FINANCIAL STATEMENTS YEARS ENDED DECEMBER 31, 2019 AND 2018

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elephone: 617-786-7775 | Fax: 617-786-9919

Dorothy F. Di Pesa, CPA John F. Oteri, CPA

INDEPENDENT AUDITOR'S REPORT

To the Board of the Norfolk County Retirement System Canton, Massachusetts

Report on Financial Statements

We have audited the accompanying financial statements of Norfolk County Retirement System (the System), which comprise the statements of fiduciary net position as of December 31, 2019 and 2018 and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

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

Email: DDiPesa@DIPESACPA.com | www.DiPesaCPA.com

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of Norfolk County Retirement System as of December 31, 2019 and 2018, and the changes in fiduciary net position for the years 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 on pages 3 through 7 and the supplementary Schedule of Changes in Net Pension Liability and Related Ratios, Investment Return, and Contributions, and the notes to the required supplementary information on pages 28 through 31 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 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.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 16, 2020 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

DI PESA & COMPANY

Di Pesa & Company

Certified Public Accountants Quincy, Massachusetts December 16, 2020



REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

DECEMBER 31, 2019 AND 2018

The following discussion provides an overview and analysis of the fiduciary net position and changes in fiduciary net position of the Norfolk County Retirement System (the System or Plan) by management for the years ended December 31, 2019 and 2018. Please refer to the audited financial statements when reading this discussion.

Overview of the Financial Statements

The System's financial statements comprise a statements of fiduciary net position, statements of changes in fiduciary net position, notes to the financial statements and required supplementary information.

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

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pension benefits changed during the years ended December 31, 2019 and 2018. It reflects in total the contributions by members and participating employers, along with deductions for retirement benefits, refunds and withdrawals, and administrative expenses. Investment income from investing and securities lending activities is also presented.

The Notes to the Financial Statements are considered an integral part of the financial statements and 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 management's discussion and analysis, schedules of changes in net pension liability and related ratios, schedule of investment return, schedules of contributions and related notes.

Financial Highlights and Analysis

 The net position restricted for pension benefits is available for payment of monthly retirement benefits and other qualified distributions to the System's participants. Net position restricted for pension benefits was \$1.1 billion at December 31. 2019 compared to \$912 million at December 31, 2018. The increase in net position of \$159 million resulted primarily from an increase in the fair value of portfolio investments.

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2019 AND 2018

The following tables present the current and prior year condensed data on the System's financial statements.

Fiduciary Net Position

	2019	<u>2018</u>
Assets		
Cash and cash equivalents	\$ 20,538,918	\$ 31,558,005
Investments	945,625,482	877,189,568
Receivables	<u>150,128,495</u>	5,000,184
Total assets	1,116,292,895	913,747,757
Liabilities		
Accounts payable	45,831,585	1,899,196
Net Position		
Net position restricted for pensions	\$ <u>1,070,461,310</u>	\$ <u>911,848,561</u>
Changes in Fiduciary Net Position		
Additions		
Contributions	\$ 108,622,090	\$ 102,248,364
Net investment income	156,013,794	(53,017,332)
Other	3,760,532	_3,331,428
Total additions	268,396,416	52,562,460
Deductions	200,000,110	
Benefits paid	106,471,795	99,825,606
Other	3,311,872	3,967,131
Total deductions	109,783,667	103,792,737
Change in net position	158,612,749	(51,230,277)
Net position restricted for pension		· · · /
benefits – beginning of year	911,848,561	<u>963,078,838</u>
Net position restricted for pension		
benefits – end of year	\$ <u>1,070,461,310</u>	\$ <u>911,848,561</u>

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2019 AND 2018

Norfolk County Retirement System 2019 Performance Summary

- The net performance for the Norfolk County Retirement System ("Norfolk") for 2019 was 16.28%. This performance was less than the Primary Investment Policy Benchmarks, which returned 17.53%.
- Domestic Equity managers represented 22.8% of the portfolio as of December 31, 2019. Approximately 49% of the domestic equity assets were allocated to large capitalization equity mandates and the remaining assets were allocated to mid and small capitalization managers. Domestic equities had a 2019 net return of 27.05% and underperformed the Russell 3000 index that returned 31.02%.
- International Equity managers represented 18.7% of the portfolio as of December 31, 2019. Approximately 66% of the international equity assets were allocated to developed markets and the remaining to emerging markets. International equity managers' net return was 23.40%, which outperformed the MSCI AC World ex US (NET) benchmark return of 22.01%.
- Domestic Fixed Income Managers represented 20.2% of the portfolio as of December 31, 2019. The overall net return for these managers was 10.27% for the year, which exceeded the return of the Barclays Aggregate Bond Index of 8.72%.
- Real Estate investment managers had a net return of 9.22% in 2019 and represented 8.8% of the total portfolio as of year-end 2019. Norfolk's real estate exposure is comprised of core, value-add and opportunistic investment strategies. The real estate portfolio outperformed the NCREIF Property Index that returned 6.42% in 2019.
- Private Equity had a net return of 6.73% in 2019 and represented 9.3% of the total portfolio as of year-end 2019. Norfolk's private equity portfolio underperformed the Cambridge Associates U.S. Private Equity index, which returned 13.00%.
- Hedge Funds had a net return of 3.92% in 2019, which underperformed the 8.42% return of the HFRI Hedge Fund-of- Funds Composite Index. Hedge funds represented 8.8% of the plan assets as of year-end 2019.
- Real Assets represented 0.3% of the portfolio as of December 31, 2019. Norfolk's real asset investment managers had a net return of -12.14% in 2019, which was behind the Real Assets Index benchmark of 5.72%.

