



2021

INVESTMENT REPORT



| PERAC

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Letter from Executive Director

John W. Parsons

“This summary report allows readers to review the current and long-term performance of our systems and the steady, positive progress being made towards the full funding of our systems.”

We are pleased to release this Investment Report for 2021. Each year, PERAC publishes the returns and annualized past returns of each Massachusetts public retirement system, in addition to their funded ratio. This summary report allows readers to review the current and long-term performance of our systems along with their steady, positive progress towards full funding. Our Annual Report will provide a more comprehensive view of our systems, both individually and collectively.

Following the adoption of Chapter 68 of the Acts of 2007, the Public Employee Retirement Administration Commission (PERAC) began issuing an Investment Report containing investment and funding results prior to the issuance of our Annual Report. Chapter 68 of the Acts of 2007 mandates that systems must meet certain investment and funding standards or they shall transfer their assets to the Pension Reserves Investment Management Board (PRIM) to invest in the Pension Reserves Investment Trust Fund (PRIT). In light of the impact that these results may have on some systems, the Commission believes that it is imperative that this data be disseminated as soon as possible.

The two Chapter 68 standards are a funded ratio of 65% and investment returns within 200 basis points (2%) of PRIM's 10-year investment performance. Based on investment performance results for 2021, the investment standard is 9.02% (PRIM 10-year return of 11.02% minus 2.00%).

This report delineates investment returns for several periods: 2021, 2017-2021 inclusive, 2012-2021 inclusive, and since inception through 2021. The funded ratios are as of the date of the most recent valuation available to PERAC. Ratios based on actuarial valuations received after April 1, 2022 have not been included in this Report. However, such valuations will be used to conduct the Chapter 68 analysis.

PERAC has completed its analysis of system funded status and investment performance in accordance with Chapter 68 of the Acts of 2007. Applying the tests set forth in that statute and PERAC Memo #35 of 2007, PERAC has determined that no retirement board will be ordered to transfer its assets to the Pension Reserves Investment Trust Fund (PRIT) based on 2021 results.

This Report is the result of the efforts of PERAC's Investment, Compliance, Audit, and Communications Units. On behalf of the Commission, I would like to thank Senior Investment Analysts Veronica Colon and Sarita Yee for their efforts in preparing this Report. Lastly, we express our appreciation to the administrative staff at our retirement boards for their efforts in providing the detailed data that allows us to issue this report in a timely and accurate manner.

I hope you find the Report informative and helpful as you assess the state of our retirement systems.

Sincerely,

A handwritten signature in dark ink, appearing to read "John W. Parsons".

