributory Retirement Systems.

BOARD REGULATIONS

The Lexington Retirement Board has adopted Regulations which are available on the PERAC website at <https://mass.gov/Lexington-retirement-board-regulations>.

SUPPLEMENTARY INFORMATION (Continued)

MEMBERSHIP EXHIBIT

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Retirement in Past Years										
Superannuation	23	21	23	21	27	32	18	10	13	22
Ordinary Disability	1	0	0	0	1	1	0	0	0	0
Accidental Disability	0	1	0	1	1	0	0	1	0	0
Total Retirements	24	22	23	22	29	33	18	11	13	22
 Total Retirees, Beneficiaries and Survivors	394	400	409	425	438	456	465	457	462	467
 Total Active Members	662	677	701	715	727	750	780	773	744	761
Pension Payments										
Superannuation	\$ 6,093,221	\$ 6,324,970	\$ 6,093,221	\$ 7,153,105	\$ 7,810,329	\$ 8,709,077	\$ 9,321,134	\$ 9,396,382	\$ 9,722,951	\$ 10,048,110
Survivor/Beneficiary Payments	307,638	386,662	307,638	423,048	500,181	502,929	534,540	584,247	634,212	686,006
Ordinary Disability	49,644	63,283	49,644	65,840	34,632	8,728	5,706	5,958	6,218	6,486
Accidental Disability	652,259	683,391	652,259	699,077	725,168	880,889	872,286	866,301	793,135	781,187
Other	651,506	584,613	1,482,937	695,817	992,180	1,112,527	1,046,431	1,135,141	1,178,199	1,232,161
Total Payments for Year	<u>7,754,269</u>	<u>8,042,919</u>	<u>8,585,700</u>	<u>9,036,888</u>	<u>\$10,062,489</u>	<u>\$11,214,150</u>	<u>\$ 11,780,098</u>	<u>\$11,988,029</u>	<u>\$12,334,714</u>	<u>\$12,753,951</u>

SUPPLEMENTARY INFORMATION (Continued)

OTHER POST EMPLOYMENT BENEFITS (OPEB)

Chapter 317 of the Acts of 2002 allowed the Town of Lexington to establish a Post Retirement Insurance Liability Fund to pay premium costs and claim costs on behalf of retired town employees and eligible spouses and dependents.

The Town administers a single-employer defined benefit healthcare plan (“the Other Post Employment Benefit Plan”). The plan provides lifetime healthcare insurance for eligible retirees, their spouses and covered dependents through the Town’s health insurance plan.

The actuarial valuation of the Town of Lexington’s Post Retirement Insurance Liability Fund was prepared by Stone Consulting, Inc. as of June 30, 2023, in accordance with GASB Statement No. 74. The components of the net OPEB liability of the Town of Lexington at June 30, 2023, were as follows:

Total OPEB Liability	\$ 268,217,947
Less: OPEB plan's fiduciary net position:	<u>27,825,878</u>
Net OPEB Liability	<u>\$ 240,392,069</u>
The OPEB plan's fiduciary net position as a percentage of the total OPEB liability	10.37%

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Cost Method	Entry Age Normal Cost
Asset Valuation Method	Market Value with Payables and Receivables
Discount Rate	5.12% per year, net of investment expenses
Healthcare Cost Trend Rate	Varies by plan type
Salary Increases	Based on on employment group and years of service

PLAN MEMBERSHIP

Actives	1,652
Retirees and Beneficiaries	1,013
Inactives	<u>23</u>
Total	<u>2,688</u>

SUPPLEMENTARY INFORMATION (Continued)

OPEB Schedules - GASB Disclosure Information

The Schedule of Changes in the Town of Lexington's Net OPEB Liability and related Ratios presents multi-year trend information on changes in the Plan's total OPEB liability, changes in the Plan's net position and ending net OPEB liability. It also demonstrates the Plan's net position as a percentage of the total liability and the Plan's net other postemployment benefit liability as a percentage of covered-employee payroll.

The Schedule of the Town of Lexington's Contributions presents multi-year trend information on the Town's actual contributions to the other postemployment benefit plan and related ratios.

The Schedule of Investment Returns presents multi-year trend information on the money-weighted investment on the Plan's other postemployment assets, net of investment expense.

These schedules are intended to present information for ten years. Until a ten-year trend is compiled, information is presented for those years for which information is available.

SCHEDULE OF CHANGES IN THE TOWN OF LEXINGTON'S NET OPEB LIABILITY AND RELATED RATIOS

	June 30, 2023	June 30, 2022	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
Total OPEB Liability							
Service Cost	\$ 8,501,758	\$ 11,311,062	\$ 5,129,907	\$ 4,980,492	\$ 4,766,021	\$ 4,498,108	\$ 4,304,410
Interest	12,937,579	10,769,471	11,017,062	10,428,694	11,419,598	10,813,966	10,278,936
Changes of benefit returns	5,218,262	-	-	-	-	-	-
Differences between expected and actual experience	(3,713,961)	9,684,097	(4,817,476)	-	(30,474,922)	-	-
Changes of assumptions	8,324,980	(42,986,402)	117,269,091	-	7,869,892	-	-
Benefit payments	(9,584,460)	(8,540,414)	(8,133,728)	(7,164,146)	(6,855,642)	(8,131,110)	(7,172,839)
Net change in Total OPEB liability	21,684,158	(19,762,187)	120,464,856	8,245,040	(13,275,053)	7,180,964	7,410,507
Total OPEB liability - beginning	246,533,789	266,295,974	145,831,118	137,586,078	150,861,131	143,680,167	136,269,660
Total OPEB liability - ending (a)	<u>\$ 268,217,946</u>	<u>\$ 246,533,789</u>	<u>\$ 266,295,974</u>	<u>\$ 145,831,118</u>	<u>\$ 137,586,078</u>	<u>\$ 150,861,131</u>	<u>\$ 143,680,167</u>
Plan Fiduciary Net Position							
Contributions - employer	\$ 11,519,946	\$ 10,613,400	\$ 8,883,728	\$ 9,049,632	\$ 8,698,537	\$ 9,371,961	\$ 8,154,066
Net investment income	2,336,764	(2,577,711)	4,842,171	806,796	1,455,542	762,693	1,022,709
Benefit payments	(9,584,460)	(8,540,414)	(8,133,728)	(7,164,146)	(6,855,642)	(7,529,066)	(6,641,748)
Net change in Plan Fiduciary Net Position	4,272,250	(504,725)	5,592,171	2,692,282	3,298,437	2,605,588	2,535,027
Plan Fiduciary Net Position - beginning	23,553,628	24,058,353	18,466,182	15,773,900	12,475,463	9,869,875	7,334,848
Plan Fiduciary Net Position - ending (b)	<u>27,825,878</u>	<u>23,553,628</u>	<u>24,058,353</u>	<u>18,466,182</u>	<u>15,773,900</u>	<u>12,475,463</u>	<u>9,869,875</u>
Net OPEB Liability - ending ((a) -(b))	<u>\$ 240,392,068</u>	<u>\$ 222,980,160</u>	<u>\$ 242,237,621</u>	<u>\$ 127,364,936</u>	<u>\$ 121,812,178</u>	<u>\$ 138,385,668</u>	<u>\$ 133,810,292</u>
Plan fiduciary Net Position as a Percentage of Total OPEB Liability	10.37%	9.55%	9.03%	12.66%	11.46%	8.27%	6.87%
Covered-Employee Payroll	\$ 49,009,764	\$ 48,600,440	\$ 47,280,885	\$ 44,676,849	\$ 40,905,690	\$ 39,368,236	\$ 38,445,876
Net OPEB Liability as a Percentage of Covered-Employee Payroll	490.50%	458.80%	512.34%	285.08%	297.79%	351.52%	348.05%
Annual money weighted rate of return, net of investment expense	10.00%	(10.39%)	25.20%	not available	not available	not available	not available

SUPPLEMENTARY INFORMATION (Continued)

SCHEDULE OF TOWN OF LEXINGTON'S CONTRIBUTIONS

Town	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contribution	Contribution Deficiency/ (Excess)	Covered Employee- Payroll	Contributions as a percentage of Covered- Employee- Payroll
Measurement Date	(a)	(b)	(a-b)	(c)	(b/c)
6/30/2023	\$ 8,149,350	\$ 9,209,350	\$ (1,060,000)	\$ 49,009,764	18.79%
6/30/2022	7,417,500	7,417,500	-	48,600,440	15.26%
6/30/2021	6,679,199	6,679,199	-	47,280,885	14.13%
6/30/2020	6,334,436	6,334,436	-	44,676,849	14.18%
6/30/2019	5,940,077	5,940,077	-	40,905,690	14.52%
6/30/2018	5,697,982	5,697,982	-	39,368,236	14.47%
6/30/2017	5,442,774	5,442,774	-	38,445,876	14.16%
6/30/2016	5,185,901	5,185,901	-	37,214,557	13.94%
6/30/2015	4,919,154	4,919,154	-	33,252,199	14.79%

SCHEDULE OF INVESTMENT RETURNS

Year	Annual Money-Weighted Rate of Return net of investment expense
June 30, 2023	10.00%
June 30, 2022	(10.39%)
June 30, 2021	25.20%
June 30, 2020	not available
June 30, 2019	not available
June 30, 2018	not available
June 30, 2017	not available

TOWN OF LEXINGTON, MASSACHUSETTS
LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A COMPONENT UNIT OF THE TOWN OF LEXINGTON, MASSACHUSETTS)
FINANCIAL STATEMENTS AND OTHER INFORMATION
FOR THE YEAR ENDED DECEMBER 31, 2022



LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

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INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Opinion

We have audited the financial statements of the Lexington Contributory Retirement System (the System), as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the Lexington Contributory Retirement System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the fiduciary net position of Lexington Contributory Retirement System, as of December 31, 2022, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit 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 System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

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

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

1

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 auditor's report that includes our opinions. 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 System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

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

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of the Net Pension Liability, Contributions, and Investment Returns, 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 auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit 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.

Marcum LLP

Boston, MA
October 15, 2024

TOWN OF LEXINGTON, MASSACHUSETTS
MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2022

As management of the Lexington Contributory Retirement System (the System), we offer readers this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2022.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: (1) fund financial statements and (2) notes to financial statements. This report also contains required supplementary information in addition to the basic financial statements themselves.

Fund Financial Statements

A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Fund accounting is used to ensure and demonstrate compliance with finance-related legal requirements.

The Statement of Fiduciary Net Position presents information on the System's assets and liabilities and the resulting net position held in trust restricted for pension benefits. This statement reflects the System's investments at fair value, as well as cash, receivables, and other liabilities.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pensions changed during the year ended December 31, 2022. It reflects contributions by participating employers, active members, and external parties, investment activity, along with deductions for retirement benefits, refunds, transfers, and administrative expenses.

Notes to Financial Statements

The Notes to Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

Required Supplementary Information

In addition to the basic financial statements and accompanying notes, this report also presents certain required supplementary information which is required to be disclosed by accounting principles generally accepted in the United States of America.

Financial Highlights

- The System's total net position restricted for pensions was \$196,294,945 at December 31, 2022, a decrease of \$(36,217,434), or (15.58)%, over the prior year. This change is primarily due to unfavorable returns on System investments in calendar year 2022.
- Employer and employee contributions to the plan were \$14,430,392, which represents a \$1,582,219 change over the prior year. The employer share of contributions represents 61.58% of the total contributions made to the System.
- Benefits paid to plan participants changed by \$521,562 or 3.46%, totaling \$15,602,756. At December 31, 2022, there were 466 retirees and beneficiaries in receipt of pension benefits, as further discussed on page 10.
- The System's funded ratio (based on the System's GASB 68 valuation) as of the January 1, 2023 actuarial valuation was 72.21%, with 6 years remaining in its amortization period.

Financial Statement Analysis

The following is a summary of financial statement data for the current and prior fiscal years:

FIDUCIARY NET POSITION

	2022	2021
Assets		
Cash and receivables	\$ 17,792,842	\$ 17,471,469
Investments	<u>178,683,272</u>	<u>215,264,646</u>
Total Assets	196,476,114	232,736,115
Liabilities		
Accounts payable	<u>181,169</u>	<u>223,736</u>
Net Position		
Restricted for pensions	<u>\$ 196,294,945</u>	<u>\$ 232,512,379</u>

The System's total assets as of December 31, 2022 were \$196,476,114 and were mostly comprised of cash and investments. Total assets decreased by \$(36,260,001), or (15.58)%, from the prior year primarily due to unfavorable returns on System investments in calendar year 2022.

	2022	2021
Additions		
Contributions	\$ 15,119,437	\$ 13,509,426
Investment income (loss), net	<u>(33,838,483)</u>	<u>26,752,652</u>
Total Additions	<u>(18,719,046)</u>	<u>40,262,078</u>
Deductions		
Benefit payments	15,602,756	15,081,194
Refunds to plan members	169,730	308,939
Transfers to other systems	1,477,752	1,165,344
Administrative expenses	<u>248,150</u>	<u>252,331</u>
Total Deductions	<u>17,498,388</u>	<u>16,807,808</u>
Net Increase (Decrease)	(36,217,434)	23,454,270
Net Position Restricted for Pensions		
Beginning of year	<u>232,512,379</u>	<u>209,058,109</u>
End of year	<u>\$ 196,294,945</u>	<u>\$ 232,512,379</u>

The amount needed to finance benefits is accumulated through the collection of employers' and employee's contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 COLA and through earnings on investments. Contributions and net investment loss for calendar year 2022 resulted in a net loss of \$(18,719,046). Employers' contributions increased by \$1,810,000, or 24.13% in calendar year 2022. The System had net investment loss of \$(33,838,483), primarily due to unfavorable market conditions during the calendar year.

The primary deductions of the System include the payment of pension benefits to plan members and beneficiaries, refunds of member contributions, reimbursement payments in accordance with Massachusetts General Laws, Chapter 32, Section 3(8)c, more commonly referred to as 3(8)c reimbursements, and the costs of administering the System. Total deductions for calendar year 2022 were \$17,498,388, which represents an increase of \$690,580, or 4.11%, over deductions of \$16,807,808 in calendar year 2021. The payment of pension benefits increased by \$521,562 or 3.46% over the previous year. The change in these expenses largely results from cost-of-living adjustments issued in the current year.

Return on Investment and Funding

The Lexington Contributory Retirement System Board continuously monitors investment performance at its monthly meetings. The money-weighted rate of return for the System's investments, as of December 31, 2022, was (15.28)%.

Requests for Information

This financial report is designed to provide a general overview of the Lexington Contributory Retirement System's finances. Questions concerning any of the information provided in this report, or requests for additional financial information, should be addressed to:

Lexington Contributory Retirement System
1625 Massachusetts Avenue
Lexington, Massachusetts 02420

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2022

Assets	
Cash and short-term investments	\$ 12,295,510
Investments:	
Equity mutual funds	23,901,874
Pooled alternative investments	43,648,776
Pooled investments	111,132,622
Accounts receivable	<u>5,497,332</u>
Total Assets	196,476,114
Liabilities	
Accounts payable	<u>181,169</u>
Net Position	
Restricted for pensions	<u>\$ 196,294,945</u>

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

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LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED DECEMBER 31, 2022

Additions	
Contributions:	
Employers	\$ 9,310,000
Plan members	5,120,392
Other systems and Commonwealth of Massachusetts	670,529
Other	<u>18,516</u>
Total Contributions	<u>15,119,437</u>
Investment Income (Loss)	
Decrease in fair value of investments	(32,987,401)
Less: management fees	<u>(851,082)</u>
Net Investment Income (Loss)	<u>(33,838,483)</u>
Total Additions	<u>(18,719,046)</u>
Deductions	
Benefit payments to plan members, beneficiaries, and other systems	15,602,756
Refunds to plan members	169,730
Transfers to other systems	1,477,752
Administrative expenses	<u>248,150</u>
Total Deductions	<u>17,498,388</u>
Net Increase (Decrease)	<u>(36,217,434)</u>
Net Position Restricted for Pensions	
Beginning of year	<u>232,512,379</u>
End of year	<u>\$ 196,294,945</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 1 - NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

NATURE OF OPERATIONS

The System is a member of the Massachusetts Contributory Retirement Systems and is governed by Chapter 32 of the Massachusetts General Laws. Because of the significance of its operational and financial relationship with the Town of Lexington, Massachusetts (the Town), the System is included as a pension trust fund in the Town's basic financial statements. The System is governed by a five-member board. The five members include two appointed by the town, two elected by the members and retirees, and a fifth member chosen by the other four members with the approval of the Public Employee Retirement Administration Commission (PERAC).

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounting policies of the System as reflected in the accompanying financial statements for the year ended December 31, 2022 conform to generally accepted accounting principles for public employee retirement systems (PERS). The more significant accounting policies of the System are summarized below:

BASIS OF ACCOUNTING

The System follows accounting policies mandated by the Commonwealth of Massachusetts. The accounting records are maintained on the accrual basis of accounting. Contributions from the Town of Lexington, Massachusetts and Lexington Housing Authority employees are recognized as revenue in the period in which employees provide services to the respective member unit.

INVESTMENTS

Investment Policy

Investments are reported at fair value in accordance with PERAC requirements. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan.

Rate of Return

For the year ended December 31, 2022, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was (15.28)%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested throughout the year.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 2 - DESCRIPTION OF PLAN

Substantially all employees of the of Town of Lexington, Massachusetts (except teachers and administrators under contract employed by the School Department) and Lexington Housing Authority are members of the Contributory Retirement System (the System), a cost sharing, multiple employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts

General Laws establishes the authority of the System, contribution percentages, and benefits paid. The Contributory Retirement Board does not have the authority to amend benefit provisions.

Membership of the plan consisted of the following at December 31, 2022:

Retirees and beneficiaries receiving benefits	466
Inactive plan members entitled to a return of employee contributions	411
Active plan members	<u>747</u>
Total	<u>1,624</u>
Number of participating employers	2

PARTICIPANT CONTRIBUTIONS

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the system. In addition, all employees hired on or after January 1, 1979 contribute an additional 2.00% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5.00%
January 1, 1975 - December 31, 1983	7.00%
January 1, 1984 - June 30, 1996	8.00%
July 1, 1996 - present	9.00%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6.00% when at least 30 years of creditable service has been attained.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 2 - DESCRIPTION OF PLAN (CONTINUED)

EMPLOYER CONTRIBUTIONS

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

PARTICIPANT RETIREMENT BENEFITS

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80 - 85% pension and 15 - 20% annuity.

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-year average annual rate of regular compensation for those first becoming members of the Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the 5 years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any 2 consecutive years exceeds 100%, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are 4 classes of membership in the retirement system, but one of these classes, Group 3, is made up exclusively of the Massachusetts State Police. The other three classes are as follows:

- Group 1 - General employees, including clerical, administrative, technical, and all other employees not otherwise classified.
- Group 2 - Certain specified hazardous duty positions.
- Group 4 - Police officers, firefighters, and other specified hazardous positions.

A retirement allowance may be received at any age, upon attaining 20 years of service. The plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4 have no minimum vesting requirements, however, must be at least age 55.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 2 - DESCRIPTION OF PLAN (CONTINUED)

PARTICIPANT RETIREMENT BENEFITS (CONTINUED)

Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement. A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

METHODS OF PAYMENT

A member may elect to receive his or her retirement allowance in one of three forms of payment as follows:

- Option A - Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the members death.
- Option B - A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member—provided, however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree’s beneficiary or beneficiaries of choice.
- Option C - A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, 2/3 of the allowance is payable to the member’s designated beneficiary (who may be the spouse, or former spouse who has not remarried, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or “pops up” to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable “pops up” to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

PARTICIPANT REFUNDS

Employees who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service or involuntarily withdrawing, receive 100% of the

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 2 - DESCRIPTION OF PLAN (CONTINUED)

PARTICIPANT REFUNDS (CONTINUED)

regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3.00%.

NOTE 3 - CASH AND SHORT-TERM INVESTMENTS

CUSTODIAL CREDIT RISK – DEPOSITS

Custodial credit risk is the risk that in the event of a bank failure, the System’s deposits may not be returned. Massachusetts General Law Chapter 32, Section 23, limits the System’s deposits “in a bank or trust company to an amount not exceeding ten percent of the capital and surplus of such bank or trust company.” The System does not have a formal deposit policy for custodial credit risk.

As of December 31, 2022, \$12,045,484 of the System’s bank balance of \$12,542,388 was exposed to custodial credit risk as uninsured or uncollateralized.

NOTE 4 - INVESTMENTS

The following is a summary of the System’s investments as of December 31, 2022:

Investment Type	Amount
Equity mutual funds	\$ 23,901,874
Pooled alternative investments	43,648,776
Pooled investments	<u>111,132,622</u>
Total investments	<u>\$ 178,683,272</u>

CREDIT RISK - INVESTMENTS OF DEBT SECURITIES

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Massachusetts General Laws, Chapter 32, Section 23, limits the investment of System funds, to the extent not required for current disbursements, in the PRIT Fund or in securities, other than mortgages or collateral loans, which are legal for the investment of funds in savings banks under the laws of the Commonwealth, provided that no more than the established percentage of assets, is invested in any one security. The System does not have formal investment policies related to credit risk.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 4 – INVESTMENTS (CONTINUED)

CREDIT RISK - INVESTMENTS OF DEBT SECURITIES (CONTINUED)

As of December 31, 2022, the System did not have any investments in fixed income securities exposed to credit risk.

CUSTODIAL CREDIT RISK

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, the System will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The System does not have formal investment policies related to custodial credit risk.

As of December 31, 2022, the System did not have any investments exposed to custodial credit risk disclosure as investments in open-end mutual funds and external investment pools are not exposed to custodial credit risk because their existence is not evidenced by securities that exist in physical or book entry form.

CONCENTRATION OF CREDIT RISK

Concentration of credit risk is the risk of loss attributable to the magnitude of the System's investment in a single issuer. Massachusetts General Laws Chapter 32, Section 23 limits the amount the System may invest in any one issuer or security type, with the exception of the Pension Reserves Investment Trust (PRIT) Fund. The System does not have formal investment policies related to concentration of credit risk.

Investments in mutual funds and other pooled investments are excluded from concentration of credit disclosure.

INTEREST RATE RISK - INVESTMENTS OF DEBT SECURITIES

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The System does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

As of December 31, 2022, the System did not have investments in debt securities exposed to interest rate risk.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 4 – INVESTMENTS (CONTINUED)

FOREIGN CURRENCY RISK

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment. The System does not have formal investment policies related to foreign currency risk.

As of December 31, 2022, none of the System's investments were exposed to foreign currency risk.

FAIR VALUE

The System categorizes its fair value measurements within the fair value hierarchy established by Governmental Accounting Standards Board Statement No. 72 *Fair Value Measurement and Application* (GASB 72). The hierarchy is based on the valuation inputs used to measure the fair value of the asset. The hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

Level 1 - Inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date.

Level 2 - Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held securities are categorized as level 2.

Level 3 - Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative instruments.

The net asset value (NAV) per share is the amount of net assets attributable to each share of capital stock outstanding at the close of the period. Investments measured at the NAV for fair value are not subject to level classification.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 4 – INVESTMENTS (CONTINUED)

FAIR VALUE (CONTINUED)

The System has the following fair value measurements as of December 31, 2022:

Description	Amount	Fair Value Measurements Using:		
		Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by Fair Value Level:				
Equity mutual funds	\$ 23,901,874	\$ 23,901,874	\$ -	\$ -
Total Investments by Fair Value Level	23,901,874	\$ 23,901,874	\$ -	\$ -
Investments Measured at NAV:				
Pooled alternative investments	43,648,776			
Pooled investments	111,132,622			
Total Investments Measured at NAV	154,781,398			
Total Investments	\$ 178,683,272			

The following table summarizes investments as of December 31, 2022 for which fair value is measured using the net asset value per share, including their related unfunded commitments and redemption restrictions:

	Amount	Unfunded Commitments	Redemption Frequency (If currently eligible)	Redemption Notice Period
Investments Measured at NAV:				
Pooled alternative investments:				
Hedge Funds ¹	\$ 18,002,442	\$ -	Monthly	Daily
Core Real Estate ²	8,024,886	-	Monthly	Daily
Private equity ³	17,621,448	2,791,992	Not Eligible	N/A
Pooled investments:				
Commingled equity funds ⁴	111,132,622	-	Monthly	30 Days
Total Investments Measured at NAV	\$ 154,781,398	\$ 2,791,992		

¹ This type includes investments in PRIT with the objective of retaining a portfolio of managers that employ a wider range of investment techniques, such as leverage, short selling, and derivatives to achieve their objectives.