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2019 AND 2018

Norfolk County Retirement System 2018 Performance Summary

- The net performance for the Norfolk County Retirement System ("Norfolk") for 2018 was -4.54%. This performance was less than the Primary Investment Policy Benchmarks, which fell -4.16%.
- Domestic Equity managers represented 30.2% of the portfolio as of December 31, 2018. Approximately 62% of the domestic equity assets were allocated to large capitalization equity mandates and the remaining assets were allocated to mid and small capitalization managers. Domestic equities had a 2018 net return of -7.83% and underperformed the Russell 3000 index that returned -5.24%.
- International Equity managers represented 16.9% of the portfolio as of December 31, 2018. Approximately 66% of the international equity assets were allocated to developed markets and the remaining to emerging markets. International equity managers' net return was -15.69%, which trailed the MSCI AC World ex US (NET) benchmark return of -14.20%.
- Domestic Fixed Income Managers represented 22.1% of the portfolio as of December 31, 2018. The overall net return for these managers was -0.10% for the year, which exceeded the return of the Barclays Aggregate Bond Index of -0.62%.
- Real estate investment managers had a net return of 6.64% in 2018 and represented 9.5% of the total portfolio as of year-end 2018. Norfolk's real estate exposure is comprised of core, value- add and opportunistic investment strategies. The real estate portfolio underperformed the NCREIF Property Index that returned 6.72% in 2018.
- Private equity had a net return of 4.93% in 2018 and represented 9.7% of the total portfolio as of year-end 2018. Norfolk's private equity portfolio underperformed the State Street Private Equity Index, which returned 15.00%.
- Hedge funds had a net return of -0.86% in 2018, which exceeded the -4.08% return of the HFRI Hedge Fund-of- Funds Composite Index. Hedge funds represented 8.5% of the plan assets as of year-end 2018.
- Real Assets represented 0.4% of the portfolio as of December 31, 2018. Norfolk's Real Asset investment managers had a net return of 36.08% in 2018, which was ahead of the Real Assets Index benchmark of -13.66%.

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2019 AND 2018

Other Information

This financial report is designed to provide a general overview of the System's finances. Questions concerning the information provided in this report or requests for additional financial information should be addressed to the Norfolk County Retirement Board, 480 Neponset Street #15, Canton, MA 02021.

STATEMENTS OF FIDUCIARY NET POSITION

DECEMBER 31, 2019 AND 2018

ASSETS

ABBETS	<u>2019</u>	<u>2018</u>
CASH AND CASH EQUIVALENTS	<u>\$ 20,538,918</u>	<u>\$ 31,558,005</u>
INVESTMENTS, AT FAIR VALUE:		
Equities	240,029,672	216,954,416
Fixed Income	78,745,577	88,877,251
Pooled Funds:		
Equity	220,501,031	224,475,660
Fixed Income	133,242,529	111,189,190
Private Equity	82,858,175	72,684,345
Real Estate	96,007,863	88,417,884
Hedge	94,240,635	74,590,822
TOTAL INVESTMENTS, AT FAIR VALUE	945,625,482	877,189,568
RECEIVABLES:		
Member Contributions	2,169,698	1,679,413
Intergovernmental	2,394,903	2,333,257
Interest and Dividend Income Due	725,901	812,132
Receivable for Investments Sold	144,833,910	170,338
Miscellaneous	4,083	5,044
TOTAL RECEIVABLES	150,128,495	5,000,184
TOTAL ASSETS	1,116,292,895	913,747,757
LIABILITIES		
LIABILITIES:		
Accounts Payable	1,073,633	1,316,422
Payable for Investments Purchased	44,757,952	582,774
TOTAL LIABILITIES	45,831,585	1,899,196
NET POSITION RESTRICTED FOR PENSION BENEFITS	\$ 1,070,461,310	\$ 911,848,561

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

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

YEARS ENDED DECEMBER 31, 2019 AND 2018

	<u>2019</u>	<u>2018</u>
ADDITIONS: Contributions:		
Employer	\$ 74,899,528	\$ 69,957,756
Member	33,722,562	32,290,608
Total Contributions	108,622,090	102,248,364
Investment Income:		
Net Change in Fair Value of Investments Interest and Dividends	152,235,864 11,423,957	(54,622,430) 8,928,267
Total Investment Income	163,659,821	(45,694,163)
Less Investment Expenses	7,646,027	7,323,169
Net Investment Income	156,013,794	(53,017,332)
Other	3,760,532	3,331,428
TOTAL ADDITIONS	268,396,416	52,562,460
DEDUCTIONS:		
Benefits Paid	106,471,795	99,825,606
Refunds of Contributions	2,078,053	2,752,015
Administrative Expenses	1,233,819	1,215,116
TOTAL DEDUCTIONS	109,783,667	103,792,737
CHANGE IN NET POSITION	158,612,749	(51,230,277)
NET POSITION RESTRICTED FOR PENSION BENEFITS:		
BEGINNING OF YEAR	911,848,561	963,078,838
END OF YEAR	<u>\$ 1,070,461,310</u>	<u>\$ 911,848,561</u>

NOTE 1 – PLAN DESCRIPTION

The Norfolk County Retirement System (the System or the Plan) is a cost-sharing multiple-employer contributory defined benefit governmental pension plan established under Chapter 32 of the Massachusetts General Laws ("MGL") covering all employees of governmental member units deemed eligible by the Norfolk County Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the Plan is mandatory immediately upon the commencement of employment for all non-teaching permanent, full time employees.

The System is governed by a five member Board who establish the policies under which the System operates. Board members also approve all of the System's financial transactions, including the approval of retirement benefits to members.

The day-to-day operations of the System are managed by the Executive Director. The legislative body for the System is an Advisory Council consisting of full-time treasurers or other qualified officials of the member units. The Advisory Council meets at least twice annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

As of December 31, 2019 and 2018, the Plan's membership consisted of:

	<u>2019</u>	<u>2018</u>
Retirees and beneficiaries	3,526	3,411
Active participants	5,651	5,351
Inactive with a vested right to benefits		
or to receive refund of their contributions	3,419	3,301

The number of participating employers was 41 for both 2019 and 2018.

The System is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of MGL. The Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts Contributory Retirement System benefits are, with certain exceptions, uniform from system to system. The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

NOTE 1 - PLAN DESCRIPTION (Continued)

There are three classes of membership in the retirement system: group 1, group 2, and group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, group 4 consists of police officers, firefighters, and other hazardous positions.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of 20 years of service or upon reaching the age of 55 with 10 years of service if hired after 1978 and if classified in groups 1 or 2. A person who became a member on or after April 2, 2012 is eligible for a superannuation retirement allowance upon reaching the age of 60 with 10 years of service if in group 1, 55 years of age with 10 years of service if in group 2, and 55 years of age if hired prior to 1978 or if classified in group 4. Normal retirement for most employees occurs at age 65 (except for certain hazardous duty and public safety positions, whose normal retirement is at age 55).