John W. Parsons, Esq.
Executive Director

2021 RETURNS & ANNUALIZED PAST RETURNS (%) | FUNDED RATIOS

| | Return (2021) | 5-Year Return | 10-Year Return | 37-Year Return | Funded Ratio | Date of Most Recent Valuation |
|---------------------|---------------|---------------|----------------|----------------|--------------|-------------------------------|
| ADAMS | 20.22% | 10.71% | 8.30% | 8.09% | 67.4% | 1/1/20 |
| AMESBURY | 20.00% | 12.67% | 10.89% | 8.55% | 57.2% | 1/1/20 |
| ANDOVER | 19.22% | 12.61% | 10.88% | 8.85% | 46.9% | 1/1/21 |
| ARLINGTON | 20.01% | 12.35% | 10.59% | 8.83% | 58.1% | 1/1/21 |
| ATTLEBORO | 16.12% | 13.40% | 11.38% | 9.43% | 62.2% | 1/1/20 |
| BARNSTABLE COUNTY | 20.44% | 12.98% | 11.09% | 8.15% | 60.8% | 1/1/20 |
| BELMONT | 17.37% | 11.21% | 10.24% | 9.59% | 60.4% | 1/1/20 |
| BERKSHIRE COUNTY | 20.18% | 12.71% | 10.91% | 9.43% | 87.4% | 1/1/21 |
| BEVERLY | 20.37% | 12.84% | 11.08% | 9.07% | 61.0% | 1/1/20 |
| BLUE HILLS REGIONAL | 20.09% | 12.63% | 10.85% | 9.13% | 73.8% | 1/1/20 |
| BOSTON (CITY) | 13.03% | 10.63% | 9.24% | 9.04% | 75.6% | 1/1/20 |
| BOSTON (TEACHERS) | 19.96% | 12.61% | 10.87% | N/A | 43.0% | 1/1/21 |
| BRAINTREE | 15.60% | 11.64% | 9.75% | 8.98% | 67.7% | 1/1/20 |
| BRISTOL COUNTY | 16.72% | 11.92% | 10.56% | 9.19% | 60.1% | 1/1/20 |
| BROCKTON | 17.84% | 10.77% | 9.08% | 8.89% | 60.6% | 1/1/20 |
| BROOKLINE | 22.83% | 12.57% | 10.33% | 9.13% | 59.6% | 1/1/20 |
| CAMBRIDGE | 17.74% | 11.83% | 10.90% | 9.56% | 85.8% | 1/1/20 |
| CHELSEA | 20.43% | 12.84% | 11.00% | 8.54% | 77.7% | 1/1/21 |
| CHICOPEE | 15.10% | 11.24% | 10.62% | 8.98% | 85.7% | 1/1/21 |
| CLINTON | 21.32% | 13.01% | 11.03% | 8.35% | 74.2% | 1/1/21 |
| CONCORD | 17.51% | 10.95% | 10.10% | 8.88% | 89.0% | 1/1/21 |
| DANVERS | 17.40% | 11.25% | 9.66% | 8.39% | 60.3% | 1/1/20 |
| DEDHAM | 20.47% | 12.89% | 11.08% | 9.90% | 83.1% | 1/1/20 |
| DUKES COUNTY | 19.32% | 13.85% | 11.89% | 8.57% | 78.2% | 1/1/20 |
| EASTHAMPTON | 20.67% | 12.86% | 11.01% | 8.81% | 74.9% | 1/1/20 |
| ESSEX REGIONAL | 20.24% | 12.60% | 10.97% | 9.20% | 53.8% | 1/1/20 |
| EVERETT | 20.35% | 12.90% | 11.09% | 8.97% | 62.9% | 1/1/20 |
| FAIRHAVEN | 20.39% | 12.81% | 10.99% | 9.70% | 74.5% | 1/1/20 |
| FALL RIVER | 20.09% | 12.47% | 10.77% | 8.85% | 44.5% | 1/1/21 |
| FALMOUTH | 18.26% | 10.93% | 10.43% | 9.23% | 67.1% | 1/1/20 |
| FITCHBURG | 20.17% | 12.75% | 10.81% | 8.24% | 47.6% | 1/1/20 |
| FRAMINGHAM | 19.97% | 12.67% | 10.92% | 9.65% | 72.8% | 1/1/20 |
| FRANKLIN REGIONAL | 20.40% | 12.32% | 11.26% | 8.89% | 74.4% | 1/1/20 |
| GARDNER | 20.45% | 12.78% | 10.98% | 9.77% | 63.7% | 1/1/21 |
| GLOUCESTER | 20.38% | 12.85% | 11.01% | 9.32% | 49.1% | 1/1/20 |
| GREATER LAWRENCE | 19.07% | 15.32% | 12.23% | 8.55% | 97.0% | 1/1/21 |

NOTE: Numbers are subject to change as board data is updated.