² This type includes investments in PRIT with the objective of providing stable income returns, low risk, and added diversification. These investments are domestic, high quality, and substantially leased properties typically in the following property types: apartment, office, retail, industrial, and R&D office.

³ This type includes five private equity funds representing various investment styles and concentrating in a variety of industries and locations. These investments cannot be redeemed with the funds; instead, distributions are received as the fund liquidates the underlying assets.

⁴ This type includes six funds that invest primarily in domestic large and small cap equity funds and international equity funds.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 5 - ACCOUNTS RECEIVABLE

Annually the Public Employee Retirement Administration (PERAC) determines the amount of employer contributions (pension appropriations) to be made to the System. The accounts receivable balance primarily represents legal amounts due from employers for pension appropriation not received until after December 31, 2022.

NOTE 6 – COLLECTIVE PENSION EXPENSE

The calculation of collective pension expense for the year ended December 31, 2022 is presented in the following table:

Service cost	\$	6,217,624
Interest		19,045,177
Differences between expected and actual experience		7,667,611
Changes of assumptions		1,783,671
Changes to benefit provisions		1,064,835
Employee contributions		(4,785,449)
Projected earnings on pension investments		(16,545,604)
Differences between projected and actual earnings on investments		5,815,425
Administrative expenses		<u>248,150</u>
 Total pension expense	 \$	 <u>20,511,440</u>

NOTE 7 - COMMITMENTS AND CONTINGENCIES

OUTSTANDING LEGAL ISSUES

On an ongoing basis, there are typically pending legal issues in which the System is involved. The System's management is of the opinion that the potential future settlement of these issues would not materially affect its financial statements taken as a whole.

UNFUNDED CAPITAL COMMITMENTS – INVESTMENTS

As of December 31, 2022, the System had \$2,791,992 in outstanding capital commitments.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 8 - NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

The net pension liability was based on an actuarial valuation dated January 1, 2023.

NET PENSION LIABILITY OF EMPLOYERS

The components of the net pension liability of the participating employers at December 31, 2022 were as follows:

Total pension liability	\$ 271,847,461
Less: Plan fiduciary net position	<u>(196,294,945)</u>
Employers' net pension liability	<u>\$ 75,552,516</u>
Plan fiduciary net position as a percentage of total pension liability	72.21%

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 8 - NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (CONTINUED)

ACTUARIAL ASSUMPTIONS

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

Valuation date	January 1, 2023
Actuarial cost method	Entry Age Normal
Remaining amortization period	6 years from January 1, 2023 to Fiscal Year 2030
Actuarial assumptions:	
Investment rate of return	7.25%
Projected salary increases:	
Groups 1 and 2	5.75% for year 1, 5.25% for years 2 and 3, 4.75% for years 4 and 5, 4.25% for years 6 and 7, 3.75% for years 8 and 9, 3.50% thereafter
Group 4	6.25% for year 1, 5.75% for year 2, 5.25% for year 3, 4.75% for year 4, 4.25% for years 5 and 6, 3.75% for years 7 and 8, 3.50% thereafter
Inflation rate	2.20%
Post-retirement cost-of-living adjustment	3.00% of first \$15,000

Actuarial valuations of the ongoing Systems involve estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision, as actual results are compared with past expectations and new estimates are made about the future.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 8 - NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (CONTINUED)

TARGET ALLOCATIONS

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan 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 arithmetic real rates of return for each major asset class included in the System's targeted asset allocation as of December 31, 2022, are summarized in the following table:

Asset Class	Target Asset Allocation	Long-Term Expected Real Rate of Return
U.S. equity	35.00%	5.90%
Developed market equity (non-US)	20.00%	7.00%
Emerging market equity	10.00%	7.20%
Real assets	10.00%	5.10%
Absolute return / portfolio completion	10.00%	3.40%
Value-added real estate	10.00%	6.20%
Core fixed income	5.00%	2.00%
Total	100.00%	

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 from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates by Statute. Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments of 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 total pension liability.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 8 - NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (CONTINUED)

SENSITIVITY OF DISCOUNT RATE

The following presents the net pension liability of the participating employers calculated using the discount rate of 7.25%, as well as what the participating employers' net pension liability would be if it were calculated using a discount rate that is one percentage-point lower or one percentage-point higher than the current rate:

1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
\$ 104,906,376	\$ 75,552,516	\$ 50,742,881

DEFERRED OUTFLOWS/INFLOWS OF RESOURCES

The following schedule reflects the deferred outflows/inflows of resources for the System for the year ended December 31, 2022:

	<u>Deferred Outflows of Resources</u>	<u>Deferred (Inflows) of Resources</u>
Differences between expected and actual experience	\$ 15,777,510	\$ (2,640,846)
Changes of assumptions	3,654,389	(454,790)
Net difference between projected and actual investment earnings on pension plan investments	25,226,935	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	24,602	(24,602)
Total	\$ 44,683,436	\$ (3,120,238)

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 8 - NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (CONTINUED)

DEFERRED OUTFLOWS/INFLOWS OF RESOURCES (CONTINUED)

The following summarizes changes in deferred outflows/inflows of resources for the year ended December 31, 2022:

	Measurement Year	Amortization Period	Beginning Balance on Prior Measurement Period Deferrals	Current Measurement Period Additions	Amortization of Amounts Recognized in Current Period Pension Expense	End of Year Balance
Deferred Outflows of Resources						
Differences between expected and actual experience	2017	5.46	\$ 592,730	\$ -	\$ (592,730)	\$ -
	2019	5.73	7,417,102	-	(2,716,887)	4,700,215
	2020	5.20	16,112,428	-	(5,035,133)	11,077,295
Changes of assumptions	2019	5.73	5,168,321	-	(1,893,157)	3,275,164
	2022	4.90	-	476,462	(97,237)	379,225
Net difference between projected and actual investment earnings on pension plan investments	2018	5	3,933,166	-	(3,933,166)	-
	2019	5	(7,371,749)	-	3,685,874	(3,685,875)
	2020	5	(6,394,806)	-	2,131,602	(4,263,204)
	2021	5	(9,508,342)	-	2,377,086	(7,131,256)
	2022	5	-	50,384,087	(10,076,817)	40,307,270
Changes in proportion and differences between employer contributions and proportionate share of contributions	2018	5.46	2,624	-	(2,624)	-
	2019	5.73	6,078	-	(2,226)	3,852
	2020	5.20	2,274	-	(711)	1,563
	2021	5.20	5,364	-	(1,277)	4,087
	2022	4.90	-	18,972	(3,872)	15,100
Total Deferred Outflows of Resources			<u>9,965,190</u>	<u>50,879,521</u>	<u>(16,161,275)</u>	<u>44,683,436</u>
Deferred Inflows of Resources						
Differences between expected and actual experience	2022	4.90	-	(3,317,986)	677,140	(2,640,846)
Changes of assumptions	2020	5.20	(661,513)	-	206,723	(454,790)
Changes in proportion and differences between employer contributions and proportionate share of contributions	2018	5.46	(2,624)	-	2,624	-
	2019	5.73	(6,078)	-	2,226	(3,852)
	2020	5.20	(2,274)	-	711	(1,563)
	2021	5.20	(5,364)	-	1,277	(4,087)
	2022	4.90	-	(18,972)	3,872	(15,100)
Total Deferred Inflows of Resources			<u>(677,853)</u>	<u>(3,336,958)</u>	<u>894,573</u>	<u>(3,120,238)</u>
Total Collective Deferred Outflows (Inflows) of Resources			<u>\$ 9,287,337</u>	<u>\$ 47,542,563</u>	<u>\$ (15,266,702)</u>	<u>\$ 41,563,198</u>

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

NOTE 8 - NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (CONTINUED)

DEFERRED OUTFLOWS/INFLOWS OF RESOURCES (CONTINUED)

The following schedule reflects the amortization of the balance of deferred outflows/(inflows) of resources:

Fiscal Year*	Total
2024	\$ 10,740,808
2025	13,181,973
2026	8,085,511
2027	<u>9,554,906</u>
Total	<u>\$ 41,563,198</u>

**Presented by member units' fiscal year to fairly present the fiduciary impact of related deferred outflows/(inflows) in the fiscal year affecting the member unit.*

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
(UNAUDITED)**

REQUIRED SUPPLEMENTARY INFORMATION

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability									
Service cost	\$ 6,217,624	\$ 5,949,879	\$ 5,015,441	\$ 4,799,465	\$ 4,292,789	\$ 4,437,477	\$ 4,291,819	\$ 4,307,033	\$ 4,274,600
Interest	19,045,177	18,401,522	16,893,061	14,187,272	13,298,345	13,037,708	12,616,002	12,642,336	12,586,679
Changes of benefit terms	1,064,835	-	1,168,352	-	-	876,835	809,529	727,749	-
Differences between expected and actual experience	(3,317,866)	-	26,182,696	15,667,763	-	7,035,465	-	3,896,914	-
Changes of assumptions	476,462	-	(1,074,953)	10,847,792	-	-	-	(4,626,513)	-
Benefit payments, including refunds of member contributions ¹	(16,226,250)	(15,250,114)	(14,380,228)	(13,095,896)	(14,886,797)	(13,614,567)	(11,493,479)	(11,256,122)	(10,151,946)
Other	-	-	-	-	-	-	-	(414,474)	(386,047)
Net change in total pension liability	7,259,882	9,101,877	33,404,364	30,306,596	3,614,377	12,372,918	6,223,901	5,106,923	6,322,846
Total pension liability - beginning	264,587,599	255,486,522	222,082,158	191,775,562	188,161,185	175,788,267	169,564,366	164,457,443	158,134,597
Total pension liability - ending (a)	271,847,481	264,587,599	255,486,522	222,082,158	191,775,562	188,161,185	175,788,267	169,564,366	164,457,443
Plan Fiduciary Net Position									
Contributions - employer	9,340,060	7,500,000	6,755,837	6,405,537	6,005,537	5,233,537	5,506,537	5,253,537	5,005,537
Contributions - member	4,785,419	4,704,073	4,552,125	4,503,536	4,371,563	4,496,408	4,604,207	3,917,137	3,967,921
Net investment income (loss)	(33,838,483)	26,752,632	24,466,546	30,372,878	(6,932,569)	27,626,207	8,216,601	-482,576	8,664,383
Benefit payments, including refunds of member contributions	(16,226,250)	(15,250,114)	(14,380,228)	(13,095,896)	(14,886,797)	(13,614,567)	(11,493,479)	(11,256,122)	(10,151,946)
Administrative expense	(248,159)	(252,331)	(224,142)	(263,276)	(273,487)	(239,160)	(220,875)	(205,868)	(226,748)
Other	-	-	-	589,684	552,981	478,212	479,544	486,729	544,630
Net change in plan fiduciary net position	(36,217,434)	23,454,270	21,799,838	26,912,607	(10,662,772)	25,103,254	7,091,535	(1,200,011)	7,503,779
Plan fiduciary net position - beginning	232,512,379	209,038,109	187,838,271	160,945,662	171,608,374	146,503,140	139,411,605	140,731,616	133,227,837
Plan fiduciary net position - ending (b)	196,294,945	232,512,379	209,038,109	187,858,271	160,945,662	171,608,374	146,503,140	139,411,605	140,731,616
Net Pension Liability - Ending (a-b)	\$ 75,552,536	\$ 32,075,220	\$ 46,448,413	\$ 34,223,887	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827

¹ Amounts may differ from those presented on page 9 due to classification differences between System and optional.

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See independent auditors' report.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

**SCHEDULES OF THE NET PENSION LIABILITY, CONTRIBUTIONS, AND INVESTMENT RETURNS
(UNAUDITED)**

REQUIRED SUPPLEMENTARY INFORMATION

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Schedule of Net Pension Liability									
Total pension liability	\$ 271,847,461	\$ 264,587,599	\$ 255,486,522	\$ 222,082,158	\$ 191,775,562	\$ 188,161,185	\$ 175,788,267	\$ 169,564,366	\$ 164,457,443
Plan fiduciary net position	(156,294,945)	(122,512,379)	(209,058,109)	(187,858,271)	(160,945,602)	(171,608,374)	(146,503,140)	(139,411,605)	(140,731,616)
Net pension liability	\$ 75,552,516	\$ 32,075,220	\$ 46,428,413	\$ 34,223,887	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827
Plan fiduciary net position as a percentage of the total pension liability	72.21%	87.88%	81.83%	84.59%	83.92%	91.29%	81.34%	82.32%	85.57%
Covered payroll	\$ 48,030,890	\$ 47,667,178	\$ 45,744,746	\$ 43,862,455	\$ 40,131,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Participating employer net pension liability as a percentage of covered payroll	157.23%	67.29%	101.49%	78.03%	76.79%	42.87%	77.50%	83.45%	72.23%
Schedule of Contributions									
Actuarially determined contribution	\$ 8,250,000	\$ 7,500,000	\$ 6,755,537	\$ 6,405,537	\$ 6,005,537	\$ 5,755,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions in relation to the actuarially determined contribution	(9,310,000)	(7,300,000)	(6,755,537)	(6,405,537)	(6,005,537)	(5,755,537)	(5,505,537)	(5,255,537)	(5,005,537)
Contribution deficiency (excess)	\$ (1,060,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 48,030,890	\$ 47,667,178	\$ 45,744,746	\$ 43,862,455	\$ 40,131,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Contributions as a percentage of covered payroll	17.17%	15.73%	14.77%	14.60%	14.90%	14.91%	14.58%	14.53%	15.24%
Schedule of Investment Returns									
Annual money weighted rate of return, net of investment expense	(13.28%)	(1.09%)	13.27%	19.49%	(3.46%)	19.03%	7.23%	(4.66%)	0.46%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See independent auditors' report.



INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Opinions

We have audited the accompanying schedule of employer allocations of the Lexington Contributory Retirement System (the System) as of and for the year ended December 31, 2022. We have also audited the total for all entities of the titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified totals) included in the accompanying schedule of pension amounts by employer of the Lexington Contributory Retirement System as of and for the year ended December 31, 2022.

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 for the total of all participating entities for the Lexington Contributory Retirement System as of and for the year ended December 31, 2022, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit 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 Schedule section of our report. We are required to be independent of the Lexington Contributory Retirement System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Schedules

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

Auditors' Responsibilities for the Audit of The Schedules

Our objectives are to obtain reasonable assurance about whether the schedules as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS 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 schedules.

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 schedules, 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 schedules.
- 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 System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedules.

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.

Restriction on Use

Our report is intended solely for the information and use of Lexington Contributory Retirement System management, the Retirement Board, System employers and their auditors as of and for the year ended December 31, 2022 and is not intended to be and should not be used by anyone other than these specified parties.

Marcum LLP

Boston, MA
October 15, 2024

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

SCHEDULE OF EMPLOYER ALLOCATIONS

FOR THE YEAR DECEMBER 31, 2022

Employer	Actual Employer Contributions	Allocation Percentage ¹
Town of Lexington	\$ 9,209,350	98.78%
Lexington Housing Authority	100,650	1.22%
Total	\$ 9,310,000	100.00%

¹Allocation percentages based on funding schedule and actuarial determined contributions. Calculations may differ from actual contributions due to excess contributions.

See actuarial assumptions in the notes to the financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

AS OF AND FOR THE YEAR DECEMBER 31, 2022

	Town of Lexington	Lexington Housing Authority	Total
Net Pension Liability	\$ 74,630,775	\$ 921,741	\$ 75,552,516
Deferred Outflows of Resources			
Differences between expected and actual experience	15,585,024	192,486	15,777,510
Changes of assumptions	3,609,805	44,584	3,654,389
Net difference between projected and actual investment earnings on pension plan investments	24,919,166	307,769	25,226,935
Changes in proportion and differences between employer contributions and proportionate share of contributions	6,576	18,026	24,602
Total Deferred Outflows of Resources	\$ 44,120,571	\$ 562,865	\$ 44,683,436
Deferred (Inflows) of Resources			
Differences between expected and actual experience	\$(2,608,625)	\$(32,218)	\$(2,640,846)
Changes of assumptions	(449,242)	(5,548)	(454,790)
Changes in proportion and differences between employer contributions and proportionate share of contributions	(18,026)	(6,576)	(24,602)
Total Deferred (Inflows) of Resources	\$ (3,075,896)	\$ (44,342)	\$ (3,120,238)
Pension Expense			
Proportionate share of pension expense	\$ 20,261,200	\$ 250,240	\$ 20,511,440
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	(3,597)	3,597	-
Total Pension Expense	\$ 20,257,603	\$ 253,837	\$ 20,511,440
Contributions			
Actuarially determined contribution	\$ 8,149,350	\$ 100,650	\$ 8,250,000
Contributions made	(9,209,350)	(100,650)	(9,310,000)
Contribution Deficiency (Excess)	\$ (1,060,000)	\$ -	\$ (1,060,000)
Contributions as a Percentage of Covered Payroll	19.52%	20.87%	19.53%
Deferred Outflows (Inflows) Recognized in Future Pension Expense			
June 30, 2024	\$10,605,350	\$135,458	\$10,740,808
June 30, 2025	13,018,322	163,651	13,181,973
June 30, 2026	7,985,061	100,450	8,085,511
June 30, 2027	9,435,944	118,962	9,554,906
Total Deferred Outflows (Inflows) Recognized in Future Pension Expense	\$ 41,044,677	\$ 518,521	\$ 41,563,198
Discount Rate Sensitivity			
1% decrease (6.25%)	\$ 103,626,518	\$ 1,279,838	\$ 104,906,356
Current discount rate (7.25%)	\$ 74,630,775	\$ 921,741	\$ 75,552,516
1% increase (8.25%)	\$ 50,123,818	\$ 619,063	\$ 50,742,881
Covered Payroll	\$ 47,184,893	\$ 482,285	\$ 47,667,178

See actuarial assumptions in the notes to the financial statements.



LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Lexington, Massachusetts)

Financial Statements and Other Information
For the Year Ended December 31, 2021

(With Independent Auditor's Report Thereon)

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INDEPENDENT AUDITOR'S REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Opinion

We have audited the financial statements of the Lexington Contributory Retirement System (the System), as of and for the year ended December 31, 2021, and the related notes to the financial statements, which collectively comprise the basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the fiduciary net position of the Lexington Contributory Retirement System as of December 31, 2021, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

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

Responsibilities of Management for the Financial Statements

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

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 System's ability to continue as a going concern for twelve months beyond the financial

Merrimack, New Hampshire
Andover, Massachusetts
Greenfield, Massachusetts
Ellsworth, Maine

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statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor’s Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinions. 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 judgement 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 System’s internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgement, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System’s ability to continue as a going concern for a reasonable period of time.

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



Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of the Net Pension Liability, Contributions, and Investment Returns, listed in the foregoing table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the 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 auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit 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 evidence sufficient to express an opinion or provide any assurance.

A handwritten signature in dark ink that reads "Melanson".

Andover, Massachusetts
March 3, 2023

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the Lexington Contributory Retirement System (the System), we offer readers this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2021.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: (1) fund financial statements and (2) notes to financial statements. This report also contains other required supplementary information in addition to the basic financial statements themselves.

Fund Financial Statements

A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Fund accounting is used to ensure and demonstrate compliance with finance-related legal requirements.

The Statement of Fiduciary Net Position presents information on the System's assets and liabilities and the resulting net position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables, and liabilities.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pensions changed during the year ended December 31, 2021. It reflects contributions by participating employers, active members, external parties, investment activity, along with deductions for retirement benefits, refunds, transfers, and administrative expenses.

Notes to Financial Statements

The Notes to Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

Required Supplementary Information

The Required Supplementary Information includes this Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of the Net Pension Liability, Contributions, and Investment Returns.

Financial Highlights

- The System's total net position restricted for pensions was \$232,512,379 at December 31, 2021, an increase of \$23,454,270, or 11.22%, over the prior year. This change is primarily due to favorable returns on System investments in calendar year 2021.
- Employer and employee contributions to the plan were \$12,848,173, which represents an increase of \$1,199,390, or 10.30%, over the prior year. The employer share of contributions represents 55.52% of the total contributions made to the System.
- Benefit payments to plan members and beneficiaries increased by \$465,831, or 3.19%, totaling \$15,081,194. At December 31, 2021, there were 457 retirees and beneficiaries in receipt of pension benefits, as further discussed on page 10.
- The System's funded ratio (based on the System's GASB 68 valuation) as of the January 1, 2021 actuarial valuation was 87.88%, with the remaining liability reducing to zero on or before June 30, 2031.

Financial Statement Analysis

The following is a summary of financial statement data for the current and prior fiscal years:

FIDUCIARY NET POSITION

	<u>2021</u>	<u>2020</u>
Assets		
Cash and receivables	\$ 17,471,469	\$ 24,758,580
Investments	<u>215,264,646</u>	<u>184,384,445</u>
Total Assets	232,736,115	209,143,025
Liabilities		
Accounts payable	<u>223,736</u>	<u>84,916</u>
Total Liabilities	223,736	84,916
Net Position		
Restricted for pensions	<u>\$ 232,512,379</u>	<u>\$ 209,058,109</u>

The System's total assets as of December 31, 2021 were \$232,736,115 and were mostly comprised of cash and investments. Total assets increased \$23,593,090, or 11.28%, from the prior year primarily due to favorable returns on System investments in calendar year 2021.

CHANGES IN FIDUCIARY NET POSITION

	<u>2021</u>	<u>2020</u>
Additions		
Contributions	\$ 13,509,426	\$ 12,299,656
Investment income, net	<u>26,752,652</u>	<u>24,466,546</u>
Total Additions	40,262,078	36,766,202
Deductions		
Benefit payments	15,081,194	14,615,363
Refunds to plan members	308,939	230,942
Transfers to other systems	1,165,344	495,917
Administrative expenses	<u>252,331</u>	<u>224,142</u>
Total Deductions	<u>16,807,808</u>	<u>15,566,364</u>
Net increase	23,454,270	21,199,838
Net Position Restricted for Pensions		
Beginning of year	<u>209,058,109</u>	<u>187,858,271</u>
End of year	<u>\$ 232,512,379</u>	<u>\$ 209,058,109</u>

The amount needed to finance benefits is accumulated through the collection of employers' and employee's contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 COLA, and through earnings on investments. Contributions and net investment income for calendar year 2021 resulted in total additions of \$40,262,078. Employers' contributions increased by \$744,463, or 11.02%, in calendar year 2021. The System had net investment income of \$26,752,652, primarily due to favorable market conditions during the calendar year.

The primary deductions of the System include the payment of pension benefits to plan members and beneficiaries, refunds and transfers of member contributions, reimbursement payments in accordance with Massachusetts General Laws, Chapter 32, Section 3(8)c, more commonly referred to as 3(8)c reimbursements, and the costs of administering the System. Total deductions for calendar year 2021 were \$16,807,808, which represents an increase of \$1,241,444, or 7.98%, over deductions of \$15,566,364 in calendar year 2020. The payment of pension benefits increased by \$465,831, or 3.19%, over the previous year.

