

WORCESTER

RETIREMENT SYSTEM

AUDIT REPORT

JANUARY 1, 2015 - DECEMBER 31, 2019



PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION
COMMONWEALTH OF MASSACHUSETTS

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PERAC

COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

PHILIP Y. BROWN, ESQ., *Chairman*

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

Auditor SUZANNE M. BUMP | KATHLEEN M. FALLON | KATE FITZPATRICK | JAMES M. MACHADO | RICHARD MacKINNON, Jr. | JENNIFER F. SULLIVAN

September 1, 2021

The Public Employee Retirement Administration Commission (PERAC) has completed a review of the audits of the Worcester Retirement System conducted by the firm of CliftonLarsonAllen LLP, Certified Public Accountants, (CLA). CLA conducted these audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits in *Government Auditing Standards*, issued by the Comptroller General of the United States. The audits covered the period from January 1, 2015 to December 31, 2019.

We conducted an inspection of the work papers prepared by CLA. We determined that the audits were conducted in a competent professional manner and the work papers demonstrated that audit tests and procedures were performed in sufficient detail to allow us to accept the final audit reports as issued. These reports are included within the Worcester Retirement Systems Comprehensive Annual Financial Report's (CAFR) and can be found on the Retirement Board page on the City of Worcester's website at <http://www.worcesterma.gov/retirement-board/reports>.

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

Accordingly, we supplemented the field work conducted in the audits by CLA with certain limited procedures designed to provide additional assurance that the accounting and management standards established by PERAC were adhered to and complied with. The specific objectives of our review were to determine: 1) that the Board is exercising appropriate fiduciary oversight, 2) that cash balances are accurately stated, 3) that contracts were procured in compliance with the provisions of Section 23B of Chapter 32, 4) that travel expenses were properly documented and accounted for, 5) that retirement contributions are accurately deducted, 6) that retirement allowances were correctly calculated, 7) that required member documentation is maintained, 8) that buybacks were correctly calculated and 9) that refunds issued by the system were correctly calculated.

To achieve these objectives, we inspected certain records of the Worcester Retirement Board in the above areas. Specifically, we reviewed the minutes of the Board meetings for compliance with fiduciary oversight, verified cash balances and tested a sample of travel expenses for Board approvals, supporting documentation and proper accounting. We reviewed procurement files for contracts awarded and confirmed that all required documents were maintained. We tested the payroll records of a sample of active members to confirm that the correct percentage of regular compensation is being deducted, including the additional two percent over \$30,000. We tested a sample of members



who retired during our audit period to verify that their retirement allowance was calculated in accordance with the statute. We reviewed a sample of member files for accuracy and completeness. We also reviewed a sample of buyback calculations and tested refunds issued for accuracy.

In our opinion, the financial records are being maintained and the management functions are being performed in conformity with the standards established by PERAC.

We commend the Worcester Retirement Board for the exemplary operation of the system.

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

Sincerely,

A handwritten signature in black ink, appearing to read "John W. Parsons", written over a light blue horizontal line.

John W. Parsons, Esq.
Executive Director

ANNUAL STATEMENTS (as submitted)