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

Active members contribute between 5 and 9% of their gross regular compensation. Members joining the System after January 1, 1979 must contribute an additional 2% on regular compensation earned at a rate in excess of \$30,000. The percentage rate is keyed to the date upon which an employee's membership commences. These deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the Public Employee Retirement Administration Commission's (PERAC) actuary. When a member's retirement becomes effective, his/her deductions and related interest are transferred to the Annuity Reserve Fund. Any cost-of-living adjustments granted between 1981 and 1997 and any increase in other benefits imposed by the Commonwealth of Massachusetts' state law during those years are borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the System and all costs are borne by the System.

The pension portion of any retirement benefit is paid from the Pension Fund of the System. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. In past years, retirement systems were paying only the actual retirement benefits that were due each year. Systems had no statutory authorization to put aside money for the future benefits of employees who are currently employed. Large unfunded liabilities resulted from operating under this pay-as-you-go basis. In 1977, legislation authorized local governments to appropriate funds to meet future pension obligations. In 1983, additional legislation was passed requiring the transfer of investment earnings (in excess of the amount credited to member accounts) into the Pension Reserve Fund. These initiatives have significantly reduced the rate of growth of the Retirement System's unfunded liabilities, and in some Systems have actually reduced such liability.

NOTE 1 - PLAN DESCRIPTION (Continued)

Administrative expenses, which were previously appropriated from the governmental entities whose employees are members of the system, are now paid from excess investment income.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service and who are not eligible to receive a retirement allowance or are under the age of 55 are entitled to request a refund of their accumulated total deductions. In addition, with at least ten years of creditable service, such employees are entitled to receive one hundred (100%) percent of the regular interest which has accrued upon those deductions. Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting and Financial Statement Presentation

The financial statements have been prepared using the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting policies are described herein.

Reporting Entity

The System was established to provide retirement benefits to eligible employees of its member employers and their beneficiaries.

Cash and Cash Equivalents

Cash and cash equivalents are considered to cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments

Investments are reported at fair value. Fair values of securities held directly are based on quotations from national securities exchanges, except for pooled funds, alternative investments, real estate, and hedge funds, for which fair values are estimated as detailed below.

Pooled Equity and Fixed Income Funds – The fair value of shares in managed investment pools is based on unit values reported by the managers of those respective funds.

Pooled Private Equity Funds – Pooled private equity funds include holdings through equity interests in various limited partnerships. These investments are carried at the limited partnership interest or redemption value, the equivalent of net asset value, which approximates fair value. Values assigned to such investments are based on available information and do not necessarily represent amounts

NOTE 2 – <u>SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES</u> (Continued)

Investments (Continued)

that may ultimately be realized in liquidation. Liquidation values depend largely on future circumstances, including marketability, and frequently cannot reasonably be estimated until at, or near, the liquidation date.

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

Pooled Hedge Funds – The fair value of shares in managed hedge funds is based on unit values reported by the managers of those respective funds.

Investments Sold and Investments Purchased

Receivables for investments sold represent amounts due from brokers for unsettled security sales transactions at year end. Liabilities for investments purchased represent amounts due to brokers for unsettled purchases at year end.

Revenue Recognition

Contributions are recognized as additions in the period when they become due pursuant to formal statutory obligations. Investment income is recognized when earned.

Benefit Payments and Refunds of Contributions

Benefits and refunds to Plan members and beneficiaries are recognized as expenses when due and payable in accordance with the terms of the Plan.

Intergovernmental, Reimbursements and Transfers to Other Systems

When members transfer to or from other Massachusetts public retirement systems, their cumulative contributions are transferred from the prior employer to the respective Massachusetts public retirement system, and are recognized as receipts or expenses when paid.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Actual results could differ from estimates. Fair values of real estate, alternative investment and hedge fund holdings are generally estimated absent readily available market values, and such estimates may be materially different from values that would have been used if a ready market existed.

NOTE 3 – PLAN ADMINISTRATION

The System is administered by a five-person Board of Retirement. 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 PERAC.

The Advisory Council consists of the full time treasurers, elected or appointed, for each town, unit or district within the System. The members of the Advisory Council elect the second member of the Board of Retirement as well as a Chair from among its members. The Advisory Council is required by statute to meet twice per year.

The investment of the System's funds is the responsibility of the Board. Disability retirement allowances must be approved by the Board and are then submitted to the PERAC Actuary for verification prior to payment. All expenses incurred by the System must be approved by a majority vote of the Board.

Board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts. The MACRS program for the System provides \$50,000,000 fiduciary protection for Trustees and employees, as well as a \$1,000,000 fidelity policy for crime coverage.

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS

The System's investments are measured and reported at fair value. The fair value 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) for identical assets or liabilities in active markets that can be accessed 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.
- Level 3 Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest to Level 3 inputs.

In certain instances, where the determination of the fair value measurement is based on inputs from different levels of the fair value hierarchy, the level in the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS (Continued)

Fair value of certain investments that do not have a readily determinable fair value is established using net asset value (or its equivalent) as a practical expedient. These investments are not categorized according to the fair value hierarchy.