Return on Investment and Funding

The Lexington Contributory Retirement System Board continuously monitors investment performance at its monthly meetings. The money-weighted rate of return for the System's investments, as of December 31, 2021, was 13.09%.

Requests for Information

This financial report is designed to provide a general overview of the Lexington Contributory Retirement System's finances. Questions concerning any of the information provided in this report, or requests for additional financial information, should be addressed to:

Lexington Contributory Retirement System
1625 Massachusetts Avenue
Lexington, Massachusetts 02420

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Fiduciary Net Position
December 31, 2021

Assets	
Cash and short-term investments	\$ 13,456,318
Investments:	
Equity mutual funds	33,317,952
Pooled alternative investments	18,374,714
Pooled investments	163,571,980
Accounts receivable	<u>4,015,151</u>
Total Assets	232,736,115
Liabilities	
Accounts payable	<u>223,736</u>
Total Liabilities	223,736
Net Position	
Restricted for pensions	<u>232,512,379</u>
Total Net Position	<u>\$ 232,512,379</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Changes in Fiduciary Net Position
For the Year Ended December 31, 2021

Additions	
Contributions:	
Employers	\$ 7,500,000
Plan members	5,348,173
Other systems and Commonwealth of Massachusetts	651,364
Other	<u>9,889</u>
Total contributions	13,509,426
Investment income:	
Increase in fair value of investments	27,635,947
Less: management fees	<u>(883,295)</u>
Net investment income	<u>26,752,652</u>
Total Additions	40,262,078
Deductions	
Benefit payments to plan members and beneficiaries	15,081,194
Refunds to plan members	308,939
Transfers to other systems	1,165,344
Administrative expenses	<u>252,331</u>
Total Deductions	<u>16,807,808</u>
Net increase	23,454,270
Net Position Restricted for Pensions	
Beginning of year	<u>209,058,109</u>
End of year	<u>\$ 232,512,379</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Notes to Financial Statements

1. Description of Plan

Substantially all employees of the Town of Lexington, Massachusetts (except teachers and administrators under contract employed by the School Department) and the Lexington Housing Authority are members of the Lexington Contributory Retirement System (the System), a cost sharing, multiple employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, contribution percentages, and benefits paid. The Lexington Contributory Retirement Board does not have the authority to amend benefit provisions.

Membership of the plan consisted of the following at December 31, 2021:

Retirees and beneficiaries receiving benefits	457
Inactive plan members entitled to a return of employee contributions	340
Active plan members	<u>757</u>
Total	<u>1,554</u>
Number of participating employers	2

Participant Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the system. In addition, all employees hired on or after January 1, 1979 contribute an additional 2.00% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5.00%
January 1, 1975 – December 31, 1983	7.00%
January 1, 1984 – June 30, 1996	8.00%
July 1, 1996 – present	9.00%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6.00% when at least 30 years of creditable service has been attained.

Employer Contributions

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

Participant Retirement Benefits

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80 - 85% pension and 15 - 20% annuity.

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-year average annual rate of regular compensation for those first becoming members of the Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the 5 years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any 2 consecutive years exceeds 100%, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are 4 classes of membership in the retirement system, but one of these classes, Group 3, is made up exclusively of the Massachusetts State Police. The other three classes are as follows:

- Group 1 – General employees, including clerical, administrative, technical, and all other employees not otherwise classified.
- Group 2 – Certain specified hazardous duty positions.
- Group 4 – Police officers, firefighters, and other specified hazardous positions.

A retirement allowance may be received at any age, upon attaining 20 years of service. The plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4 have no minimum vesting requirements, however, must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

Methods of Payment

A member may elect to receive his or her retirement allowance in one of three forms of payment as follows:

- Option A – Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the member’s death.
- Option B – A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree’s beneficiary or beneficiaries of choice.
- Option C – A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, 2/3 of the allowance is payable to the member’s designated beneficiary (who may be the spouse, or former spouse who has not remarried, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or “pops up” to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable “pops up” to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

Participant Refunds

Employees who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service or involuntarily withdrawing, receive 100% of the regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3.00%.

2. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

The System is a member of the Massachusetts Contributory Retirement Systems and is governed by Chapter 32 of the Massachusetts General Laws. Because of the significance of its operational and financial relationship with the Town, the System is included as a pension trust fund in the Town's basic financial statements. The System is governed by a five-member board. The five members include two appointed by the town, two elected by the members and retirees, and a fifth member chosen by the other four members with the approval of PERAC.

Summary of Significant Accounting Policies

The accounting policies of the System as reflected in the accompanying financial statements for the year ended December 31, 2021 conform to generally accepted accounting principles for public employee retirement systems (PERS). The more significant accounting policies of the System are summarized below:

Basis of Accounting

The System follows accounting policies mandated by the Commonwealth of Massachusetts. The accounting records are maintained on the accrual basis of accounting. Contributions from the Town of Lexington, Massachusetts and the Lexington Housing Authority employees are recognized as revenue in the period in which employees provide services to the respective member unit.

Investments

Investment Policy

Investments are reported at fair value in accordance with PERAC requirements. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan.

Rate of Return

For the year ended December 31, 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 13.09%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested throughout the year.

3. Deposits and Investments

Custodial Credit Risk – Deposits

Custodial credit risk is the risk that in the event of a bank failure, the System's deposits may not be returned. Massachusetts General Laws Chapter 32, Section 23, limits the System's deposits "in a bank or trust company to an amount not exceeding ten percent

of the capital and surplus of such bank or trust company.” The System does not have formal deposit policies for custodial credit risk.

As of December 31, 2021, \$13,502,931 of the System’s bank balance of \$13,752,931 was exposed to custodial credit risk as uninsured or uncollateralized.

Investment Summary

The following is a summary of the System’s investments as of December 31, 2021:

<u>Investment Type</u>	<u>Amount</u>
Equity mutual funds	\$ 33,317,952
Pooled alternative investments	18,374,714
Pooled investments	<u>163,571,980</u>
Total investments	<u>\$ 215,264,646</u>

Credit Risk – Investments of Debt Securities

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Massachusetts General Laws, Chapter 32, Section 23, limits the investment of System funds, to the extent not required for current disbursements, in the PRIT Fund or in securities, other than mortgages or collateral loans, which are legal for the investment of funds in savings banks under the laws of the Commonwealth, provided that no more than the established percentage of assets, is invested in any one security. The System does not have formal investment policies related to credit risk.

As of December 31, 2021, all of the System’s investments of \$215,264,646 were unrated by nationally recognized statistical rating organizations.

Custodial Credit Risk

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, the System will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The System does not have formal investment policies related to custodial credit risk.

As of December 31, 2021, the System did not have any investments exposed to custodial credit risk disclosure as investments in open-end mutual funds and external investment pools are not exposed to custodial credit risk because their existence is not evidence by securities that exist in physical or book entry form.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributable to the magnitude of the System’s investment in a single issuer. Massachusetts General Laws Chapter 32, Section

23 limits the amount the System may invest in any one issuer or security type, with the exception of the PRIT Fund. The System does not have formal investment policies related to concentration of credit risk.

As of December 31, 2021, the System did not have any investments subject to concentration of credit risk as investments in mutual funds and other pooled investments are excluded from concentration of credit risk disclosure.

Interest Rate Risk – Investments of Debt Securities

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The System does not have formal investment policies limiting investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

As of December 31, 2021, all of the System’s investments had maturities of less than one year.

Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment. The System does not have formal investment policies related to foreign currency risk.

Fair Value

The System categorizes its fair value measurements within the fair value hierarchy established by Governmental Accounting Standards Board Statement No. 72, *Fair Value Measurement and Application* (GASB 72).

The hierarchy is based on the valuation inputs used to measure the fair value of the asset. The hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – Inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date.
- Level 2 – Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held securities are categorized as level 2.
- Level 3 – Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative instruments.

The net asset value (NAV) per share is the amount of net assets attributable to each share of capital stock outstanding at the close of the period. Investments measured at the NAV for fair value are not subject to level classification.

The System has the following fair value measurements as of December 31, 2021:

Description	Amount	Fair Value Measurements Using:		
		Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by fair value level:				
Equity mutual funds	\$ 33,317,952	\$ 33,317,952	\$ -	\$ -
			Redemption Frequency (if currently eligible)	Redemption Notice Period
Investments measured at NAV:				
Pooled alternative investments:				
Hedge Funds	\$ 18,374,714	\$ -	Not Eligible	N/A
Pooled investments:				
CIF Enduring Assets	30,552,009	-	Monthly	30 Days
CIF OPP Invest Alloc	19,854,485	-	Monthly	30 Days
Matthews Pacific Tiger fund - Inst	11,635,924	-	Monthly	30 Days
Acadian International All Cap Fund	23,574,751	-	Monthly	30 Days
Rhumbline Russell 1000 Pooled Index Fund	38,256,409	-	Monthly	30 Days
Monroe Capital Private Credit (Delaware) Feeder Fund IV (Unleveraged) LP	3,992,845	1,003,407	Quarterly	90 Days
Monroe Capital Senior Secured Direct Loan Fund (Unleveraged) LP	156,275	599,999	Quarterly	90 Days
Golub Capital Partners International 9, LP	3,500,000	500,000	Quarterly	90 Days
Golub Capital Partners International 14, LP	2,500,000	2,500,000	Quarterly	90 Days
White Oak Summit Fund, LP	3,192,546	72,992	Quarterly	90 Days
Kayne Anderson Rudnick SM-Mid Cap Core CITCL	14,693,772	-	Monthly	30 Days
Dreihaus Emerg Mkts Growth CIT CL C	6,825,821	-	Monthly	30 Days
AG Direct Lending Fund III (Unleveraged), LP	4,837,163	100,000	Monthly	30 Days
Total investments measured at NAV	\$ 781,946,694	\$ 4,776,398		

4. Accounts Receivable

Annually the Public Employee Retirement Administration Commission (PERAC) determines the amount of employer contributions (pension appropriations) to be made to the System. The accounts receivable balance primarily represents legal amounts due from employers for pension appropriation not received until after December 31, 2021.

5. Commitments and Contingencies

COVID-19

The COVID-19 pandemic in the United States (and across the globe) has resulted in economic uncertainties. There is considerable uncertainty around the duration and scope of the economic disruption. The extent of the impact of COVID-19 on our operational and financial performance will depend on certain developments, including the duration and spread of the outbreak, impact on individuals served by the System, employees, and vendors, all of which are uncertain and cannot be predicted. At this point, the extent to which COVID-19 may impact our financial condition or results of operations is uncertain.

Outstanding Legal Issues

On an ongoing basis, there are typically pending legal issues in which the System is involved. The System's management is of the opinion that the potential future settlement of these issues would not materially affect its financial statements taken as a whole.

Unfunded Capital Commitments - Investments

As of December 31, 2021, the System had \$4,776,398 in outstanding capital commitments.

6. Net Pension Liability of Participating Employers

The net pension liability was based on an actuarial valuation dated January 1, 2021.

Net Pension Liability of Employers

The components of the net pension liability of the participating employers at December 31, 2021 were as follows:

Total pension liability	\$ 264,587,599
Plan fiduciary net position	<u>(232,512,379)</u>
Employers' net pension liability	<u>\$ 32,075,220</u>
Plan fiduciary net position as a percentage of total pension liability	87.88%

Actuarial Assumptions

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

Valuation date	January 1, 2021
Actuarial cost method	Entry Age Normal
Remaining amortization period	8 years from January 1, 2021 to Fiscal Year 2030
Actuarial assumptions:	
Investment rate of return	7.25%
Projected salary increases:	
Groups 1 and 2	5.75% for year 1, 5.25% for years 2 and 3, 4.75% for years 4 and 5, 4.25% for years 6 and 7, 3.75% for years 8 and 9, 3.50% thereafter
Group 4	6.25% for year 1, 5.75% for year 2, 5.25% for year 3, 4.75% for year 4, 4.25% for years 5 and 6, 3.75% for years 7 and 8, 3.50% thereafter
Inflation rate	2.20%
Post-retirement cost-of-living adjustment	3.00% of first \$15,000

Actuarial valuations of the ongoing System involves estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision, as actual results are compared with past expectations and new estimates are made about the future.

It is assumed that mortality is represented by the RP-2014 table adjusted to 2006, projected using MP-2020 (gender distinct). During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used. Mortality for disabled retirees follows the same table as non-disabled retirees, set forward 2 years. Death is assumed to be due to the same cause as the disability 40% of the time.

Target Allocations

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan 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 geometric real rates of return for each major asset class included in the System’s targeted asset allocation as of December 31, 2021, are summarized in the following table:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. equity	27.00%	4.50%
Private equity	12.00%	7.60%
Emerging market equity	11.00%	6.10%
Developed market equity (non-US)	10.00%	5.20%
Investment grade bonds	9.00%	0.20%
Core private real estate	7.00%	3.80%
Core infrastructure	7.00%	5.00%
TIPS	6.00%	0.20%
High yield bonds	5.00%	2.20%
Emerging market bonds (major)	2.50%	2.00%
Emerging market bonds (local)	2.50%	2.30%
Value-added real estate	1.00%	5.80%
Long gov bonds	0.00%	0.60%
Total	<u>100.00%</u>	

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 from participating employers will be made based on the actuarially determined rates based on the Board’s funding policy, which establishes the contractually required rates by Statute. Based on those assumptions, the System’s fiduciary net position was projected to be available to make all the projected future benefit payments of 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 total pension liability.

Sensitivity of Discount Rate

The following presents the net pension liability of the participating employers calculated using the discount rate of 7.25%, as well as what the participating employers' net pension liability would be if it were calculated using a discount rate that is one percentage-point lower or one percentage-point higher than the current rate:

1% Decrease <u>(6.25%)</u>	Current Discount Rate <u>(7.25%)</u>	1% Increase <u>(8.25%)</u>
\$ 60,904,657	\$ 32,075,220	\$ 7,741,546

Deferred Outflows/Inflows of Resources

The following schedule reflects the deferred outflows/inflows of resources for the System for the year ended December 31, 2021:

	Deferred Outflows of <u>Resources</u>	Deferred (Inflows) of <u>Resources</u>
Differences between expected and actual experience	\$ 24,122,260	\$ -
Changes of assumptions	5,168,321	(661,513)
Net difference between projected and actual investment earnings on pension plan investments	-	(19,341,731)
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>16,340</u>	<u>(16,340)</u>
Total	<u>\$ 29,306,921</u>	<u>\$ (20,019,584)</u>

The following summarizes changes in deferred outflows/inflows of resources:

	Measurement Year	Amortization Period	Beginning Balance on Prior Measurement Period Deferrals	Current Measurement Period Additions	Amortization of Amounts Recognized in Current Period Pension Expense	End of Year Balance
Deferred Outflows of Resources						
Differences between expected and actual experience	2017	5.46	\$ 1,881,277	\$ -	\$ (1,288,547)	\$ 592,730
	2019	5.73	10,133,989	-	(2,716,887)	7,417,102
	2020	5.20	21,147,562	-	(5,035,134)	16,112,428
Changes of assumptions	2019	5.73	7,061,478	-	(1,893,157)	5,168,321
Changes in proportion and differences between employer contributions and proportionate share of contributions	2016	5.27	253	-	(253)	-
	2017	5.46	4,932	-	(4,932)	-
	2018	5.46	7,592	-	(4,968)	2,624
	2019	5.73	8,304	-	(2,226)	6,078
	2020	5.20	2,985	-	(711)	2,274
	2021	5.20	-	6,641	(1,277)	5,364
Total Deferred Outflows of Resources			<u>40,248,372</u>	<u>6,641</u>	<u>(10,948,092)</u>	<u>29,306,921</u>
Deferred Inflows of Resources						
Changes of assumptions	2020	5.20	(868,236)	-	206,723	(661,513)
Net difference between projected and actual investment earnings on pension plan investments	2017	5	(3,346,385)	-	3,346,385	-
	2018	5	7,866,336	-	(3,933,170)	3,933,166
	2019	5	(11,057,623)	-	3,685,874	(7,371,749)
	2020	5	(8,526,408)	-	2,131,602	(6,394,806)
	2021	5	-	(11,885,428)	2,377,086	(9,508,342)
Changes in proportion and differences between employer contributions and proportionate share of contributions	2016	5.27	(253)	-	253	-
	2017	5.46	(4,932)	-	4,932	-
	2018	5.46	(7,592)	-	4,968	(2,624)
	2019	5.73	(8,304)	-	2,226	(6,078)
	2020	5.20	(2,985)	-	711	(2,274)
	2021	5.20	-	(6,641)	1,277	(5,364)
Total Deferred Inflows of Resources			<u>(15,956,382)</u>	<u>(11,892,069)</u>	<u>7,828,867</u>	<u>(20,019,584)</u>
Total Collective Deferred Outflows (Inflows) of Resources			<u>\$ 24,291,990</u>	<u>\$ (11,885,428)</u>	<u>\$ (3,119,225)</u>	<u>\$ 9,287,337</u>

The following schedule reflects the amortization of the balance of deferred outflows/inflows of resources:

Fiscal Year*	Total
2022	\$ 5,769,790
2023	1,243,892
2024	3,685,058
2025	<u>(1,411,403)</u>
Total	<u>\$ 9,287,337</u>

* Presented by member units' fiscal year to fairly present the fiduciary impact of related deferred outflows/inflows in the fiscal year affecting the member unit.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Changes in the Net Pension Liability
Required Supplementary Information

(Unaudited)

	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability								
Service cost	\$ 3,949,879	\$ 3,015,441	\$ 4,799,465	\$ 4,592,789	\$ 4,437,477	\$ 4,291,849	\$ 4,107,033	\$ 4,274,100
Interest	10,401,322	16,493,051	14,187,272	13,908,385	13,037,708	12,616,002	12,642,336	12,586,679
Changes of benefit terms	-	1,168,352	-	-	876,833	809,529	757,749	-
Differences between expected and actual experience	-	25,182,586	15,567,763	-	7,085,465	-	3,896,914	-
Changes of assumptions	-	(1,074,938)	10,847,792	-	-	-	(4,626,513)	-
Benefit payments, including refunds of member contributions ¹	(15,250,124)	(14,380,228)	(15,095,696)	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Other	-	-	-	-	-	-	(414,474)	(386,047)
Net change in total pension liability	9,101,077	33,404,364	30,306,396	3,614,377	12,372,918	6,223,901	5,106,923	6,322,846
Total pension liability - beginning	255,486,522	222,082,158	191,775,362	188,161,185	175,788,267	169,564,366	164,457,443	158,134,597
Total pension liability - ending (a)	264,587,599	255,486,522	222,082,158	191,775,362	188,161,185	175,788,267	169,564,366	164,457,443
Plan Fiduciary Net Position								
Contributions - employer	7,500,000	6,755,537	6,405,537	6,005,537	5,755,537	5,505,537	5,255,537	5,005,537
Contributions - member	4,704,073	4,582,125	4,503,536	4,871,563	4,498,405	4,604,207	3,917,137	3,667,521
Net investment income (loss)	26,752,632	24,466,546	30,372,878	(6,932,569)	27,626,807	8,216,601	482,576	8,664,385
Benefit payments, including refunds of member contributions	(15,250,124)	(14,380,228)	(15,095,696)	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Administrative expenses	(252,331)	(224,142)	(263,270)	(273,487)	(239,160)	(220,875)	(205,868)	(226,748)
Other	-	-	589,684	532,981	478,212	479,544	486,729	544,630
Net change in plan fiduciary net position	23,454,270	21,156,838	26,912,609	(10,662,772)	25,105,234	7,089,535	(1,320,011)	7,508,779
Plan fiduciary net position - beginning	209,038,109	187,838,271	160,945,662	171,608,374	146,503,140	139,411,605	140,731,616	133,227,837
Plan fiduciary net position - ending (b)	232,512,379	209,038,109	187,838,271	160,945,662	171,608,374	146,503,140	139,411,605	140,731,616
Net Pension Liability - Ending (a-b)	\$ 32,075,220	\$ 46,428,413	\$ 34,223,887	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827

¹ Amounts may differ from those presented on page 9 due to classification differences between System and actuary

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditor's Report.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedules of the Net Pension Liability, Contributions, and Investment Returns
Required Supplementary Information

(Unaudited)

	2021	2020	2019	2018	2017	2016	2015	2014
Schedule of Net Pension Liability								
Total pension liability	\$ 264,387,539	\$ 225,486,522	\$ 222,082,158	\$ 191,775,562	\$ 188,161,185	\$ 175,788,267	\$ 169,564,366	\$ 164,457,443
Plan fiduciary net position	(232,512,379)	(209,058,109)	(187,858,271)	(166,945,602)	(171,606,374)	(146,503,140)	(139,411,605)	(146,731,616)
Net pension liability	\$ 32,075,220	\$ 46,428,413	\$ 34,223,887	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827
Plan fiduciary net position as a percentage of the total pension liability	87.88%	81.83%	84.59%	83.92%	91.20%	83.34%	82.22%	85.57%
Covered payroll	\$ 47,667,178	\$ 45,744,746	\$ 43,862,455	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,839,691
Participating employer net pension liability as a percentage of covered payroll	67.29%	101.49%	78.03%	76.78%	42.87%	77.56%	83.43%	72.22%
Schedule of Contributions								
Actuarially determined contribution	\$ 7,500,000	\$ 6,755,537	\$ 6,405,537	\$ 6,005,537	\$ 5,755,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions in relation to the actuarially determined contribution	(7,500,000)	(6,755,537)	(6,405,537)	(6,005,537)	(5,755,537)	(5,505,537)	(5,255,537)	(5,005,537)
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 47,667,178	\$ 45,744,746	\$ 43,862,455	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,839,691
Contributions as a percentage of covered payroll	15.73%	14.77%	14.60%	14.96%	14.91%	14.58%	14.55%	15.24%
Schedule of Investment Returns								
Annual money-weighted rate of return, net of investment expense	13.09%	11.37%	19.49%	(3.46)%	19.05%	7.25%	0.40%	0.40%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditor's Report.



INDEPENDENT AUDITOR'S REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Opinion

We have audited the accompanying schedule of employer allocations of the Lexington Contributory Retirement System as of and for the year ended December 31, 2021. We have also audited the total for all entities of the net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense included in the accompanying schedule of pension amounts by employer of the Lexington Contributory Retirement System as of and for the year ended December 31, 2021.

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 for the total of all participating entities for the Lexington Contributory Retirement System as of and for the year ended December 31, 2021, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

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

Responsibilities of Management for the Schedules

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

Merrimack, New Hampshire
Andover, Massachusetts
Greenfield, Massachusetts
Ellsworth, Maine



Auditor's Responsibilities for the Audit of the Schedules

Our objectives are to obtain reasonable assurance about whether the schedules as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS 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 a 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 judgement made by a reasonable user based on the schedules.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedules, 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 schedules.
- 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 System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedules.

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.



Restriction on Use

Our report is intended solely for the information and use of Lexington Contributory Retirement System management, the Retirement Board, System employers and their auditors as of and for the year ended December 31, 2021 and is not intended to be and should be used by anyone other than these specified parties.

