

DUKES COUNTY CONTRIBUTORY

RETIREMENT SYSTEM

AUDIT REPORT

JANUARY 1, 2015 - DECEMBER 31, 2018



PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION
COMMONWEALTH OF MASSACHUSETTS

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PERAC

COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

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JOHN W. PARSONS, ESQ., *Executive Director*

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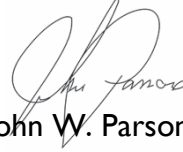
July 21, 2022

The Public Employee Retirement Administration Commission has completed an examination of the Dukes County Retirement System pursuant to G.L. c. 32, § 21. The examination covered the period from January 1, 2015 to December 31, 2018. This audit was conducted in accordance with the accounting and management standards established by the Public Employee Retirement Administration Commission in regulation 840 CMR 25.00.

In our opinion, the financial records are being maintained and the management functions are being performed in conformity with the standards established by the Public Employee Retirement Administration Commission with the exception of those noted in the findings presented in this report.

In closing, I acknowledge the work of auditors who conducted this examination, and express appreciation to the Board of Retirement and staff for their courtesy and cooperation.

Sincerely,



John W. Parsons, Esq.
Executive Director



EXPLANATION OF FINDINGS AND RECOMMENDATIONS

I. Cash/Bank Reconciliations:

Bank reconciliations are not prepared by the current County Treasurer, but instead by the Retirement Board staff. The Retirement Board has been preparing bank reconciliations since the former Treasurer retired in June 2018. The reconciliations are provided to the current Treasurer for review, however, we did not see signatures or dates to show that the reconciliations tested were reviewed.

A new bank account was opened in August 2017 to replace the original bank account used for disbursements and to help reconcile cash to the general ledger (GL). However, the original bank account remained open as of the end of the audit field work.

We noted the original bank account's reconciliation for the period ending December 31, 2018 had an unexplained variance of \$10,299 with the GL; the GL balance was higher than the adjusted bank balance. By April 30, 2021, the variance increased to \$33,166; the GL balance was lower than the adjusted bank balance and had actually become less than zero.

Recommendation: Monthly bank reconciliations should be prepared by the County Treasurer or a member of the Treasurer's office for best internal controls over cash. There is an internal control deficiency when the Retirement Board office processes disbursements, records the accounting and prepares the bank reconciliations.

Variances noted in bank reconciliations must be investigated and corrected on a timely basis. The Board should close the original account and transfer the remaining balance to the new one.

Board Response:

The Retirement Board has received this issue and approved the newly created method of reconciliation as follows. Reconciliations are now completed by a staff member, reviewed by the Director and approved by the County Treasurer. All parties sign off and date reconciliations. Reconciliations are also reviewed by external auditors annually. The separate issue of the bank account has been resolved by closing the existing account and transferring the funds to the second existing bank account.

2. Monthly Financial Reporting:

A complete set of monthly financial reports were not presented to the Board members for review at monthly Board meetings from January 2015 through to March 2021.

Recommendation: The monthly accounting, cash reconciliations along with bank statements, budget to actual expense comparison (quarterly at a minimum), and cash flow forecast should be presented to the Board members and documented in the meeting minutes.

Board Response:

The records are prepared and made available for review by the Board members. We have now instituted a procedure where the minutes reflect that the Board members have reviewed the monthly financial record.

EXPLANATION OF FINDINGS AND RECOMMENDATIONS (Continued)

3. New Retirements Calculations:

We tested the retirement allowance calculation of 20 new retirees during the audit period and found the following issues:

- One member's retirement allowance calculation included five additional months of stipend over the allowable three years.
- Three retirees' calculations included four annual longevity payments in the three year average of regular compensation. One of these also had approximately \$6,000 of vacation payouts included in regular compensation. Reviewing payroll records rather than just relying on deductions can prevent the types of calculation errors in these first two bullets.
- One allowance was calculated for a superannuation retirement, but was eligible for a termination allowance under Section 10(2). The difference between the two allowances is approximately \$8,000 per year.
- We tested two accidental disability retirements and both were being paid without PERAC approval of the retirement allowance calculations. The board needs to submit all accidental disability retirement calculations to PERAC for approval. This should be done prior to any payment of allowances. Additionally, we were unable to determine how the Board arrived at the earnings used for one of the accidental disability allowance calculations.

Recommendation: The board needs to review and recalculate the retirement allowances noted and make necessary corrections. The Board should review other retirement calculations to make sure only three years of longevity and stipends are included in the three year average of regular compensation; payroll reports will aid this process. The board should review all accidental disability retirements, ordinary disability retirements, and deaths awarded from the beginning of the audit period to the present to make sure the calculations have been properly submitted to PERAC for approval.

Board Response:

The basis of this finding is a newly set standard of reviewing payroll registers for final retirement calculations. The accepted standard of reviewing deductions to confirm pensionability is no longer endorsed by PERAC auditors. While the Board understands and agrees with this standard, the issue at hand is revising the policy and applying it retroactively. After due consideration, the Board has agreed to use review of payroll to ensure regular compensation is used in connection with the member's pension calculation and the proper period is used.