2021 RETURNS & ANNUALIZED PAST RETURNS (%) | FUNDED RATIOS

| | Return (2021) | 5-Year Return | 10-Year Return | 37-Year Return | Funded Ratio | Date of Most Recent Valuation |
|--|---------------|---------------|----------------|----------------|--------------|-------------------------------|
| GREENFIELD | 20.41% | 12.93% | 11.12% | 9.02% | 59.9% | 1/1/21 |
| HAMPDEN COUNTY REGIONAL | 19.95% | 12.50% | 10.73% | 9.05% | 48.7% | 1/1/20 |
| HAMPSHIRE COUNTY | 19.09% | 12.22% | 10.11% | 8.73% | 62.4% | 1/1/20 |
| HAVERHILL | 22.53% | 13.14% | 10.92% | 10.29% | 53.0% | 1/1/20 |
| HINGHAM | 20.39% | 12.90% | 10.37% | 9.52% | 70.4% | 1/1/20 |
| HOLYOKE | 16.07% | 12.82% | 11.90% | 9.80% | 69.0% | 1/1/20 |
| HULL | 20.38% | 12.82% | 11.00% | 8.49% | 69.6% | 1/1/20 |
| LAWRENCE | 20.30% | 12.78% | 10.95% | 8.38% | 55.4% | 1/1/20 |
| LEOMINSTER | 20.46% | 12.36% | 11.54% | 9.06% | 110.3% | 1/1/21 |
| LEXINGTON | 13.54% | 12.20% | 10.34% | 9.12% | 76.6% | 1/1/21 |
| LOWELL | 19.85% | 12.49% | 10.70% | 9.46% | 58.7% | 1/1/21 |
| LYNN | 20.33% | 12.50% | 10.86% | 8.55% | 58.5% | 1/1/21 |
| MALDEN | 9.79% | 12.77% | 10.10% | 9.82% | 72.9% | 1/1/20 |
| MARBLEHEAD | 20.37% | 12.81% | 11.00% | 9.63% | 62.3% | 1/1/20 |
| MARLBOROUGH | 14.24% | 10.91% | 9.30% | 8.66% | 79.0% | 1/1/21 |
| MASS. HOUSING FINANCE AGENCY (MHFA) | 16.62% | 12.00% | 9.52% | 7.99% | 94.8% | 1/1/21 |
| MASSPORT | 15.66% | 12.62% | 10.56% | 9.41% | 95.1% | 1/1/21 |
| MASS. TEACHERS' RETIREMENT SYSTEM (MTRS) | 20.50% | 12.90% | 11.07% | 9.84% | 53.0% | 1/1/21 |
| MASS. WATER RESOURCES AUTHORITY (MWRA) | 13.46% | 11.06% | 9.70% | 8.47%* | 88.2% | 1/1/21 |
| MAYNARD | 17.71% | 11.58% | 10.49% | 8.37% | 75.0% | 1/1/21 |
| MEDFORD | 18.11% | 11.08% | 9.12% | 9.01% | 61.3% | 1/1/20 |
| MELROSE | 19.44% | 12.22% | 10.43% | 8.81% | 60.8% | 1/1/21 |
| METHUEN | 20.39% | 12.92% | 11.25% | 8.58% | 56.2% | 1/1/20 |
| MIDDLESEX COUNTY | 20.11% | 12.48% | 10.62% | 8.86% | 48.1% | 1/1/20 |
| MILFORD | 20.25% | 12.66% | 10.85% | 8.73% | 65.8% | 1/1/21 |
| MILTON | 20.43% | 12.79% | 10.99% | 9.76% | 88.6% | 1/1/21 |
| MINUTEMAN REGIONAL | 20.17% | 12.55% | 10.69% | 9.79% | 94.2% | 1/1/21 |
| MONTAGUE | 20.31% | 12.76% | 10.97% | 9.53% | 78.1% | 1/1/20 |
| NATICK | 20.46% | 13.00% | 11.57% | 8.72% | 70.4% | 1/1/21 |
| NEEDHAM | 20.22% | 12.69% | 10.89% | 9.97% | 65.6% | 1/1/20 |
| NEW BEDFORD | 18.11% | 13.08% | 11.16% | 8.65% | 46.9% | 1/1/20 |
| NEWBURYPORT | 20.35% | 12.71% | 10.88% | 8.74% | 64.9% | 1/1/20 |
| NEWTON | 19.76% | 12.51% | 10.81% | 9.06% | 57.4% | 1/1/21 |
| NORFOLK COUNTY | 19.40% | 11.49% | 10.14% | 8.94% | 63.5% | 1/1/20 |
| NORTH ADAMS | 10.53% | 13.19% | 10.63% | 9.82% | 83.3% | 1/1/21 |
| NORTH ATTLEBORO | 16.06% | 12.57% | 11.19% | 9.12% | 73.2% | 1/1/20 |

* Based on 36-year return

NOTE: Numbers are subject to change as board data is updated.