Melanson

Andover, Massachusetts
March 3, 2023



LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
 (A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Employer Allocations

<u>Employer</u>	FY 2022 / CY 2021 Actual Employer <u>Contributions</u>	Allocation <u>Percentage</u>
Town of Lexington	\$ 7,417,500	98.90%
Lexington Housing Authority	<u>82,500</u>	1.10%
Total	\$ <u>7,500,000</u>	

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Pension Amounts by Employer
As of and for the Year Ended December 31, 2021

	Town of <u>Lexington</u>	Lexington Housing <u>Authority</u>	<u>Total</u>
Net Pension Liability	\$ 31,722,393	\$ 352,827	\$ 32,075,220
Deferred Outflows of Resources			
Differences between expected and actual experience	\$ 23,856,915	\$ 265,345	\$ 24,122,260
Changes of assumptions	5,111,469	56,852	5,168,321
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>7,853</u>	<u>8,487</u>	<u>16,340</u>
Total Deferred Outflows of Resources	\$ 28,976,237	\$ 330,684	\$ 29,306,921
Deferred (Inflows) of Resources			
Changes of assumptions	\$ (654,236)	\$ (7,277)	\$ (661,513)
Net difference between projected and actual investment earnings on pension plan investments	(19,128,972)	(212,759)	(19,341,731)
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>(8,487)</u>	<u>(7,853)</u>	<u>(16,340)</u>
Total Deferred (Inflows) of Resources	\$ (19,791,695)	\$ (227,889)	\$ (20,019,584)
Pension Expense			
Proportionate share of pension expense	\$ 8,061,794	\$ 89,666	\$ 8,151,460
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	<u>5,035</u>	<u>(5,035)</u>	<u>-</u>
Total Pension Expense	\$ 8,066,829	\$ 84,631	\$ 8,151,460
Contributions			
Actuarially determined contribution	\$ 7,417,500	\$ 82,500	\$ 7,500,000
Contributions made	<u>(7,417,500)</u>	<u>(82,500)</u>	<u>(7,500,000)</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll	15.72%	17.11%	15.73%
Deferred Outflows (Inflows) Recognized in Future Pension Expense			
June 30, 2022	\$ 5,705,667	\$ 64,123	\$ 5,769,790
June 30, 2023	1,228,731	15,161	1,243,892
June 30, 2024	3,644,633	-40,425	3,685,058
June 30, 2025	(1,394,743)	(16,660)	(1,411,403)
June 30, 2026	<u>255</u>	<u>(255)</u>	<u>-</u>
Total Deferred Outflows (Inflows) Recognized in Future Pension Expense	\$ 9,184,543	\$ 102,794	\$ 9,287,337
Discount Rate Sensitivity			
1% decrease (6.25%)	\$ 60,234,706	\$ 669,951	\$ 60,904,657
Current discount rate (7.25%)	31,722,393	352,827	32,075,220
1% increase (8.25%)	7,656,389	85,157	7,741,546
Covered Payroll	\$ 47,184,883	\$ 482,285	\$ 47,667,178

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Lexington, Massachusetts)

Financial Statements and Other Information
For the Year Ended December 31, 2020

(With Independent Auditors' Report Thereon)

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INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

We have audited the accompanying financial statements of the Lexington Contributory Retirement System (the System), a component unit of the Town of Lexington, Massachusetts, as of and for the year ended December 31, 2020, and the related notes to the financial statements, which collectively comprise the basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements 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 financial statements are free from material misstatement.

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

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significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Lexington Contributory Retirement System as of December 31, 2020, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of the Net Pension Liability, Contributions, and Investment Returns, listed in the foregoing table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the 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 auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit 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 evidence sufficient to express an opinion or provide any assurance.

A handwritten signature in black ink that reads "Melanson".

Andover, Massachusetts
March 3, 2022

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the Lexington Contributory Retirement System (the System), we offer readers this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2020.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: (1) fund financial statements and (2) notes to financial statements. This report also contains other required supplementary information in addition to the basic financial statements themselves.

Fund Financial Statements

A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Fund accounting is used to ensure and demonstrate compliance with finance-related legal requirements.

The Statement of Fiduciary Net Position presents information on the System's assets and liabilities and the resulting net position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables, and liabilities.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pensions changed during the year ended December 31, 2020. It reflects contributions by participating employers, active members, external parties, investment activity, along with deductions for retirement benefits, refunds, transfers, and administrative expenses.

Notes to Financial Statements

The Notes to Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The Required Supplementary Information includes this Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of the Net Pension Liability, Contributions, and Investment Returns.

Financial Highlights

- The System's total net position restricted for pensions was \$209,058,109 at December 31, 2020, an increase of \$21,199,838, or 11.29%, over the prior year. This change is primarily due to favorable returns on System investments in calendar year 2020.

- Employer and employee contributions to the plan were \$11,648,783, which represents an increase of \$339,710, or 3.00%, over the prior year. The employer share of contributions represents 54.92% of the total contributions made to the System.
- Benefit payments to plan members and beneficiaries increased by \$289,074, or 2.02%, totaling \$14,615,363. At December 31, 2020, there were 457 retirees and beneficiaries in receipt of pension benefits, as further discussed on page 9.
- The System's funded ratio (based on the System's GASB 68 valuation) as of the January 1, 2021 actuarial valuation was 81.83%, with 8 years remaining in its amortization period.

Financial Statement Analysis

The following is a summary of financial statement data for the current and prior fiscal years:

FIDUCIARY NET POSITION

	<u>2020</u>	<u>2019</u>
Assets		
Cash and receivables	\$ 24,758,580	\$ 11,449,798
Investments	<u>184,384,445</u>	<u>176,519,430</u>
Total Assets	209,143,025	187,969,228
Liabilities		
Accounts payable	<u>84,916</u>	<u>110,957</u>
Total Liabilities	84,916	110,957
Net Position		
Restricted for pensions	<u>\$ 209,058,109</u>	<u>\$ 187,858,271</u>

The System's total assets as of December 31, 2020 were \$209,143,025 and were mostly comprised of cash and investments. Total assets increased \$21,173,797, or 11.26%, from the prior year primarily due to favorable returns on System investments in calendar year 2020.

CHANGES IN FIDUCIARY NET POSITION

	<u>2020</u>	<u>2019</u>
Additions		
Contributions	\$ 12,299,656	\$ 11,908,718
Investment income, net	<u>24,466,546</u>	<u>30,330,460</u>
Total Additions	36,766,202	42,239,178
Deductions		
Benefit payments	14,615,363	14,326,289
Refunds to plan members	230,942	258,219
Transfers to other systems	495,917	511,188
Administrative expenses	<u>224,142</u>	<u>230,813</u>
Total Deductions	<u>15,566,364</u>	<u>15,326,509</u>
Net increase	21,199,838	26,912,669
Net Position Restricted for Pensions		
Beginning of year	<u>187,858,271</u>	<u>160,945,602</u>
End of year	<u>\$ 209,058,109</u>	<u>\$ 187,858,271</u>

The amount needed to finance benefits is accumulated through the collection of employers' and employee's contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 COLA, and through earnings on investments. Contributions and net investment income for calendar year 2020 resulted in total additions of \$36,766,202. Employers' contributions increased by \$350,000, or 5.46%, in calendar year 2020. The System had net investment income of \$24,466,546, primarily due to favorable market conditions during the calendar year.

The primary deductions of the System include the payment of pension benefits to plan members and beneficiaries, refunds and transfers of member contributions, reimbursement payments in accordance with Massachusetts General Law, Chapter 32, Section 3(8)c, more commonly referred to as 3(8)c reimbursements, and the costs of administering the System. Total deductions for calendar year 2020 were \$15,566,364, which represents an increase of \$239,855, or 1.56%, over deductions of \$15,326,509 in calendar year 2019. The payment of pension benefits increased by \$289,074, or 2.02%, over the previous year.

Return on Investment and Funding

The Lexington Contributory Retirement System Board continuously monitors investment performance at its monthly meetings. The money-weighted rate of return for the System's investments, as of December 31, 2020, was 13.37%.

Requests for Information

This financial report is designed to provide a general overview of the Lexington Contributory Retirement System's finances. Questions concerning any of the information provided in this report, or requests for additional financial information, should be addressed to:

Lexington Contributory Retirement System

1625 Massachusetts Avenue

Lexington, Massachusetts 02420

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Fiduciary Net Position
December 31, 2020

Assets	
Cash and short-term investments	\$ 21,173,067
Investments:	
Equity mutual funds	26,775,117
Pooled alternative investments	16,787,958
Pooled investments	140,821,370
Accounts receivable	<u>3,585,513</u>
Total Assets	209,143,025
Liabilities	
Accounts payable	<u>84,916</u>
Total Liabilities	84,916
Net Position	
Restricted for pensions	<u>209,058,109</u>
Total Net Position	<u>\$ 209,058,109</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Changes in Fiduciary Net Position
For the Year Ended December 31, 2020

Additions	
Contributions:	
Employers	\$ 6,755,537
Plan members	4,893,246
Other systems and Commonwealth of Massachusetts	630,338
Other	<u>20,535</u>
Total contributions	12,299,656
Investment income:	
Increase in fair value of investments	24,934,020
Less: management fees	<u>(467,474)</u>
Net investment income	<u>24,466,546</u>
Total Additions	36,766,202
Deductions	
Benefit payments to plan members and beneficiaries	14,615,363
Refunds to plan members	230,942
Transfers to other systems	495,917
Administrative expenses	<u>224,142</u>
Total Deductions	<u>15,566,364</u>
Net Increase	21,199,838
Net Position Restricted for Pensions	
Beginning of year	<u>187,858,271</u>
End of year	<u>\$ 209,058,109</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Notes to Financial Statements

1. Description of Plan

Substantially all employees of the Town of Lexington, Massachusetts (except teachers and administrators under contract employed by the School Department) and the Lexington Housing Authority are members of the Lexington Contributory Retirement System (the System), a cost sharing, multiple employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, contribution percentages, and benefits paid. The Lexington Contributory Retirement Board does not have the authority to amend benefit provisions.

Membership of the plan consisted of the following at December 31, 2020:

Retirees and beneficiaries receiving benefits	457
Inactive plan members entitled to a return of employee contributions	340
Active plan members	<u>757</u>
Total	<u>1,554</u>
Number of participating employers	2

Participant Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the system. In addition, all employees hired on or after January 1, 1979 contribute an additional 2.00% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5.00%
January 1, 1975 – December 31, 1983	7.00%
January 1, 1984 – June 30, 1996	8.00%
July 1, 1996 – present	9.00%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6.00% when at least 30 years of creditable service has been attained.

Employer Contributions

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

Participant Retirement Benefits

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80 - 85% pension and 15 - 20% annuity.

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-year average annual rate of regular compensation for those first becoming members of the Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the 5 years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any 2 consecutive years exceeds 100%, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are 4 classes of membership in the retirement system, but one of these classes, Group 3, is made up exclusively of the Massachusetts State Police. The other three classes are as follows:

- Group 1 – General employees, including clerical, administrative, technical, and all other employees not otherwise classified.
- Group 2 – Certain specified hazardous duty positions.
- Group 4 – Police officers, firefighters, and other specified hazardous positions.

A retirement allowance may be received at any age, upon attaining 20 years of service. The plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4 have no minimum vesting requirements, however, must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

Methods of Payment

A member may elect to receive his or her retirement allowance in one of three forms of payment as follows:

- Option A – Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the member’s death.
- Option B – A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree’s beneficiary or beneficiaries of choice.
- Option C – A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, 2/3 of the allowance is payable to the member’s designated beneficiary (who may be the spouse, or former spouse who has not remarried, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or “pops up” to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable “pops up” to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

Participant Refunds

Employees who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service or involuntarily withdrawing, receive 100% of the regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3.00%.

2. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

The System is a member of the Massachusetts Contributory Retirement Systems and is governed by Chapter 32 of the Massachusetts General Laws. Because of the significance of its operational and financial relationship with the Town, the System is included as a pension trust fund in the Town's basic financial statements. The System is governed by a five-member board. The five members include two appointed by the town, two elected by the members and retirees, and a fifth member chosen by the other four members with the approval of PERAC.

Summary of Significant Accounting Policies

The accounting policies of the System as reflected in the accompanying financial statements for the year ended December 31, 2020 conform to generally accepted accounting principles for public employee retirement systems (PERS). The more significant accounting policies of the System are summarized below:

Basis of Accounting

The System follows accounting policies mandated by the Commonwealth of Massachusetts. The accounting records are maintained on the accrual basis of accounting. Contributions from the Town of Lexington, Massachusetts and Lexington Housing Authority employees are recognized as revenue in the period in which employees provide services to the respective member unit.

Investments

Investment Policy

Investments are reported at fair value in accordance with PERAC requirements. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan.

Rate of Return

For the year ended December 31, 2020, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 13.37%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested throughout the year.

3. Deposits and Investments

Custodial Credit Risk – Deposits

Custodial credit risk is the risk that in the event of a bank failure, the System's deposits may not be returned. Massachusetts General Law Chapter 32, Section 23, limits the System's deposits "in a bank or trust company to an amount not exceeding ten percent

of the capital and surplus of such bank or trust company.” The System does not have formal deposit policies for custodial credit risk.

As of December 31, 2020, \$20,923,062 of the System’s bank balance of \$21,408,211 was exposed to custodial credit risk as uninsured or uncollateralized.

Investment Summary

The following is a summary of the System’s investments as of December 31, 2020:

<u>Investment Type</u>	<u>Amount</u>
Equity mutual funds	\$ 26,775,117
Pooled alternative investments	16,787,958
Pooled investments	<u>140,821,370</u>
Total investments	<u>\$ 184,384,445</u>

Credit Risk – Investments of Debt Securities

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Massachusetts General Law, Chapter 32, Section 23, limits the investment of System funds, to the extent not required for current disbursements, in the PRIT Fund or in securities, other than mortgages or collateral loans, which are legal for the investment of funds in savings banks under the laws of the Commonwealth, provided that no more than the established percentage of assets, is invested in any one security. The System does not have formal investment policies related to credit risk.

As of December 31, 2020, all of the System’s investments of \$184,384,445 were unrated by nationally recognized statistical rating organizations.

Custodial Credit Risk

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, the System will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The System does not have formal investment policies related to custodial credit risk.

As of December 31, 2020, the System did not have any investments exposed to custodial credit risk disclosure as investments in open-end mutual funds and external investment pools are not exposed to custodial credit risk because their existence is not evidence by securities that exist in physical or book entry form.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributable to the magnitude of the System's investment in a single issuer. Massachusetts General Law Chapter 32, Section 23 limits the amount the System may invest in any one issuer or security type, with the exception of the PRIT Fund. The System does not have formal investment policies related to concentration of credit risk.

As of December 31, 2020, the System did not have any investments subject to concentration of credit risk as investments in mutual funds and other pooled investments are excluded from concentration of credit risk disclosure.

Interest Rate Risk – Investments of Debt Securities

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The System does not have formal investment policies limiting investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

As of December 31, 2020, all of the System's investments had maturities of less than one year.

Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment. The System does not have formal investment policies related to foreign currency risk.

Fair Value

The System categorizes its fair value measurements within the fair value hierarchy established by Governmental Accounting Standards Board Statement No. 72, *Fair Value Measurement and Application* (GASB 72).

The hierarchy is based on the valuation inputs used to measure the fair value of the asset. The hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – Inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date.
- Level 2 – Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held securities are categorized as level 2.

- Level 3 – Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative instruments.

The net asset value (NAV) per share is the amount of net assets attributable to each share of capital stock outstanding at the close of the period. Investments measured at the NAV for fair value are not subject to level classification.

The System has the following fair value measurements as of December 31, 2020:

Description	Amount	Fair Value Measurements Using:		
		Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by fair value level:				
Equity mutual funds	\$ 26,775,117	\$ 26,775,117	\$ -	\$ -
			Redemption Frequency (If currently eligible)	Redemption Notice Period
Investments measured at NAV:		Unfunded Commitments		
Pooled alternative investments:				
Hedge Funds	\$ 16,787,958	\$ -	Not Eligible	N/A
Pooled investments:				
CIF Enduring Assets	26,485,911	-	Monthly	30 Days
CIF DPP Invest Alloc	18,598,746	-	Monthly	30 Days
Matthews Pacific Tiger fund - Inst	12,157,899	-	Monthly	30 Days
Acadian International All Cap Fund	20,539,663	-	Monthly	30 Days
Rhumbline Russell 1000 Pooled Index Fund	30,261,507	-	Monthly	30 Days
Monroe Capital Senior Secured Direct Loan Fund (Unleveraged) LP	1,627,688	589,999	Quarterly	90 Days
Golub Capital Partners International 9, LP	3,500,000	500,000	Quarterly	90 Days
White Oak Summit Fund, LP	3,929,556	72,992	Quarterly	90 Days
Kayne Anderson Rudnick SM-Mid Cap Core CIT CL	12,186,851	-	Monthly	30 Days
Orielhaus Emerg Mkts Growth CIT CL C	6,932,773	-	Monthly	30 Days
AG Direct Lending Fund III (Unlevered), LP	4,600,796	425,000	Monthly	30 Days
Total investments measured at NAV	\$ 157,609,328	\$ 1,597,991		

4. Accounts Receivable

Annually the Public Employee Retirement Administration Commission (PERAC) determines the amount of employer contributions (pension appropriations) to be made to the System. The accounts receivable balance primarily represents legal amounts due from employers for pension appropriation not received until after December 31, 2020.

5. Commitments and Contingencies

COVID-19

The COVID-19 pandemic in the United States (and across the globe) has resulted in economic uncertainties. There is considerable uncertainty around the duration and scope of the economic disruption. The extent of the impact of COVID-19 on our operational and financial performance will depend on certain developments, including the duration and spread of the outbreak, impact on individuals served by the System, employees, and vendors, all of which are uncertain and cannot be predicted. At this point, the extent to which COVID-19 may impact our financial condition or results of operations is uncertain.

Outstanding Legal Issues

On an ongoing basis, there are typically pending legal issues in which the System is involved. The System's management is of the opinion that the potential future settlement of these issues would not materially affect its financial statements taken as a whole.

Unfunded Capital Commitments - Investments

As of December 31, 2020, the System had \$1,597,991 in outstanding capital commitments.

6. Net Pension Liability of Participating Employers

The net pension liability was based on an actuarial valuation dated January 1, 2021.

Net Pension Liability of Employers

The components of the net pension liability of the participating employers at December 31, 2020 were as follows:

Total pension liability	\$ 255,486,522
Plan fiduciary net position	<u>(209,058,109)</u>
Employers' net pension liability	<u>\$ 46,428,413</u>
Plan fiduciary net position as a percentage of total pension liability	81.83%

Actuarial Assumptions

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

Valuation date	January 1, 2021
Actuarial cost method	Entry Age Normal
Remaining amortization period	8 years from January 1, 2021 to Fiscal Year 2030
Actuarial assumptions:	
Investment rate of return	7.25% (previously 7.50%)
Projected salary increases:	
Groups 1 and 2	5.75% for year 1, 5.25% for years 2 and 3, 4.75% for years 4 and 5, 4.25% for years 6 and 7, 3.75% for years 8 and 9, 3.50% thereafter
Group 4	6.25% for year 1, 5.75% for year 2, 5.25% for year 3, 4.75% for year 4, 4.25% for years 5 and 6, 3.75% for years 7 and 8, 3.50% thereafter
Inflation rate	2.10%
Post-retirement cost-of-living adjustment	3.00% of first \$15,000

Actuarial valuations of the ongoing System involves estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision, as actual results are compared with past expectations and new estimates are made about the future.

It is assumed that mortality is represented by the RP-2014 table adjusted to 2006, projected using MP-2020 (gender distinct). During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used. Mortality for disabled retirees follows the same table as non-disabled retirees, set forward 2 years. Death is assumed to be due to the same cause as the disability 40% of the time.

Changes of Assumptions

Some actuarial assumptions and methods used have changed since the last measurement date, including reducing the discount rate from 7.50% to 7.25%, and updating the mortality, retirement, withdrawal, and disability rates.

Target Allocations

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan 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 geometric real rates of return for each major asset class included in the System's targeted asset allocation as of December 31, 2020, are summarized in the following table:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. equity	24.00%	4.60%
Development market equity	13.00%	4.90%
Emerging market equity	12.00%	5.88%
Private equity	10.00%	6.86%
Real estate	10.00%	4.70%
Long-term government bonds	7.00%	0.39%
High yield bonds	6.00%	2.06%
Investment grade bonds	5.00%	(0.29)%
TIPS	4.00%	(0.29)%
Natural resources	3.00%	6.07%
Bank loans	2.00%	1.86%
Emerging market bonds	2.00%	1.76%
Infrastructure	2.00%	4.80%
Total	<u>100.00%</u>	

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 from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates by Statute. Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments of 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 total pension liability.

Sensitivity of Discount Rate

The following presents the net pension liability of the participating employers calculated using the discount rate of 7.25%, as well as what the participating employers' net pension liability would be if it were calculated using a discount rate that is one percentage-point lower or one percentage-point higher than the current rate:

1% Decrease <u>(6.25%)</u>	Current Discount Rate <u>(7.25%)</u>	1% Increase <u>(8.25%)</u>
\$ 74,508,504	\$ 46,428,413	\$ 22,708,493

Deferred Outflows/Inflows of Resources

The following schedule reflects the deferred outflows/inflows of resources for the System for the year ended December 31, 2020:

	Deferred Outflows of <u>Resources</u>	Deferred (Inflows) of <u>Resources</u>
Differences between expected and actual experience	\$ 33,162,828	\$ -
Changes of assumptions	7,061,478	(868,236)
Net difference between projected and actual investment earnings on pension plan investments	-	(15,064,080)
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>24,066</u>	<u>(24,066)</u>
Total	\$ <u>40,248,372</u>	\$ <u>(15,956,382)</u>

The following summarizes changes in deferred outflows/inflows of resources:

	Measurement Year	Amortization Period	Beginning Balance on Prior Measurement Period Deferrals	Current Measurement Period Additions	Amortization of Amounts Recognized in Current Period Pension Expense	End of Year Balance
Deferred Outflows of Resources						
Differences between expected and actual experience	2015	5.27	\$ 199,654	\$ -	\$ (199,654)	\$ -
	2017	5.46	3,169,824	-	(1,288,547)	1,881,277
	2019	5.73	12,850,876	-	(2,716,887)	10,133,989
	2020	5.20	-	26,182,696	(5,035,134)	21,147,562
Changes of assumptions	2019	5.73	8,954,635	-	(1,893,157)	7,061,478
Changes in proportion and differences between employer contributions and proportionate share of contributions	2015	5.27	6,998	-	(6,998)	-
	2016	5.27	1,191	-	(938)	253
	2017	5.46	13,322	-	(8,390)	4,932
	2018	5.46	10,678	-	(3,086)	7,592
	2019	5.73	10,530	-	(2,226)	8,304
	2020	5.20	-	3,696	(711)	2,985
Total Deferred Outflows of Resources			25,217,708	26,186,392	(11,155,728)	40,248,372
Deferred Inflows of Resources						
Changes of assumptions	2015	5.27	(237,033)	-	237,033	-
	2020	5.20	-	(1,074,958)	206,722	(868,236)
Net difference between projected and actual investment earnings on pension plan investments	2016	5	439,570	-	(439,570)	-
	2017	5	(6,692,769)	-	3,346,384	(3,346,385)
	2018	5	11,799,505	-	(3,933,169)	7,866,336
	2019	5	(14,743,497)	-	3,685,874	(11,057,623)
	2020	5	-	(10,658,010)	2,131,602	(8,526,408)
Changes in proportion and differences between employer contributions and proportionate share of contributions	2015	5.27	(6,998)	-	6,998	-
	2016	5.27	(1,191)	-	938	(253)
	2017	5.46	(13,322)	-	8,390	(4,932)
	2018	5.46	(10,678)	-	3,086	(7,592)
	2019	5.73	(10,530)	-	2,226	(8,304)
	2020	5.20	-	(3,696)	711	(2,985)
Total Deferred Inflows of Resources			(9,476,943)	(11,736,664)	5,257,225	(15,956,382)
Total Collective Deferred Outflows (Inflows) of Resources			\$ 15,740,765	\$ 14,449,728	\$ (5,898,503)	\$ 24,291,990

The following schedule reflects the amortization of the balance of deferred outflows/inflows of resources:

<u>Fiscal</u> <u>Year*</u>	<u>Total</u>
2021	\$ 5,496,310
2022	8,146,876
2023	3,620,978
2024	6,062,144
2025	<u>965,682</u>
	<u>\$ 24,291,990</u>