We have always provided special attention to deductions and calculations. We are consistently providing training for treasurers and staff about the importance of insuring the nature of payment.

There is no guidance for this particular termination allowance provided for under §10(2), but the matter listed has been resolved for the case in point.

EXPLANATION OF FINDINGS AND RECOMMENDATIONS (Continued)

4. Investment Management Fees:

Management Fees reported on the Annual Statement's Schedule 7 did not match GL #5304 Management Fees for each year under audit. The Schedule 7 reports were prepared on an accrual basis but the Board did not accrue these expenses in the GL in all years of the audit period.

Also, the Schedule 7 reports included fees for the Vanguard fund which were not included in #5304. These management fees were subtracted from the investment income and this net income amount was recorded to GL #4821 Investment Income.

Recommendation: The Board should be consistent and accrue management fees to GL #5304 in order to correctly account for and report the fees and investment income throughout their Annual Statement.

The Retirement Board must not "net" management fees for accounting purposes but should record management fees and gross income for each investment.

Board Response:

The Annual Statement line GL #5304 was netted fees from a pooled account. The fees were itemized on Schedule 7 of the Annual Statement. Future pooled fund fees will be recorded in GL #5304.

FINAL DETERMINATION:

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

STATEMENT OF LEDGER ASSETS AND LIABILITIES

	AS OF DECEMBER 31,			
	2018	2017	2016	2015
Net Assets Available For Benefits:				
Cash	\$3,446,451	\$5,160,972	\$5,025,170	\$4,104,081
Fixed Income Securities	17,650,513	13,947,194	13,431,898	12,925,671
Equities	38,198,553	38,055,637	30,909,981	28,430,271
Pooled Domestic Equity Funds	17,987,343	19,018,574	16,235,301	13,891,469
Pooled International Equity Funds	5,840,960	6,842,946	3,760,950	3,701,476
Pooled Alternative Investment Funds	62,567	0	0	0
Pooled Real Estate Funds	12,794,582	12,179,800	11,232,911	10,473,908
PRIT Core Fund	58,581,272	59,981,693	51,144,165	47,534,126
Interest Due and Accrued	80,560	58,902	77,072	53,614
Accounts Receivable	336,766	353,526	425,764	840,739
Accounts Payable	(667,644)	(13,135)	(95,870)	(110,846)
Total	<u>\$154,311,923</u>	<u>\$155,586,110</u>	<u>\$132,147,343</u>	<u>\$121,844,510</u>
Fund Balances:				
Annuity Savings Fund	\$37,155,398	\$35,886,137	\$34,257,994	\$32,820,580
Annuity Reserve Fund	11,152,626	9,506,295	8,824,061	8,125,332
Pension Fund	7,230,160	8,479,646	9,070,196	136,012
Military Service Fund	30,167	30,136	13,426	13,413
Expense Fund	0	0	0	0
Pension Reserve Fund	98,743,572	101,683,896	79,981,665	80,749,173
Total	<u>\$154,311,923</u>	<u>\$155,586,110</u>	<u>\$132,147,343</u>	<u>\$121,844,510</u>

STATEMENT OF CHANGES IN FUND BALANCES

	Annuity Savings Fund	Annuity Reserve Fund	Pension Fund	Military Service Fund	Expense Fund	Pension Reserve Fund	Total All Funds
Beginning Balance 2015	\$31,257,927	\$7,186,443	\$740,574	\$13,399	\$0	\$75,995,183	\$115,193,525
Receipts	3,710,574	200,669	5,233,797	13	918,472	4,812,527	14,876,053
Interfund Transfers	(1,792,371)	1,850,908	0	0	0	(58,537)	(0)
Disbursements	(355,549)	(1,112,688)	(5,838,358)	0	(918,472)	0	(8,225,068)
Ending Balance 2015	32,820,580	8,125,332	136,012	13,413	0	80,749,173	121,844,510
Receipts	4,055,189	250,733	5,286,963	13	944,799	9,232,493	19,770,190
Interfund Transfers	(1,728,336)	1,728,336	10,000,000	0	0	(10,000,000)	0
Disbursements	(889,439)	(1,280,340)	(6,352,779)	0	(944,799)	0	(9,467,357)
Ending Balance 2016	34,257,994	8,824,061	9,070,196	13,426	0	79,981,665	132,147,343
Receipts	4,151,940	265,186	6,406,687	16,710	1,181,847	21,736,240	33,758,610
Interfund Transfers	(1,848,837)	1,882,846	0	0	0	(34,009)	0
Disbursements	(674,961)	(1,465,798)	(6,997,237)	0	(1,181,847)	0	(10,319,843)
Ending Balance 2017	35,886,137	9,506,295	8,479,646	30,136	0	101,683,896	155,586,110
Receipts	4,549,514	301,584	6,820,877	30	1,229,239	(2,937,003)	9,964,242
Interfund Transfers	(2,985,836)	2,989,156	0	0	0	(3,320)	(0)
Disbursements	(294,416)	(1,644,410)	(8,070,363)	0	(1,229,239)	0	(11,238,429)
Ending Balance 2018	\$37,155,398	\$11,152,626	\$7,230,160	\$30,167	\$0	\$98,743,572	\$154,311,923