STATEMENT OF LEDGER ASSETS AND LIABILITIES

AS OF DECEMBER 31,					
	2019	2018	2017	2016	2015
Net Assets Available For Benefits:					
Cash	\$5,343,445	\$4,608,318	\$4,148,258	\$4,599,609	\$3,795,507
Fixed Income Securities	100,909,456	98,144,108	107,001,932	103,086,027	101,432,199
Equities	12,850,660	10,096,567	12,009,334	11,236,496	16,730,714
Pooled Domestic Equity Funds	138,253,443	137,397,319	172,591,021	164,644,355	174,725,037
Pooled International Equity Funds	184,250,900	159,714,271	188,357,076	156,805,116	190,206,171
Pooled Domestic Fixed Income Funds	25,282,226	22,901,125	48,240,634	45,435,226	41,036,887
Pooled Global Fixed Income Funds	32,043,367	27,877,399	30,161,581	26,807,016	0
Pooled Alternative Investment Funds	143,977,107	126,757,131	116,885,774	118,854,173	118,795,516
Pooled Real Estate Funds	75,496,921	82,626,295	73,265,374	133,514,184	134,050,117
Hedge Funds	0	0	0	19,537,642	18,728,641
Prit Fund	317,693,109	236,041,192	203,302,393	54,496,590	0
Accounts Receivable	977,139	886,760	1,691,507	1,467,205	1,345,924
Interest Due and Accrued	465,054	564,512	580,031	599,072	532,387
Accounts Payable	(3,944,582)	(3,149,220)	(5,790,844)	(3,738,001)	(3,549,029)
Total	<u>\$1,033,598,245</u>	<u>\$904,465,776</u>	<u>\$952,444,071</u>	<u>\$837,344,711</u>	<u>\$797,830,070</u>
Fund Balances:					
Annuity Savings Fund	\$207,514,425	\$201,754,782	\$196,740,865	\$188,910,537	\$186,699,458
Annuity Reserve Fund	63,938,450	63,477,299	61,846,885	63,217,316	59,752,142
Pension Fund	3,527,379	2,173,916	2,607,080	5,267,083	7,828,433
Military Service Fund	212,233	187,690	187,502	200,946	200,671
Expense Fund	0	0	0	0	0
Pension Reserve Fund	758,405,758	636,872,090	691,061,738	579,748,829	543,349,365
Total	<u>\$1,033,598,245</u>	<u>\$904,465,776</u>	<u>\$952,444,071</u>	<u>\$837,344,711</u>	<u>\$797,830,070</u>

ANNUAL STATEMENTS (as submitted) (Continued)

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	\$183,475,605	\$57,153,305	\$7,756,460	\$198,332	\$0	\$577,049,471	\$825,633,173
Receipts	17,509,561	1,711,354	44,585,992	30,847	5,664,044	(12,978,986)	56,522,812
Interfund Transfers	(12,124,960)	11,831,254	21,043,333	(28,508)	0	(20,721,120)	0
Disbursements	<u>(2,160,748)</u>	<u>(10,943,771)</u>	<u>(65,557,352)</u>	<u>0</u>	<u>(5,664,044)</u>	<u>0</u>	<u>(84,325,916)</u>
Ending Balance 2015	186,699,458	59,752,142	7,828,433	200,671	0	543,349,365	797,830,070
Receipts	17,868,787	1,774,551	46,342,174	55,173	5,872,978	56,195,786	128,109,448
Interfund Transfers	(13,810,925)	13,162,209	20,499,936	(54,898)	0	(19,796,322)	(0)
Disbursements	<u>(1,846,784)</u>	<u>(11,471,585)</u>	<u>(69,403,459)</u>	<u>0</u>	<u>(5,872,978)</u>	<u>0</u>	<u>(88,594,806)</u>
Ending Balance 2016	188,910,537	63,217,316	5,267,084	200,946	0	579,748,829	837,344,712
Receipts	19,476,613	1,852,795	48,042,035	187	5,216,941	131,974,260	206,562,831
Interfund Transfers	(9,064,083)	9,104,780	20,634,284	(13,631)	0	(20,661,351)	0
Disbursements	<u>(2,582,201)</u>	<u>(12,328,006)</u>	<u>(71,336,322)</u>	<u>0</u>	<u>(5,216,941)</u>	<u>0</u>	<u>(91,463,472)</u>
Ending Balance 2017	196,740,865	61,846,885	2,607,081	187,502	0	691,061,738	952,444,071
Receipts	20,137,459	1,835,835	50,823,517	188	5,586,561	(33,196,774)	45,186,785
Interfund Transfers	(12,587,898)	12,658,905	20,921,867	0	0	(20,992,873)	0
Disbursements	<u>(2,535,644)</u>	<u>(12,864,327)</u>	<u>(72,178,549)</u>	<u>0</u>	<u>(5,586,561)</u>	<u>0</u>	<u>(93,165,080)</u>
Ending Balance 2018	201,754,782	63,477,299	2,173,916	187,690	0	636,872,090	904,465,777
Receipts	20,888,488	1,852,594	53,858,205	24,543	6,478,632	144,444,951	227,547,414
Interfund Transfers	(12,557,485)	12,669,584	22,799,184	0	0	(22,911,283)	0
Disbursements	<u>(2,571,361)</u>	<u>(14,061,027)</u>	<u>(75,303,925)</u>	<u>0</u>	<u>(6,478,632)</u>	<u>0</u>	<u>(98,414,945)</u>
Ending Balance 2019	<u>\$207,514,425</u>	<u>\$63,938,450</u>	<u>\$3,527,380</u>	<u>\$212,233</u>	<u>\$0</u>	<u>\$758,405,758</u>	<u>\$1,033,598,246</u>