** Presented by member units' fiscal year to fairly present the fiduciary impact of related deferred outflows/inflows in the fiscal year affecting the member unit.*

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Changes in the Net Pension Liability
Required Supplementary Information

(Unaudited)

	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service cost	\$ 5,015,441	\$ 4,799,466	\$ 4,592,789	\$ 4,437,477	\$ 4,291,849	\$ 4,107,033	\$ 4,274,160
Interest	16,493,061	14,187,272	13,908,385	13,037,708	12,616,002	12,642,336	12,586,679
Changes of benefit terms	1,168,352	-	-	876,835	809,529	757,749	-
Differences between expected and actual experience	26,182,696	15,567,763	-	7,035,465	-	3,896,914	-
Changes of assumptions	(1,074,958)	10,847,792	-	-	-	(4,626,513)	-
Benefit payments, including refunds of member contributions ¹	(14,380,228)	(15,095,696)	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Other	-	-	-	-	-	(434,474)	(386,047)
Net change in total pension liability	33,404,364	30,306,596	3,614,377	12,372,918	6,223,901	5,106,923	6,322,846
Total pension liability - beginning	222,082,158	191,775,562	188,161,185	175,788,267	169,564,366	164,457,443	158,134,597
Total pension liability - ending (a)	255,486,522	222,082,158	191,775,562	188,161,185	175,788,267	169,564,366	164,457,443
Plan Fiduciary Net Position¹							
Contributions - employer	6,755,537	6,405,537	6,005,537	5,755,537	5,505,537	5,255,537	5,005,537
Contributions - member	4,582,125	4,903,536	4,871,563	4,498,405	4,604,207	3,917,137	3,667,921
Net investment income (loss)	24,466,546	30,372,878	(6,932,569)	27,626,807	8,216,601	482,576	8,664,385
Benefit payments, including refunds of member contributions	(14,380,228)	(15,095,696)	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Administrative expense	(224,142)	(263,270)	(273,487)	(239,160)	(220,875)	(205,808)	(226,748)
Other	-	589,684	552,981	478,212	479,544	486,729	544,630
Net change in plan fiduciary net position	21,199,838	26,912,669	(10,662,772)	25,105,234	7,091,535	(1,320,011)	7,503,779
Plan fiduciary net position - beginning	187,858,271	160,945,602	171,608,374	146,503,140	139,411,605	140,731,616	133,227,837
Plan fiduciary net position - ending (b)	209,058,109	187,858,271	160,945,602	171,608,374	146,503,140	139,411,605	140,731,616
Net Pension Liability - Ending (a-b)	\$ 46,428,413	\$ 34,223,887	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827

¹ Amounts may differ from those presented on page 8 due to classification differences between System and actuary

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedules of the Net Pension Liability, Contributions, and Investment Returns
Required Supplementary Information

(Unaudited)

	2020	2019	2018	2017	2016	2015	2014
Schedule of Net Pension Liability							
Total pension liability	\$ 255,486,522	\$ 222,082,158	\$ 191,775,562	\$ 188,161,185	\$ 175,780,267	\$ 169,564,366	\$ 164,457,443
Plan fiduciary net position	<u>(209,058,109)</u>	<u>(187,858,271)</u>	<u>(160,945,602)</u>	<u>(171,608,374)</u>	<u>(146,503,140)</u>	<u>(139,411,605)</u>	<u>(140,731,616)</u>
Net pension liability	<u>\$ 46,428,413</u>	<u>\$ 34,223,887</u>	<u>\$ 30,829,960</u>	<u>\$ 16,552,811</u>	<u>\$ 29,285,127</u>	<u>\$ 30,152,761</u>	<u>\$ 23,725,827</u>
Plan fiduciary net position as a percentage of the total pension liability	81.83%	84.59%	83.92%	91.20%	83.34%	82.22%	85.57%
Covered payroll	\$ 45,744,746	\$ 43,862,455	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Participating employer net pension liability as a percentage of covered payroll	101.49%	78.03%	76.78%	42.87%	77.56%	83.45%	72.22%
Schedule of Contributions							
Actuarially determined contribution	\$ 6,755,537	\$ 6,405,537	\$ 6,005,537	\$ 5,755,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions in relation to the actuarially determined contribution	<u>(6,755,537)</u>	<u>(6,405,537)</u>	<u>(6,005,537)</u>	<u>(5,755,537)</u>	<u>(5,505,537)</u>	<u>(5,255,537)</u>	<u>(5,005,537)</u>
Contribution deficiency (excess)	<u>\$ -</u>						
Covered payroll	\$ 45,744,746	\$ 43,862,455	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Contributions as a percentage of covered payroll	14.77%	14.60%	14.96%	14.91%	14.58%	14.55%	15.24%
Schedule of Investment Returns							
Annual money weighted rate of return, net of investment expense	13.37%	19.49%	(3.46)%	19.05%	7.23%	0.46%	0.46%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.



INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Report on Schedules

We have audited the accompanying schedule of employer allocations of the Lexington Contributory Retirement System as of and for the year ended December 31, 2020. We have also audited the total for all entities of the titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified totals) included in the accompanying schedule of pension amounts by employer of the Lexington Contributory Retirement System as of and for the year ended December 31, 2020.

Management's Responsibility for the Schedules

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

Auditors' Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified totals included in 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 totals included in 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 in the schedule of employer allocations and specified totals included in 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 totals included in the schedule of pension amounts by employer, whether due to fraud or error. In making those risk assessments, the auditor considers internal

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Greenfield, Massachusetts
Ellsworth, Maine

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control relevant to the System's preparation and fair presentation of the schedule of employer allocations and specified 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 System'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 totals included in 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 for the total of all participating entities for the Lexington Contributory Retirement System as of and for the year ended December 31, 2020, in accordance with accounting principles generally accepted in the United States of America.

Restriction on Use

Our report is intended solely for the information and use of Lexington Contributory Retirement System management, the Retirement Board, System employers and their auditors as of and for the year ended December 31, 2020 and is not intended to be and should not be used by anyone other than these specified parties.

A handwritten signature in black ink that reads 'Melanson'.

Andover, Massachusetts
March 3, 2022

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
 (A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Employer Allocations

<u>Employer</u>	FY 2021 / CY 2020 Actual Employer Contributions	Allocation Percentage
Town of Lexington	\$ 6,679,199	98.87%
Lexington Housing Authority	<u>76,338</u>	1.13%
Total	<u>\$ 6,755,537</u>	

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Pension Amounts by Employer
As of and for the Year Ended December 31, 2020

	<u>Town of Lexington</u>	<u>Lexington Housing Authority</u>	<u>Total</u>
Net Pension Liability	\$ 45,903,772	\$ 524,641	\$ 46,428,413
Deferred Outflows of Resources			
Differences between expected and actual experience	\$ 32,788,088	\$ 374,740	\$ 33,162,828
Changes of assumptions	6,981,683	79,795	7,061,478
Changes in proportion and differences between employer contributions and proportionate share of contributions	10,913	13,153	24,066
Total Deferred Outflows of Resources	<u>\$ 39,780,684</u>	<u>\$ 467,688</u>	<u>\$ 40,248,372</u>
Deferred (Inflows) of Resources			
Changes of assumptions	(858,425)	(9,811)	(868,236)
Net difference between projected and actual investment earnings on pension plan investments	(14,893,856)	(170,224)	(15,064,080)
Changes in proportion and differences between employer contributions and proportionate share of contributions	(13,153)	(10,913)	(24,066)
Total Deferred (Inflows) of Resources	<u>\$ (15,765,434)</u>	<u>\$ (190,948)</u>	<u>\$ (15,956,382)</u>
Pension Expense			
Proportionate share of pension expense	\$ 10,291,218	\$ 117,620	\$ 10,408,838
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	11,625	(11,625)	—
Total Pension Expense	<u>\$ 10,302,843</u>	<u>\$ 105,995</u>	<u>\$ 10,408,838</u>
Contributions			
Actuarially determined contribution	\$ 6,679,199	\$ 76,338	\$ 6,755,537
Contributions made	(6,679,199)	(76,338)	(6,755,537)
Contribution deficiency (excess)	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Contributions as a percentage of covered payroll	14.75%	16.47%	14.77%
Deferred Outflows (Inflows) Recognized in Future Pension Expense			
June 30, 2021	\$ 5,437,960	\$ 58,350	\$ 5,496,310
June 30, 2022	8,052,884	93,992	8,146,876
June 30, 2023	3,577,305	43,673	3,620,978
June 30, 2024	5,992,475	69,669	6,062,144
June 30, 2025	954,626	11,056	965,682
Total Deferred Outflows (Inflows) Recognized in Future Pension Expense	<u>\$ 24,015,250</u>	<u>\$ 276,740</u>	<u>\$ 24,291,990</u>
Discount Rate Sensitivity			
1% decrease (6.25%)	\$ 73,666,558	\$ 841,946	\$ 74,508,504
Current discount rate (7.25%)	45,903,772	524,641	46,428,413
1% increase (8.25%)	22,451,887	256,606	22,708,493
Covered Payroll	\$ 45,281,164	\$ 463,582	\$ 45,744,746

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.



LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Financial Statements,
Required Supplementary Information,
and Other Information

For the Year Ended December 31, 2019

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INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

We have audited the accompanying financial statements of the Lexington Contributory Retirement System (the System), a component unit of the Town of Lexington, Massachusetts, as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements 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 financial statements are free from material misstatement.

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

Merrimack, New Hampshire
Andover, Massachusetts
Greenfield, Massachusetts
Ellsworth, Maine

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evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Lexington Contributory Retirement System as of December 31, 2019, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns, listed in the foregoing table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the 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 auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit 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 evidence sufficient to express an opinion or provide any assurance.

A handwritten signature in black ink that reads "Melanson".

Andover, Massachusetts
December 10, 2020

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the Lexington Contributory Retirement System (the System), we offer readers this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2019.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: (1) fund financial statements and (2) notes to financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

Fund Financial Statements

A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Fund accounting is used to ensure and demonstrate compliance with finance-related legal requirements.

The Statement of Fiduciary Net Position presents information on the System's assets, liabilities, and net position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables, and accounts payable.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pensions changed during the year ended December 31, 2019. This statement reflects contributions by plan members and participating employers, other contributions, investment activity, deductions for benefit payments to plan members and beneficiaries, and administrative expenses.

Notes to Financial Statements

The Notes to Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The Required Supplementary Information includes this Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns.

Financial Highlights

- The System's total net position restricted for pensions was \$187,858,271 at December 31, 2019, which represents a change of \$26,912,669, or 16.72%, over the prior year. This change is primarily due to favorable returns on System investments in calendar year 2019.

- Employer and employee contributions to the plan were \$11,309,073, which represents an increase of \$431,973, or 3.97%, over the prior year. The employer share of contributions represents 53.83% of the total contributions made to the System.
- Benefit payments to plan members and beneficiaries increased by \$208,899, or 1.40%, totaling \$15,095,696. At December 31, 2019, there were 465 retirees and beneficiaries receiving benefits, as further discussed on page 8.
- The System's funded ratio (based on the System's GASB 68 valuation) as of the January 1, 2020 actuarial valuation was 84.59%, with 7 years remaining in its amortization period.

Financial Statement Analysis

The following is a summary of financial statement data for the current and prior fiscal years:

FIDUCIARY NET POSITION

	<u>2019</u>	<u>2018</u>
Assets		
Cash and receivables	\$ 11,449,798	\$ 4,978,753
Investments	<u>176,519,430</u>	<u>156,041,040</u>
Total Assets	<u>187,969,228</u>	<u>161,019,793</u>
Liabilities		
Accounts payable	<u>110,957</u>	<u>74,191</u>
Total Liabilities	<u>110,957</u>	<u>74,191</u>
Net Position		
Restricted for pensions	<u>\$ 187,858,271</u>	<u>\$ 160,945,602</u>

The System's total assets as of December 31, 2019 were \$187,969,228 and were mostly comprised of cash and investments. Total assets increased by \$26,949,435, or 16.74%, from the prior year primarily due to favorable returns on System investments in calendar year 2019.

CHANGES IN FIDUCIARY NET POSITION

	<u>2019</u>	<u>2018</u>
Additions		
Contributions	\$ 11,898,757	\$ 11,430,081
Investment income (loss)	<u>30,372,878</u>	<u>(6,932,569)</u>
Total Additions	42,271,635	4,497,512
Deductions		
Benefit payments	15,095,696	14,886,797
Administrative expenses	<u>263,270</u>	<u>273,487</u>
Total Deductions	<u>15,358,966</u>	<u>15,160,284</u>
Net Increase (Decrease)	26,912,669	(10,662,772)
Net Position Restricted for Pensions		
Beginning of year	<u>160,945,602</u>	<u>171,608,374</u>
End of year	<u>\$ 187,858,271</u>	<u>\$ 160,945,602</u>

The amount needed to finance benefits is accumulated through the collection of employers' and employee's contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 cost-of-living adjustments (COLA), and through earnings on investments. Employers' contributions increased by \$400,000, or 6.66%, in calendar year 2019. The System had net investment income of \$30,372,878 in calendar year 2019 versus a loss of \$(6,932,569) in calendar year 2018, primarily due to favorable market conditions during calendar year 2019.

Requests for Information

This financial report is designed to provide a general overview of the Lexington Contributory Retirement System's finances. Questions concerning any of the information provided in this report, or requests for additional financial information, should be addressed to:

Lexington Contributory Retirement System
 1625 Massachusetts Avenue
 Lexington, Massachusetts 02420

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Fiduciary Net Position
December 31, 2019

Assets	
Cash and short-term investments	\$ 8,100,970
Investments:	
Equity mutual funds	20,207,510
External investment pool (PRIT)	33,877,671
Pooled alternative investments	122,434,249
Accounts receivable	<u>3,348,828</u>
Total Assets	187,969,228
Liabilities	
Accounts payable	<u>110,957</u>
Total Liabilities	<u>110,957</u>
Net Position	
Restricted for pensions	<u><u>\$ 187,858,271</u></u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Changes in Fiduciary Net Position
For the Year Ended December 31, 2019

Additions	
Contributions:	
Employers	\$ 6,405,537
Plan members	4,903,536
Other	<u>589,684</u>
Total contributions	11,898,757
Investment income:	
Appreciation in fair value of investments	30,917,713
Less: management fees	<u>(544,835)</u>
Net investment income	<u>30,372,878</u>
Total Additions	42,271,635
Deductions	
Benefit payments to plan members and beneficiaries	15,095,696
Administrative expenses	<u>263,270</u>
Total Deductions	<u>15,358,966</u>
Net Increase	26,912,669
Net Position Restricted for Pensions	
Beginning of year	<u>160,945,602</u>
End of year	<u>\$ 187,858,271</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Notes to Financial Statements

1. Description of Plan

Substantially all employees of the Town of Lexington, Massachusetts (except teachers and administrators under contract employed by the School Department) and the Lexington Housing Authority are members of the Lexington Contributory Retirement System (the System), a cost sharing, multiple employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, contribution percentages, and benefits paid. The Lexington Contributory Retirement Board does not have the authority to amend benefit provisions.

Membership of the plan consisted of the following at December 31, 2019:

Retirees and beneficiaries receiving benefits	465
Inactive members entitled to a return of employee contributions	316
Active plan members	<u>780</u>
Total	<u>1,561</u>
Number of participating employers	2

Participant Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the System. In addition, all employees hired on or after January 1, 1979 contribute an additional 2.00% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5.00%
January 1, 1975 – December 31, 1983	7.00%
January 1, 1984 – June 30, 1996	8.00%
July 1, 1996 – present	9.00%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6.00% when at least 30 years of creditable service has been attained.

Employer Contributions

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

Participant Retirement Benefits

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80 - 85% pension and 15 - 20% annuity.

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-year average annual rate of regular compensation for those first becoming members of the Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the five years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any two consecutive years exceeds 100%, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of five consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are four classes of membership in the System, but one of these classes, Group 3, is made up exclusively of the Massachusetts State Police. The other three classes are as follows:

- Group 1 – General employees, including clerical, administrative, technical, and all other employees not otherwise classified.
- Group 2 – Certain specified hazardous duty positions.
- Group 4 – Police officers, firefighters, and other specified hazardous positions.

A retirement allowance may be received at any age, upon attaining 20 years of service. The plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4 have no minimum vesting requirements, however, must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

Methods of Payment

A member may elect to receive his or her retirement allowance in one of three forms of payment as follows:

- Option A – Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the members death.
- Option B – A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree’s beneficiary or beneficiaries of choice.
- Option C – A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, two-thirds of the allowance is payable to the member’s designated beneficiary (who may be the spouse, or former spouse who has not remarried, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or “pops up” to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable “pops up” to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

Participant Refunds

Employees who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service or involuntarily withdrawing, receive 100% of the regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3.00%.

2. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

The System is a member of the Massachusetts Contributory Retirement Systems and is governed by Chapter 32 of the Massachusetts General Laws. Because of the significance of its operational and financial relationship with the Town, the System is included as a pension trust fund in the Town's basic financial statements. The System is governed by a five-member board. The five members include two appointed by the Town, two elected by the members and retirees, and a fifth member chosen by the other four members with the approval of PERAC.

Summary of Significant Accounting Policies

The accounting policies of the System as reflected in the accompanying financial statements for the year ended December 31, 2019 conform to generally accepted accounting principles for public employee retirement systems (PERS). The more significant accounting policies of the System are summarized below:

Basis of Accounting

The System follows accounting policies mandated by the Commonwealth of Massachusetts. The accounting records are maintained on the accrual basis of accounting. Contributions from the Town of Lexington, Massachusetts and Lexington Housing Authority employees are recognized as revenue in the period in which employees provide services to the respective member unit.

Investments

Investment Policy

Investments are reported at fair value in accordance with PERAC requirements. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan.

Rate of Return

For the year ended December 31, 2019, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 19.49%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested throughout the year.

3. Deposits and Investments

Custodial Credit Risk - Deposits. Custodial credit risk is the risk that in the event of a bank failure, the System's deposits may not be returned. Massachusetts General Law Chapter 32, Section 23, limits the System's deposits "in a bank or trust company to an amount not exceeding ten percent of the capital and surplus of such bank or trust

company.” The System does not have formal policies related to custodial credit risk of deposits.

As of December 31, 2019, \$7,887,936 of the System’s bank balances of \$8,387,936 was exposed to custodial credit risk as uninsured or uncollateralized.

Investment Summary

The following is a summary of the System’s investments as of December 31, 2019:

<u>Investment Type</u>	<u>Amount</u>
Equity mutual funds	\$ 20,207,510
External investment pool (PRIT)*	33,877,671
Pooled alternative investments	<u>122,434,249</u>
Total investments	<u>\$ 176,519,430</u>

**Fair value is the same as the value of the pool share. The Pension Reserves Investment Trust (PRIT) was created under Massachusetts General Law, Chapter 32, Section 22, in December 1983. The Pension Reserves Investment Trust is operated under contract with a private investment advisor, approved by the Pension Reserves Investment Management Board. The Pension Reserves Investment Management Board shall choose an investment advisor by requesting proposals from advisors and reviewing such proposals based on criteria adopted under Massachusetts General Law, Chapter 30B.*

Credit Risk – Investments of Debt Securities

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Massachusetts General Law, Chapter 32, Section 23, limits the investment of System funds, to the extent not required for current disbursements, in the PRIT Fund or in securities, other than mortgages or collateral loans, which are legal for the investment of funds in savings banks under the laws of the Commonwealth, provided that no more than the established percentage of assets, is invested in any one security. The System does not have formal investment policies related to credit risk.

Presented below is the actual rating as of year-end for each investment type:

<u>Investment Type</u>	<u>Rating as of Year End</u>	
	<u>Amount</u>	<u>Unrated</u>
External investment pool (PRIT)	\$ 33,877,671	\$ 33,877,671
Pooled alternative investments	<u>122,434,249</u>	<u>122,434,249</u>
Total	<u>\$ 156,311,920</u>	<u>\$ 156,311,920</u>

Custodial Credit Risk – Investments

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The System does not have formal investment policies related to custodial credit risk.

As of December 31, 2019, the System did not have any investments exposed to custodial credit risk disclosure as investments in open-end mutual funds and external investment pools are not exposed to custodial credit risk because their existence is not evidenced by securities that exist in physical or book entry form.

Concentration of Credit Risk – Investments

Massachusetts General Law Chapter 32, Section 23 limits the amount the System may invest in any one issuer or security type, with the exception of the PRIT Fund. The System does not have formal investment policies related to concentration of credit risk.

As of December 31, 2019, the System did not have any investments subject to concentration of credit risk as investments in mutual funds and other pooled investments are excluded from concentration of credit disclosure.

Interest Rate Risk – Investments of Debt Securities

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The System does not have formal investment policies limiting investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Information about the sensitivity of the fair values of the System’s investments to market interest rate fluctuations is as follows:

<u>Investment Type</u>	<u>Investment Maturities (in Years)</u>	
	<u>Amount</u>	<u>Less Than 1</u>
External investment pool (PRIT)	\$ 33,877,671	\$ 33,877,671
Pooled alternative investments	<u>122,434,249</u>	<u>122,434,249</u>
Total	<u>\$ 156,311,920</u>	<u>\$ 156,311,920</u>

Foreign Currency Risk – Investments

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment. The System does not have formal investment policies related to foreign currency risk.

Fair Value

The System categorizes its fair value measurements within the fair value hierarchy established by Governmental Accounting Standards Board Statement No. 72 *Fair Value Measurement and Application* (GASB 72).

The hierarchy is based on the valuation inputs used to measure the fair value of the asset. The hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – Inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date.
- Level 2 – Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held securities are categorized as level 2.
- Level 3 – Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative instruments.

The net asset value (NAV) per share is the amount of net assets attributable to each share of capital stock outstanding at the close of the period. Investments measured at the NAV for fair value are not subject to level classification.

The System has the following fair value measurements as of December 31, 2019:

Description	Amount	Fair Value Measurements Using:		
		Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by fair value level:				
Equity mutual funds	\$ 20,207,510	\$ 20,207,510	\$ -	\$ -

<u>Description</u>	<u>Amount</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency</u>	<u>Redemption Notice Period</u>
Investments measured at NAV:				
PRIM Core Real Estate Account	\$ 17,299,788	\$ -	Monthly	30 Days
PRIM Hedge Funds Account	16,577,883	-	Monthly	30 Days
CIF Enduring Assets	25,646,452	-	Monthly	30 Days
CIF OPP Invest Alloc	15,821,451	-	Monthly	30 Days
Matthews Pacific Tiger Fund - Inst	9,426,121	-	Monthly	30 Days
Acadian International All Cap Fund	18,318,068	-	Monthly	30 Days
FMI Large Cap FD - Institutional Class (FMIQX)	4,525,421	-	Monthly	30 Days
RhumbLine Russell 1000 Pooled Index Fund	20,974,533	-	Monthly	30 Days
Monroe Capital Senior Secured Direct Loan Fund (Unleveraged), LP	2,108,006	599,999	Quarterly	90 Days
Golub Capital Partners International 9, LP	3,500,000	500,000	Quarterly	90 Days
White Oak Summit Fund, LP	3,983,035	72,992	Quarterly	90 Days
Kayne Anderson Rudnick SM-Mid Cap Core CIT CL	8,865,052	-	Monthly	30 Days
Driehaus Emerg MKTS Growth CIT CL C	5,416,348	-	Monthly	30 Days
AG Direct Lending Fund III (Unlevered), LP	3,849,762	1,175,000	Monthly	30 Days
Total investments measured at NAV	\$ <u>156,311,920</u>	\$ <u>2,347,991</u>		

4. Accounts Receivable

Annually the Public Employee Retirement Administration Commission (PERAC) determines the amount of employer contributions (pension appropriations) to be made to the System. The accounts receivable balance primarily represents legal amounts due from employers for pension appropriations due to the System as of December 31, 2019.