STATEMENT OF RECEIPTS

	FOR THE PERIOD ENDING DECEMBER 31,			
	2018	2017	2016	2015
Annuity Savings Fund:				
Members Deductions	\$4,032,845	\$3,875,822	\$3,682,784	\$3,512,321
Transfers from Other Systems	349,137	130,872	179,385	81,674
Member Make Up Payments and Re-deposits	55,525	30,096	129,177	19,602
Member Payments from Rollovers	62,780	61,902	13,413	60,258
Investment Income Credited to Member Accounts	<u>49,227</u>	<u>53,249</u>	<u>50,430</u>	<u>36,718</u>
Sub Total	<u>4,549,514</u>	<u>4,151,940</u>	<u>4,055,189</u>	<u>3,710,574</u>
Annuity Reserve Fund:				
Investment Income Credited to the Annuity Reserve Fund	<u>301,584</u>	<u>265,186</u>	<u>250,733</u>	<u>200,669</u>
Pension Fund:				
3 (8) (c) Reimbursements from Other Systems Received from Commonwealth for COLA and Survivor Benefits	184,192	170,170	171,125	171,600
Pension Fund Appropriation	29,245	11,123	23,086	27,507
Settlement of Workers' Compensation Claims	6,597,440	6,220,443	5,083,751	5,016,899
Recovery of 91A Overearnings	10,000	4,950	9,000	13,492
	<u>0</u>	<u>0</u>	<u>0</u>	<u>4,299</u>
Sub Total	<u>6,820,877</u>	<u>6,406,687</u>	<u>5,286,963</u>	<u>5,233,797</u>
Military Service Fund:				
Contribution Received from Municipality on Account of Military Service	0	16,697	0	0
Investment Income Credited to the Military Service Fund	<u>30</u>	<u>13</u>	<u>13</u>	<u>13</u>
Sub Total	<u>30</u>	<u>16,710</u>	<u>13</u>	<u>13</u>
Expense Fund:				
Investment Income Credited to the Expense Fund	<u>1,229,239</u>	<u>1,181,847</u>	<u>944,799</u>	<u>918,472</u>
Pension Reserve Fund:				
Pension Reserve Appropriation	0	62,833	897,134	760,765
Interest Not Refunded	3,613	3,441	1,798	59
Miscellaneous Income	0	22	14	1,275
Excess Investment Income	<u>(2,940,616)</u>	<u>21,669,944</u>	<u>8,333,546</u>	<u>4,050,429</u>
Sub Total	<u>(2,937,003)</u>	<u>21,736,240</u>	<u>9,232,493</u>	<u>4,812,527</u>
Total Receipts, Net	<u>\$9,964,242</u>	<u>\$33,758,610</u>	<u>\$19,770,190</u>	<u>\$14,876,053</u>

STATEMENT OF DISBURSEMENTS

FOR THE PERIOD ENDING DECEMBER 31,				
	2018	2017	2016	2015
Annuity Savings Fund:				
Refunds to Members	\$207,824	\$334,247	\$456,798	\$213,495
Transfers to Other Systems	<u>86,592</u>	<u>340,714</u>	<u>432,641</u>	<u>142,054</u>
Sub Total	<u>294,416</u>	<u>674,961</u>	<u>889,439</u>	<u>355,549</u>
Annuity Reserve Fund:				
Annuities Paid	1,639,918	1,465,798	1,280,340	1,112,688
Option B Refunds	<u>4,492</u>	<u>0</u>	<u>0</u>	<u>0</u>
Sub Total	<u>1,644,410</u>	<u>1,465,798</u>	<u>1,280,340</u>	<u>1,112,688</u>
Pension Fund:				
Pensions Paid:				
Regular Pension Payments	5,653,390	5,046,151	4,650,428	4,189,992
Survivorship Payments	138,686	135,158	121,447	100,603
Ordinary Disability Payments	103,582	101,692	102,215	94,703
Accidental Disability Payments	888,964	858,021	781,365	766,427
Accidental Death Payments	174,383	183,048	183,048	180,528
Section 101 Benefits	10,906	10,588	10,588	10,280
3 (8) (c) Reimbursements to Other Systems	994,054	562,337	410,811	408,478
State Reimbursable COLA's Paid	<u>106,398</u>	<u>100,243</u>	<u>92,878</u>	<u>87,347</u>
Sub Total	<u>8,070,363</u>	<u>6,997,237</u>	<u>6,352,779</u>	<u>5,838,358</u>
Expense Fund:				
Board Member Stipend	15,000	15,000	15,000	15,000
Salaries	161,856	167,178	159,310	155,623
Legal Expenses	21,431	29,464	18,288	7,143
Medical Expenses	0	140	198	160
Travel Expenses	3,847	7,974	10,488	16,375
Administrative Expenses	65,370	70,931	67,130	52,691
Professional Services	0	1,525	0	0
Actuarial Services	18,000	19,970	10,240	6,125
Accounting Services	38,000	76,000	0	36,878
Education and Training	960	1,000	3,400	5,780
Furniture and Equipment	5,099	16,049	1,429	839
Management Fees	780,439	658,319	570,476	513,779
Custodial Fees	47,928	40,388	31,336	43,329
Consultant Fees	35,000	43,750	26,250	35,000
Service Contracts	30,169	28,150	25,330	24,000
Fiduciary Insurance	<u>6,141</u>	<u>6,009</u>	<u>5,925</u>	<u>5,752</u>
Sub Total	<u>1,229,239</u>	<u>1,181,847</u>	<u>944,799</u>	<u>918,472</u>
Total Disbursements	<u>\$11,238,429</u>	<u>\$10,319,843</u>	<u>\$9,467,357</u>	<u>\$8,225,068</u>