ANNUAL STATEMENTS (as submitted) (Continued)

STATEMENT OF RECEIPTS

	FOR THE PERIOD ENDING DECEMBER 31,				
	2019	2018	2017	2016	2015
Annuity Savings Fund:					
Members Deductions	\$19,256,363	\$18,252,813	\$17,910,839	\$16,735,927	\$16,428,601
Transfers from Other Systems	1,267,003	1,577,382	1,270,345	850,815	821,772
Member Make Up Payments and Re-deposits	132,330	83,461	59,261	58,527	45,263
Member Payments from Rollovers	0	0	0	21,775	9,223
Investment Income Credited to Member Accounts	<u>232,793</u>	<u>223,803</u>	<u>236,168</u>	<u>201,743</u>	<u>204,702</u>
Sub Total	<u>20,888,488</u>	<u>20,137,459</u>	<u>19,476,613</u>	<u>17,868,787</u>	<u>17,509,561</u>
Annuity Reserve Fund:					
Investment Income Credited to the Annuity Reserve	<u>1,852,594</u>	<u>1,835,835</u>	<u>1,852,795</u>	<u>1,774,551</u>	<u>1,711,354</u>
Pension Fund:					
3 (8) (c) Reimbursements from Other Systems	801,385	809,924	791,079	700,787	646,856
Received from Commonwealth for COLA and Survivor Benefits	790,329	859,845	975,837	1,153,949	1,161,661
Pension Fund Appropriation	52,206,269	49,098,344	46,188,470	44,411,990	42,703,837
Settlement of Workers' Compensation Claims	18,700	49,500	47,999	45,300	54,000
Recovery of 91A Overearnings	<u>41,522</u>	<u>5,904</u>	<u>38,649</u>	<u>30,148</u>	<u>19,638</u>
Sub Total	<u>53,858,205</u>	<u>50,823,517</u>	<u>48,042,035</u>	<u>46,342,174</u>	<u>44,585,992</u>
Military Service Fund:					
Contribution Received from Municipality on Account of Military Service	24,356	0	0	55,027	30,685
Investment Income Credited to the Military Service Fund	<u>188</u>	<u>188</u>	<u>187</u>	<u>146</u>	<u>161</u>
Sub Total	<u>24,543</u>	<u>188</u>	<u>187</u>	<u>55,173</u>	<u>30,847</u>
Expense Fund:					
Investment Income Credited to the Expense Fund	<u>6,478,632</u>	<u>5,586,561</u>	<u>5,216,941</u>	<u>5,872,978</u>	<u>5,664,044</u>
Pension Reserve Fund:					
Federal Grant Reimbursement	0	0	0	0	0
Interest Not Refunded	8,095	159	821	1,662	810
Miscellaneous Income	3	261	8,890	237	2,206
Excess Investment Income	<u>144,436,853</u>	<u>(33,197,194)</u>	<u>131,964,548</u>	<u>56,193,887</u>	<u>(12,982,002)</u>
Sub Total	<u>144,444,951</u>	<u>(33,196,774)</u>	<u>131,974,260</u>	<u>56,195,786</u>	<u>(12,978,986)</u>
Total Receipts, Net	<u>\$227,547,414</u>	<u>\$45,186,785</u>	<u>\$206,562,831</u>	<u>\$128,109,448</u>	<u>\$56,522,812</u>

ANNUAL STATEMENTS (as submitted) (Continued)