5. Accounts Payable

This balance primarily represents management fees due to investment advisors at year end.

6. Contingencies

There are various pending claims arising in the ordinary course of operations; however, management believes that the probable liability resulting from such claims and litigation would not materially affect the System's financial position.

7. Net Pension Liability of Participating Employers

The net pension liability was based on an actuarial valuation dated January 1, 2020.

Net Pension Liability of Employers

The components of the net pension liability of the participating employers at December 31, 2019 were as follows:

Total pension liability	\$ 222,082,158
Plan fiduciary net position	<u>(187,858,271)</u>
Employers' net pension liability	<u>\$ 34,223,887</u>
Plan fiduciary net position as a percentage of total pension liability	84.59%

Actuarial Assumptions

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

Valuation date	January 1, 2020
Actuarial cost method	Entry Age Normal
Remaining amortization period	7 years from January 1, 2020
Investment rate of return	7.50%
Projected salary increases:	
Groups 1 and 2	3.50% - 5.75%
Fire & Police	3.50% - 6.25%
Inflation rate	3.00%
Post-retirement cost-of-living adjustment	3.00% of first \$14,000

Actuarial valuations of the ongoing System involves estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision, as actual results are compared with past expectations and new estimates are made about the future.

It is assumed that mortality is represented by the various SOA Pub-2010 Public Retirement Plans Mortality Tables specific to the Group, Pre-retirement versus Post, Disabled and Beneficiaries, with Scale MP-2019 improvements until 2025. This is a change from the previous valuation that used modified versions of the RP-2000 Mortality Tables.

Target Allocations

The long-term expected real rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation)

are developed for each major asset class. These ranges are combined to produce the long-term expected real 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 arithmetic real rates of return for each major asset class included in the System's targeted asset allocation as of December 31, 2019, are summarized in the following table:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Public domestic equity	35.00%	8.10%
Public international developed equity	20.00%	8.50%
Public international emerging equity	10.00%	10.35%
Value-added fixed income	10.00%	4.74%
Real estate / Real assets	10.00%	7.64%
Hedge funds	10.00%	5.40%
Core fixed income	<u>5.00%</u>	3.77%
Total	<u>100.00%</u>	

Discount Rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates by Statute. Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments of 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 total pension liability.

Sensitivity of Discount Rate

The following presents the net pension liability of the participating employers calculated using the discount rate of 7.50%, as well as what the participating employers' net pension liability would be if it were calculated using a discount rate that is one percentage-point lower (6.50%) or one percentage-point higher (8.50%) than the current rate:

1% Decrease <u>(6.50%)</u>	Current Discount Rate <u>(7.50%)</u>	1% Increase <u>(8.50%)</u>
\$ 58,362,765	\$ 34,223,887	\$ 13,747,447

Deferred Outflows/(Inflows) of Resources

The following schedule reflects the deferred outflows and (inflows) of resources for the System for the year ended December 31, 2019:

	Deferred Outflows of <u>Resources</u>	Deferred (Inflows) of <u>Resources</u>
Differences between expected and actual experience	\$ 16,220,354	\$ -
Changes of assumptions	8,954,635	(237,033)
Net difference between projected and actual investment earnings on pension plan investments	-	(9,197,191)
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>42,719</u>	<u>(42,719)</u>
Total	<u>\$ 25,217,708</u>	<u>\$ (9,476,943)</u>

The following summarizes changes in deferred outflows and (inflows) of resources:

	Measurement Year	Amortization Period	Beginning Balance on Prior Measurement Period Deferrals	Current Measurement Period Additions	Amortization of Amounts Recognized in Current Period Pension Expense	End of Year Balance
Deferred Outflows of Resources						
Differences between expected and actual experience	2015	5.27	\$ 939,106	\$ -	\$ (739,452)	\$ 199,654
	2017	5.46	4,458,371	-	(1,288,547)	3,169,824
	2019	5.73	-	15,567,763	(2,716,887)	12,850,876
Changes of assumptions	2019	5.73	-	10,847,792	(1,893,157)	8,954,635
Changes in proportion and differences between employer contributions and proportionate share of contributions	2015	5.27	32,911	-	(25,913)	6,998
	2016	5.27	2,129	-	(938)	1,191
	2017	5.46	18,738	-	(5,416)	13,322
	2018	5.46	13,764	-	(3,086)	10,678
	2019	5.73	-	12,756	(2,226)	10,530
Total Deferred Outflows of Resources			5,465,019	26,428,311	(6,675,622)	25,217,708
Deferred (Inflows) of Resources						
Changes of assumptions	2015	5.27	(1,114,929)	-	877,896	(237,033)
Net difference between projected and actual investment earnings on pension plan investments	2015	5	2,070,854	-	(2,070,854)	-
	2016	5	879,138	-	(439,568)	439,570
	2017	5	(10,039,153)	-	3,346,384	(6,692,769)
	2018	5	15,732,674	-	(3,933,169)	11,799,505
	2019	5	-	(18,429,371)	3,685,874	(14,743,497)
Changes in proportion and differences between employer contributions and proportionate share of contributions	2015	5.27	(32,911)	-	25,913	(6,998)
	2016	5.27	(2,129)	-	938	(1,191)
	2017	5.46	(18,738)	-	5,416	(13,322)
	2018	5.46	(13,764)	-	3,086	(10,678)
	2019	5.73	-	(12,756)	2,226	(10,530)
Total Deferred (Inflows) of Resources			7,461,042	(18,442,127)	1,504,142	(9,476,943)
Total Collective Deferred Outflows (Inflows) of Resources			\$ 12,926,061	\$ 7,986,184	\$ (5,171,480)	\$ 15,740,765

The following schedule reflects the amortization of the balance of deferred outflows and (inflows) of resources:

Fiscal Year*	Amount
2021	\$ 3,201,693
2022	2,799,501
2023	5,450,067
2024	924,169
Thereafter	<u>3,365,335</u>
Total	<u>\$ 15,740,765</u>

** Presented by member units' fiscal year to fairly present the fiduciary impact of related deferred outflows in the fiscal year affecting the member unit.*

8. Subsequent Events

COVID-19

The COVID-19 outbreak in the United States and across the globe has resulted in economic uncertainties. The disruption is expected to be temporary, but there is considerable uncertainty around the duration and scope. The extent of the impact of COVID-19 on our operational and financial performance will depend on certain developments, including the duration and spread of the outbreak, special acts or legislation by the state or federal government, and the impact on our active members, employees, retirees, and vendors, all of which are uncertain and cannot be predicted. At this point, the extent to which COVID-19 may impact our financial condition or results of operations is uncertain.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Changes in the Net Pension Liability
Required Supplementary Information
For the Year Ended December 31, 2019
(Unaudited)

	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service cost	\$ 4,799,465	\$ 4,592,789	\$ 4,437,477	\$ 4,291,849	\$ 4,107,033	\$ 4,274,160
Interest on unfunded liability - time value of money	14,187,272	13,908,385	13,037,708	12,616,002	12,642,336	12,586,679
Changes of benefit terms	-	-	876,835	809,529	757,749	-
Differences between expected and actual experience	15,567,763	-	7,035,465	-	3,896,914	-
Changes of assumptions	10,847,792	-	-	-	(4,626,513)	-
Benefit payments, including refunds of member contributions	(15,095,696)	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Other	-	-	-	-	(414,474)	(386,047)
Net change in total pension liability	30,306,596	3,614,377	12,372,918	6,223,901	5,106,923	6,322,846
Total pension liability - beginning	191,775,562	188,161,185	175,788,267	169,564,366	164,457,443	158,134,597
Total pension liability - ending (a)	222,082,158	191,775,562	188,161,185	175,788,267	169,564,366	164,457,443
Plan Fiduciary Net Position						
Contributions - employer	6,405,537	6,005,537	5,755,537	5,505,537	5,255,537	5,005,537
Contributions - member	4,903,536	4,871,563	4,498,405	4,604,207	3,917,137	3,667,921
Net investment income (loss)	30,372,878	(6,932,569)	27,626,807	8,216,601	482,576	8,664,385
Benefit payments, including refunds of member contributions	(15,095,696)	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Administrative expense	(263,270)	(273,487)	(239,160)	(220,875)	(205,868)	(226,748)
Other	589,684	552,981	478,212	479,544	486,729	544,630
Net change in plan fiduciary net position	26,912,669	(10,662,772)	25,105,234	7,091,535	(1,320,011)	7,503,779
Plan fiduciary net position - beginning	160,945,602	171,608,374	146,503,140	139,411,605	140,731,616	133,227,837
Plan fiduciary net position - ending (b)	187,858,271	160,945,602	171,608,374	146,503,140	139,411,605	140,731,616
Net pension liability - ending (a-b)	\$ 34,223,887	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedules of Net Pension Liability, Contributions, and Investment Returns
Required Supplementary Information
For the Year Ended December 31, 2019
(Unaudited)

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Schedule of Net Pension Liability						
Total pension liability	\$ 222,082,158	\$ 191,775,562	\$ 188,161,185	\$ 175,788,267	\$ 169,564,366	\$ 164,457,443
Plan fiduciary net position	<u>(187,858,271)</u>	<u>(160,945,602)</u>	<u>(171,608,374)</u>	<u>(146,503,140)</u>	<u>(139,411,605)</u>	<u>(140,731,616)</u>
Net pension liability	<u>\$ 34,223,887</u>	<u>\$ 30,829,960</u>	<u>\$ 16,552,811</u>	<u>\$ 29,285,127</u>	<u>\$ 30,152,761</u>	<u>\$ 23,725,827</u>
Plan fiduciary net position as a percentage of the total pension liability	84.59%	83.92%	91.20%	83.34%	82.22%	85.57%
Covered payroll	\$ 43,862,455	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Participating employer net pension liability as a percentage of covered payroll	78.03%	76.78%	42.87%	77.56%	83.45%	72.22%
Schedule of Contributions						
Actuarially determined contribution	\$ 6,405,537	\$ 6,005,537	\$ 5,755,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions in relation to the actuarially determined contribution	<u>(6,405,537)</u>	<u>(6,005,537)</u>	<u>(5,755,537)</u>	<u>(5,505,537)</u>	<u>(5,255,537)</u>	<u>(5,005,537)</u>
Contribution deficiency (excess)	<u>\$ -</u>					
Covered payroll	\$ 43,862,455	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Contributions as a percentage of covered payroll	14.60%	14.96%	14.91%	14.58%	14.55%	15.24%
Schedule of Investment Returns						
Annual money weighted rate of return, net of investment expense	19.49%	(3.46)%	19.05%	7.23%	0.46%	0.46%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.



INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Report on Schedules

We have audited the accompanying schedule of employer allocations of the Lexington Contributory Retirement System as of and for the year ended December 31, 2019. We have also audited the total for all entities of the net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified totals) included in the accompanying schedule of pension amounts by employer of the Lexington Contributory Retirement System as of and for the year ended December 31, 2019.

Management's Responsibility for the Schedules

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

Auditors' Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified totals included in 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 totals included in 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 in the schedule of employer allocations and specified totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditor's judgment,

Merrimack, New Hampshire
Andover, Massachusetts
Greenfield, Massachusetts
Ellsworth, Maine



including the assessment of the risks of material misstatement of the schedule of employer allocations and specified totals included in 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 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 totals included in 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 for the total of all participating entities for the Lexington Contributory Retirement System as of and for the year ended December 31, 2019, in accordance with accounting principles generally accepted in the United States of America.

Restriction on Use

Our report is intended solely for the information and use of Lexington Contributory Retirement System management, the Retirement Board, System employers, and their auditors as of and for the year ended December 31, 2019 and is not intended to be and should not be used by anyone other than these specified parties.

A handwritten signature in black ink that reads "Melanson".

Andover, Massachusetts
December 10, 2020

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
 (A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Employer Allocations

<u>Employer</u>	FY 2020 / CY 2019 Actual Employer <u>Contributions</u>	Allocation <u>Percentage</u>
Town of Lexington	\$ 6,334,436	98.89%
Lexington Housing Authority	<u>71,101</u>	<u>1.11%</u>
Total	<u>\$ 6,405,537</u>	<u>100.00%</u>

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Pension Amounts by Employer
As of and for the Year Ended December 31, 2019

	<u>Town of Lexington</u>	Lexington Housing <u>Authority</u>	<u>Total</u>
Net Pension Liability	\$ 33,844,002	\$ 379,885	\$ 34,223,887
Deferred Outflows of Resources			
Differences between expected and actual experience	\$ 16,040,308	\$ 180,046	\$ 16,220,354
Changes of assumptions	8,855,239	99,396	8,954,635
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>27,900</u>	<u>14,819</u>	<u>42,719</u>
Total Deferred Outflows of Resources	<u>\$ 24,923,447</u>	<u>\$ 294,261</u>	<u>\$ 25,217,708</u>
Deferred Inflows of Resources			
Changes of assumptions	\$ (234,402)	\$ (2,631)	\$ (237,033)
Net difference between projected and actual investment earnings on pension plan investments	(9,095,101)	(102,090)	(9,197,191)
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>(14,819)</u>	<u>(27,900)</u>	<u>(42,719)</u>
Total Deferred Inflows of Resources	<u>\$ (9,344,322)</u>	<u>\$ (132,621)</u>	<u>\$ (9,476,943)</u>
Pension Expense			
Proportionate share of pension expense	\$ 7,490,367	\$ 84,076	\$ 7,574,443
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	<u>12,338</u>	<u>(12,338)</u>	<u>-</u>
Total Pension Expense	<u>\$ 7,502,705</u>	<u>\$ 71,738</u>	<u>\$ 7,574,443</u>
Contributions			
Actuarially determined contribution	\$ 6,334,436	\$ 71,101	\$ 6,405,537
Contributions made	<u>(6,334,436)</u>	<u>(71,101)</u>	<u>(6,405,537)</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll	14.60%	14.60%	14.60%
Deferred Outflows (Inflows) of Resources Recognized in Future Pension Expense			
June 30, 2021	\$ 3,173,918	\$ 27,775	\$ 3,201,693
June 30, 2022	2,769,879	29,622	2,799,501
June 30, 2023	5,388,352	61,715	5,450,067
June 30, 2024	911,866	12,303	924,169
June 30, 2025	<u>3,335,110</u>	<u>30,225</u>	<u>3,365,335</u>
Total Deferred Outflows (Inflows) of Resources Recognized in Future Pension Expense	<u>\$ 15,579,125</u>	<u>\$ 161,640</u>	<u>\$ 15,740,765</u>
Discount Rate Sensitivity			
1% decrease (6.50%)	\$ 57,714,938	\$ 647,827	\$ 58,362,765
Current discount rate (7.50%)	33,844,002	379,885	34,223,887
1% increase (8.50%)	13,594,850	152,597	13,747,447
Covered Payroll	43,375,582	486,873	43,862,455

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.



LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of
Lexington, Massachusetts)

Financial Statements,
Required Supplementary Information,
and Other Information

For the Year Ended December 31, 2018

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INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Additional Offices:
Nashua, NH
Manchester, NH
Greenfield, MA
Ellsworth, ME

We have audited the accompanying financial statements of the Lexington Contributory Retirement System (the System), a component unit of the Town of Lexington, Massachusetts, as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements 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 financial statements are free from material misstatement.

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

evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Lexington Contributory Retirement System as of December 31, 2018, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns, listed in the foregoing table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the 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 auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit 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 evidence sufficient to express an opinion or provide any assurance.

Melanson Heath

October 8, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the Lexington Contributory Retirement System (the System), we offer readers this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2018.

A. OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: (1) fund financial statements and (2) notes to financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

Fund financial statements. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Fund accounting is used to ensure and demonstrate compliance with finance-related legal requirements.

The Statement of Fiduciary Net Position presents information on the System's assets, liabilities, and net position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables, and accounts payable.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pensions changed during the year ended December 31, 2018. This statement reflects contributions by plan members and participating employers, other contributions, investment activity, deductions for benefit payments to plan members and beneficiaries, and administrative expenses.

Notes to financial statements. The Notes to Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The Required Supplementary Information includes this Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns.

B. FINANCIAL HIGHLIGHTS

- The System's total net position restricted for pensions was \$160,945,602 at December 31, 2018, which represents a change of \$(10,662,772), or (6.21)%, over the prior year. This change is primarily due to unfavorable returns on System investments in calendar year 2018.

- Employer and employee contributions to the plan were \$10,877,100, which represents an increase of \$623,158, or 6.08%, over the prior year. The employer share of contributions represents 52.54% of the total contributions made to the System.
- Benefit payments to plan members and beneficiaries increased by \$1,872,230, or 14.39%, totaling \$14,886,797. At December 31, 2018, there were 456 retirees and beneficiaries receiving benefits, as further discussed on page 9.
- The System's funded ratio as of the January 1, 2018 actuarial valuation for funding purposes was 87.20%, while the System's funded ratio (based on the System's GASB 68 valuation) as of the January 1, 2018 actuarial valuation (rolled forward to December 31, 2018) for accounting purposes was 83.92%.

C. FINANCIAL STATEMENT ANALYSIS

The following is a summary of financial statement data for the current and prior fiscal years:

FIDUCIARY NET POSITION

	<u>2018</u>	<u>2017</u>
Assets		
Cash and receivables	\$ 4,978,753	\$ 4,190,395
Investments	<u>156,041,040</u>	<u>167,499,918</u>
Total assets	161,019,793	171,690,313
Liabilities		
Accounts payable	74,191	81,939
Net Position		
Restricted for pensions	<u>\$ 160,945,602</u>	<u>\$ 171,608,374</u>

The System's total assets as of December 31, 2018 were \$161,019,793 and were mostly comprised of cash and investments. Total assets decreased by \$10,670,520, or 6.21%, from the prior year primarily due to unfavorable returns on System investments in calendar year 2018.

CHANGES IN FIDUCIARY NET POSITION

	<u>2018</u>	<u>2017</u>
Additions		
Contributions	\$ 11,430,081	\$ 10,732,154
Investment income (loss)	<u>(6,932,569)</u>	<u>27,626,807</u>
Total additions	4,497,512	38,358,961
Deductions		
Benefit payments	14,886,797	13,014,567
Administrative expenses	<u>273,487</u>	<u>239,160</u>
Total deductions	<u>15,160,284</u>	<u>13,253,727</u>
Changes in net position	(10,662,772)	25,105,234
Net Position Restricted for Pensions		
Beginning of year	<u>171,608,374</u>	<u>146,503,140</u>
End of year	<u>\$ 160,945,602</u>	<u>\$ 171,608,374</u>

The amount needed to finance benefits is accumulated through the collection of employers' and employee's contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 cost-of-living adjustments (COLA), and through earnings on investments. Contributions and net investment loss for calendar year 2018 resulted in a net loss of \$10,662,772. Employers' contributions increased by \$250,000, or 4.34%, in calendar year 2018. The System had net investment loss of \$6,932,569 in calendar year 2018 versus a gain of \$27,626,807 in calendar year 2017, primarily due to unfavorable market conditions during calendar year 2018.

The primary deductions of the System include the payment of pension benefits to plan members and beneficiaries, refunds and transfers of member contributions, reimbursement payments in accordance with Massachusetts General Law Chapter 32, Section 3(8)c, more commonly referred to as 3(8)c reimbursements, and the costs of administering the System. Total deductions for calendar year 2018 were \$15,160,284, which represents an increase of \$1,906,557, or 14.39%, over deductions of \$13,253,727 in calendar year 2017. The payment of pension benefits to plan members and beneficiaries increased by \$1,872,230, or 14.39%, over the previous year. Significant factors of the increase in deductions are illustrated in the table below:

Retirement benefit payments paid to new retirees in 2018	\$ 776,938
Change in benefit payments to calendar year 2017 retirees	485,476
Increase in 3(8)c reimbursement payments to other Commonwealth Systems	128,987
Increase in retiree transfers to other Commonwealth Systems	401,049
Other	<u>79,780</u>
Total	<u>\$ 1,872,230</u>

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the Lexington Contributory Retirement System's finances. Questions concerning any of the information provided in this report, or requests for additional financial information, should be addressed to:

Lexington Contributory Retirement System
1625 Massachusetts Avenue
Lexington, Massachusetts 02420

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Fiduciary Net Position

December 31, 2018

Assets	
Cash and short-term investments	\$ 1,808,077
Investments:	
Equity mutual funds	20,079,167
Pooled alternative investments	104,926,944
State investment pool (PRIT)	31,034,929
Accounts receivable	<u>3,170,676</u>
Total assets	161,019,793
Liabilities	
Accounts payable	74,191
Net Position	
Restricted for pensions	<u>160,945,602</u>
Total liabilities and net position	<u>\$ 161,019,793</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Changes in Fiduciary Net Position

For the Year Ended December 31, 2018

Additions	
Contributions:	
Employers	\$ 6,005,537
Plan members	4,871,563
Other	<u>552,981</u>
Total contributions	11,430,081
Investment (loss):	
Depreciation in fair value of investments	(6,510,256)
Less: management fees	<u>(422,313)</u>
Net investment (loss)	<u>(6,932,569)</u>
Total additions	4,497,512
Deductions	
Benefit payments to plan members and beneficiaries	14,886,797
Administrative expenses	<u>273,487</u>
Total deductions	<u>15,160,284</u>
Net (decrease)	(10,662,772)
Net Position Restricted for Pensions	
Beginning of year	<u>171,608,374</u>
End of year	<u>\$ 160,945,602</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Notes to Financial Statements

1. Description of Plan

Substantially all employees of the Town of Lexington, Massachusetts (except teachers and administrators under contract employed by the School Department) and the Lexington Housing Authority are members of the Lexington Contributory Retirement System (the System), a cost sharing, multiple employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, contribution percentages, and benefits paid. The Lexington Contributory Retirement Board does not have the authority to amend benefit provisions.

Membership of the plan consisted of the following at December 31, 2018:

Retirees and beneficiaries receiving benefits	456
Inactive members entitled to a return of employee contributions	297
Active plan members	<u>750</u>
Total	<u>1,503</u>
Number of participating employers	2

Participant Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the System. In addition, all employees hired on or after January 1, 1979 contribute an additional 2.00% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5.00%
January 1, 1975 – December 31, 1983	7.00%
January 1, 1984 – June 30, 1996	8.00%
July 1, 1996 – present	9.00%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6.00% when at least 30 years of creditable service has been attained.

Employer Contributions

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

Participant Retirement Benefits

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80 - 85% pension and 15 - 20% annuity.

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-year average annual rate of regular compensation for those first becoming members of the Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the five years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any two consecutive years exceeds 100%, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of five consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are four classes of membership in the System, but one of these classes, Group 3, is made up exclusively of the Massachusetts State Police. The other three classes are as follows:

- Group 1 – General employees, including clerical, administrative, technical, and all other employees not otherwise classified.
- Group 2 – Certain specified hazardous duty positions.
- Group 4 – Police officers, firefighters, and other specified hazardous positions.

A retirement allowance may be received at any age, upon attaining 20 years of service. The plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4 have no minimum vesting requirements, however, must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

Methods of Payment

A member may elect to receive his or her retirement allowance in one of three forms of payment as follows:

- Option A – Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the members death.
- Option B – A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree's beneficiary or beneficiaries of choice.
- Option C – A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, two-thirds of the allowance is payable to the member's designated beneficiary (who may be the spouse, or former spouse who has not remarried, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or "pops up" to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable "pops up" to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

Participant Refunds

Employees who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service or involuntarily withdrawing, receive 100% of the regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3.00%.

2. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

The System is a member of the Massachusetts Contributory Retirement Systems and is governed by Chapter 32 of the Massachusetts General Laws. Because of the significance of its operational and financial relationship with the Town, the System is included as a pension trust fund in the Town's basic financial statements. The System is governed by a five-member board. The five members include two appointed by the Town, two elected by the members and retirees, and a fifth member chosen by the other four members with the approval of PERAC.