INVESTMENT INCOME

	FOR THE PERIOD ENDING DECEMBER 31,			
	2018	2017	2016	2015
Investment Income Received From:				
Cash	\$20,420	\$17,633	\$17,810	\$12,588
Short Term Investments	0	0	0	3,411
Fixed Income	483,376	370,452	439,726	559,468
Equities	368,189	892,801	262,848	255,468
Pooled or Mutual Funds	<u>2,903,698</u>	<u>2,283,192</u>	<u>2,394,871</u>	<u>2,190,801</u>
Total Investment Income	<u>3,775,683</u>	<u>3,564,078</u>	<u>3,115,255</u>	<u>3,021,737</u>
Plus:				
Realized Gains	4,462,133	3,706,774	2,209,753	2,759,478
Unrealized Gains	7,180,458	16,613,436	10,238,000	8,672,248
Interest Due and Accrued - Current Year	80,560	58,902	77,072	53,614
Sub Total	<u>11,723,151</u>	<u>20,379,113</u>	<u>12,524,825</u>	<u>11,485,339</u>
Less:				
Paid Accrued Interest on Fixed Income Securities	(85,618)	(12,438)	(41,757)	(30,524)
Realized Loss	(375,041)	(258,698)	(288,030)	(254,095)
Unrealized Loss	(16,339,637)	(424,744)	(5,677,157)	(9,016,155)
Interest Due and Accrued - Prior Year	(58,902)	(77,072)	(53,614)	0
Sub Total	<u>(16,859,198)</u>	<u>(772,951)</u>	<u>(6,060,558)</u>	<u>(9,300,774)</u>
Additional Adjustments:				
Miscellaneous Investment Expenses	(172)	0	0	0
Net Investment Income	<u>(1,360,535)</u>	<u>23,170,239</u>	<u>9,579,522</u>	<u>5,206,302</u>
Income Required:				
Annuity Savings Fund	49,227	53,249	50,430	36,718
Annuity Reserve Fund	301,584	265,186	250,733	200,669
Military Service Fund	30	13	13	13
Expense Fund	<u>1,229,239</u>	<u>1,181,847</u>	<u>944,799</u>	<u>918,472</u>
Total Income Required	<u>1,580,081</u>	<u>1,500,296</u>	<u>1,245,976</u>	<u>1,155,873</u>
Net Investment Income	(1,360,535)	23,170,239	9,579,522	5,206,302
Less: Total Income Required	<u>1,580,081</u>	<u>1,500,296</u>	<u>1,245,976</u>	<u>1,155,873</u>
Excess Income (Loss) To The Pension Reserve Fund	<u>(\$2,940,616)</u>	<u>\$21,669,944</u>	<u>\$8,333,546</u>	<u>\$4,050,429</u>

SCHEDULE OF ALLOCATION OF INVESTMENTS OWNED

(percentages by category)

AS OF DECEMBER 31, 2018		
	MARKET VALUE	PERCENTAGE OF TOTAL ASSETS
Cash	\$3,446,451	2.2%
Fixed Income Securities	17,650,513	11.4%
Equities	38,198,553	24.7%
Pooled Domestic Equity Funds	17,987,343	11.6%
Pooled International Equity Funds	5,840,960	3.8%
Pooled Alternative Investment Funds	62,567	0.0%
Pooled Real Estate Funds	12,794,582	8.3%
PRIT Core Fund	<u>58,581,272</u>	<u>37.9%</u>
Grand Total	<u><u>\$154,562,241</u></u>	<u>100.0%</u>

For the year ending December 31, 2018, the rate of return for the investments of the Dukes County Retirement System was -0.45%. For the five-year period ending December 31, 2018, the rate of return for the investments of the Dukes County Retirement System averaged 7.52%. For the 34-year period ending December 31, 2018, since PERAC began evaluating the returns of the retirement systems, the rate of return on the investments of the Dukes County Retirement System was 7.79%.