The following tables present a summary of the fair value hierarchy of investments and short-term holdings that are measured at fair value on a recurring basis at December 31, 2019 and 2018 (in thousands):

		Fair Value Measurements Using						
			Quoted Prices in					
			Active	Markets for	Signi	ficant Other	S	Significant
			Ident	ical Assets	Obsei	rvable Inputs	Un	observable
Investments by Fair Value Level		Total	(L	<u>_evel 1)</u>	(Level 2)	Inpu	uts (Level 3)
Short-Term Investment Funds	\$	<u>18,664</u>	\$		\$	18,664	\$	
Equities:								
Common Stock		237,168		237,168		-		-
Real Estate Investment Trusts		<u>2,862</u>		<u>2,862</u>				
Total Equities		<u>240,030</u>		<u>240,030</u>				
Fixed Income:								
Collateralized Mortgage								
Obligations		8,205		-		8,205		-
Corporate Bonds		47,856				47,856		-
Government Issues		22,110		5,582		16,528		-
Municipals		574				<u>574</u>		-
Total Fixed Income		<u>78,745</u>		<u>5,582</u>		<u>73,163</u>		
Pooled Funds:		045 404						045 404
Equity		215,194		-		-		215,194
Fixed Income		98,461		-		-		98,461
Private Equity		13,791		-		-		13,791
Real Estate		68,625		-		-		68,625
Hedge		-						$\frac{-}{200.074}$
Total Pooled Funds		<u>396,071</u>						<u>396,071</u>
Total Investments by Fair Value Level	¢	733,510	\$	245.612	\$	91,827	¢	396.071
	<u>\$</u>	133,510	<u>⊅</u>	243,012	$\overline{\Phi}$	91,027	<u>\$</u>	390,071
Investments Measured at Net								
Asset Value (NAV):								
Pooled Equity Funds	\$	5,307						
Pooled Fixed Income Funds	Ψ	34,781						
Pooled Private Equity Funds		69,067						
Pooled Real Estate Funds		27,383						
Pooled Hedge Funds		94,241						
Total Investments Measured at NA	V \$	230,779						
Total Investments Measured	. 4							
at Fair Value	\$	964,289						
		* * *						

<u>2019</u>

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS (Continued)

<u>2018</u>

Fair Value Measurements Using Quoted Prices in Active Markets for Significant Other Significant Observable Inputs Identical Assets Unobservable (Level 1) (Level 2) Investments by Fair Value Level Inputs (Level 3) Total Short-Term Investment Funds \$ \$ \$ <u>31,1</u>62 31,162 _ \$ -Equities: Common Stock 214,857 214,857 **Mutual Funds** 696 696 _ **Real Estate Investment Trusts** 1.401 1.401 **Total Equities** 216,954 216,954 Fixed Income: **Collateralized Mortgage** Obligations 19,466 19,466 Corporate Bonds 36,551 36,551 Credit Card Receivable 447 447 **Government Issues** 22,771 22,771 **Municipals** 1,804 1,804 Other Asset Backed 7,838 7,838 **Total Fixed Income** 88,877 88,877 -Pooled Funds: 141,865 Equity 106,092 35.773 Fixed Income 75,926 12,730 62798 398 Private Equity 2,500 374 2,126 Real Estate 56,411 7,366 79 48,966 Hedge 276<u>,702</u> **Total Pooled Funds** 126,562 98,650 51,490 **Total Investments by Fair** Value Level \$ 613,695 \$ 343,516 \$ 218,689 \$ 51,490 Investments Measured at Net Asset Value (NAV): **Pooled Equity Funds** \$ 82.611 Pooled Fixed Income Funds 35.264 Pooled Private Equity Funds 70,184 Pooled Real Estate Funds 32,007 **Pooled Hedge Funds** 74,591 Total Investments Measured at NAV \$ 294,657 **Total Investments Measured** at Fair Value \$ 908,352

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS (Continued)

Reconciliation of Total Investments Measured at Fair Value (listed above) to the Statement of Fiduciary Net Position (in thousands):

	<u>2019</u>	2018
Total Investments Measured at Fair Value per above:	\$964,289	\$908,352
Short-Term Investment Funds classified as Cash and Cash Equivalents on Statement of Fiduciary Net Position	<u>(18,664</u>)	<u>(31,162)</u>
Total Investments on Statement of Fiduciary Net Position	\$ <u>945,625</u>	\$ <u>877,190</u>

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES

The following disclosures represent essential risk information about the System's deposits and investments.

Custodial Credit Risk – Deposits

Custodial credit risk is the risk that in the event of bank failure, the System's deposits may not be returned. The System carries deposits that are insured by FDIC insurance up to \$250,000 per financial institution. The System evaluates each financial institution and assesses the level of risk of each institution and only uses those institutions with an acceptable level of risk. At December 31, 2019 and 2018, the System had cash balances at two financial institutions in excess of FDIC limits of approximately \$2,890,000 and \$4,029,000, respectively.

Investment Policy

The provisions of M.G.L. Chapter 32 § 23 (2) and the Plan's own investment policy govern the System's investment practice. The Board retains an investment consultant to assure that strategic investment diversification is attained, to employ investment managers with expertise in their respective asset classes, and to closely monitor the implementation and performance of the respective investment strategies. The System invests in stocks (domestic and foreign), fixed income securities (domestic and foreign), private equity, real estate and hedge funds.

Custodial Credit Risk - Investments

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the System would not be able to recover the value of investment or securities. The System's investments are held by the System's custodian and registered in the System's name. All of the System's securities are held by the System's custodial bank in the System's name, except for investments in pooled funds, which by their nature, do not have securities that are used as evidence of the investment.

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Interest Rate Risk

The following is a listing of the System's fixed income investments (in thousands) and related maturity schedule (in years) as of December 31, 2019 and 2018:

		<u>2019</u>			
Investment Type	<u>Fair Value</u>	<u>Less than 1</u>	<u>1 – 5</u>	<u>6 – 10</u>	More than 10
U.S. Agencies Domestic Corporate International Corporate Domestic Government	\$22,111 49,925 6,135 <u>574</u> \$ <u>78,745</u>	\$ - 2,014 923 \$ <u>_2,937</u>	\$ - 14,402 3,791 <u>574</u> \$ <u>18,767</u>	\$ 247 4,992 994 <u>-</u> \$ <u>6,233</u>	\$21,864 28,517 427 <u>-</u> \$ <u>50,808</u>
		<u>2018</u>			
Investment Type	<u>Fair Value</u>	<u>Less than 1</u>	<u>1 – 5</u>	<u>6 – 10</u>	More than 10
U.S. Agencies Domestic Corporate International Corporate Domestic Government	\$ 30,096 52,099 4,878 <u>1,804</u> \$ <u>88,877</u>	\$	\$ - 13,995 3,495 <u>1,804</u> \$ <u>19,294</u>	\$233 5,889 1,383 <u>-</u> \$ <u>7,505</u>	\$29,863 29,706 - - \$ <u>59,569</u>

The System's guidelines do not specifically address limits on maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. The managers of each fixed income portfolio are responsible for determining the maturity and commensurate returns of their portfolio.