2021 RETURNS & ANNUALIZED PAST RETURNS (%) | FUNDED RATIOS

| | Return (2021) | 5-Year Return | 10-Year Return | 37-Year Return |
|--------------------|---------------|---------------|----------------|----------------|
| NORTHAMPTON | 9.82% | 13.00% | 10.48% | 9.63% |
| NORTHBRIDGE | 20.50% | 12.93% | 11.07% | 9.75% |
| NORWOOD | 18.07% | 13.53% | 11.02% | 9.59% |
| PEABODY | 20.39% | 12.84% | 11.02% | 9.11% |
| PITTSFIELD | 19.99% | 12.37% | 10.74% | 8.68% |
| PLYMOUTH | 21.19% | 12.48% | 11.36% | 9.25% |
| PLYMOUTH COUNTY | 16.88% | 11.69% | 10.07% | 9.36% |
| QUINCY | 14.34% | 11.40% | 9.42% | 8.52% |
| READING | 20.70% | 12.73% | 10.99% | 9.66% |
| REVERE | 20.16% | 12.68% | 10.87% | 8.87% |
| SALEM | 20.13% | 12.68% | 10.68% | 8.64% |
| SAUGUS | 19.05% | 12.62% | 10.91% | 9.59% |
| SHREWSBURY | 19.64% | 12.95% | 11.55% | 9.57% |
| SOMERVILLE | 18.89% | 16.79% | 12.97% | 9.84% |
| SOUTHBRIDGE | 20.22% | 12.77% | 10.85% | 8.59% |
| SPRINGFIELD | 20.44% | 12.96% | 11.15% | 8.92% |
| STATE | 20.50% | 12.92% | 11.08% | 9.84% |
| STONEHAM | 17.26% | 10.88% | 10.18% | 9.04% |
| SWAMPSCOTT | 19.59% | 12.85% | 11.29% | 9.46% |
| TAUNTON | 17.97% | 12.24% | 10.80% | 9.88% |
| WAKEFIELD | 20.31% | 12.81% | 11.04% | 10.00% |
| WALTHAM | 15.80% | 11.74% | 10.70% | 9.03% |
| WATERTOWN | 16.24% | 11.93% | 10.45% | 8.72% |
| WEBSTER | 15.45% | 10.72% | 10.02% | 8.42% |
| WELLESLEY | 20.37% | 12.81% | 11.03% | 10.26% |
| WEST SPRINGFIELD | 9.73% | 12.65% | 10.33% | 8.56% |
| WESTFIELD | 14.86% | 11.99% | 11.46% | 9.19% |
| WEYMOUTH | 18.49% | 12.58% | 10.92% | 10.11% |
| WINCHESTER | 20.47% | 12.27% | 9.96% | 9.35% |
| WINTHROP | 20.39% | 12.84% | 10.84% | 9.13% |
| WOBURN | 20.78% | 12.57% | 11.09% | 9.74% |
| WORCESTER | 21.13% | 12.53% | 10.16% | 9.20% |
| WORCESTER REGIONAL | 20.38% | 12.75% | 10.87% | 8.70% |
| COMPOSITE | 19.51% | 12.62% | 10.86% | 9.58% |

| Funded Ratio | Date of Most Recent Valuation |
|-----------------------|-------------------------------|
| 69.2% | 1/1/20 |
| 72.8% | 1/1/20 |
| 78.4% | 1/1/20 |
| 49.3% | 1/1/20 |
| 52.0% | 1/1/21 |
| 51.9% | 1/1/20 |
| 61.0% | 1/1/20 |
| 45.9% | 1/1/20 |
| 75.5% | 1/1/21 |
| 63.5% | 1/1/21 |
| 59.2% | 1/1/20 |
| 83.2% | 1/1/21 |
| 101.4% | 1/1/21 |
| 69.7% | 1/1/21 |
| 62.9% | 1/1/20 |
| 28.9% | 1/1/20 |
| 66.4% | 1/1/21 |
| 78.1% | 1/1/20 |
| 62.4% | 1/1/21 |
| 74.5% | 1/1/20 |
| 64.7% | 1/1/20 |
| 61.5% | 1/1/21 |
| 98.3% | 1/1/21 |
| 58.4% | 1/1/20 |
| 84.9% | 1/1/21 |
| 66.4% | 1/1/20 |
| 73.5% | 1/1/21 |
| 65.6% | 1/1/20 |
| 84.7% | 1/1/21 |
| 92.7% | 1/1/21 |
| 61.1% | 1/1/20 |
| 67.1% | 1/1/21 |
| 46.4% | 1/1/20 |
| NOT APPLICABLE | |

| | | | | |
|-------------|--------|--------|--------|-------|
| PRIM | 20.67% | 12.90% | 11.02% | 9.91% |
|-------------|--------|--------|--------|-------|

NOTE: Numbers are subject to change as board data is updated.

2021

COMMONWEALTH OF MASSACHUSETTS

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