The composite rate of return for all retirement systems for the year ending December 31, 2018 was -2.25%. For the five-year period ending December 31, 2018, the composite rate of return for the investments of all retirement systems averaged 6.22%. For the 34-year period ending December 31, 2018, since PERAC began evaluating the returns of the retirement systems, the composite rate of return on the investments of all retirement systems averaged 9.00%.

NOTES TO FINANCIAL STATEMENTS

NOTE 1 – SUMMARY OF PLAN PROVISIONS

The plan is a contributory defined benefit plan covering all Dukes County Retirement System member unit employees deemed eligible by the retirement board, with the exception of school department employees who serve in a teaching capacity. The Teachers' Retirement Board administers the pensions of such school employees.

ADMINISTRATION

There are 104 contributory retirement systems for public employees in Massachusetts. Each system is governed by a retirement board and all boards, although operating independently, are governed by Chapter 32 of the Massachusetts General Laws. This law in general provides uniform benefits, uniform contribution requirements and a uniform accounting and funds structure for all systems.

PARTICIPATION

Participation is mandatory for all full-time employees. Eligibility with respect to part-time, provisional, temporary, seasonal or intermittent employment is governed by regulations promulgated by the retirement board, and approved by PERAC. Membership is optional for certain elected officials.

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

NOTES TO FINANCIAL STATEMENTS (Continued)

MEMBER CONTRIBUTIONS

Member contributions vary depending on the most recent date of membership:

Prior to 1975:	5% of regular compensation
1975 - 1983:	7% of regular compensation
1984 to 6/30/96:	8% of regular compensation
7/1/96 to present:	9% of regular compensation
1979 to present:	an additional 2% of regular compensation in excess of \$30,000.

In addition, members of Group 1 who join the system on or after April 2, 2012 will have their withholding rate reduced to 6% after achieving 30 years of creditable service.

RATE OF INTEREST

Interest on regular deductions made after January 1, 1984 is a rate established by PERAC in consultation with the Commissioner of Banks. The rate is obtained from the average rates paid on individual savings accounts by a representative sample of at least 10 financial institutions.

RETIREMENT AGE

The mandatory retirement age for some Group 2 and Group 4 employees is age 65. Most Group 2 and Group 4 members may remain in service after reaching age 65. Group 4 members who are employed in certain public safety positions are required to retire at age 65. There is no mandatory retirement age for employees in Group 1.

SUPERANNUATION RETIREMENT

A person who became a member before April 2, 2012 is eligible for a superannuation retirement allowance (service retirement) upon meeting the following conditions:

- completion of 20 years of service, or
- attainment of age 55 if hired prior to 1978, or if classified in Group 4, or
- attainment of age 55 with 10 years of service, if hired after 1978, and if classified in Group 1 or 2.

A person who became a member on or after April 2, 2012 is eligible for a superannuation retirement allowance (service retirement) upon meeting the following conditions:

- attainment of age 60 with 10 years of service if classified in Group 1, or
- attainment of age 55 with 10 years of service if classified in Group 2, or
- attainment of age 55 if classified in Group 4.

NOTES TO FINANCIAL STATEMENTS (Continued)

AMOUNT OF BENEFIT

A member's annual allowance is determined by multiplying average salary by a benefit rate related to the member's age and job classification at retirement, and the resulting product by his creditable service. The amount determined by the benefit formula cannot exceed 80% of the member's highest three year (or five year as discussed below) average salary. For veterans as defined in G.L. c. 32, s. 1, there is an additional benefit of \$15 per year for each year of creditable service, up to a maximum of \$300.

For employees who become members after January 1, 2011, regular compensation is limited to 64% of the federal limit found in 26 U.S.C. 401(a)(17). In addition, regular compensation will be limited to prohibit "spiking" of a member's salary to increase the retirement benefit.

- For persons who became members prior to April 2, 2012, Average Salary is the average annual rate of regular compensation received during the 3 consecutive years that produce the highest average, or, if greater, during the last 3 years (whether or not consecutive) preceding retirement.
- For persons who became members on or after April 2, 2012, Average Salary is the average annual rate of regular compensation received during the 5 consecutive years that produce the highest average, or, if greater, during the last 5 years (whether or not consecutive) preceding retirement.
- The Benefit Rate varies with the member's retirement age. For persons who became members prior to April 2, 2012 the highest rate of 2.5% applies to Group 1 employees who retire at or after age 65, Group 2 employees who retire at or after age 60, and to Group 4 employees who retire at or after age 55. A .1% reduction is applied for each year of age under the maximum age for the member's group. For Group 2 employees who terminate from service under age 55, the benefit rate for a Group 1 employee shall be used.
- For persons who became members on or after April 2, 2012 and retire with less than 30 years of creditable service, the highest rate of 2.5% applies to Group 1 employees who retire at or after age 67, Group 2 employees who retire at or after age 62, and to Group 4 employees who retire at or after age 57. A .15% reduction is applied for each year of age under the maximum age for the member's group.
- For persons who became members on or after April 2, 2012 and retire with more than 30 years of creditable service, the highest rate of 2.5% applies to Group 1 employees who retire at or after age 67, Group 2 employees who retire at or after age 62, and to Group 4 employees who retire at or after age 57. A .125% reduction is applied for each year of age under the maximum age for the member's group.