STATEMENT OF DISBURSEMENTS

FOR THE PERIOD ENDING DECEMBER 31,					
	2019	2018	2017	2016	2015
Annuity Savings Fund:					
Refunds to Members	\$991,935	\$1,145,034	\$1,358,121	\$1,030,226	\$954,885
Transfers to Other Systems	<u>1,579,426</u>	<u>1,390,610</u>	<u>1,224,080</u>	<u>816,559</u>	<u>1,205,863</u>
Sub Total	<u>2,571,361</u>	<u>2,535,644</u>	<u>2,582,201</u>	<u>1,846,784</u>	<u>2,160,748</u>
Annuity Reserve Fund:					
Annuities Paid	13,789,635	12,766,235	12,150,716	11,427,732	10,723,267
Option B Refunds	<u>271,392</u>	<u>98,092</u>	<u>177,290</u>	<u>43,853</u>	<u>220,504</u>
Sub Total	<u>14,061,027</u>	<u>12,864,327</u>	<u>12,328,006</u>	<u>11,471,585</u>	<u>10,943,771</u>
Pension Fund:					
Pensions Paid:					
Regular Pension Payments	36,337,596	35,072,799	39,441,834	37,977,162	35,487,721
Survivorship Payments	4,176,398	3,997,270	1,162,453	1,079,176	1,391,760
Ordinary Disability Payments	735,086	624,193	580,801	600,754	506,729
Accidental Disability Payments	14,256,359	13,718,454	12,238,723	12,015,214	11,334,407
Accidental Death Payments	3,706,826	3,757,164	3,298,326	3,423,947	3,531,944
Section 101 Benefits	889,778	865,129	121,013	123,144	123,576
3 (8) (c) Reimbursements to Other Systems	3,515,507	2,656,236	3,148,303	3,027,024	2,257,637
State Reimbursable COLA's Paid	<u>11,686,375</u>	<u>11,487,304</u>	<u>11,344,869</u>	<u>11,157,038</u>	<u>10,923,579</u>
Sub Total	<u>75,303,925</u>	<u>72,178,549</u>	<u>71,336,322</u>	<u>69,403,459</u>	<u>65,557,352</u>
Expense Fund:					
Board Member Stipend	22,500	22,125	22,500	22,500	22,500
Salaries	349,796	320,618	313,270	309,168	350,010
Legal Expenses	106,903	74,142	77,561	76,248	50,038
Medical Expenses	11,036	12,711	21,527	13,125	9,551
Custodial Fees	137,638	166,528	163,602	158,485	172,130
Investment Consultant Fees	154,999	165,000	165,000	230,000	210,000
Travel Expenses	508	2,819	2,841	905	1,388
Administrative Expenses	14,762	8,959	9,160	9,420	10,494
Actuarial Services	33,000	32,000	32,000	32,000	31,000
Accounting Services	23,000	23,000	23,000	22,000	21,000
Education and Training	800	320	250	1,000	1,310
Management Fees	5,527,737	4,667,098	4,304,935	4,918,823	4,709,172
Service Contracts	43,856	41,467	31,998	31,300	28,873
Fiduciary Insurance	<u>52,096</u>	<u>49,775</u>	<u>49,296</u>	<u>48,003</u>	<u>46,578</u>
Sub Total	<u>6,478,632</u>	<u>5,586,561</u>	<u>5,216,941</u>	<u>5,872,978</u>	<u>5,664,044</u>
Total Disbursements	\$98,414,945	\$93,165,080	\$91,463,472	\$88,594,806	\$84,325,916

ANNUAL STATEMENTS (as submitted) (Continued)