Credit Risk

The System allows investment managers to apply discretion under the Prudent Person rule. Investments are made, as a prudent person would be expected to act with discretion and intelligence, to seek reasonable income, preserve capital and, in general, avoid speculative investments.

The System's fixed income investments as of December 31, 2019 and 2018 were rated by Standard & Poor's and/or an equivalent national rating organization and the ratings are presented below (in thousands) using the Standard & Poor's rating scale:

<u>2019</u>

NOTE 5 - DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Credit Risk (Continued)

Investment <u>Type</u>	Fair <u>Value</u>	<u>AAA</u>	<u>AA</u>	A	BBB	BB	<u>B</u>	<u>CC to D</u>	Not <u>Rated</u>
U.S. Agencies Domestic	\$ 22,111	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$ 22,111
Corporate International	49,925	4,468	696	5,023	25,803	5,470	30	633	7,802
Corporate Domestic	6,135	-	-	961	4,664	510	-	-	-
Government	574	-	-	-	574	-	-	-	-
Pooled Funds	133,242	-	-	-	-	-	-	-	133,242
	\$ 211,987	\$ 4,468	\$ 696	\$ 5,984	\$ 31,041	\$ 5,980	\$ 30	\$ 633	\$ 163,155
<u>2018</u>									
				<u>2018</u>					
Investment	Fair			<u>2018</u>					Not
Investment <u>Type</u>	Fair <u>Value</u>	<u>AAA</u>	<u>AA</u>	<u>2018</u>	BBB	BB	<u>B</u>	<u>CC to D</u>	Not <u>Rated</u>
	<u>Value</u>	AAA \$ -	AA \$ -		<u>BBB</u> \$ -	<u>BB</u> \$ -	<u>B</u> \$ -	<u>СС to D</u> \$ -	
<u>Type</u> U.S. Agencies	<u>Value</u>			<u>A</u>			_		<u>Rated</u>
<u>Type</u> U.S. Agencies Domestic Corporate	<u>Value</u> \$ 30,096	\$ -	\$ -	≜ \$ -	\$-	\$-	\$-	\$ -	<u>Rated</u> \$ 30,096
Type U.S. Agencies Domestic Corporate International Corporate	<u>Value</u> \$ 30,096 52,099	\$ -	\$ -	<u>▲</u> \$ - 3,236	\$ - 24,654	\$ - 5,765	\$-	\$ -	<u>Rated</u> \$ 30,096

Concentration Risk

\$ 200,066

\$ 4,206

\$ 2,024

Other than investments in two and four pooled funds, respectively, the System has no individual investment at fair value that exceeds 5% of total investments at December 31, 2019 and 2018. The System adheres to the provisions of MGL Chapter 32 § 23, the rules and regulations of PERAC, and the Plan's own investment policy when managing concentration risk.

\$ 3,605

\$ 29,330

\$ 6,238

\$

905

\$ 153,520

\$ 238

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Similar to the investments in domestic equities, the System employs or encourages its investment advisor to employ diversification, asset allocation, and quality strategies. Risk of loss arises from changes in currency exchange rates. The System's exposure to foreign currency risk as of December 31, 2019 and 2018 is presented on the following tables (in thousands):

Currency	Cash and Cash Equivalents	<u>Equity</u>	Fixed Income	Pooled <u>Funds</u>	<u>Total</u>
Argentine Peso	\$ -	\$-	\$ -	\$ 872	\$ 872
Australian Dollar	-	375	-	2,373	2,748
Bermudian Dollar	-	-	-	745	745
Brazilian Real	-	-	-	5,266	5,266
British Pound Sterling	-	13,257	-	6,888	20,145
Canadian Dollar	-	1,077	-	64	1,141
Cayman Islands Dollar	-	-	-	13,734	13,734
Chinese Yuan Renminbi	-	-	-	8,328	8,328
Czech Koruna	-	-	-	413	413
Danish Kroner	-	2,355	-	159	2,514
Euro Currency	-	37,711	-	22,719	60,430
Hong Kong Dollar	-	2,614	-	2,747	5,361
Indian Rupee	-	-	-	1,393	1,393
Indonesian Rupiah	-	-	-	1,732	1,732
Israeli Shekel	-	-	-	343	343
Japanese Yen	-	13,009	-	17,977	30,986
Kazakhstani Tenge	-	-	-	291	291
Kenyan Shilling	-	-	-	365	365
Malaysian Ringgit	-	-	-	822	822
Mexican Peso	-	-	-	988	988
New Russian Ruble	-	-	-	1,969	1,969
Norwegian Krone	-	-	-	907	907
Philippine Peso	-	-	-	345	345
Singapore Dollar	-	1,272	-	-	1,272
South African Rand	-	-	-	3,443	3,443
South Korean Won	-	-	-	4,357	4,357
Swedish Krona	-	778	-	1,235	2,013

<u>2019</u>

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2019 AND 2018

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Foreign Currency Risk (Continued)

2019 (Continued)

Currency	Cash and Cash Equivalents	<u>Equity</u>	Fixed Income	Pooled <u>Funds</u>	<u>Total</u>
Swiss Franc	-	15,015	-	763	15,778
Thai Baht	-	-	-	1,224	1,224
Taiwan New Dollar	-	-	-	6,136	6,136
Turkish Lira Total Securities Subject to		<u> </u>		<u>47</u>	<u>47</u>
Foreign Currency Risk	\$ <u>-</u>	\$ <u>87,463</u>	\$ <u> -</u>	\$ <u>108,645</u>	\$ <u>196,108</u>