DEFERRED VESTED BENEFIT

A participant who has attained the requisite years of creditable service can elect to defer his or her retirement until a later date. Certain public safety employees cannot defer beyond age 65. All participants must begin to receive a retirement allowance or withdraw their accumulated deductions no later than April 15 of the calendar year following the year they reach age 72.

NOTES TO FINANCIAL STATEMENTS (Continued)

WITHDRAWAL OF CONTRIBUTIONS

Member contributions may be withdrawn upon termination of employment. The interest rate for employees who first become members on or after January 1, 1984 who voluntarily withdraw their contributions with less than 10 years of service will be 3%. Interest payable on all other withdrawals will be set at regular interest.

DISABILITY RETIREMENT

The Massachusetts Retirement Plan provides 2 types of disability retirement benefits:

ORDINARY DISABILITY

Eligibility: Non-veterans who become totally and permanently disabled by reason of a non-job related condition with at least 10 years of creditable service (or 15 years creditable service in systems in which the local option contained in G.L. c. 32, s. 6(1) has not been adopted).

Veterans with ten years of creditable service who become totally and permanently disabled by reason of a non-job related condition prior to reaching “maximum age”. “Maximum age” applies only to those employees classified in Group 4 who are subject to mandatory retirement.

Retirement Allowance: For persons who became members prior to April 2, 2012, the benefit is equal to the accrued superannuation retirement benefit as if the member was age 55. If the member is a veteran, the benefit is 50% of the member’s final rate of salary during the preceding 12 months, plus an annuity based upon accumulated member contributions plus credited interest. If the member is over age 55, he or she will receive not less than the superannuation allowance to which he or she is entitled.

For persons in Group 1 who became members on or after April 2, 2012, the benefit is equal to the accrued superannuation retirement benefit as if the member was age 60. If the member is a veteran, the benefit is 50% of the member’s final rate of salary during the preceding 12 months, plus an annuity based upon accumulated member contributions plus credited interest. If the member is over age 60, he or she will receive not less than the superannuation allowance to which he or she would have been entitled had they retired for superannuation.

For persons in Group 2 and Group 4 who became members on or after April 2, 2012, the benefit is equal to the accrued superannuation retirement benefit as if the member was age 55. If the member is a veteran, the benefit is 50% of the member’s final rate of salary during the preceding 12 months, plus an annuity based upon accumulated member contributions plus credited interest. If the member is over age 55, he or she will receive not less than the superannuation allowance to which he or she would have been entitled had they retired for superannuation.

NOTES TO FINANCIAL STATEMENTS (Continued)

ACCIDENTAL DISABILITY

Eligibility: Applies to members who become permanently and totally unable to perform the essential duties of the position as a result of a personal injury sustained or hazard undergone while in the performance of duties. There are no minimum age or service requirements.

Retirement Allowance: 72% of salary plus an annuity based on accumulated member contributions, with interest. This amount is not to exceed 100% of pay. For those who became members in service after January 1, 1988 or who have not been members in service continually since that date, the amount is limited to 75% of pay. There is an additional pension of \$924.60 per year (or \$312 per year in systems in which the local option contained in G.L. c. 32, s. 7(2)(a)(iii) has not been adopted), per child who is under 18 at the time of the member's retirement, with no age limitation if the child is mentally or physically incapacitated from earning. The additional pension may continue up to age 22 for any child who is a full time student at an accredited educational institution. For systems that have adopted Chapter 157 of the Acts of 2005, veterans as defined in G.L. c. 32, s. 1 receive an additional benefit of \$15 per year for each year of creditable service, up to a maximum of \$300.

ACCIDENTAL DEATH

Eligibility: Applies to members who die as a result of a work-related injury or if the member was retired for accidental disability and the death was the natural and proximate result of the injury or hazard undergone on account of which such member was retired.

Allowance: An immediate payment to a named beneficiary equal to the accumulated deductions at the time of death, plus a pension equal to 72% of current salary and payable to the surviving spouse, dependent children or the dependent parent, plus a supplement of \$924.60 per year, per child (or \$312 per year in systems in which the local option contained in G.L. c. 32, s. 9(2)(d)(ii) has not been adopted), payable to the spouse or legal guardian until all dependent children reach age 18 or 22 if a full time student, unless mentally or physically incapacitated.