INVESTMENT INCOME

	FOR THE PERIOD ENDING DECEMBER 31,				
	2019	2018	2017	2016	2015
Investment Income Received From:					
Cash	\$69,439	\$44,743	\$35,320	\$1,211	(\$5,474)
Short Term Investments	2,200	0	0	0	0
Fixed Income	3,481,875	2,482,720	2,709,777	2,795,283	2,657,980
Equities	212,983	229,096	222,892	302,236	(2,559)
Pooled or Mutual Funds	18,511,244	16,232,510	11,740,110	11,833,645	6,180,827
Commission Recapture	<u>151</u>	<u>165</u>	<u>104</u>	<u>143</u>	<u>169</u>
Total Investment Income	<u>22,277,893</u>	<u>18,989,234</u>	<u>14,708,203</u>	<u>14,932,518</u>	<u>8,830,943</u>
Plus:					
Realized Gains	55,198,646	56,901,321	45,949,233	16,028,791	12,068,904
Unrealized Gains	149,612,084	71,554,310	108,682,804	79,289,842	66,253,383
Interest Due & Accrued - Current Year	<u>465,054</u>	<u>564,512</u>	<u>580,031</u>	<u>599,072</u>	<u>532,387</u>
Sub Total	<u>205,275,783</u>	<u>129,020,143</u>	<u>155,212,068</u>	<u>95,917,705</u>	<u>78,854,674</u>
Less:					
Paid Accrued Interest on Fixed Income Securities	109,766	92,237	151,514	260,267	192,653
Realized Losses	4,414,008	5,234,915	2,507,318	2,979,526	7,421,546
Unrealized Losses	68,635,947	166,196,291	27,391,725	43,034,739	84,903,401
Interest Due & Accrued - Prior Year	564,512	580,031	599,072	532,387	569,758
Additional Adjustments:					
Carried Interest Expenses	282,694	826,538	0	0	0
Miscellaneous Investment Expenses	<u>545,688</u>	<u>630,173</u>	<u>0</u>	<u>0</u>	<u>0</u>
Sub Total	<u>74,552,616</u>	<u>173,560,184</u>	<u>30,649,630</u>	<u>46,806,919</u>	<u>93,087,357</u>
Net Investment Income	<u>153,001,060</u>	<u>(25,550,808)</u>	<u>139,270,641</u>	<u>64,043,304</u>	<u>(5,401,740)</u>
Income Required:					
Annuity Savings Fund	232,793	223,803	236,168	201,743	204,702
Annuity Reserve Fund	1,852,594	1,835,835	1,852,795	1,774,551	1,711,354
Military Service Fund	188	188	187	146	161
Expense Fund	<u>6,478,632</u>	<u>5,586,561</u>	<u>5,216,941</u>	<u>5,872,978</u>	<u>5,664,044</u>
Total Income Required	<u>8,564,207</u>	<u>7,646,387</u>	<u>7,306,093</u>	<u>7,849,417</u>	<u>7,580,262</u>
Net Investment Income	153,001,060	(25,550,808)	139,270,641	64,043,304	(5,401,740)
Less: Total Income Required	<u>8,564,207</u>	<u>7,646,387</u>	<u>7,306,093</u>	<u>7,849,417</u>	<u>(7,580,262)</u>
Excess Income (Loss) To The Pension Reserve Fund	<u>\$144,436,853</u>	<u>(\$33,197,194)</u>	<u>\$131,964,548</u>	<u>\$56,193,887</u>	<u>(\$12,982,002)</u>

SUPPLEMENTARY INFORMATION

SCHEDULE OF ALLOCATION OF INVESTMENTS OWNED

(percentages by category)

AS OF DECEMBER 31, 2019		
	MARKET VALUE	PERCENTAGE OF TOTAL ASSETS
Cash	\$5,343,445	0.5%
Fixed Income Securities	100,909,456	9.7%
Equities	12,850,660	1.2%
Pooled Domestic Equity Funds	138,253,443	13.3%
Pooled International Equity Funds	184,250,900	17.8%
Pooled Domestic Fixed Income Funds	25,282,226	2.4%
Pooled Global Fixed Income Funds	32,043,367	3.1%
Pooled Alternative Investment Funds	143,977,107	13.9%
Pooled Real Estate Funds	75,496,921	7.3%
PRIT Core Fund	<u>317,693,109</u>	<u>30.7%</u>
Grand Total	<u>\$1,036,100,634</u>	<u>100.0%</u>

For the year ending December 31, 2019, the rate of return for the investments of the Worcester Retirement System was 17.66%. For the five-year period ending December 31, 2019, the rate of return for the investments of the Worcester Retirement System averaged 7.44%. For the 35-year period ending December 31, 2019, since PERAC began evaluating the returns of the retirement systems, the rate of return on the investments of the Worcester Retirement System was 8.81%.

The composite rate of return for all retirement systems for the year ending December 31, 2019 was 16.90%. For the five-year period ending December 31, 2019, the composite rate of return for the investments of all retirement systems averaged 7.95%. For the 35-year period ending December 31, 2019, since PERAC began evaluating the returns of the retirement systems, the composite rate of return on the investments of all retirement systems averaged 9.22%.

SUPPLEMENTARY INFORMATION (Continued)

SUMMARY OF PLAN PROVISIONS

The plan is a contributory defined benefit plan covering all Worcester 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.

SUPPLEMENTARY INFORMATION (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.

SUPPLEMENTARY INFORMATION (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.

SUPPLEMENTARY INFORMATION (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.

SUPPLEMENTARY INFORMATION (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 \$952.32 per year (or \$312.00 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 \$952.32 per year, per child (or \$312.00 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 \$300,000.00 from the State Retirement Board. This lump sum payment is also available to the family of a public prosecutor in certain, limited circumstances.

SUPPLEMENTARY INFORMATION (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.

SUPPLEMENTARY INFORMATION (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-rata may not be undertaken. This is because such a person may receive a separate retirement allowance from each system.

SUPPLEMENTARY INFORMATION (Continued)

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 primarily relies upon the investment strategy of the PRIM board to maintain their 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.