<u>2018</u>

Currency	Cash and Cash Equivalents	<u>Equity</u>	Fixed Income	Pooled <u>Funds</u>	<u>Total</u>
Argentine Peso	\$ -	\$-	\$ -	\$ 810	\$ 810
Australian Dollar	-	469	-	2,912	3,381
Bermudian Dollar	-	-	-	408	408
Brazilian Real	-	-	-	4,235	4,235
British Pound Sterling	-	11,183	-	5,843	17,034
Canadian Dollar	5	1,528	-	111	1,639
Cayman Islands Dollar	-	-	-	420	420
Chinese Yuan Renminbi	-	-	-	10,278	10,278
Danish Kroner	-	1,747	-	6	1,753
Egyptian Pound	-	-	-	516	516
Euro Currency	-	29,890	-	15,835	45,725
Hong Kong Dollar	-	2,182	-	-	2,182
Hungarian Forint	-	-	-	878	878
Indian Rupee	-	-	-	4,494	4,494
Indonesian Rupiah	-	-	-	2,376	2,376
Japanese Yen	-	9,324	-	12,972	22,296
Malaysian Ringgit	-	-	-	310	310
Mexican Peso	-	-	-	1,870	1,870
New Russian Ruble	-	-	-	5,320	5,320
Norwegian Krone	-	-	-	546	546
Pakistani Rupee	-	-	-	775	775

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Foreign Currency Risk (Continued)

2018 (Continued)

Currency	Cash and Cash Equivalents	<u>Equity</u>	Fixed Income	Pooled <u>Funds</u>	<u>Total</u>
Philippine Peso		-	-	310	310
Singapore Dollar	-	1,118	-	-	1,118
South African Rand	-	-	-	5,142	5,142
South Korean Won	-	-	-	8,297	8,297
Swedish Krona	-	576	-	1,149	1,725
Swiss Franc	-	10,431	-	540	10,971
Thai Baht	-	-	-	775	775
Taiwan New Dollar	-	-	-	2,738	2,738
Turkish Lira Total Securities Subject to	<u> </u>			<u>2,117</u>	<u>2,117</u>
Foreign Currency Risk	\$ <u>8</u>	\$ <u>68,448</u>	\$ <u></u>	\$ <u>91,983</u>	\$ <u>160,439</u>

NOTE 6 – LEGALLY REQUIRED RESERVES

The System's legally required reserves are all funded at levels required by state statute and were as follows as of December 31:

	2019	<u>2018</u>
Annuity Savings Fund	\$ 296,098,905	\$286,911,086
Annuity Reserve Fund	82,242,071	77,781,147
Military Service Fund	37,953	37,915
Pension Fund	2,247,864	3,613,574
Pension Reserve Fund	689,834,517	543,504,839
Expense Fund	<u> </u>	
	\$ <u>1,070,461,310</u>	\$ <u>911,848,561</u>

NOTE 6 – <u>LEGALLY REQUIRED RESERVES</u> (Continued)

The *Annuity Savings Fund* is the fund in which member's contributions are deposited. Voluntary contributions, redeposits, and transfers to and from other systems are also accounted for in this fund. Members' contributions to the fund earn interest at a rate determined by PERAC. Interest for some members who withdraw from the System with less than 10 years of service is transferred to the Pension Reserve Fund. Upon retirement, a member's contributions and interest are transferred to the Annuity Reserve Fund. Dormant account balances must be transferred to the Pension Reserve Fund. Dormant account balances must be transferred to the Pension Reserve Fund of 10 years of inactivity.

The *Annuity Reserve Fund* is the fund to which a member's account is transferred upon retirement from the Annuity Savings Fund and the Military Service Fund. The annuity portion of the retirement allowance is paid from this fund. Interest is credited monthly to this fund at the rate of 3% annually on the previous month's balance.

The *Military Service Fund* contains contributions and interest for members while on military leave for service in the Armed Forces who will receive creditable service for the period of that leave. Creditable service is granted provided the member returns to the same governmental unit within two years of the date of discharge from the military. Upon retirement, a member's contributions and interest are transferred to the Annuity Reserve Fund.

The *Pension Fund* contains the amounts appropriated by the governmental units as established by PERAC to pay the pension portion of each retirement allowance.

The *Pension Reserve Fund* contains the amounts set aside by the system for the purpose of establishing a reserve to meet future pension liabilities. Any investment income in excess of the amount required to credit interest to the Annuity Savings Fund, Annuity Reserve Fund and Military Service Fund is credited to the Pension Reserve Fund. Any profit or loss realized on the sale or maturity of any investment or on the unrealized gain or loss of market valued investments as of the valuation date is credited to the Pension Reserve Fund.

The *Expense Fund* contains amounts transferred from investment income for the purpose of administering the System.

The *Investment Income Account* is credited with all interest and dividends derived from invested funds. At the end of the year, the interest credited to the Annuity Savings Fund, Annuity Reserve Fund, Special Military Credit Service Fund and Expense Fund is distributed from this account and the remaining balance is transferred to the Pension Reserve Fund.

NOTE 7 – FUNDING POLICY

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

The participating employers' budgeted contributions to the System for the employer fiscal years ended June 30, 2020 and 2019 were as follows (in thousands):

		<u>2020</u>		<u>2019</u>
Town of Avon	\$	1,351	\$	1,318
Avon Housing Authority	Ŧ	13	Ŧ	23
Town of Bellingham		3,388		3,184
Bellingham Housing Authority		32		30
Town of Canton		5,740		5,347
Canton Housing Authority		93		102
Town of Cohasset		2,509		2,561
Cohasset Housing Authority		18		17
Norfolk County		3,910		3,623
Charles River Pollution Control		180		165
Town of Dover		1,448		1,351
Dover-Sherborn Regional High School		897		794
Town of Foxboro		4,934		4,473
Foxboro Housing Authority		82		59
Town of Franklin		5,873		5,324
Franklin Housing Authority		94		89
Town of Holbrook		2,181		2,111
Holbrook Housing Authority		42		51
King Philip Regional School District		765		783
Town of Medfield		2,826		2,578
Medfield Housing Authority		15		16
Town of Medway		2,677		2,500
Medway Housing Authority		92		93
Town of Millis		1,852		1,761
Millis Housing Authority		45		39
Town of Norfolk		2,303		2,163
Norfolk Housing Authority		35		32
Norfolk Mosquito Control		214		202
Town of Plainville		2,009		1,892
Town of Randolph		6,359		5,780
Randolph Housing Authority		102		67

NOTE 7 – FUNDING POLICY (Continued)