The surviving spouse of a member of a police or fire department or any corrections officer who, under specific and limited circumstances detailed in the statute, suffers an accident and is killed or sustains injuries while in the performance of his duties that results in his death, may receive a pension equal to the maximum salary for the position held by the member upon his death. In addition, an eligible family member may receive a one-time payment of \$300,000 from the State Retirement Board. This lump sum payment is also available to the family of a public prosecutor in certain, limited circumstances.

NOTES TO FINANCIAL STATEMENTS (Continued)

DEATH AFTER ACCIDENTAL DISABILITY RETIREMENT

Effective November 7, 1996, Accidental Disability retirees were allowed to select Option C at retirement and provide a benefit for an eligible survivor. For Accidental Disability retirees prior to November 7, 1996, who could not select Option C, if the member's death is from a cause unrelated to the condition for which the member received accidental disability benefits, a surviving spouse will receive an annual allowance of \$6,000. For Systems that accept the provisions of Section 28 of Chapter 131 of the Acts of 2010, the amount of this benefit is \$9,000. For Systems that accept the provisions of Section 63 of Chapter 139 of the Acts of 2012, the amount of this benefit is \$12,000.

DEATH IN ACTIVE SERVICE (OPTION D)

Allowance: An immediate allowance equal to that which would have been payable had the member retired and selected Option C on the day before his or her death. For a member who became a member prior to April 2, 2012 whose death occurred prior to the member's superannuation retirement age, the age 55 benefit rate is used. For a member classified in Group 1 who became a member on or after April 2, 2012 whose death occurred prior to the member's superannuation retirement age, the age 60 benefit rate is used. If the member died after age 60, the actual age is used. For a member classified in Group 2 or Group 4, whose death occurred prior to the member's minimum superannuation retirement age, the benefit shall be calculated using an age 55 age factor. The minimum annual allowance payable to the surviving spouse of a member in service who dies with at least two years of creditable service is \$3,000 unless the retirement system has accepted the local option increasing this minimum annual allowance to \$6,000, provided that the member and the spouse were married for at least one year and living together on the member's date of death.

The surviving spouse of such a member in service receives an additional allowance equal to the sum of \$1,440 per year for the first child and \$1,080 per year for each additional child until all dependent children reach age 18 or 22 if a full time student, unless mentally or physically incapacitated.

COST OF LIVING

If a system has accepted Chapter 17 of the Acts of 1997, and the Retirement Board votes to pay a cost of living increase (COLA) for that year, the percentage is determined based on the increase in the Consumer Price Index used for indexing Social Security benefits, but cannot exceed 3.0%. Section 51 of Chapter 127 of the Acts of 1999, if accepted, allows boards to grant COLA increases greater than that determined by CPI but not to exceed 3.0%. Only a certain portion of a retiree's total allowance is subject to a COLA. The total COLA for periods from 1981 through 1996 is paid for by the Commonwealth of Massachusetts.

Under the provisions of Chapter 32, Section 103(j) inserted by Section 19 of Chapter 188 of the Acts of 2010, systems may increase the maximum base on which the COLA is calculated in multiples of \$1,000. For many years the COLA base was calculated based upon the first \$12,000 of a retiree's allowance. Now the maximum base upon which the COLA is calculated varies from system to system. Each increase in the base must be accepted by a majority vote of the Retirement Board and approved by the legislative body.

NOTES TO FINANCIAL STATEMENTS (Continued)

METHODS OF PAYMENT

A member may elect to receive his or her retirement allowance in one of 3 forms of payment.

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.

ALLOCATION OF PENSION COSTS

If a member's total creditable service was partly earned by employment in more than one retirement system, the cost of the "pension portion" is allocated between the different systems pro rata based on the member's service within each retirement system. In certain circumstances, if a member received regular compensation concurrently from two or more systems on or after January 1, 2010, and was not vested in both systems as of January 1, 2010, such a pro-ration may not be undertaken. This is because such a person may receive a separate retirement allowance from each system.

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES

The accounting records of the System are maintained on a calendar year basis in accordance with the standards and procedures established by the Public Employee Retirement Administration Commission.

Cash accounts are considered to be funds on deposit with banks and are available upon demand.

Short Term Investments are highly liquid investments that will mature within twelve months from the date of acquisition.

Investments are reported at their fair value. Securities traded on recognized exchanges are valued at the most recent sales price at year end. If no sale was reported, the mean of the bid and asked price is used when available, or the most recent bid price. Mutual, commingled and pooled funds are valued based on the net asset or unit value at year end. Real estate and alternative investments are valued based on estimates provided by the managers of those respective investments. Purchases and sales of securities are reflected on the date the trade is initiated. Realized gain or loss is largely based on the difference between the cost or the value at the prior year end and the funds realized upon liquidation. Dividend income is generally recorded when received. Interest income is recorded as earned on an accrual basis. Income from alternative investments is recorded as reported by the managing partner. Appreciation or depreciation in the value of investments consists of the unrealized gains and losses reported as the difference between the previous period and the current value.