SUPPLEMENTARY INFORMATION (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.

SUPPLEMENTARY INFORMATION (Continued)

ADMINISTRATION OF THE SYSTEM

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

Ex-officio Member: Robert V. Stearns

Appointed Member: Stephen F. Wentzell, Chairperson Serves until a successor is appointed

Elected Member: Elizabeth A. Early Term Expires: 11/01/22

Elected Member: John F. Mahan Term Expires: 01/01/23

Appointed Member: Tamara Cullen Term Expires: 11/07/21

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

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

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

BOARD REGULATIONS

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

SUPPLEMENTARY INFORMATION (Continued)

ACTUARIAL VALUATION AND ASSUMPTIONS

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

The actuarial liability for active members was	\$616,415,898
The actuarial liability for vested terminated members was	17,387,442
The actuarial liability for non-vested terminated members was	5,663,970
The actuarial liability for retired, survivor, and inactive members was	<u>915,307,098</u>
The total actuarial liability was	\$1,554,774,408
System assets as of that date were (actuarial value)	<u>993,870,483</u>
The unfunded actuarial liability was	<u>\$560,903,925</u>
 The ratio of system's assets to total actuarial liability was	 63.9%
As of that date the total covered employee payroll was	\$196,970,554

The normal cost for employees on that date was 10.1% of payroll

The normal cost for the employer including administrative expenses was 7.6% of payroll

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

Investment Return:	6.9% per annum
Rate of Salary Increase:	4% per annum

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	\$993,870,483	\$1,554,774,408	\$560,903,925	63.9%	\$196,970,554	284.8%
1/1/2019	\$952,294,056	\$1,506,336,758	\$554,042,702	63.2%	\$189,546,932	292.3%
1/1/2018	\$928,286,125	\$1,462,371,012	\$534,084,887	63.5%	\$186,825,867	285.9%
1/1/2017	\$884,576,848	\$1,346,266,105	\$461,689,257	65.7%	\$177,059,965	260.8%
1/1/2016	\$849,286,321	\$1,286,899,596	\$437,613,275	66.0%	\$170,322,286	256.9%

* Covered Payroll Figure Set Equal to Total Payroll

SUPPLEMENTARY INFORMATION (Continued)

MEMBERSHIP EXHIBIT

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Retirement in Past Years										
Superannuation	156	59	113	90	101	96	125	77	111	109
Ordinary Disability	1	2	2	0	0	0	1	0	0	1
Accidental Disability	7	3	8	2	5	4	2	3	8	10
Total Retirements	164	64	123	92	106	100	128	80	119	120
Total Retirees, Beneficiaries and Survivors	2,809	2,772	2,754	2,741	2,718	2,716	2,724	2,718	2,761	2,929
Total Active Members	3,185	3,173	3,260	3,281	3,247	3,352	3,414	3,466	2,227	3,856
Pension Payments										
Superannuation	\$26,885,194	\$28,911,453	\$29,865,176	\$30,940,562	\$33,659,810	\$35,487,721	\$37,977,162	\$39,441,834	\$35,072,799	\$36,337,596
Survivor/Beneficiary Payments	1,895,837	2,260,176	2,219,417	2,357,117	1,326,138	\$1,391,760	1,079,176	1,162,453	3,997,270	4,176,398
Ordinary Disability	410,682	481,273	517,857	532,847	529,901	\$506,729	600,754	580,801	624,193	735,086
Accidental Disability	10,993,690	11,134,734	10,960,801	10,949,146	11,066,163	\$11,334,407	12,015,214	12,238,723	13,718,454	14,256,359
Other	<u>15,422,707</u>	<u>15,277,356</u>	<u>15,859,767</u>	<u>16,246,803</u>	<u>16,773,791</u>	<u>16,836,735</u>	<u>17,731,152</u>	<u>17,912,511</u>	<u>18,765,833</u>	<u>19,798,486</u>
Total Payments for Year	<u>\$55,608,110</u>	<u>\$58,064,992</u>	<u>\$59,423,018</u>	<u>\$61,026,475</u>	<u>\$63,355,803</u>	<u>\$65,557,352</u>	<u>\$69,403,459</u>	<u>\$71,336,322</u>	<u>\$72,178,549</u>	<u>\$75,303,925</u>

COMMONWEALTH OF MASSACHUSETTS

Public Employee Retirement Administration Commission

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