Town of Sharon	4,517	4,188
Sharon Housing Authority	14	26
Town of Stoughton	5,999	5,504
Stoughton Housing Authority	83	74
Town of Walpole	5,184	5,073
Walpole Housing Authority	59	56
Town of Westwood	5,507	5,164
Town of Wrentham	2,186	1,981
Wrentham Housing Authority	29	26
Dedham Westwood Water District	560	607
	\$76,217	\$71,227

NOTE 8 - NET PENSION LIABILITY

The components of the net pension liability of the System as of December 31, 2019 and 2018, are as follows:

	<u>2019</u>	2018
Total Pension Liability	\$1,657,574,687	\$1,562,788,951
Fiduciary Net Position	<u>1,070,461,310</u>	<u>911,848,561</u>
System's Net Pension Liability	\$ <u>587,113,377</u>	\$ <u>650,940,390</u>
Fiduciary Net Position as a percentage of total pension liability	64.6%	58.3%
	04.070	50.570

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of January 1, 2020. The following actuarial assumptions were applied to all periods included in the measurement:

Actuarial cost method:	Entry Age Normal Cost Method
Amortization method	Open-Level percent of payroll
Asset valuation method	Market value
Investment rate of return	7.75%
Projected salary increases	3.5% - 5.5%
Inflation	3.0%
Cost of living increases	3.0% of first \$18,000
Mortality:	The RP-2014 Blue Collar Mortality Table with Scale with MP-2014

NOTE 8 - NET PENSION LIABILITY (Continued)

The long term expected rate of return on 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 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. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized as follows:

<u>Asset Class</u>	Targ <u>Alloca</u> 2019		Long-te Expected <u>Rate of I</u> 2019	d Real
Domestic Equity	30.5%	32.0%	6.6%	8.1%
International Equities	15.5	17.5	8.0%	8.2%
Fixed Income	20.5	19.0	3.8%	3.2%
Real Estate	9.5	9.0	8.2%	7.3%
Private Equity	10.0	8.5	9.9%	10.4%
Hedge Funds	11.5	9.0	7.2%	7.4%
Real Assets	2.5	5.0	8.2%	10.4%
Total	<u>100.0</u> %	<u>100.0</u> %		

The annual money-weighted rate of return on investments, net of investment expense was 16.28% and -4.54% for the years ended December 31, 2019 and 2018, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. The above was the Board's adopted asset allocation policy and best estimates of real rates of return for each major asset class as of December 31, 2019 and 2018.

Discount Rate

The discount rate used to measure the total pension liability as of December 31, 2019 and 2018 was 7.75%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at contractually required rates, actuarially determined. Under Chapter 32 of the MGL, employers are required to make the necessary contributions such that the Plan reaches full funding status by 2040. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine total pension liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the System as of December 31, 2019 and 2018. For 2019 and 2018, the net pension liability was calculated using the discount rate of 7.75%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (6.75%) or one-percentage point higher (8.75%) than the current rate.

NOTE 8 – <u>NET PENSION LIABILITY</u> (Continued)

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

	<u>2019</u>		
	<u>1% Decrease (6.75%)</u>	Current Discount <u>Rate (7.75%)</u>	<u>1% Increase (8.75%)</u>
System's Net Pension Liability	\$762,545,338	\$587,113,377	\$438,049,042
	<u>2018</u>	Current Discount	
	<u>1% Decrease (6.75%)</u>	<u>Rate (7.75%)</u>	<u>1% Increase (8.75%)</u>
System's Net Pension Liability	\$816,336,350	\$650,940,390	\$510,329,389

NOTE 9 – <u>LEASE COMMITMENTS</u>

The System leases office space under an operating through August 2021. The lease also provides for the payment of common area costs, real estate taxes and utilities. Future minimum lease payments under the lease is as follows:

<u>Year</u>	Amount
2020	\$ 48,000
2021	32,000
Total	\$ <u>80,,000</u>

Rent expense for the years ended December 31, 2019 and 2018 was \$59,728 and \$60,602, respectively.

NOTE 10 – UNCERTAINTIES

The System is, from time to time, involved in legal matters arising in the normal course of its administration of member benefits that, in the opinion of management, will not have a material effect on the net assets of the System.

NOTE 11 - SUBSEQUENT EVENTS

The System has performed an evaluation of subsequent events through December 16, 2020, the date the basic financial statements were available to be issued. No material events were identified by the System.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULES OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