The system makes estimates and assumptions that affect the reported values of assets and liabilities and the reported amounts added and deducted during the reporting periods. The fair value of real estate and alternative investment holdings are generally estimated in the absence of reliable exchange values. The actual funds realized upon liquidation may differ from these estimates.

The provisions of Massachusetts General Laws Chapter 32, § 23(2) generally govern the investment practices of the system. The Board retains an investment consultant to closely monitor the implementation and performance of their investment strategy and advise them of the progress toward full funding of the system. That strategy seeks to balance the exposure to common deposit and investment risks related to custody, credit concentrations, interest rate and foreign currency fluctuations.

Operating expenses include the ordinary and necessary cost of investment and professional services and the other miscellaneous administrative expenses of the system.

NOTES TO FINANCIAL STATEMENTS (Continued)

The Annuity Savings Fund is the fund in which members' contributions are deposited. Voluntary contributions, re-deposits, 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 with less than ten years of service is transferred to the Pension Reserve Fund. Upon retirement, members' contributions and interest are transferred to the Annuity Reserve Fund. Dormant account balances must be transferred to the Pension Reserve Fund after a period of ten 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 Special Military Service Credit 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 Special Military Service Credit Fund contains contributions and interest for members while on a military leave for service in the Armed Forces who will receive creditable service for the period of that leave.

The Expense Fund contains amounts transferred from investment income for the purposes of administering the retirement system.

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 amounts appropriated by the governmental units for the purposes of funding future retirement benefits. Any profit or loss realized on the sale or maturity of any investment or on the unrealized gain of a market valued investment as of the valuation date is credited to the Pension Reserve Fund. Additionally, any investment income in excess of the amount required to credit interest to the Annuity Savings Fund, Annuity Reserve Fund, and Special Military Service Credit Fund is credited to this Reserve account.

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

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 4 - ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by KMS Actuaries, LLC as of January 1, 2020.

The actuarial liability for active members was	\$109,056,061
The actuarial liability for inactive members was	3,293,244
The actuarial liability for retired members was	<u>109,501,831</u>
The total actuarial liability was	\$221,851,136
System assets as of that date were (actuarial value)	<u>173,576,041</u>
The unfunded actuarial liability was	<u>\$48,275,095</u>
The ratio of system's assets to total actuarial liability was	78.2%
As of that date the total covered employee payroll was	\$44,437,598

The normal cost for employees on that date was 9.7% of payroll

The normal cost for the employer including administrative expenses was 5.8% of payroll

The principal actuarial assumptions used in the valuation are as follows:

Investment Return: 7.50% per annum
 Rate of Salary Increase: Varies by group & service

SCHEDULE OF FUNDING PROGRESS AS OF JANUARY 1, 2020

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Cov. Payroll ((b-a)/c)
1/1/2020	\$173,576,041	\$221,851,136	\$48,275,095	78.2%	\$44,437,598	108.6%
1/1/2018	\$147,758,673	\$193,470,945	\$45,712,272	76.4%	\$41,262,496	110.8%
1/1/2016	\$121,642,995	\$167,672,546	\$46,029,551	72.5%	\$37,993,450	121.2%
1/1/2014	\$97,171,632	\$141,568,416	\$44,396,784	68.6%	\$34,859,969	127.4%
1/1/2011	\$73,989,143	\$110,358,557	\$36,369,414	67.0%	\$29,118,456	124.9%

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 5 - MEMBERSHIP EXHIBIT

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Retirement in Past Years										
Superannuation	13	13	17	15	17	14	24	15	23	31
Ordinary Disability	1	0	0	0	0	0	0	1	0	0
Accidental Disability	0	0	1	0	0	0	1	1	0	0
Total Retirements	14	13	18	15	17	14	25	17	23	31
Total Retirees, Beneficiaries and Survivors	215	233	239	246	260	270	286	300	315	340
Total Active Members	713	612	616	651	641	663	692	671	682	664
Pension Payments										
Superannuation	\$2,518,527	\$2,740,220	\$2,852,890	\$3,071,499	\$3,390,038	\$3,802,241	\$4,189,992	\$4,650,428	\$5,046,151	\$5,653,390
Survivor/Beneficiary Payments	92,053	90,234	104,848	97,366	93,332	93,321	100,603	121,447	135,158	138,686
Ordinary Disability	82,020	85,678	87,326	94,545	90,882	90,882	94,703	102,215	101,692	103,582
Accidental Disability	500,080	540,675	560,650	638,134	674,603	707,386	766,427	781,365	858,021	888,964
Other	389,154	404,495	641,667	556,795	580,283	595,627	686,633	697,325	856,216	1,285,741
Total Payments for Year	<u>\$3,581,834</u>	<u>\$3,861,302</u>	<u>\$4,247,382</u>	<u>\$4,458,338</u>	<u>\$4,829,138</u>	<u>\$5,289,455</u>	<u>\$5,838,358</u>	<u>\$6,352,779</u>	<u>\$6,997,237</u>	<u>\$8,070,363</u>



COMMONWEALTH OF MASSACHUSETTS

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