Summary of Significant Accounting Policies

The accounting policies of the System as reflected in the accompanying financial statements for the year ended December 31, 2018 conform to generally accepted accounting principles for public employee retirement systems (PERS). The more significant accounting policies of the System are summarized below:

Basis of Accounting

The System follows accounting policies mandated by the Commonwealth of Massachusetts. The accounting records are maintained on the accrual basis of accounting. Contributions from the Town of Lexington, Massachusetts and Lexington Housing Authority employees are recognized as revenue in the period in which employees provide services to the respective member unit.

Investments

Investment Policy

Investments are reported at fair value in accordance with PERAC requirements. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan.

Rate of Return

For the year ended December 31, 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was (3.46)%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested throughout the year.

3. Cash and Short-Term Investments

Custodial Credit Risk - Deposits. Custodial credit risk is the risk that in the event of a bank failure, the System's deposits may not be returned. Massachusetts General Law Chapter 32, Section 23, limits the System's deposits "in a bank or trust company to an amount not exceeding ten percent of the capital and surplus of such bank or trust company." The System does not have formal policies related to custodial credit risk.

As of December 31, 2018, \$1,808,000 of the System's bank balances of \$2,035,985 was exposed to custodial credit risk as uninsured or uncollateralized.

4. Investments

The following is a summary of the System's investments as of December 31, 2018:

<u>Investment Type</u>	<u>Amount</u>
Equity mutual funds	\$ 20,079,167
Pooled alternative investments	104,926,944
State investment pool (PRIT)*	<u>31,034,929</u>
Total investments	<u>\$ 156,041,040</u>

** Fair value is the same as the value of the pool share. The Pension Reserves Investment Trust (PRIT) was created under Massachusetts General Law, Chapter 32, Section 22, in December 1983. The Pension Reserves Investment Trust is operated under contract with a private investment advisor, approved by the Pension Reserves Investment Management Board. The Pension Reserves Investment Management Board shall choose an investment advisor by requesting proposals from advisors and reviewing such proposals based on criteria adopted under Massachusetts General Law, Chapter 30B.*

A. Credit Risk

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Massachusetts General Law, Chapter 32, Section 23, limits the investment of System funds, to the extent not required for current disbursements, in the PRIT Fund or in securities, other than mortgages or collateral loans, which are legal for the investment of funds in savings banks under the laws of the Commonwealth, provided that no more than the established percentage of assets, is invested in any one security. The System does not have formal investment policies related to credit risk.

Presented below is the average rating as of year-end for each investment type:

<u>Investment Type</u>	<u>Average Rating as of Year End</u>	
	<u>Amount</u>	<u>Unrated</u>
Equity mutual funds	\$ 20,079,167	\$ 20,079,167
Pooled alternative investments	104,926,944	104,926,944
State investment pool (PRIT)	<u>31,034,929</u>	<u>31,034,929</u>
Total	<u>\$ 156,041,040</u>	<u>\$ 156,041,040</u>

B. Custodial Credit Risk

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The System does not have formal investment policies related to custodial credit risk.

As of December 31, 2018, the System did not have any investments exposed to custodial credit risk disclosure as investments in open-end mutual funds and external investment pools are not exposed to custodial credit risk because their existence is not evidenced by securities that exist in physical or book entry form.

C. Concentration of Credit Risk

Massachusetts General Law Chapter 32, Section 23 limits the amount the System may invest in any one issuer or security type, with the exception of the PRIT Fund. The System does not have formal investment policies related to concentration of credit risk.

Investments in mutual funds and other pooled investments are excluded from concentration of credit disclosure.

D. Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The System does not have formal investment policies limiting investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Information about the sensitivity of the fair values of the System's investments to market interest rate fluctuations is as follows:

<u>Investment Type</u>	<u>Investment Maturities (in Years)</u>	
	<u>Amount</u>	<u>Less Than 1</u>
Equity mutual funds	\$ 20,079,167	\$ 20,079,167
Pooled alternative investments	104,926,944	104,926,944
State investment pool (PRIT)	<u>31,034,929</u>	<u>31,034,929</u>
Total	<u>\$ 156,041,040</u>	<u>\$ 156,041,040</u>

E. Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment. The System does not have formal investment policies related to foreign currency risk.

F. Fair Value

The System categorizes its fair value measurements within the fair value hierarchy established by Governmental Accounting Standards Board Statement No. 72 *Fair Value Measurement and Application* (GASB 72).

The hierarchy is based on the valuation inputs used to measure the fair value of the asset. The hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – Inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date.
- Level 2 – Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held securities are categorized as level 2.
- Level 3 – Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative instruments.

The net asset value (NAV) per share is the amount of net assets attributable to each share of capital stock outstanding at the close of the period. Investments measured at the NAV for fair value are not subject to level classification.

The System has the following fair value measurements as of December 31, 2018:

Description	Amount	Fair Value Measurements Using:		
		Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by fair value level:				
Equity mutual funds	\$ 20,079,167	\$ -	\$ 20,079,167	\$ -
Investments measured at the net asset value (NAV):				
Pooled alternative investments	104,926,944			
State investment pool (PRIT)	31,034,929			
Total	\$ 156,041,040			

Description	Amount	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Beacon Capital Partners strategic partners V, LP	\$ 182	\$ -	Monthly	30 Days
BNY Mellon acadian international all cap fund	21,984,954	-	Monthly	30 Days
FMI Funds large cap FD - institutional class	5,387,803	-	Monthly	30 Days
Golub Capital Partners International 9, LP	3,500,000	500,000	Quarterly	90 Days
Matthews Asia pacific tiger fund - institutional	5,599,955	-	Monthly	30 Days
Monroe Capital senior secured direct loan fund (unleveraged) LP	3,042,893	599,999	Quarterly	90 Days
PRIM core real estate account	15,641,559	-	Monthly	30 Days
PRIM hedge funds account	15,393,370	-	Monthly	30 Days
Rhumbline Advisors russell 1000 pooled index fund	19,534,054	-	Monthly	30 Days
SEI Trust Company kayne anderson rudnick sm-mid cap core CIT CL	6,326,990	-	Monthly	30 Days
State Street Loomis, Sayles & Company NHIT credit asset trust - CL B	5,588,059	-	Monthly	30 Days
Wellington Trust Company CIF enduring assets	16,773,323	-	Monthly	30 Days
Wellington Trust Company CIF OPP investment allocation	13,191,264	-	Monthly	30 Days
White Oak Global Advisors summit fund, LP	3,997,467	136,647	Quarterly	90 Days
Total investments measured at NAV	\$ 135,961,873	\$ 1,236,646		

5. Accounts Receivable

Annually the Public Employee Retirement Administration Commission (PERAC) determines the amount of employer contributions (pension appropriations) to be made to the System. The accounts receivable balance primarily represents legal amounts due from employers for pension appropriations due to the System as of December 31, 2018.

6. Accounts Payable

This balance primarily represents management fees due to investment advisors at year end.

7. Contingencies

There are various pending claims arising in the ordinary course of operations; however, management believes that the probable liability resulting from such claims and litigation would not materially affect the System's financial position.

8. Net Pension Liability of Participating Employers

The net pension liability was based on an actuarial valuation dated January 1, 2018 and rolled forward to December 31, 2018.

A. Net Pension Liability of Employers

The components of the net pension liability of the participating employers at December 31, 2018 were as follows:

Total pension liability	\$ 191,775,562
Plan fiduciary net position	<u>(160,945,602)</u>
Employers' net pension liability	<u>\$ 30,829,960</u>
Plan fiduciary net position as a percentage of total pension liability	83.92%

B. Actuarial Assumptions

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

Valuation date	January 1, 2018
Actuarial cost method	Entry Age Normal
Remaining amortization period	6 years from January 1, 2018
Investment rate of return	7.50%
Projected salary increases:	
Groups 1 and 2	3.50% - 5.75%
Fire & Police	3.50% - 6.25%
Inflation rate	Not Explicitly Assumed
Post-retirement cost-of-living adjustment	3.00% of first \$14,000

Actuarial valuations of the ongoing System involves estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision, as actual results are compared with past expectations and new estimates are made about the future.

Mortality rates were based on the following:

Pre-retirement and beneficiary mortality	RP-2014 Blue Collar Mortality with Scale MP-2014, fully generational
Mortality for retired members:	
Groups 1 and 2	RP-2014 Blue Collar Mortality Table set forward five years for males and three years for females, fully generational
Group 4	RP-2014 Blue Collar Mortality Table set forward three years for males, and six years for females, fully generational
Mortality for disabled members:	
Groups 1 and 2	RP-2000 Mortality Table set forward six years
Group 4	RP-2000 Mortality Table set forward two years

C. Target Allocations

The long-term expected real rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected real 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 arithmetic real rates of return for each major asset class included in the System's targeted asset allocation as of December 31, 2018, are summarized in the following table:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. equities	17.50%	7.62%
International equities	15.50%	7.80%
Portfolio completion (PCS)	13.00%	6.83%
Core fixed income	12.00%	3.96%
Private equities	12.00%	11.15%
Value-added fixed income	10.00%	7.58%
Real estate	10.00%	6.59%
Emerging international equities	6.00%	9.31%
Timberland	4.00%	7.00%
Total	<u>100.00%</u>	

D. Discount Rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates by Statute. Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments of 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 total pension liability.

E. Sensitivity of Discount Rate

The following presents the net pension liability of the participating employers calculated using the discount rate of 7.50%, as well as what the participating employers' net

pension liability would be if it were calculated using a discount rate that is one percentage-point lower (6.50%) or one percentage-point higher (8.50%) than the current rate:

1% Decrease <u>(6.50%)</u>	Current Discount Rate <u>(7.50%)</u>	1% Increase <u>(8.50%)</u>
\$ 51,628,634	\$ 30,829,960	\$ 13,186,045

F. Deferred Outflows/(Inflows) of Resources

The following schedule reflects the deferred outflows/(inflows) of resources for the System for the year ended December 31, 2018:

	Deferred Outflows of Resources	Deferred (Inflows) of Resources
Differences between expected and actual experience	\$ 5,397,477	\$ -
Changes of assumptions	-	(1,114,929)
Net difference between projected and actual investment earnings on pension plan investments	8,643,513	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>67,542</u>	<u>(67,542)</u>
Total	\$ <u>14,108,532</u>	\$ <u>(1,182,471)</u>

The following summarizes changes in deferred outflows/(inflows) of resources:

	Measurement Year	Amortization Period	Beginning Balance on Prior Measurement Period Deferrals	Current Measurement Period Additions	Amortization of Amounts Recognized in Current Period Pension Expense	End of Year Balance
Deferred Outflows of Resources						
Differences between expected and actual experience	2015	5.27	\$ 1,678,558	\$ -	\$ (739,452)	\$ 939,106
	2017	5.46	5,746,918	-	(1,288,547)	4,458,371
Net difference between projected and actual investment earnings on pension plan investments	2014	5.00	323,159	-	(323,159)	-
	2015	5.00	4,141,709	-	(2,070,855)	2,070,854
	2016	5.00	1,318,706	-	(439,568)	879,138
	2017	5.00	(13,385,537)	-	3,346,384	(10,039,153)
	2018	5.00	-	19,665,843	(3,933,169)	15,732,674
Changes in proportion and differences between employer contributions and proportionate share of contributions	2015	5.27	58,824	-	(25,913)	32,911
	2016	5.27	3,067	-	(938)	2,129
	2017	5.46	24,154	-	(5,416)	18,738
	2018	5.46	-	16,850	(3,086)	13,764
Total deferred outflows of resources			(90,442)	19,682,693	(5,483,719)	14,108,532
Deferred (Inflows) of Resources						
Changes of assumptions	2015	5.27	(1,992,825)	-	877,896	(1,114,929)
Changes in proportion and differences between employer contributions and proportionate share of contributions	2015	5.27	(58,824)	-	25,913	(32,911)
	2016	5.27	(3,067)	-	938	(2,129)
	2017	5.46	(24,154)	-	5,416	(18,738)
	2018	5.46	-	(16,850)	3,086	(13,764)
Total deferred (inflows) of resources			(2,078,870)	(16,850)	913,249	(1,182,471)
Total Collective Deferred Outflows (Inflows) of Resources			\$ (2,169,312)	\$ 19,665,843	\$ (4,570,470)	\$ 12,926,061

The following schedule reflects the amortization of the balance of deferred outflows and (inflows) of resources:

Fiscal Year*	Amount
2020	\$ 4,247,310
2021	2,277,523
2022	1,875,331
2023	4,525,897
Total	\$ <u>12,926,061</u>

* Presented by member units' fiscal year to fairly present the fiduciary impact of related deferred outflows in the fiscal year affecting the member unit.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Changes in the Net Pension Liability

Required Supplementary Information

For the Year Ended December 31, 2018

	(Unaudited)				
	2018	2017	2016	2015	2014
Total Pension Liability					
Service cost	\$ 4,592,789	\$ 4,437,477	\$ 4,291,849	\$ 4,107,033	\$ 4,274,160
Interest on unfunded liability - time value of money	13,908,385	13,037,708	12,616,002	12,642,336	12,586,679
Changes of benefit terms	-	876,835	809,529	757,749	-
Differences between expected and actual experience	-	7,035,465	-	3,896,914	-
Changes of assumptions	-	-	-	(4,626,513)	-
Benefit payments, including refunds of member contributions	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Other	-	-	-	(414,474)	(386,047)
Net change in total pension liability	3,614,377	12,372,918	6,223,901	5,106,923	6,322,846
Total pension liability - beginning	188,161,185	175,788,267	169,564,366	164,457,443	158,134,597
Total pension liability - ending (a)	\$ 191,775,562	\$ 188,161,185	\$ 175,788,267	\$ 169,564,366	\$ 164,457,443
Plan Fiduciary Net Position					
Contributions - employer	\$ 6,005,537	\$ 5,735,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions - member	4,871,563	4,498,405	4,604,207	3,917,137	3,667,921
Net investment income/(loss)	(6,932,569)	27,626,807	8,216,601	482,576	8,664,385
Benefit payments, including refunds of member contributions	(14,886,797)	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Administrative expense	(273,487)	(239,160)	(220,875)	(205,868)	(226,748)
Other	552,981	478,212	479,544	486,729	544,630
Net change in plan fiduciary net position	(10,662,772)	25,105,234	7,091,535	(1,320,011)	7,503,779
Plan fiduciary net position - beginning	171,608,374	146,503,140	139,411,605	140,731,616	133,227,837
Plan fiduciary net position - ending (b)	\$ 160,945,602	\$ 171,608,374	\$ 146,503,140	\$ 139,411,605	\$ 140,731,616
Net pension liability - ending (a-b)	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Lexington, Massachusetts)

Schedules of Net Pension Liability, Contributions, and Investment Returns

Required Supplementary Information

For the Year Ended December 31, 2018

(Unaudited)

	2018	2017	2016	2015	2014
Schedule of Net Pension Liability					
Total pension liability	\$ 191,775,562	\$ 188,161,185	\$ 175,788,267	\$ 169,564,366	\$ 164,457,443
Plan fiduciary net position	(160,945,602)	(171,608,374)	(146,503,140)	(139,411,605)	(140,731,616)
Net pension liability	\$ 30,829,960	\$ 16,552,811	\$ 29,285,127	\$ 30,152,761	\$ 23,725,827
Plan fiduciary net position as a percentage of the total pension liability	83.92%	91.20%	83.34%	82.22%	85.57%
Covered payroll	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Participating employer net pension liability as a percentage of covered payroll	76.78%	42.87%	77.56%	83.45%	72.22%
Schedule of Contributions					
Actuarially determined contribution	\$ 6,005,537	\$ 5,755,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions in relation to the actuarially determined contribution	(6,005,537)	(5,755,537)	(5,505,537)	(5,255,537)	(5,005,537)
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 40,151,972	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Contributions as a percentage of covered payroll	14.96%	14.91%	14.58%	14.55%	15.24%
Schedule of Investment Returns					
Annual money weighted rate of return, net of investment expense	(3.46)%	19.05%	7.23%	0.46%	0.46%

Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.

INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Additional Offices:

Nashua, NH
Manchester, NH
Greenfield, MA
Ellsworth, ME

Report on Schedules

We have audited the accompanying schedule of employer allocations of the Lexington Contributory Retirement System as of and for the year ended December 31, 2018. We have also audited the total for all entities of the net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified totals) included in the accompanying schedule of pension amounts by employer of the Lexington Contributory Retirement System as of and for the year ended December 31, 2018.

Management's Responsibility for the Schedules

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

Auditors' Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified totals included in 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 totals included in 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 in the schedule of employer allocations and specified totals included in 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 totals included in 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 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 totals included in 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 for the total of all participating entities for the Lexington Contributory Retirement System as of and for the year ended December 31, 2018, in accordance with accounting principles generally accepted in the United States of America.

Restriction on Use

Our report is intended solely for the information and use of Lexington Contributory Retirement System management, the Retirement Board, System employers, and their auditors as of and for the year ended December 31, 2018 and is not intended to be and should not be used by anyone other than these specified parties.

Melanson Heath

October 8, 2019

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Employer Allocations

<u>Employer</u>	FY 2019 / CY 2018	
	Actual Employer <u>Contributions</u>	Allocation <u>Percentage</u>
Town of Lexington	\$ 5,940,077	98.91%
Lexington Housing Authority	<u>65,460</u>	<u>1.09%</u>
Total	\$ <u>6,005,537</u>	<u>100.00%</u>

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the Town of Lexington, Massachusetts)

Schedule of Pension Amounts by Employer

As of and for the Year Ended December 31, 2018

	<u>Town of Lexington</u>	<u>Lexington Housing Authority</u>	<u>Total</u>
Net Pension Liability	\$ 30,493,914	\$ 336,046	\$ 30,829,960
Deferred Outflows of Resources			
Differences between expected and actual experience	\$ 5,338,645	\$ 58,832	\$ 5,397,477
Net difference between projected and actual investment earnings on pension plan investments	8,549,299	94,214	8,643,513
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>51,648</u>	<u>15,894</u>	<u>67,542</u>
Total deferred outflows of resources	<u>\$ 13,939,592</u>	<u>\$ 168,940</u>	<u>\$ 14,108,532</u>
Deferred Inflows of Resources			
Changes of assumptions	\$ (1,102,776)	\$ (12,153)	\$ (1,114,929)
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>(15,894)</u>	<u>(51,648)</u>	<u>(67,542)</u>
Total deferred inflows of resources	<u>\$ (1,118,670)</u>	<u>\$ (63,801)</u>	<u>\$ (1,182,471)</u>
Pension Expense			
Proportionate share of pension expense	\$ 5,677,725	\$ 62,569	\$ 5,740,294
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	<u>12,958</u>	<u>(12,958)</u>	<u>-</u>
Total pension expense	<u>\$ 5,690,683</u>	<u>\$ 49,611</u>	<u>\$ 5,740,294</u>
Contributions			
Actuarially determined contribution	\$ 5,940,077	\$ 65,460	\$ 6,005,537
Contributions made	<u>(5,940,077)</u>	<u>(65,460)</u>	<u>(6,005,537)</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll	14.96%	14.96%	14.96%
Deferred Outflows (Inflows) of Resources Recognized in Future Pension Expense			
June 30, 2020	\$ 4,228,319	\$ 18,991	\$ 4,247,310
June 30, 2021	2,261,086	16,437	2,277,523
June 30, 2022	1,856,967	18,364	1,875,331
June 30, 2023	4,475,970	49,927	4,525,897
June 30, 2024	<u>(1,420)</u>	<u>1,420</u>	<u>-</u>
Total deferred outflows (inflows) of resources recognized in future pension expense	<u>\$ 12,820,922</u>	<u>\$ 105,139</u>	<u>\$ 12,926,061</u>
Discount Rate Sensitivity			
1% decrease (6.50%)	\$ 51,065,885	\$ 562,749	\$ 51,628,634
Current discount rate (7.50%)	\$ 30,493,915	\$ 336,045	\$ 30,829,960
1% increase (8.50%)	\$ 13,042,318	\$ 143,727	\$ 13,186,045
Covered Payroll	\$ 39,714,262	\$ 437,710	\$ 40,151,972

See actuarial assumptions in the Lexington Contributory Retirement System's audited financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of
Lexington, Massachusetts)

Financial Statements,
Required Supplementary Information,
and Other Information

For the Year Ended December 31, 2017

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INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Additional Offices:

Nashua, NH
Manchester, NH
Greenfield, MA
Ellsworth, ME

We have audited the accompanying financial statements of the Lexington Contributory Retirement System (the System), a component unit of the Town of Lexington, Massachusetts, as of and for the year ended December 31, 2017, and the related notes to financial statements, which collectively comprise the basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements 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 financial statements are free from material misstatement.

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

policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Lexington Contributory Retirement System as of December 31, 2017, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United State of America require that the Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns, listed in the foregoing table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the 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 auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit 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 evidence sufficient to express an opinion or provide any assurance.

Melanson Heath

January 17, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the Lexington Contributory Retirement System (the System), we offer readers this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2017.

A. OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: (1) fund financial statements and (2) notes to financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

Fund financial statements. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Fund accounting is used to ensure and demonstrate compliance with finance-related legal requirements.

The Statement of Fiduciary Net Position presents information on the System's assets and liabilities and the resulting net position, held in trust, restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables, and accounts payable.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pensions changed during the year ended December 31, 2017. It reflects contributions by members and participating employers, investment activity, along with deductions for retirement benefits to plan members and beneficiaries and administrative expenses.

The Notes to Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The Required Supplementary Information includes this Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns.

B. FINANCIAL HIGHLIGHTS

- The System's total net position restricted for pensions was \$171,608,374 at December 31, 2017.
- The System's net position increased by \$25,105,234, which is primarily due to favorable returns on investments and related income.

- Employer and employee contributions to the plan were \$10,253,942, which represents a \$143,658 increase over the prior year. The employer share of contributions represents 56.13% of the total contributions.
- Benefits payments to plan members and beneficiaries were \$13,014,567. At December 31, 2017, there were 407 retirees and beneficiaries in receipt of pension benefits.
- The System's funded ratio as of December 31, 2017 in accordance with GASB 68 (for accounting purposes) was 91.20% and the System's funded ratio per the actuarial valuation (for funding purposes) was 87.20%.

C. FINANCIAL STATEMENT ANALYSIS

The following is a summary of financial statement data for the current and prior fiscal years:

FIDUCIARY NET POSITION

	<u>2017</u>	<u>2016</u>
Assets		
Cash and receivables	\$ 4,190,395	\$ 6,045,158
Investments	<u>167,499,918</u>	<u>140,530,720</u>
Total Assets	171,690,313	146,575,878
Liabilities		
Accounts payable	<u>81,939</u>	<u>72,738</u>
Net Position	<u>\$ 171,608,374</u>	<u>\$ 146,503,140</u>

The System's total assets as of December 31, 2017 were \$171,690,313 and were mostly comprised of cash and investments. Total assets increased \$25,114,435, or 17.13%, from the prior year primarily due to the favorable returns on investments and related income. Total liabilities as of December 31, 2017 were \$81,939 and were mostly comprised of management fees outstanding at year end.

CHANGES IN FIDUCIARY NET POSITION

	2017	2016
Additions		
Contributions	\$ 10,253,942	\$ 10,110,284
Investment Income, net	27,626,807	8,216,078
Other	<u>478,212</u>	<u>479,546</u>
Total Additions	38,358,961	18,805,908
Deductions		
Benefit payments	13,014,567	11,493,498
Other	<u>239,160</u>	<u>220,875</u>
Total Deductions	<u>13,253,727</u>	<u>11,714,373</u>
Changes in Net Position	25,105,234	7,091,535
Net position - beginning of year	<u>146,503,140</u>	<u>139,411,605</u>
Net position - end of year	\$ <u>171,608,374</u>	\$ <u>146,503,140</u>

The amount needed to finance benefits is primarily accumulated through the collection of employers' and employee's contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 cost-of-living adjustments (COLA), and through earnings on investments. Contributions and net investment income for calendar year 2017 resulted in a net gain of \$38,358,961. Employers' contributions increased by \$249,460, or 4.53%, in calendar year 2017. The System had net investment income of \$27,626,806 versus \$8,216,078 in calendar year 2016, primarily due to general market performance in calendar year 2017.