YEARS ENDED DECEMBER 31, 2014 - 2019

	<u>2019</u>	<u>2018</u>	2017	<u>2016</u>	2015	<u>2014</u>
TOTAL PENSION LIABILITY: Service Cost	\$ 36.227.627	\$ 33,120,792	\$ 34,738,004	\$ 33.401.927	\$ 31,963,567	\$ 31,799,628
Interest on Liability and Service Cost	م 30,227,027 119,795,961	\$ 33,120,792 116,162,593	\$ 34,738,004 107,709,293	\$ 33,401,927 103,990,120	\$ 31,963,567 106,603,992	\$ 31,799,028 102,271,303
Difference Between Actual and Expected Experience	41,916,868		61,837,812		13,828,826	
Assumption Changes	-	-	36,207,214	-	(57,518,820)	-
Change in Plan Provisions	5,395,128	-	12,205,895	-	-	-
Benefit Payments, Including Refunds of Contributions	(108,549,848)	(102,577,621)	(94,665,189)	(89,903,327)	(84,888,359)	(81,095,471)
NET CHANGE IN TOTAL PENSION LIABILITY	94,785,736	46,705,764	158,033,029	47,488,720	9,989,206	52,975,460
TOTAL PENSION LIABILITY - BEGINNING OF YEAR	1,562,788,951	1,516,083,187	1,358,050,158	1,310,561,438	1,300,572,232	1,247,596,772
TOTAL PENSION LIABILITY - END OF YEAR (a)	<u>\$ 1,657,574,687</u>	<u>\$ 1,562,788,951</u>	<u>\$ 1,516,083,187</u>	\$ 1,358,050,158	<u>\$ 1,310,561,438</u>	\$ 1,300,572,232
CHANGE IN FIDUCIARY NET POSITION Contributions - Employer	74,899,528	69,957,756	\$ 64,009,904	\$ 58,539,478	\$ 53,201,068	\$ 48,383,549
Contributions - Member	33,722,562	32,290,608	29,351,605	29,448,483	¢ 55,201,000 26,920,012	26,322,747
Net Investment Income	156,013,794	(53,017,332)	125,637,080	68,848,066	(11,383,452)	34,539,916
Benefit Payments, Including Refunds of Contributions	(108,549,848)	(102,577,621)	(94,665,189)	(89,903,327)	(84,888,359)	(81,095,471)
Administrative Expenses	(1,233,819)	(1,215,116)	(1,215,601)	(1,193,583)	(1,158,971)	(1,077,892)
Other	3,760,532	3,331,428	3,933,503	2,939,696	2,711,397	2,021,260
NET CHANGE IN FIDUCIARY NET POSITION	158,612,749	(51,230,277)	127,051,302	68,678,813	(14,598,305)	29,094,109
FIDUCIARY NET POSITION - BEGINNING OF YEAR	911,848,561	963,078,838	836,027,536	767,348,723	781,947,028	752,852,919
FIDUCIARY NET POSITION - END OF YEAR (b)	\$ 1,070,461,310	\$ 911,848,561	\$ 963,078,838	\$ 836,027,536	\$ 767,348,723	\$ 781,947,028
NET PENSION LIABILITY - END OF YEAR (a) - (b)	<u>\$ 587,113,377</u>	<u>\$ 650,940,390</u>	<u> </u>	<u> </u>	<u>\$ 543,212,715</u>	<u> </u>
FIDUCIARY NET POSITION as a PERCENTAGE OF						
TOTAL PENSION LIABILITY	64.6%	58.3%	63.5%	61.6%	58.6%	60.1%
COVERED EMPLOYEE PAYROLL	\$ 311,489,280	\$ 299,245,268	\$ 289,125,863	\$ 279,489,744	\$ 267,454,300	\$ 246,722,941
NET PENSION LIABILTY as a PERCENTAGE OF COVERED EMPLOYEE PAYROLL	188.5%	217.5%	191.3%	186.8%	203.1%	210.2%

This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Accompanying Independent Auditors' Report and Notes to Required Supplementary Information

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF INVESTMENT RETURN

YEARS ENDED DECEMBER 31, 2014 - 2019

Annual Money-Weighted Rate of Return, Net of Investment Expense:

2019	16.28%
2018	-4.54%
2017	14.81%
2016	8.59%
2015	-0.75%
2014	5.07%

This schedule is intended to present 10 years of data. Additional years will be presented when available.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULES OF CONTRIBUTIONS

YEARS ENDED DECEMBER 31, 2014 - 2019

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially Determined Contribution	\$ 76,217,000	\$ 71,227,000	\$ 65,170,000	\$ 59,628,000	\$ 54,208,000	\$ 49,280,000
Actual Contributions in Relation to Actuarially Determined Contribution	 76,217,000	 71,227,000	 65,170,000	 59,628,000	 54,208,000	 49,280,000
Contribution Deficiency (Excess)	\$ 	\$ 	\$ 	\$ 	\$ 	\$
Covered-Employee Payroll	\$ 311,489,280	\$ 299,245,268	\$ 289,125,863	\$ 279,489,744	\$ 267,454,300	\$ 246,722,941
Contributions as a Percentage of Covered-Employee Payroll	24.5%	23.8%	22.5%	21.3%	20.3%	20.0%

This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Accompanying Independent Auditors' Report and Notes to Required Supplementary Information

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

DECEMBER 31, 2019 AND 2018

1. SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

The total pension liability presented in the schedule were provided by the System's actuarial consultant, Sherman Actuarial Services, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the System. The related ratios show Plan net position as a percentage of the total pension liability and the net pension liability as a percentage of covered employee payroll.

2. SCHEDULE OF INVESTMENT RETURN

The annual money-weighted rate of return is calculated as the internal rate of return on Plan investments, net of Plan investment expense. A money-weighted rate of return expresses investment performance, net of Plan investment expense, adjusted for changing amounts actually invested.

3. SCHEDULE OF CONTRIBUTIONS

The actuarially determined contribution amount in the schedule of contributions was calculated as of January 1, 2020 (for 2019); January 1, 2018 (for 2018 and 2017); January 1, 2016 (for 2016 and 2015) and as of January 1, 2015 for 2014. The following actuarial methods and assumptions were used to determine the contribution amount reported in that schedule:

Actuarial Cost Method	Individual entry age normal actuarial cost method
Amortization Method	Open – Level percent of payroll Payroll assumed to grow 3.5%-5.5% per year (January 1, 2020, 2018 and 2016) and 4% per year (January 1, 2015)
Asset Valuation Method	Market value as reported to PERAC
Inflation	3.0% (January 1, 2020) 4.0% (January 1, 2018 and 2016) 4.5% (January 1, 2015)
Investment Rate of Return	7.75% (January 1, 2020 and 2018) 8.0% (January 1, 2016) 8.25% (January 1, 2015)
Cost of Living Adjustments	3.0% of first \$18,000 (January 1, 2020) and 3% of of first \$17,000 (January 1, 2018) and 3% of first \$15,000 (January 1, 2016 and 2015) of retirement income
Mortality Table	RP-2014 Blue Collar Mortality Table with Scale with MP-2014 (January 1, 2020, 2018 and 2016) RP-2000 Mortality Table adjusted with Scale AA (January 1, 2015)



elephone: 617-786-7775 | Fax: 617-786-9919

Dorothy F. Di Pesa, CPA John F. Oteri, CPA

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

To the Board of the Norfolk County Retirement System Canton, Massachusetts

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Norfolk County Retirement System, as of and for the years ended December 31, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the Norfolk County Retirement System's basic financial statements, and have issued our report thereon dated December 16, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Norfolk County Retirement System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Norfolk County Retirement System's internal control. Accordingly, we do not express an opinion on the effectiveness of the Norfolk County Retirement System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Email: DDiPesa@DIPESACPA.com | www.DiPesaCPA.com

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Norfolk County Retirement System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

DI PESA & COMPANY

Di Pesa & Company

Certified Public Accountants Quincy, Massachusetts

December 16, 2020