The primary deductions of the System include the payment of pension benefits to plan members and beneficiaries, refunds and transfers of member contributions, reimbursement payments in accordance with Massachusetts General Law, Chapter 32, Section 3(8)c, more commonly referred to as 3(8)c reimbursements, and the costs of administering the System. Total deductions for calendar year 2017 were \$13,253,727, which represents an increase of \$1,539,354, or 13.14%, over deductions of \$11,714,373 in calendar year 2016. Significant factors in the change in deductions are illustrated in the table below:

Retirement benefit payments paid to new retirees in 2017	\$ 653,243
Change in benefit payments to calendar year 2016	383,028
Change in 3(8)c reimbursement payments to other Commonwealth Systems	261,809
Increase in retiree transfers to other Commonwealth Systems	185,348
Other	<u>55,926</u>
	\$ <u>1,539,354</u>

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the Lexington Contributory Retirement System's finances. Questions concerning any of the information provided in this report, or requests for additional financial information, should be addressed to:

Lexington Contributory Retirement System
1625 Massachusetts Avenue, Lexington, MA 02420

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Fiduciary Net Position

December 31, 2017

Assets	
Cash and short-term investments	\$ 1,175,468
Investments	167,499,918
Accounts receivable	<u>3,014,927</u>
Total Assets	<u>\$ 171,690,313</u>
Liabilities	
Accounts payable	<u>\$ 81,939</u>
Total Liabilities	81,939
Net Position	
Restricted for pensions	<u>171,608,374</u>
Total Liabilities and Net Pension	<u>\$ 171,690,313</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Lexington, Massachusetts)

Statement of Changes in Fiduciary Net Position

For the Year Ended December 31, 2017

Additions

Contributions:	
Employers	\$ 5,755,537
Plan members	4,498,405
Other	<u>478,212</u>
Total contributions	10,732,154
Investment income:	
Appreciation in fair value of investments	28,080,774
Less: management fees	<u>(453,967)</u>
Net investment gain	<u>27,626,807</u>
Total Additions	38,358,961

Deductions

Benefit payments to plan members and beneficiaries	13,014,567
Administrative expenses	<u>239,160</u>
Total Deductions	<u>13,253,727</u>
Net Increase	25,105,234

Net Position Restricted for Pensions

Beginning of year	<u>146,503,140</u>
End of year	<u>\$ 171,608,374</u>

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

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Notes to Financial Statements

1. Description of Plan

Substantially all employees of the Town of Lexington (except teachers and administrators under contract employed by the School Department) and Lexington Housing Authority are members of the Lexington Contributory Retirement System (the System), a cost sharing, multiple employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, contribution percentages, and benefits paid. The Lexington Contributory Retirement Board does not have the authority to amend benefit provisions.

Membership of the plan consisted of the following at December 31, 2017:

Retirees and beneficiaries receiving benefits	407
Terminated plan members entitled to, but not yet receiving, benefits	303
Active plan members	<u>706</u>
Total	<u>1,416</u>
Number of participating employers	2

Participant Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the System. In addition, all employees hired on or after January 1, 1979 contribute an additional 2% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5%
January 1, 1975 - December 31, 1983	7%
January 1, 1984 - June 30, 1996	8%
July 1, 1996 - present	9%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6.00% when at least 30 years of creditable service has been attained.

Employer Contributions

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

Participant Retirement Benefits

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-year average annual rate of regular compensation for those first becoming members of a Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the 5 years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any 2 consecutive years exceeds 100%, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

A retirement allowance may be received at any age, upon attaining 20 years of service. The plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left Town employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4, have no minimum vesting requirements, however, must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80-85% pension and 15-20% annuity.

Participant Refunds

Employees who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service, or involuntarily withdrawing, receive 100% of the regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3.00%.

2. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

The System is a member of the Massachusetts Contributory Retirement Systems and is governed by Chapter 32 of the Massachusetts General Laws. Because of the significance of its operational and financial relationship with the Town, the System is included as a pension trust fund in the Town's basic financial systems. The System is governed by a five-member board. The five members include two appointed by the town, two elected by the members and retirees, and a fifth member chosen by the other four members with the approval of PERAC.

Summary of Significant Accounting Policies

The accounting policies of the System as reflected in the accompanying financial statements for the year ended December 31, 2017 conform to generally accepted accounting principles for public employee retirement systems (PERS). The more significant accounting policies of the System are summarized below:

Basis of Accounting

The System follows accounting policies mandated by the Commonwealth of Massachusetts. The accounting records are maintained on the accrual basis of accounting. Contributions from the Town of Lexington and Lexington Housing Authority employees are recognized as revenue in the period in which employees provide services to the member employers.

Investments

Investment Policy

Investments are reported at fair value in accordance with PERAC requirements. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan.

Rate of Return

For the year ended December 31, 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 19.05%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested throughout the year.

3. Cash and Short-Term Investments

Custodial Credit Risk - Deposits. Custodial credit risk is the risk that in the event of a bank failure, the System's deposits may not be returned. Massachusetts General Law Chapter 32, Section 23, limits the System's deposits "in a bank or trust company to an amount not exceeding ten percent of the capital and surplus of such bank or trust company." The System does not have policies for custodial credit risk.

As of December 31, 2017, \$1,323,741 of the System's bank balances of \$1,573,741 was exposed to custodial credit risk as uninsured or uncollateralized.

4. Investments

The following is a summary of the System's investments as of December 31, 2017:

Mutual funds	\$	23,386,670
State investment pool (PRIT)		25,471,278
Pooled alternative investments		118,587,454
Pooled real estate funds		54,516
	\$	<u>167,499,918</u>

A. Credit Risk

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Massachusetts General Law, Chapter 32, Section 23, limits the investment of System funds, to the extent not required for current disbursements, in the Pension Reserves Investment Trust (PRIT) Fund, as discussed further in the fair value footnote, or in securities, other than mortgages or collateral loans, which are legal for the investment of funds in savings banks under the laws of the Commonwealth, provided that no more than the established percentage of assets is invested in any one security.

Presented below is the actual rating as of year-end for each investment type:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Unrated</u>
Mutual funds	\$ 23,386,670	\$ 23,386,670
State investment pool (PRIT)	25,471,278	25,471,278
Pooled alternative investments	118,587,454	118,587,454
Pooled real estate funds	54,516	54,516
Total investments	<u>\$ 167,499,918</u>	<u>\$ 167,499,918</u>

B. Custodial Credit Risk

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The System does not have policies for custodial credit risk.

As of December 31, 2017, the System did not have any investments exposed to custodial credit risk as investments in external investment pools and open-end mutual funds are not exposed to custodial credit risk because their existence is not evidenced by securities that exist in physical or book entry form.

C. Concentration of Credit Risk

Massachusetts General Law Chapter 32, Section 23 limits the amount the System may invest in any one issuer or security type, with the exception of the PRIT Fund.

As of December 31, 2017, the System did not have any investments subject to concentration of credit risk as investments in mutual funds, external investment pools, and other pooled investments are excluded from concentration of credit risk.

D. Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The System does not have formal investment policies limiting investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Information about the sensitivity of the fair values of the System's investments to market interest rate fluctuations is as follows:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Less Than 1 Year</u>
Mutual funds	\$ 23,386,670	\$ 23,386,670
State investment pool (PRIT)	25,471,278	25,471,278
Pooled alternative investments	118,587,454	118,587,454
Pooled real estate funds	54,516	54,516
Total investments	<u>\$ 167,499,918</u>	<u>\$ 167,499,918</u>

E. Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment. The System does not have policies for foreign currency risk.

F. Fair Value

The System categorizes its fair value measurements within the fair value hierarchy established by *Governmental Accounting Standards Board Statement No. 72 Fair Value Measurement and Application (GASB 72)*.

The hierarchy is based on the valuation inputs used to measure the fair value of the asset. The hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date.
- Level 2 – inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held securities are categorized as level 2.
- Level 3 – unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative instruments.

The net asset value (NAV) per share is the amount of net assets attributable to each share of capital stock outstanding at the close of the period. Investments measured at the NAV for fair value are not subject to level classification.

The System has the following fair value measurements as of December 31, 2017:

Description	Fair Value Measurements Using:			
	Quoted prices in active markets for identical (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Investments by fair value level:				
Mutual funds	\$ 23,386,670	\$ -	\$ 23,386,670	\$ -
Investments measured at the net asset value (NAV):				
State investment pool (PRIT)*	25,471,278			
Pooled alternative investments	118,587,454			
Pooled real estate funds	54,516			
Total investments measured at the NAV	144,113,248			
Total investments	\$ 167,499,918			

Description	Value	Unfunded Commitments	Redemption Frequency (if currently eligible)	Redemption Notice Period
State investment pool (PRIT) hedge funds*	\$ 15,636,692	\$ -	Monthly	30 Days
State investment pool (PRIT) real estate*	9,834,586	-	Monthly	30 Days
BNY Mellon acadian international all cap fund	25,978,010	-	Monthly	30 Days
Beacon Capital Partners strategic partners V, LP	54,516	-	Quarterly	90 Days
FMI Funds large cap FD - institutional class	5,595,456	-	Monthly	30 Days
Golub Capital Partners International 9, LP	3,500,000	500,000	Quarterly	90 Days
SEI Trust Company kayne anderson rudnick sm-mid cap core CIT CL	6,633,218	-	Monthly	30 Days
Matthews Asia pacific liger fund - Inst.	6,288,141	-	Monthly	30 Days
Monroe Capital senior secured direct loan fund (unleveraged) LP	4,276,005	-	Quarterly	90 Days
State Street Loomis, Sayles & Company L.P. NHIT Credit Asset Trust - CL B	10,711,411	-	Monthly	30 Days
Rhumbline Advisors russell 1000 pooled index fund	20,519,388	-	Monthly	30 Days
William Blair WB macro allocation CL Inst.	4,962,200	-	Monthly	30 Days
Wellington Trust Company CIF OPP Invest. Alloc.	14,791,690	-	Monthly	30 Days
Wellington Trust Company enduring assets	11,880,544	-	Monthly	30 Days
White Oak Global Advisors summit fund, LP	3,451,391	-	Monthly	30 days
Total investments measured at the NAV	\$ 144,113,248	\$ 500,000		

*Fair value is the same as the value of the pool share. The Pension Reserves Investment Trust (PRIT) was created under Massachusetts General Law, Chapter 32, Section 22, in December 1983. The Pension Reserves Investment Trust is operated under contract with a private investment advisor, approved by the Pension Reserves Investment Management Board. The Pension Reserves Investment Management Board shall choose an investment advisor by requesting proposals from advisors and reviewing such proposals based on criteria adopted under Massachusetts General Law, Chapter 30B.

5. Accounts Receivable

Annually, the Public Employee Retirement Administration Commission (PERAC) determines the amount of employer contributions (pension appropriations) to be made to the System. The accounts receivable balance primarily represents legal amounts due from employers for pension appropriation not received until after December 31, 2017.

6. Accounts Payable

This balance is mostly comprised of management fees due to investment advisors at year-end.

7. Contingencies

There are various pending claims arising in the ordinary course of operations; however, management believes that the probable liability resulting from such claims and litigation would not materially affect the System's financial position.

8. Net Pension Liability of Participating Employers

The net pension liability was based on an actuarial valuation dated December 31, 2017.

The components of the net pension liability of the participating employers at December 31, 2017 were as follows:

A. Net Pension Liability of Employers

Total pension liability	\$	188,161,185
Plan fiduciary net position		<u>(171,608,374)</u>
Employers' net pension liability	\$	<u>16,552,811</u>
Plan fiduciary net position as a percentage of total pension liability		91.20%

B. Actuarial Assumptions

Actuarial valuations of the ongoing System involve estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision, as actual results are compared with past expectations and new estimates are made about the future.

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

Valuation Date	December 31, 2017
Actuarial cost method	Entry Age Normal Cost Method
Actuarial assumptions:	
Investment rate of return	7.50%
Projected salary increases	3.50% - 5.75% for Group 1 and 3.50% - 6.25% for Group 4
Inflation rate	Not Explicitly Assumed
Post-retirement cost-of-living adjustment	3.00% of first \$13,000

Mortality rates were based on the following:

Pre-retirement and beneficiary mortality	RP-2014 Blue Collar Mortality with Scale MP-2014, fully generational
Mortality for retired members:	
Groups 1 and 2	RP-2014 Blue Collar Mortality Table set forward 5 years for males and 3 years for females, fully generational
Group 4	RP-2014 Blue Collar Mortality Table set forward 3 years for males and 6 years for females, fully generational
Mortality for disabled members:	
Groups 1 and 2	RP-2000 Mortality Table set forward 6 years
Group 4	RP-2000 Mortality Table set forward 2 years

C. Target Allocations

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan 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 arithmetic real rates of return for each major asset class included in the System's targeted asset allocation as of December 31, 2017, are summarized in the following table:

<u>Asset Class</u>	<u>Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
International equity	22.00%	8.55%
Domestic equity	18.00%	7.63%
Hedge funds	13.00%	6.40%
Core fixed income	12.00%	3.67%
Private equity	11.00%	9.50%
Value added fixed income	10.00%	6.30%
Real estate	10.00%	6.70%
Timberland	4.00%	6.25%
Total	<u>100.00%</u>	

D. Discount Rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates by Statute. Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments of 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 total pension liability.

E. Sensitivity of Discount Rate

The following presents the net pension liability of the participating employers calculated using the discount rate of 7.50%, as well as what the participating employers' net pension liability would be if it were calculated using a discount rate that is one percentage-point lower (6.50%) or one percentage-point higher (8.50%) than the current rate:

<u>Year Ended</u>	<u>1% Decrease (6.50%)</u>	<u>Current Discount Rate (7.50%)</u>	<u>1% Increase (8.50%)</u>
December 31, 2017	\$ 36,907,768	\$ 16,552,811	\$ (714,481)

F. Deferred Outflows/(Inflows) of Resources

The following schedule reflects the deferred outflows/(inflows) of resources for the System for the year ended December 31, 2017:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and	\$ 7,425,476	\$ -
Net difference between projected and actual investment earnings on pension plan investments	-	(7,601,963)
Changes of assumptions	-	(1,992,825)
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>86,045</u>	<u>(86,045)</u>
Total	<u>\$ 7,511,521</u>	<u>\$ (9,680,833)</u>

The following summarizes changes in deferred outflows/(inflows), excluding employer-specific amounts:

	Measurement Year	Amortization Period	Beginning Balance on Prior Measurement Period Deferrals	Current Measurement Period Additions	Amortization of Amounts Recognized in Current Period Pension Expense	End of Year Balance
Deferred Outflows of Resources						
Differences between expected and actual experience	2017	5.46	\$ -	\$ 7,035,465	\$ (1,288,547)	\$ 5,746,918
	2015	5.27	2,418,010	-	(739,452)	1,678,558
Changes in proportion and differences between employer contributions and proportionate share of contributions	2017	5.46	-	29,570	(5,416)	24,154
	2016	5.27	4,005	-	(938)	3,067
	2015	5.27	84,737	-	(25,913)	58,824
Total Deferred Outflows of Resources			2,506,752	7,065,035	(2,060,266)	7,511,521
Deferred (Inflows) of Resources						
Changes of assumptions	2015	5.27	(2,870,721)	-	877,896	(1,992,825)
Net difference between projected and actual investment earnings on pension plan investments	2017	5.00	-	(16,731,821)	3,348,384	(13,385,537)
	2016	5.00	1,758,274	-	(439,568)	1,318,706
	2015	5.00	6,212,564	-	(2,070,855)	4,141,709
	2014	5.00	645,319	-	(323,160)	323,159
Changes in proportion and differences between employer contributions and proportionate share of contributions	2017	5.46	-	(29,570)	5,416	(24,154)
	2016	5.27	(4,005)	-	938	(3,067)
	2015	5.27	(84,737)	-	25,913	(58,824)
Total Deferred (Inflows) of Resources			5,857,694	(16,751,491)	1,422,964	(9,680,833)
Total Collective Deferred Outflows (Inflows) of Resources			\$ 8,164,446	\$ (9,696,456)	\$ (637,302)	\$ (2,169,312)

The following schedule reflects the amortization of the balance of deferred outflows/(inflows) of resources:

Fiscal Year*	Town of Lexington	Lexington Housing Authority	Total
2019	\$ 661,319	\$ (24,018)	\$ 637,301
2020	341,391	(27,250)	314,141
2021	(1,627,615)	(28,031)	(1,655,646)
2022	(2,032,097)	(25,741)	(2,057,838)
2023	589,292	3,438	592,730
	\$ (2,067,710)	\$ (101,602)	\$ (2,169,312)

* Presented by member unit(s) fiscal year to fairly present the fiduciary impact of related deferred outflows/(inflows) in the fiscal year affecting the member unit.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Schedule of Changes in the Net Pension Liability

(Unaudited)

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability				
Service cost	\$ 4,437,477	\$ 4,291,849	\$ 4,107,033	\$ 4,274,160
Interest on unfunded liability - time value of money	13,037,708	12,616,002	12,642,336	12,586,679
Changes of benefit terms	876,835	809,529	757,749	-
Differences between expected and actual experience	7,035,465	-	3,896,914	-
Changes of assumptions	-	-	(4,626,513)	-
Benefit payments, including refunds of member contributions	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Other	-	-	(414,474)	(386,047)
Net change in total pension liability	<u>12,372,918</u>	<u>6,223,901</u>	<u>5,106,923</u>	<u>6,322,846</u>
Total pension liability - beginning	<u>175,788,267</u>	<u>169,564,366</u>	<u>164,457,443</u>	<u>158,134,597</u>
Total pension liability - ending (a)	<u>\$ 188,161,185</u>	<u>\$ 175,788,267</u>	<u>\$ 169,564,366</u>	<u>\$ 164,457,443</u>
Plan Fiduciary Net Position				
Contributions - employer	\$ 5,755,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions - member	4,498,405	4,604,207	3,917,137	3,667,921
Net investment income	27,626,807	8,216,601	482,576	8,664,385
Benefit payments, including refunds of member contributions	(13,014,567)	(11,493,479)	(11,256,122)	(10,151,946)
Administrative expense	(239,160)	(220,875)	(205,868)	(226,748)
Other	478,212	479,544	486,729	544,630
Net change in plan fiduciary net position	<u>25,105,234</u>	<u>7,091,535</u>	<u>(1,320,011)</u>	<u>7,503,779</u>
Plan fiduciary net position - beginning	<u>146,503,140</u>	<u>139,411,605</u>	<u>140,731,616</u>	<u>133,227,837</u>
Plan fiduciary net position - ending (b)	<u>\$ 171,608,374</u>	<u>\$ 146,503,140</u>	<u>\$ 139,411,605</u>	<u>\$ 140,731,616</u>
Net pension liability (asset) - ending (a-b)	<u>\$ 16,552,811</u>	<u>\$ 29,285,127</u>	<u>\$ 30,152,761</u>	<u>\$ 23,725,827</u>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Schedules of Net Pension Liability, Contributions, and Investment Returns

(Unaudited)

Schedule of Net Pension Liability

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability	\$ 188,161,185	\$ 175,788,267	\$ 169,564,366	\$ 164,457,443
Plan fiduciary net position	<u>(171,608,374)</u>	<u>(146,503,140)</u>	<u>(139,411,605)</u>	<u>(140,731,616)</u>
Net pension liability	\$ <u>16,552,811</u>	\$ <u>29,285,127</u>	\$ <u>30,152,761</u>	\$ <u>23,725,827</u>
Plan fiduciary net position as a percentage of the total pension liability	91.20%	83.34%	82.22%	85.57%
Covered payroll	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Participating employer net pension liability as a percentage of covered payroll	42.87%	77.56%	83.45%	72.22%

Schedule of Contributions

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially determined contribution	\$ 5,755,537	\$ 5,505,537	\$ 5,255,537	\$ 5,005,537
Contributions in relation to the actuarially determined contribution	<u>(5,755,537)</u>	<u>(5,505,537)</u>	<u>(5,255,537)</u>	<u>(5,005,537)</u>
Contribution deficiency (excess)	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>
Covered payroll	\$ 38,607,665	\$ 37,756,517	\$ 36,130,638	\$ 32,850,691
Contributions as a percentage of covered payroll	14.91%	14.58%	14.55%	15.24%

Schedule of Investment Returns

Year Ended December 31

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money weighted rate of return, net of investment expense	19.05%	7.23%	0.46%	0.46%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

INDEPENDENT AUDITORS' REPORT

To the Honorable Lexington Contributory Retirement Board
Lexington Contributory Retirement System
Town of Lexington, Massachusetts

Additional Offices:
Nashua, NH
Manchester, NH
Greenfield, MA
Ellsworth, ME

Report on Schedules

We have audited the accompanying schedule of employer allocations of the Lexington Contributory Retirement System as of and for the year ended December 31, 2017. 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 included in the accompanying schedule of pension amounts by employer of the Lexington Contributory Retirement System as of and for the year ended December 31, 2017.

Management's Responsibility for the Schedules

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

Auditors' Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified column totals included in 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 in 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 in the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and specified column totals included in 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 in 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 for the total of all participating entities for the Lexington Contributory Retirement System as of and for the year ended December 31, 2017, in accordance with accounting principles generally accepted in the United States of America.

Restriction on Use

Our report is intended solely for the information and use of Lexington Contributory Retirement System management, the Retirement Board, System employers and their auditors as of and for the year ended December 31, 2017 and is not intended to be and should not be used by anyone other than these specified parties.

Melanson Heath

January 17, 2019

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Schedule of Employer Allocations

<u>Employer</u>	FY2018 Actual Employer Contributions	Employer Allocation Percentage
Town of Lexington	\$ 5,697,982	99.00%
Lexington Housing Authority	<u>57,555</u>	<u>1.00%</u>
Total	<u>\$ 5,755,537</u>	<u>100%</u>

See actuarial assumptions in the Lexington Contributory Retirement System audited financial statements.

LEXINGTON CONTRIBUTORY RETIREMENT SYSTEM

Schedule of Pension Amounts by Employer

As of and For the Year Ended December 31, 2017

Entity	Deferred Outflows of Resources			Deferred Inflows of Resources			Pension Expense			
	Net Pension Liability	Differences Between Expected and Actual Experience	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Total Deferred Outflows of Resources	Net Amortization of Deferred Amounts From Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Pension Expense	Total Employer Pension Expense
Town of Lexington	\$ 16,387,284	\$ 7,351,222	\$ 82,977	\$ (7,525,944)	\$ (3,088)	\$ (9,501,909)	\$ 7,434,199	\$ (1,972,897)	\$ 3,796,839	\$ 3,827,230
Lexington Housing Authority	165,527	74,254	3,088	(76,019)	(82,977)	(178,924)	77,322	(19,928)	38,352	7,961
Total for All Entities	\$ 16,552,811	\$ 7,425,476	\$ 86,045	\$ (7,601,963)	\$ (86,045)	\$ (9,680,833)	\$ 7,511,521	\$ (1,992,825)	\$ 3,835,191	\$ 3,835,191

See actuarial assumptions in the Lexington Contributory Retirement System audited financial statements.

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COMMONWEALTH OF MASSACHUSETTS

Public Employee Retirement Administration Commission

10 Cabot Road, Suite 300 | Medford, MA 02155

Phone: 617-666-4446 | Fax: 617-628-4002

Web: www.mass.gov/perac